Town Plan

West Windsor, Vermont

Photo by Cathy Boedtker

Adopted by the Selectboard on September 14, 2020

TOWN PLAN ADOPTION HISTORY

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08/09/2010

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02/17/2015

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CHAPTER 1. INTRODUCTION

PURPOSE OF OUR TOWN PLAN

The State of Vermont "Planning Manual—2017" provides guidance for preparing a town plan as described in the following three paragraphs. The West Windsor Planning Commission used the concepts when preparing this 2020 Town Plan.

Planning for economic development, housing needs, infrastructure, and environmental health are fundamental responsibilities of Vermont's towns. Developing a picture for the future and setting clear goals helps the town government and its citizens connect many smaller actions and measure achievement toward the larger vision for West Windsor.

A comprehensive Town Plan is essential to defining and implementing our community's vision. The plan provides a framework toward attaining community aspirations through public investments, land use regulations, and other implementation programs such as a state-designated village center, business improvement districts, or land conservation programs. It can also qualify West Windsor for state grants to fund improvements or receive specialized technical assistance.

Our Town Plan is intended to be used as:

- A long term guide—8-year plan with 20 year planning horizon
- A basis for decision-making, community programs, and taxpayer investments
- An action plan that identifies implementation steps
- A basis for municipal regulations
- A source of information
- A source for strategic planning and studies
- A tool for coordination
- A source for community standards in Vermont State regulatory proceedings

IMPLEMENTATION OF 2015 TOWN PLAN

Context is important when developing a Town Plan. First, a look back: what has the Town achieved since the last Town Plan was adopted? The following actions were taken to implement priority recommendations made in the 2015 Town Plan:

- Acquired and made improvements to the water and wastewater systems serving the resort area; completed construction of the Village wastewater system, connecting it to the existing resort area wastewater system.
- Facilitated the development and implementation of up-to-date telecommunications technology with the expansion of EC Fiber within the town.
- Partnered with the Trust for Public Land to acquire the ski area land; Ascutney Outdoors was established to operate the area and offer a broad spectrum of recreational opportunities year round.
- Coordinated with Ascutney Outdoors and Ascutney Trails, formerly Ascutney Trails Association (ATA) and Sport Trails of Ascutney Basin (STAB), to expand the trail network, and promoted the area as a recreational destination hosting numerous events including the Vermont 50, the Vermont Mountain Bike Festival, Ragnar trail running relay event, and the Point-to-Point event.

- Revised the local flood regulations to comply with Vermont state flood regulations.
- Continued to implement post-Tropical Storm Irene projects and policies to protect the transportation infrastructure during floods.
- Developed a multi-year Capital Budget and Program for Town land, equipment and building needs.
- Began assessing the water quality of Mill Brook and its tributaries periodically.
- Participated in a geomorphic assessment of Mill Brook watershed.
- Applied for and received a Village Center designation from the State of Vermont in 2018, allowing for grant and other opportunities to be pursued. An immediate benefit was the granting of a $51,000 tax credit for the renovation of the general store.

RECENT RELEVANT DEVELOPMENTS

Other recent developments that provided context for our new Town Plan include:

- Vermont Act 46 strongly encouraged school consolidation. After much research and debate, the Towns of Windsor and West Windsor voted to consolidate schools. As a result, school choice has been eliminated and the long-term viability of Albert Bridge School will be subject to the new consolidated school district.
- The closure of the Mount Ascutney Resort in 2010 adversely affected employment, property values and recreational visits to West Windsor. Brownsville General Store suffered from the loss of skiers and eventually closed early in 2017. Early in 2018 a group of citizens came together to form Friends of Brownsville General Store, LLC. Almost $400,000 was raised to buy and renovate the store, which opened in late 2018 as Brownsville Butcher & Pantry, a combined café, butcher, and general store.
- Ascutney Outdoors purchased the burned out resort base lodge in 2017. Local fundraising and grants, as well as volunteer labor and donated services, resulted in the construction of a new, smaller base lodge that opened in September 2018. The lodge serves as a gathering place serving skiers, bikers and the community at large.

- When the talc plant closed in 2003, the Town lost a major employer. In 2013, an innovative producer of wood pellets purchased the property and began producing pellets in 2015. However, the process proved unprofitable, and the site sat idle again for several years until it was purchased by Waters Excavation.

- Climate change, and the resultant risk to planet sustainability, has become a critical long-term challenge. While the effects of climate change are becoming apparent, the catastrophic impacts will not be felt until well beyond the 8-year time horizon of this Plan. However, it is imperative that mitigation and adaptation efforts begin now if there is any hope of avoiding the most destructive effects. While climate change may be the current paramount threat to our environment, ultimate human and planet sustainability also depends on avoiding other environmental degradations.

WEST WINDSOR'S VITAL ASSETS

Some final contextual elements to consider are the many vital assets of the Town of West Windsor. This Town Plan is dependent upon continued protection and use of these assets, which include:

- Mt. Ascutney as a beautiful, ever present southern anchor.

- The Town Forest, including the Mt. Ascutney outdoor recreation area and its associated trail systems, offers many recreational opportunities.
- The natural beauty of the rural landscape that provides a sense of peace while offering outdoor recreation options to residents and visitors alike.
- The network of dirt roads and tree canopies.
- The sense of community, and commitment to working together to enhance everyone's experience.
- Our expanded wastewater system and upgraded water system which are both now owned by the Town.
- The Village Center designation, and the buildings constituting our "Village Center."
- Engaged citizens willing to volunteer time and donate funds and other resources to advance initiatives such as Ascutney Outdoors and the restoration of the General Store.
- Albert Bridge School, facilities and staff.
- Our Town history, and our Historical Society, which has documented much of that history.
- Town-wide, high-speed internet availability.

2020 SHARED VISION

As an early step in the process of developing this Town Plan, the Planning Commission completed a community assessment by:

- Evaluating progress against the 2015 Town Plan,
- Conducting a SWOT (strengths, weaknesses, opportunities and threats) analysis.
- Reaching out to key constituents such as the Select Board, School Board, and Ascutney Outdoors leadership for specific input.
- Engaging the town's people at large, including through public hearings and other conversations.
- Conducting a town wide survey using on line tools as well as mailings. (see Appendix B for results)

This process resulted in a "Shared Vision" for West Windsor that was articulated before the Town Plan was updated, but also adjusted as the process moved forward:

The Town of West Windsor is a beautiful and safe place, where residents work together to enhance and sustain the vibrancy of the community, and maintain our rural character. We strive to offer housing, recreational and educational options that retain residents and attract new families. We embrace technological advances that keep us well connected to educational, entertainment, and health care resources beyond our borders. We invite visitors to share our diverse recreational resources and support our local economy. We cherish our sense of community by ensuring the youngest among us are cared for and educated, providing needed services to residents at a reasonable cost and allowing our older population to age in place comfortably and gracefully.

2020 STRATEGIC COMMUNITY GOALS

Based on the contextual information summarized above and the initial articulation of a Shared Vision, the following Strategic Community Goals emerged. These, along with the Shared Vision, informed the process of updating and rewriting the detailed Town Plan in the following chapters.

Like the Shared Vision, these Strategic Community Goals were adjusted as the process of detailed planning was completed.

West Windsor's Strategic Community Goals for 2020 and beyond include:

- Utilize the Village Center Designation with the new Village wastewater system to encourage the redevelopment of under-utilized buildings and development of vacant parcels in the Village.
- Make combating climate change, specifically reducing carbon emissions and improving energy efficiency, and the broader, more inclusive goal of improving environmental sustainability Town priorities, through creation of a Sustainability Committee and other specific actions.
- Support the ongoing development of Ascutney Outdoors and other recreational initiatives that bring visitors to Town to support the local economy and provide recreation activities for residents.
- Support efforts by the newly formed Mt. Ascutney School District to develop a curriculum that incorporates outdoor education and takes advantage of unique natural resources like Mt. Ascutney, as well as cultural and historic resources and the expertise of local residents.
- Encourage programs that facilitate the use of town buildings (Albert Bridge School, the Town Hall, and the Library) and the Ascutney Outdoors Center to bring the community together more frequently, utilize the spaces more completely, and/or generate economic activity.
- Considering recent demographic trends and the school district merger, develop programs that encourage more families to move to West Windsor.
- Given the demographics of our community, develop programs and resources that allow for aging in place for those who wish to remain in their homes.
- Support appropriate utilization of the Light Industrial/Commercial district, home of the long-closed talc plant, and renew discussions with the owner of the adjacent 207-acre property about donating it to the town after the tailing pond reclamation project is complete.
- In anticipation of the eventual relocation of the fire station outside the flood hazard area, identify opportunities to responsibly redevelop the vacated parcel with other valuable, Village-centered businesses or uses.

HISTORY OF WEST WINDSOR

See Appendix A for additional information

West Windsor originally was the West Parish of Windsor. On July 6, 1761, Josiah Willard of Winchester, New Hampshire "sued out" a six-mile square grant for Windsor from Benning Wentworth, governor of New Hampshire, in the name of King George III of Great Britain. It was seven years later that the second division of house lots was mapped for the entire grant, setting the tone for dividing the township into two parishes.

It was not long before a crude church was built, and a cemetery was established high on a hill by the well-traveled track, which led west through the township. Settlers were "making pitches," buying land, and establishing their subsistence farms. The first central hamlet of the West Parish was the cluster of homes in the bowl of hills just west of the church. So many members of the

Shedd family settled there, that the tiny community, with its tannery, potash works, blacksmith, store (complete with library), tavern, and school, has always been known as Sheddsville.

Settlers in the hills carved rough roads to sawmills and gristmills in the soggy valley along Mill Brook. By 1810 a fulling and carding mill was using waterpower to process the wool from sheep that were thriving on the rocky hillsides. As mills drew settlers to the valley, and Return Brown built his brick home with seven chimneys near where Potash Brook flows into Mill Brook, the community grew and thrived. By this time, children in the large families had the opportunity to get a basic education, for there were eleven one-room schoolhouses scattered throughout the township.

When Merino sheep were imported into Vermont by Consul-General William Jarvis of Weathersfield, local farmers began to enlarge and improve their flocks. As the more successful farmers bought out smaller farms, many families moved west to land that was more fertile and more easily cultivated.

Over the years there had been underlying friction between the urban East Parish on the river and the agricultural West Parish. Much of the problem had to do with money, roads and caring for the indigent and poor. By an act of the Vermont legislature, the two parishes were legally separated November 4, 1814. Less than a year and a half later they made up their differences and were rejoined on March 1, 1816.

The sheep industry continued to flourish until the middle of the century when there were over 7,000 sheep denuding the once forested hills. Some of the farmers who were concentrating on breeding their sheep for even higher wool quality were selling prize rams not only to shepherds in our own western territories, but also to sheep-men in Australia and South Africa.

Friction continued between the two parishes. In 1848 they were again legally separated. Since that time they have remained two distinct townships. The first census taken after West Windsor was an independent township records the town as having 1,002 inhabitants.

In the late 1800's, as the sheep industry waned, the dairy business began to grow. A cheese factory bought milk from the local farmers. Several varieties of cheese were made and sent by rail to the Boston market. As refrigeration improved and more cows were taking over old sheep pastures, a creamery was established which also shipped milk to Massachusetts. By 1930, at the height of dairying, West Windsor's population had dropped to 512. There were 94 herds of cattle, and a total of 1,148 cows. That same year there were 91 students in the four existing schools.

In the mid-1990s, the last "milking" farm went out of business. Horse farms and high-value second homes continued to be built in many rural areas of town. The social impact of nearby Dartmouth College and Dartmouth Hitchcock Medical Center grew larger.

In 1946, when skiing began to be a popular sport, a rope tow pulled avid skiers up a hill south of Brownsville at the base of Mount Ascutney. From that early start, a substantial family ski area was developed with tows, snowmaking, chair lifts, central lodges, and an ever-increasing number of trails. The operation changed hands a number of times, each time expanding until it had a hotel, fitness center, and many condominiums.

During the early 1990's, the Mount Ascutney Resort went into bankruptcy. The bankruptcy extended over several years and, when the court finally sold the property, the town only received a portion of the total taxes due. Deeply in debt, with local banks reluctant to lend to the town, the Selectboard raised the property tax rate enough to pay off the town's borrowing debt in a single year. As a result, property values grew over the next few years and the town rebounded.

From 1993 until 2008, the Resort was owned exclusively by Snowdance LLC. In 2008, the fitness center and several of the hotel buildings at the Resort were sold to Orange Lake Resorts, a Florida-based timeshare company. In 2010, the senior lender to Snowdance LLC foreclosed on the property and the ski area ceased operations. The ski area was reopened in 2015 as discussed in the previous sections of this Chapter.

In the central village of Brownsville there is one church, one school, one café/general store, a library, the town hall, and the West Windsor Historical Society, headquartered in the old grange hall. Though West Windsor is no longer considered an agricultural-farming community, there are many homeowners who have gardens and animals. There are many small businesses and cottage industries throughout the township. Most West Windsor workers commute to work in other towns. Many residents are retired. A number of dwellings are second homes. West Windsor's quiet dirt roads, which are great for recreational use, have attracted many outdoor enthusiasts to the area.

The town's decision not to pave any additional roads has helped West Windsor retain its rural character.

POPULATION AND DEMOGRAPHICS

Figure 1 shows population trends in West Windsor. The town's population increased sharply between 1970 and 2000. The growth rate after 2000 moderated. According to American Community Survey data from the U.S. Census Bureau, West Windsor's population in 2017 is estimated to be 1,106, a very slight increase from 1,099 in 2010.

An analysis conducted for the State of Vermont in 2013 estimates a modest 2.6% increase in West Windsor's population over the twenty-year period between 2010 and 2030.

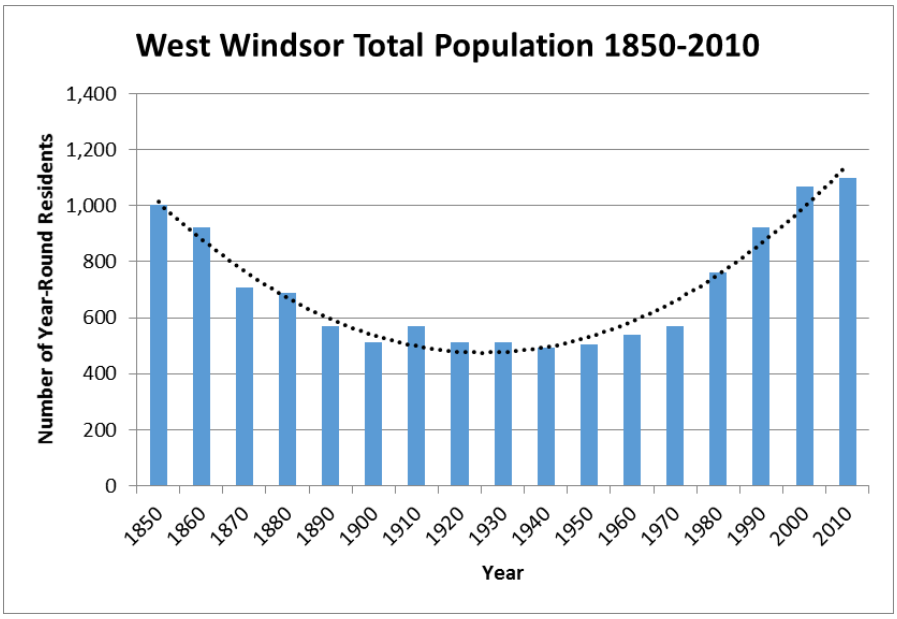


Figure 1: Population of West Windsor based on decennial census figures from the US Census Bureau

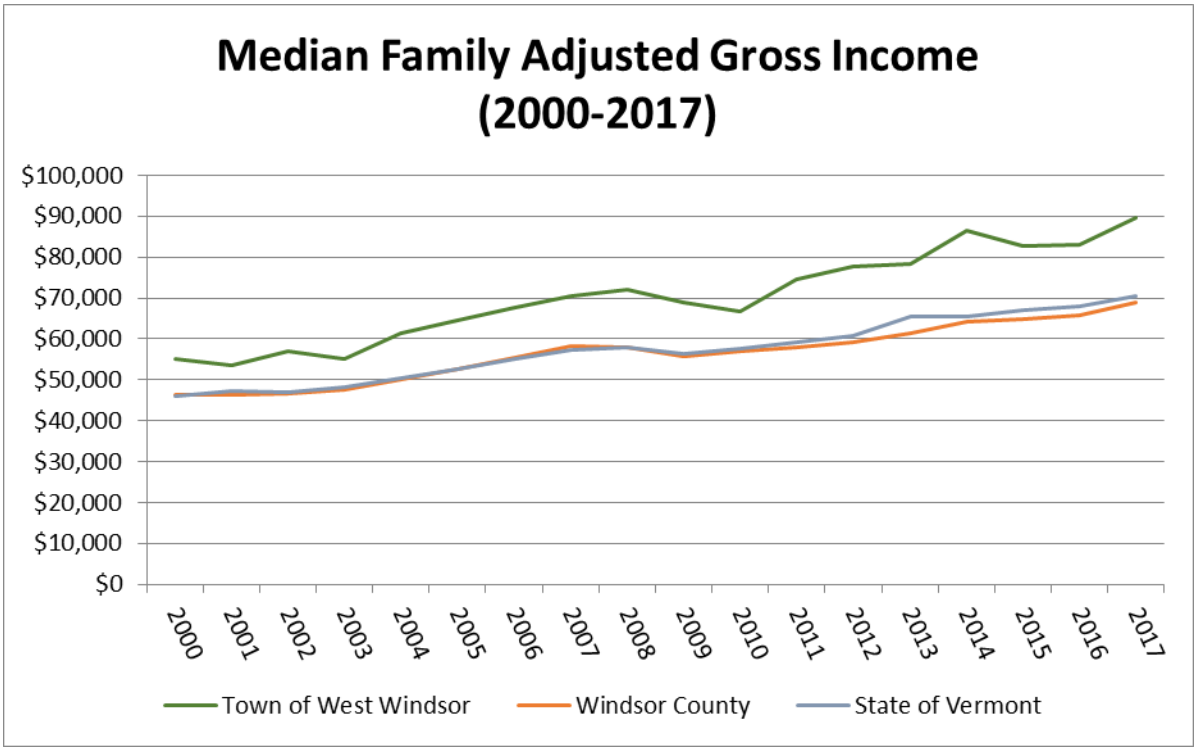


Figure 2: Comparison of median family adjusted income in West Windsor, Windsor County and State of Vermont.

Median family adjusted income has been increasing steadily since 2000, based on data from the U.S. Census Bureau (see Figure 2). West Windsor has a higher median family adjusted income in 2017 ($89,604) than both Windsor County ($68,996) and the State of Vermont ($70,538).

Figure 3: Property Tax Rates (Per $100) 2017

TOWN	SCHOOL/ RESIDENTIAL	SCHOOL/ NONRESIDENTIAL	MUNICIPAL
ANDOVER	1.2461	1.3234	0.41
BALTIMORE	1.545	1.53	0.4583
CAVENDISH	1.3945	1.4057	0.3626
CHESTER	1.2262	1.2781	0.6967
HARTLAND	1.5418	1.4611	0.4366
LUDLOW	1.7425	1.571	0.2927
READING	1.6789	1.5059	0.4665
SPRINGFIELD	1.4817	1.3955	1.6053
WEATHERSFIELD	1.5574	1.5538	0.6544
WEST WINDSOR	1.5777	1.4436	0.4399
WINDSOR	1.1772	1.4085	1.4728
WOODSTOCK	1.6603	1.5503	0.4073

According to the VT Department of Taxes 2017 Annual Report, West Windsor had the fourth highest residential school tax rate in the ten-town Southern Windsor County area ($1.5777 per $100) before the Windsor and West Windsor school districts merged. West Windsor also had the median municipal property tax rate ($0.4399 per $100) and the sixth lowest non-residential school tax rate ($1.4436 per $100). After the merger, in 2019, West Windsor's residential school tax rate was the sixth highest ($1.4648 per $100) in the ten-town area. The Town's municipal property tax rate was also sixth ($0.473), while it's non-residential school tax rate was fifth ($1.5851 per $100).

See Appendix D for more information about population and demographics in West Windsor.

CHAPTER 2. LAND USE

Decisions about the appropriate use of public and private land in West Windsor should reflect the values and vision of our community of year-round and seasonal residents. These decisions must take into account the natural resources and environmental constraints that are unique features of our town. West Windsor's scenic beauty and recreational opportunities are valuable assets which attract both residents and visitors. Land use decisions must take these assets into consideration. Historic land use patterns, the efficient and cost-effective provision of public services, and housing that supports a diverse population are also important considerations. Together, these factors form the basis for West Windsor's land use plan.

CURRENT LAND USE

West Windsor remains a small town with a traditional Vermont village surrounded primarily by rural areas. The unincorporated village of Brownsville has a limited mix of commercial, residential, and public buildings including a general store, library, post office, elementary school, historical society, and municipal offices. Most of the existing buildings in the village are small in scale, close to the roadway and to each other, and are architecturally compatible. Adjacent to the village is the former Ascutney Mountain Resort (i.e. the resort area). The resort area and the eastern section of the Town Forest includes a ski area, recreational trails, base lodge, health club, hotel and time-share units, restaurant, housing, and various recreational services. The ski area closed in 2010. West Windsor purchased the ski area lands (469 acres) in 2015 with assistance from the Trust for Public Lands and combined this acreage with the existing Town Forest. Ascutney Outdoors was established to provide a broad range of recreational activities in the community, including winter operations. Ascutney Outdoors now operates a rope tow (2015), base lodge, tubing lift (2018) and T-bar (2020).

Most of the resort and village areas are served by a sewer system, which the town acquired in February of 2014, while the remainder of the town is served by on-site septic systems. The resort area is served by a public water system. The Light Industrial/Commercial district is home to the former talc/wood pellet manufacturing facility, the Lucy MacKenzie Humane Society, and the Evergreen Equine Veterinary Clinic. Outside the village and the Resort, West Windsor is characterized by low-density rural development.

Although it is located in three towns of West Windsor, Windsor and Weathersfield, Mount Ascutney is the prominent feature of the landscape. The ski, biking and outdoor recreation area is located entirely in West Windsor, in the expanded Town Forest on the northern side of the mountain. There are also telecommunications facilities located near the summit. In West Windsor, much of the remainder of the mountain is undeveloped and under town ownership – the West Windsor Town Forest. Recent residential development indicates that those who are building houses in the area have a strong preference for locations with scenic views.

The majority of the land area in town is undeveloped forest or open land, much of which is in the state's Use Value Appraisal Program (AKA "current use"). Steep slopes, undeveloped ridgelines and wetland areas add to the scenic beauty of West Windsor and provide habitat for a variety of wildlife. The pastures and fields along VT Route 44 and Mill Brook are among the most valued scenic resources in town.

Of West Windsor's 15,808 total acres, roughly half of the land area is forested and another quarter of the land area is agricultural land or open fields. Only 9.7% of West Windsor's taxable parcels are enrolled in the Current Use program, but these represent 40.4% of the total land area. Table 1 below summarized the current land uses based upon the 2017 Grand List.

Table 2.1 Current Land Use Summary (2017 Grand List)

Category	Number	Acres	Avg. Acre per Unit	Total Property Value	Avg. Property Value per Unit
Commercial	20	78.36	3.92	$13,412,700	$670,635
Commercial Apartments	1	2.00	2.00	$223,400	$223,400
Industrial	*	*	*	*	*
Residential with Less than 6 Acres	313	751.58	2.40	$74,760,400	$238,851
Residential with 6 or More Acres	314	10681.84	34.02	$164,242,500	$523,065
Mobile Home (Landed)	10	153.02	15.30	$1,493,000	$149,300
Mobile Home (Un-Landed)	*	*	*	*	*
Seasonal Home with Less than 6 Acres	2	6.46	3.23	$236,000	$118,000
Seasonal Home with 6 or More Acres	1	11.40	11.40	$186,500	$186,500
Utilities	3	2.00	0.67	$3,536,900	$1,178,967
Woodland	*	*	*	*	*
Miscellaneous	128	3727.60	29.12	$17,832,300	$139,315
Other	122	0.00	0.00	$12,794,600	$104,874
TOTAL	**914**	**15414.26**	**16.86**	**$288,718,300**	**$315,884**

FUTURE LAND USE

In order to implement the goals, policies and recommendations of this Plan through zoning and other measures, the following land use categories are established and shown on the Future Land Use Map:

1) Primary Growth
   a) Village
   b) Resort/Residential
   c) Sewer Overlay Areas
2) Secondary Growth
3) Light Industrial/Commercial
4) Rural Residential
5) Resort/Conservation
6) Conservation

A 2019 survey indicates strong local support for revitalizing the Village Center in Brownsville. The survey also indicates strong support for the vision statement in Chapter 1. The Future Land Use Map and category descriptions are intended to be consistent with this vision statement.

Along with the suitability of the land for development and the protection of valuable natural resources, the efficient provision and expansion of public services provide the basis for West Windsor's land use categories. Directing growth to areas most effectively and efficiently serviced by utilities, roads and schools will help the town maintain its rural character and control the cost of public services. Policies and regulations which encourage growth in or near the village area, especially in the vicinity of the existing sewer line, are consistent with these goals. In general, future growth shall be encouraged in high density areas first and rural areas last.

New development should blend into the existing landscape to the extent possible. Ridgeline development restrictions, siting and screening standards, building envelopes and conservation subdivision design should be considered for inclusion in West Windsor's zoning and subdivision regulations as a means of preserving the town's natural and scenic resources, rural character, and open spaces.

Primary Growth Areas

The primary growth areas, as shown on the Future Land Use Map, are where future commercial and higher density residential development should be encouraged. These areas include the village of Brownsville and the resort area. In order to maintain the aesthetic value and historic character of the village, increased density must include open space.

Building scale, architectural style and setbacks of new development should be consistent with the character of the area in which it is located. The village and resort areas should maintain their separate and distinct appearances and character.

Village

The village of Brownsville currently has a mixture of moderate density residential, commercial and institutional uses. Low-impact non-residential development has historically been located in the village. Now that the Village Center is served by a municipal sewer system this area is suitable for a higher-density mix of commercial, residential and civic uses. The State-designated Village Center is shown as an overlay on the Future Land Use Map (see Chapter 11 for a description of Village Center designation). This area should retain the appearance of a traditional Vermont village. Zoning regulations call for one-acre minimum lot sizes in this area. However, smaller lots or higher densities should be considered now that the Village Center is served by a sewer system. The traffic circulation system should accommodate pedestrians and other non-motorized travel. New development in the village should be consistent with its historic character and aesthetic qualities. Additional parking in the Village is needed but should be located behind, or to the side of, commercial and institutional buildings.

Resort/Residential

The Resort area offers a range of recreational and other amenities, including skiing, biking, tennis, swimming, restaurant, conference facilities, a health club, and special events. Accommodations include hotel, time-share, and condominium buildings. The resort area currently has a mixture of

high density accommodations and commercial, recreational and residential uses. This area is served by water and sewer systems. Zoning regulations allow for ¼-acre to 1-acre minimum lot sizes in this district, depending on whether proposed development will be connected to the existing sewer system or not. PUD review is required. Future resort housing development shall not be built adjacent to ski trails or at elevations higher than existing resort development. Resort development shall not have an adverse impact on village aesthetics or water quality. Resort lighting shall be limited to the minimum required for safety and security and shall incorporate cut-off style fixtures wherever possible. Noise associated with resort uses should be minimized or mitigated. Screening of new resort development with trees and other native vegetation may be required to limit visual impacts on the village and/or protect scenic views. Future resort development should provide a safe traffic circulation system for bicycles and pedestrians. Better connections for walking and biking between the Village and Resort areas should be explored.

Sewer Service Overlay Areas

A Sewer Service Overlay is shown on the Future Land Use map depicting the existing sewer service area, where the densest and most intensive land uses are enabled as long as the pattern and form of development is consistent with the vision statement and the policies of the Town Plan. A proposed sewer service expansion area is also shown on the map. The cost of land in West Windsor is the greatest limiting factor in housing affordability. This Overlay allows for greater densities and smaller lot sizes, which will support the development of affordable housing. All costs (including engineering, permitting and construction) associated with any proposed connection to an existing sewer line are to be assumed by the developer.

Secondary Growth Area / Residential

Moderate density residential and accessory uses shall be allowed in the area north of the village along Coon Club Road, Bible Hill Road, East Rowe Hill, Westgate Road, and the lower portion of Brownsville-Hartland Road, as shown on the future land use map. Facilities for pedestrians and bicyclists should be considered when planning new development in this area. This area is currently served by private wells and on-site septic systems. Minimum lot sizes of 4-5 acres are required per zoning standards.

Rural Residential

Rural residential areas can support a variety of uses including residential, forestry, and agricultural (e.g. livestock, tree farms and other horticultural uses). The designation of this area is based on its current uses and distance from town facilities and services. The primary concern in rural residential areas shall be to preserve open space, wildlife habitat, forest cover, and scenic resources, and to maintain low-density settlement patterns. In this area, 5-acre minimum lot sizes prevail per zoning standards. Recreational resources should be preserved wherever possible. Particular consideration should be given to protecting, and maintaining public access to the existing network of trails for hiking, biking, horseback riding, snowmobiling and other recreational activities. New residential development shall only occur in rural residential areas that are accessible from existing town or state highways.

Conservation Area

Conservation areas are lands that possess outstanding wildlife habitat, priority forest blocks, recreational or educational resources, fragile natural areas, economic assets (generating revenue from recreation or tourism) or scenic resource values. These areas include: Mount Ascutney, headwater areas, floodplains, vegetated areas next to surface waters, wetlands, vernal pools, Natural Heritage Inventory sites, critical deer wintering habitat and bear habitat as defined by the Vermont Agency of Natural Resources, locally and regionally significant historic sites, and other locally defined sensitive natural areas. Conservation areas also include existing private residences and public lands owned by the town and state. Conservation lands represent relatively pristine areas or special resource areas of the town, such as the Town Forest, that residents wish to preserve in their natural state for future generations, and that should, therefore, receive the highest level of protection from development. Special care should be taken in any resource management or extraction plans to maintain the character and value of these areas. Conservation areas are especially beneficial when surrounded by compatible uses such as forestry and agriculture. Zoning regulations call for a 30-acre minimum lot size in this district.

Resort/Conservation Planned Unit Development (PUD)

The purpose of the Resort/Conservation area is to provide for the orderly growth of single-family residences affiliated with the resort in such a manner as to preserve, to the maximum extent possible, the important open space, scenic, agricultural/forestry and natural resource characteristics of the district. (See the definition of a Planned Unit Development in the zoning bylaws.) For residential development that makes a demonstrable contribution to the recreational development of the area in accordance with the goals of the Recreation and Economic Development chapters of this Town Plan, current zoning allows one-acre lots with connection to a state-approved sewage treatment plant, and five-acre lots with on-site water and septic. Residential development that does not make a demonstrable contribution to the recreational development of the area requires a 30-acre minimum lot size. The preservation of Mile Long Field is of particular importance to the Town of West Windsor. All land uses in this area, other than forestry and agriculture, shall be reviewed and approved by the Development Review Board before a zoning permit may be issued. See also Special Considerations.

Commercial / Light Industrial

Light industrial and commercial uses may result in noise, light, traffic, emission, or waste generation levels that are incompatible with typical residential or recreational uses and shall, therefore, be located in the Light Industrial/Commercial district. Redevelopment of the former talc plant as a wood pellet manufacturing facility was expected to have a positive impact on the local economy. However, this business closed down after only a few years of operation. New development or redevelopment shall not adversely affect the natural, aesthetic or scenic resources in this area, which serves as a gateway to West Windsor. Parking lots should be located away from the road and properly screened. To limit noise and light pollution, adequate screening from VT Route 44 and adjacent parcels shall be provided, and access management techniques shall be implemented. Zoning regulations call for a two-acre minimum lot size in this district.

Special Considerations

In addition, special considerations shall be observed with the following resources:

Agricultural Areas – Agriculture has historically been important to the town's economy, food supply and cultural heritage. Lands currently being used for agricultural purposes and prime agricultural soils (as defined by the U.S. Department of Agriculture) located in open meadow areas that are large enough for an economically viable farming operation, should be protected for their contributions to the local economy and the scenic quality of the community.

Floodplains – To protect the natural function of floodplains and minimize property damage and loss of life during flooding events, new development should be strongly discouraged in Special Flood Hazard Areas as shown on the Flood Insurance Rate Maps produced by the Federal Emergency Management Agency (FEMA).

Forests **–** Forests are lands currently dominated by a dense growth of trees and other plants. Forest land is an essential component of rural life. Forests protect air, water and wildlife resources that are vital to the town's environmental, physical and economic health. Both by providing areas for recreation and by providing the basis for a sustainable forest products industry, forests directly support the local economy. All future development shall strive to preserve existing forest cover and minimize fragmentation of large forested areas.

Headwater Areas – Development in headwater areas, as defined in 10 V.S.A. 6086(a)(1)(A) shall be prohibited to avoid contamination of the headwaters of local streams, brooks and rivers, and the wildlife found in these areas.

Mile Long Field – Mile Long Field and adjacent acreage to the west extending toward Coaching Lane is highly valued by West Windsor residents for its many natural and recreational resources including, but not limited to, trails, open space, prime agricultural soils, wetlands, wildlife habitat, headwaters, streams, and springs. If development (including infrastructure development) is proposed for the area, a natural resources inventory shall be performed and all significant natural features shall be mapped. Special consideration must be given to site plans to ensure that development is designed to protect the area's natural features to the maximum extent possible.

Scenic Resources – West Windsor's scenic resources, including its prominent ridgelines, make the town a desirable place to live, work and visit. Scenic resources should be inventoried and any development in scenic areas should be subject to conditional use review.

Steep Slopes and Shallow Soils **-** Land with less than two feet of soil between the surface and the water table or between the surface and bedrock is poorly suited for development. Special consideration with regard to drainage may be necessary for development proposed in areas with shallow soils. Likewise, development in areas with slopes over 25% may require special erosion and sedimentation control measures. Development in such areas must be accessible year-round by emergency vehicles.

West Windsor Town Forest – The West Windsor Town Forest is highly valued by residents for its wildlife habitat and its trails, which are used frequently for low-impact, non-motorized recreational activities.

TIMING OF DEVELOPMENT

In order to ensure that public infrastructure is built in the most efficient and cost-effective manner, efforts should be made to encourage growth in and around the village, the resort base area, and the commercial/light industrial area instead of in the more rural areas of town. In addition, to prevent sudden dramatic increases in population which would place undue stress on town facilities and services, the town may require phasing for new subdivisions or Planned Unit Developments.

LAND USE POLICIES

In order to achieve the desired future land uses, as discussed in this chapter, the town should pursue the policies and recommendations listed below.

1. Promote orderly growth in a way that encourages compatibility among adjacent land uses, without the degradation of waterways, large forested or agricultural areas, wildlife habitat, scenic views, open space or public recreational facilities. Adverse impacts to these significant natural resources should be minimized or mitigated with appropriate techniques.
2. Encourage development to locate along existing roads, utility lines and services.
3. Support the use of compact development techniques to encourage less expensive municipal services, energy efficiency and the preservation of open space.
4. Ensure that the provision of municipal services and infrastructure is in keeping with the rural character of West Windsor.
5. Maintain historic settlement patterns by promoting moderate to high density residential, commercial and civic uses in the primary growth areas.
6. Ensure that important public historic sites and structures are protected and maintained, and encourage the protection and maintenance of private historic sites and structures.
7. Because West Windsor's recreational trails are an important asset, maintain access to them and connectivity among them.
8. Support programs (such as "current use") that reduce the cost of resource protection for farm and forestland owners.
9. Resort development shall make a demonstrable contribution to the recreational development of the area in accordance with the goals of the Recreation and Economic Development chapters of this Town Plan and shall not adversely impact the village or the town.
10. Development must be consistent with the intent of the future land use map and categories.

LAND USE RECOMMENDATIONS

1. Revise the land use regulations so they are consistent with the purpose and intent of the Town Plan, encouraging Village Center revitalization and maintaining rural character in the other parts of town.

2. Inventory and map open space, agricultural and forest lands, wildlife habitat, scenic views, ridgelines and other important resources in town, and establish appropriate methods for their protection.
3. Adopt an official map, pursuant to 24 V.S.A. §4421, showing future utility and facility improvements including, but not limited to, rights-of-way for recreational paths and sewer lines.
4. Investigate non-regulatory means for protecting areas where the special considerations mentioned above exist, as well as corridors through which recreational trails run, by providing increased support for the purchase of conservation easements or development rights and exploring other possible alternatives.
5. Educate landowners about conservation incentive programs.
6. Maintain "Village Center" designation to provide tools that help with Village Center revitalization efforts including, but not limited to, tax credit programs for renovating historic structures.
7. Charge the Planning Commission with ensuring that local land use regulations support the adaptive reuse of architecturally or historically significant structures, and provide guidelines for development in the historic village area.
8. Consider revising the zoning regulations to decrease the minimum lot size in the Village district, and evaluate the parking standards to determine if they create a barrier for Village Center revitalization.
9. Plan for making improvements to the Trail to Town in order to facilitate non-motorized connections between the resort area and the village and school.
10. Evaluate suitable options for the existing Fire Station site.

CHAPTER 3. UTILITIES AND FACILITIES

Note: See Map #1 - Base Features

Current utilities, facilities, and services in West Windsor are those that are characteristic of a small, rural Vermont town. Services found within the resort area are the exception. In some ways, the resort area is like another community within the town.

Unless otherwise specified in this Town Plan, existing utilities, facilities and municipal services are anticipated to be adequate to meet the expected needs over the next 8 years. Additional public investment in existing facilities and services, such as public sewer and water system improvements, or the enlargement of any public buildings, should occur when a need for such investments arises. Developers shall be required to pay for the additional utilities and facilities needed for new developments.

ELECTRIC UTILITIES

Electrical service throughout most of West Windsor, including the resort and the industrial zone, is supplied by Green Mountain Power from the Brownsville substation at the corner of VT Route 44 and Churchill Road. Power to that substation is supplied by a transmission line that runs north from Weathersfield. A small portion of the northeastern part of town is served from a Windsor substation.

In 2017, the Town signed a 25-year contract to purchase power for West Windsor's public buildings from Next Sun Energy, a solar facility in Westminster, VT to take advantage of discounted electric rates.

There is one 500 KW commercial solar facility in the resort area. In addition, homeowners have installed a number of residential-scale renewable systems (i.e. solar, wind) that collectively produce 377 KW of energy.

WATER AND SEWER

The resort area and the village contain properties that are served by a public sewer system. Construction of the pipeline, which runs from the resort area to the Windsor sewage treatment plant, was completed in 1987. Although a majority of the buildings in the resort area are hooked up to the sewer line, the Mountainside Condominiums, some of the residences on Village Lane, and most of the residences in the Skyhawk development, have on-site systems. Many of these properties are on small lots that were developed in the 1970s and have septic systems that are reaching the end of their useful lives.

At Town Meeting in 2012, West Windsor voters authorized the Selectboard to purchase the resort sewer system. The purchase transpired on February 12, 2014. Immediately following the purchase, the portion of the system located in Windsor was transferred to the Town of Windsor. A Utility Advisory Committee, with representatives from the various user groups, reviews and advises the Selectboard on matters such as budgets, rates, capital plans, and audits.

In 2016 West Windsor completed a sewer expansion project to serve buildings in the village area along Mill Brook. While the gravity sections of the sewer system have sufficient capacity to allow for additional connections, such connections are not allowed in sections served by force mains.

Water is supplied to most buildings in and around the resort, and to the Brownsville Butcher & Pantry, through one of three water systems. The largest of these three systems, which the Town acquired from the Resort in December 2015, was constructed during Phases I and II of the former Ascutney Mountain Resort development and serves the hotel complex (including the 100 condo/hotel units), the health club, the Mountains Edge condo complex and the privately-owned homes on Ski Tow Road known as the "Upper Loop." The two smaller systems are shared by homeowners on Sky Hawk Lane. The remaining residences in the resort have private, on-site water supplies.

The main water system, constructed during the 1980s expansion of the resort, includes supply lines, hydrants, and storage for fire protection. Water for the fire protection system that serves the resort buildings comes from the same well that provides domestic water to the buildings.

In January 2015 the vacant Ski Area Base Lodge burned. The booster pumps for the resort's water system were located in the basement of the burned out lodge and, although they were still functioning after the fire, accessing them was treacherous. Shortly after the fire, the Town took control of the water system as receiver and, in December, the Public Service Board approved the transfer of the system to the town. In 2016, the Town initiated a water system improvement project that included the construction of a new booster pump building, and the installation of new pumps and a generator. The project also included installation of approximately 1,800 feet of new 8" PVC waterline, installation of a pressure reducing/flow control valve, installation of four new fire hydrants, replacement of an existing pressure reducing valve, replacement of the telemetry system, reconfiguration of the service to the Mountainside Condominiums, abandonment of the Mountainside booster pump station, and the purchase of a spare well pump.

The Town is currently planning a second water system improvement project, which will include replacing and re-routing the 4" and 8" water lines that run under the skier bridge; installing an emergency generator for the well; and replacing the existing well house with a new, more secure, heated and insulated structure to house the well control electronics.

The water system has limited excess capacity. If a sizeable development were proposed within the water service area, the system's ability to serve the development would have to be evaluated and improvements (e.g. additional storage tanks) may need to be considered.

To accommodate the expansion of the school, a new bedrock well was drilled on the school grounds in 2003. The Town is the permittee for the school water system. The new well supplies the school, the town hall, the library and the church. Throughout the remainder of the town, all buildings are served by on-site septic disposal and water supply systems. Maintaining and improving the water quality of the brooks and streams in town, and assuring that quality groundwater supplies continue to exist, are priorities for the town.

Groundwater resources are an often overlooked and under-valued asset, but one which a rural community like West Windsor should not take for granted. Reliance throughout most of the town on individual wells and springs for domestic water supply makes this an important planning consideration when contemplating development of any kind.

ELECTRIC, WATER AND SEWER POLICIES

1. Encourage the underground placement of new electric and telecommunications lines.
2. Encourage residents and businesses to consider installation of renewable electricity capacity, including net metering connections to the existing energy grid.
3. Ensure that the West Windsor Public Sewer System is operated and maintained in a manner that preserves its financial viability and protects human and environmental health.
4. Encourage the installation of innovative on-site septic systems and alternative methods of waste disposal**.**
5. Support efforts to educate owners about proper maintenance of on-site septic systems.
6. Maintain or improve the water quality of Mill Brook and its tributaries.
7. Ensure that the town-owned West Windsor Mountain Water System supplies a sufficient quality and quantity of potable water that meets State and Federal drinking water quality standards.

ELECTRIC, WATER AND SEWER RECOMMENDATIONS

1. Continue to assess the water quality of Mill Brook and its tributaries periodically, and address any situations that negatively impact water quality.
2. Consider the possible future expansion of the existing public sewer system to serve the Skyhawk area.
3. Evaluate the need for Mountain Water System capacity improvements, and develop a scope and cost estimate if improvements are warranted.

TELECOMMUNICATIONS

Phone Service

Land line phone service for most residents of West Windsor is provided by Consolidated Communications or EC Fiber via the Reading exchange: 484. Others are served by Windsor's exchange: 674. A handful of families in the northwestern section of town are served by VTel's 436 exchange. All calls within the town, regardless of the exchange, are considered local calls, and towns in adjoining exchanges are also part of the local calling area. Numerous companies provide long distance service throughout the town. Aboveground telephone lines handle most of the telecommunications activity at this time. When considering the installation of any new lines, the town should require that, when possible, these lines be buried or co-located to enable the preservation of the canopy of trees along the roadways for aesthetic reasons.

The use of pagers and cellular phones has enhanced the communications capabilities of businesses and private citizens, and improved communications for emergency providers, which is an asset to all. Existing towers on Mount Ascutney provide telecommunications companies with the opportunity to share tower space ("collocation"). Over the past few years, several telecommunications companies have added capacity to the existing cell towers on Mt. Ascutney. Although cell coverage has improved as a result, there are still many areas of town where coverage

is spotty at best. In 2012, to resolve deficiencies in area police communications, the town applied for a narrowband FCC license and installed a new UHF repeater on the tower on Mt. Ascutney.

Television

In 2006, Comcast installed cable in the resort area and the southeastern portion of West Windsor. As a result, residents in that area of town have access to cable television. Residents in the rest of the town can contract with a satellite company for television service. In addition, locations with high-speed internet can access various streaming services.

Internet

In 2008, West Windsor joined with 22 other towns in East Central Vermont to create East Central Vermont Community Fiber (ECFiber), which is committed to making high-speed communication services available to all homes and businesses in participating towns. The ECFiber network is owned by the participating towns and consists entirely of fiber-optic cable, providing fast and reliable internet and phone service. ECFiber has completed their buildout of West Windsor, with the exception of a few properties that are awaiting easements from landowners, and as of February 1, 2020 has 245 local subscribers. A number of other providers also offer internet service in West Windsor.

Towers

Communication towers are one of the most visible indicators of the technological age. These metal towers can stand 300 feet tall and the footprint can encompass up to two acres depending on road access. In 2005, West Windsor amended its zoning regulations to include specific standards for the review and permitting of proposed wireless telecommunications facilities. In addition, the State of Vermont relies on Act 250 to review the development of communication towers. Because towers often exceed 20 feet and are located above 2,500 feet in elevation, applicants are required to get an Act 250 permit. However, the Federal Telecommunications Act of 1996 (TCA) allows the preemption of local zoning authority by the Federal Communications Commission (FCC).

The town should be prepared to take advantage of growth in this industry to access emerging technologies for economic development potential. The town should be ready to emphasize its needs from a general public as well as an industrial viewpoint. This means paying attention to and having a voice in the location of existing and future infrastructure, and the needs of the community. Because communication towers have an immediate and negative visual impact on the aesthetics of the town, the development of these towers must be done with sensitivity and foresight.

TELECOMMUNICATIONS POLICIES

1. Require applicants to comply with all federal, state and town telecommunication ordinances, bylaws and/or regulations, including annual reporting requirements.
2. Preserve the historic character, appearance and natural resources of the town while encouraging the development of up-to-date wireless telecommunications services.
3. Minimize tower and antenna proliferation by requiring the sharing of existing communications facilities, towers and sites where possible and feasible.

4. Encourage the location of towers and antennas in non-residential areas and away from sensitive areas, including schools.

TELECOMMUNICATION RECOMMENDATIONS

1. Increase awareness about the availability and benefits of EC Fiber

CHAPTER 4. MUNICIPAL SERVICES & GOVERNMENT

FIRE, AMBULANCE AND POLICE SERVICES

The West Windsor Volunteer Fire Department (WWVFD)

West Windsor is served by a volunteer fire department. The department, in turn, is part of mutual aid, a system organized to enable neighboring towns to assist each other when needed. Initial dispatching for fires and all other emergencies is done in Hartford.

Local dispatching for the WWVFD is done by volunteers at West Windsor's firehouse at any time the department is called out. The fire department reviews and comments on major land development proposals over which the town has jurisdiction. It is the belief of the department that the size and type of development should be carefully monitored to assure that the WWVFD is always able to provide adequate service within the town.

The original fire department building, constructed in 1962, is located in Brownsville village. (The building and the lot on which it sits are actually owned by the department, not the town.) Additions to the building were constructed in 1979 and 1984. The 1984 addition was built specifically to accommodate a ladder truck to serve the new resort development. Although the WWVFD's building and equipment meet the town's needs at this time, the type and size of future development will impact the adequacy of the current facility.

In 2011, flooding from Tropical Storm Irene damaged the firehouse, the adjacent pump house and the parking area. Fortunately, the fire trucks had been moved to higher ground and were not damaged. In part due to concern for this site's vulnerability to flooding, in 2019 the Town acquired a 4.6-acre property at the intersection of Route 44 and Bible Hill Road as a suitable future location for the firehouse. In the meantime, the five-bay garage on the property is being used to store highway equipment.

In 2013, the WWVFD acquired a utility vehicle for trail rescues, which have become more frequent as West Windsor's recreational trail network expands and attracts more users. In 2018, the WWVFD purchased a new tanker and in 2019 they replaced the 1983 ladder truck with a newer 1993 model. In 2028 they plan to replace the pumper truck. They continue to be on an alternating 20-year replacement cycle for the two major trucks.

Emergency Medical Service

First response emergency medical care is currently provided by members of the West Windsor Volunteer First Aid Stabilization Team (FAST) Squad. The FAST Squad is a separate organization from the fire department. Currently licensed by the state at the *Advanced* Life Support level, the squad provides pre-hospital emergency care and support, including defibrillation. All services are provided by a small core group of dedicated volunteers. Squad members use their own vehicles, and store equipment and supplies in their homes. An ideal volunteer would be a telecommuter working from home.

The town is fortunate that it has been able to depend on trained volunteers to respond to the emergency needs of townspeople with the best emergency services possible. In recent years however, EMT certification and the training necessary to keep the certification up to date for FAST Squad members has become more expensive and time consuming, which makes it challenging to

recruit and retain volunteers. The Town should encourage our state representatives to support legislation that expands the availability of EMT training courses and increases funding for such courses.

Ambulance Service/DHART

Ambulance service is currently provided by Windsor Ambulance in Windsor, VT. A contract is renewed annually by the Selectboard.

Officially designated landing areas for the Dartmouth Hitchcock Air Response Team (DHART) are located at the east end of the Town parking lot on Ski Tow Road, and across from the former talc plant on Route 44. The playing field at Albert Bridge School could also be used as a landing area if necessary, except in winter. New windsocks are needed for the official landing areas.

Enhanced 911 Service

Enhanced 911 services became operational in November 1998. Preparation included providing street addresses for all structures. Structure numbering is based on 1/1000th of a mile increments and assists emergency services personnel in locating structures. When a caller dials 911, the geographic location of the caller appears on the call taker's computer screen, the "enhanced" aspect of Enhanced 911. This feature is especially helpful in communities such as West Windsor with its high percentage of seasonal housing. In 2019, roughly 70% of all "911 calls" in Vermont were placed from cell phones. All cell phones do not provide the dispatcher with the caller's exact location. West Windsor residents who call 911 from a cell phone should be prepared to provide the address from which they are calling and a clear description of their location.

In 2013, the Selectboard adopted a Building Number ordinance allowing the Town to place signs indicating the house or building number of the adjacent structure in the highway right-of-way to facilitate emergency response. Green and white building number signs were installed by the highway department in 2015.

Law Enforcement

The town is currently served by the Windsor Police Department, which has at least two officers on call to respond to emergencies 24 hours a day. In addition, officers from the Windsor Police Department spend 15 to 20 hours per week patrolling and monitoring speed in West Windsor. Assistance is provided by the Vermont State Police Department's Westminster barracks as needed.

Events, depending on their nature and size, may be required to have an additional law enforcement presence.

Emergency Planning

Most disaster preparation and emergency response is done by local and regional organizations such as the fire department, the FAST Squad, the Windsor Police Department, the Vermont Agency of Transportation, the County Sheriff and the State Police. The Town of West Windsor has an Emergency Management Officer to help coordinate town efforts with regional and state officials.

The town encourages emergency planning and disaster preparedness to help reduce the risk to life and health, the damage to public and private property and the environmental damage that often occurs during a disaster. Emergency planning enables the town to prepare calmly and realistically

for likely emergencies, to know the location of resources and equipment that will be needed, to inform residents of potential dangers and ways to avoid those dangers, and to quickly arrange for help when it is needed. West Windsor has an Emergency Management handbook (nicknamed the "Green Book"), a Local Emergency Management Plan, a Pre-Disaster Mitigation Plan, and mutual aid agreements with surrounding towns. Over the years, these documents have been useful resources for responding to the weather-related emergencies that West Windsor typically experiences.

However, the coronavirus pandemic has highlighted some areas of local emergency planning that warrant additional consideration, especially: strengthening partnerships among community organizations to meet the needs of vulnerable populations; strengthening information technology resources; reviewing, and possibly expanding, mutual aid agreements; maintaining adequate supplies of the materials and equipment needed for emergency response; and establishing a Continuity of Operations Plan for all critical town functions and positions.

In addition, a preliminary evaluation of the buildings designated as emergency shelters in West Windsor suggests that some specific improvements are needed. There are certain criteria that a building should meet in order to be useful as an emergency shelter. At a minimum, these include: space for sleeping (40 sq. ft. per person); toilets (one per 40 people); water; kitchen facilities; heating and cooling capacity; telephones; internet; and emergency power, including power to run water and sewer pumps. Ideally, showers would also be available.

Most of West Windsor's potential shelters, when considered separately, are lacking in one or more of these important characteristics. However, if several proximate buildings are considered as an emergency shelter complex, the strengths of each can compensate for the shortcomings of its neighbor. For example, the school, church and Town Hall are in close proximity. The school has nine toilets and plenty of space, but limited kitchen facilities. The church has a large kitchen but limited space. The Town Hall has back-up power and some space, but limited bathroom and kitchen facilities. The "weak link" is the lack of a generator to power the school building, the church, and the well pump that serves all three buildings. To ensure that West Windsor has a fully functioning shelter facility when the need arises, the Town should pursue funding for a generator to serve this purpose.

EMERGENCY PLANNING POLICIES

1. Require that all new roads and driveways be properly constructed so that run-off does not damage town or state roads and so that vehicles can respond to emergency situations.
2. Encourage the improvement of existing roads, and design culverts and bridges in accordance with Agency of Transportation hydraulic studies and statewide stream alteration standards.
3. Encourage the recruitment and training of new fire department and FAST Squad members.
4. Encourage the development and improvement of emergency evacuation plans and include plans for the protection of pets and livestock.

EMERGENCY PLANNING RECOMMENDATIONS

1. Identify at-risk residents and vulnerable populations who may need assistance during an emergency and strengthen partnerships among community organizations that can provide needed assistance.
2. Develop a comprehensive plan for the evacuation of disabled residents as well as pets and livestock.
3. Ensure that the town's "Green Book" and Local Emergency Management Plan are updated annually by the Emergency Management Coordinator and the Town Administrator.
4. Inventory the town's current and historic assets and records to evaluate their vulnerability to, and determine potential loss from, disasters.
5. Strengthen information technology resources to facilitate off-site work arrangements, including remote access to records and remote meetings.
6. Update the town's Pre-Disaster Mitigation Plan every five years in conjunction with the Southern Windsor County Regional Planning Commission (SWCRPC), the Fire Chief, the FAST Squad Director, Law Enforcement Officials, and the Emergency Management Coordinator.
7. Review mutual aid agreements regularly and update them as needed.
8. Ensure adequate supplies of materials and equipment needed to respond to emergencies.
9. Review and consider amending zoning regulations to require that new driveways have an average slope of less than or equal to 15% to allow safe access for emergency vehicles.
10. Install new windsocks at designated DHART helicopter landing areas.
11. Enlist the support of state representatives for legislation that increases the availability of, and funding for, EMT training courses.
12. Prepare a Continuity of Operations Plan and update it as needed (e.g. when new town officials are elected or appointed, or there are changes in the leadership of local emergency response organizations).
13. Pursue funding for a generator to provide back-up power for the school, the church, and the water supply that serves both buildings, as well as the Town Hall, thereby enabling these three buildings to serve as an emergency shelter complex for the Town.

TOWN GOVERNMENT AND ADMINISTRATION

Town Governance

West Windsor is governed by a three-member Selectboard. The Town Clerk/Treasurer is the initial contact for those conducting town business and is responsible for the land records, town accounts, and general town business. The Zoning Administrator and a five-member Development Review Board (DRB) handle local permitting issues. A five-member Planning Commission drafts plans and regulations and makes recommendations on a wide variety of land use and economic

development matters. The Town Administrator assists the Selectboard. The Zoning Administrator assists the DRB and the Planning Commission.

Like most towns in Vermont, West Windsor has a Town Meeting every year on the first Tuesday in March. At Town Meeting, the registered voters discuss and act on the business of the town, which includes the annual operating budget. All business is conducted “from the floor” by voice vote unless otherwise required by law or unless the Moderator determines that the outcome is too close to call, in which case a paper ballot is required.

Town Owned Facilities

Story Memorial Hall

Built in 1915, the "Town Hall," as it is commonly known, serves the public in many ways. In addition to housing the town offices of West Windsor, the upper story is the central gathering place for town-wide meetings and other functions. Various groups, both public and private, use the hall for meetings, events, activities and social gatherings. Although the upper story is equipped with a stage, the acoustics of the space leave much to be desired. With improved acoustics, the space would be more suitable for plays, concerts, and other performing arts activities.

An energy audit of the Town Hall was conducted in 2010. Although some of the lighting recommendations were implemented, additional lighting, electrical and insulation work would substantially improve the building’s efficiency, as would sealing or replacing the windows and doors.

A new vault was constructed in 2002 to preserve the resources located in the town offices, but additional vault space will soon be needed. The furnace used to heat the hall was replaced in 2016. There was a significant increase in record keeping requirements with the addition of town-owned water and sewer systems. Accounting Software was updated in 2018. With these complexities, additional space and/or a reconfiguration of the design and flow of the office environment should be considered. Digitizing records, and hardware or software to share information, either cloud-based or within the office, should also be considered.

The Town Highway Garage

In 1998, the highway garage was replaced with a pre-fabricated steel building capable of housing the highway department's entire equipment inventory. However, twenty-two years have passed since then and the staff size and equipment inventory have grown. Requirements for additional storage space have been addressed for the time being with the acquisition of the Burke property, which includes a 5-bay wooden storage structure and is conveniently located across the road from the existing highway garage. The acquisition of the Burke property will also enable the Town to relocate the sand pile, which encroaches on the state highway right-of-way. Eventually, as funding allows and circumstances require, the Town plans to build a new Fire Station on the Burke property, at which point the equipment storage needs of the highway department will have to be re-evaluated. Any capital budget planning should also take into consideration the replacement of the underground storage tank at the Town Garage.

Environmental considerations, including testing of the drinking water supply and the various lines and tanks associated with the wastewater systems at the highway garage, have been and will continue to be addressed.

West Windsor Town Forest

A total of 1,582 acres on Mt. Ascutney are owned by the townspeople of West Windsor. The Cross Woodlot was deeded to the town by the Cross family in 1979. In 1980, an advisory committee was formed to oversee the Town Forest, which included the Cross Woodlot and the 300-acre Glebe Lot. A 1986 forest management plan recommended thinning, but was never implemented. In 1991, the base-to-summit Vermont Bicentennial Trail opened, utilizing mainly old pulp roads from the Cross woodlot era, however the trail is prone to erosion and plans to relocate sections of it are being developed.

In 2005, Sport Trails of the Ascutney Basin (STAB) began constructing and improving recreational trails on the Town Forest property and adjacent ski area land. After the ski area closed in 2010, a town-wide survey found that residents support recreation as an economic engine, and ecological values as important to our quality of life. In 2015, the Town worked with the Trust for Public Land to acquire the former Ascutney Mountain Resort ski trail acreage and add it to the existing Town Forest. As a result, most of the recreational trail network on the mountain is now on Town property and public access to it is permanently protected through a conservation easement co-held by the Upper Valley Land Trust and the Vermont Housing and Conservation Board.

The conservation easement requires the Town to adopt a Community Forest Management Plan. To meet this requirement, the Town adopted an interim CFMP in 2015 and a final version in 2017. While the Conservation Commission oversees the Town Forest property as a whole, Ascutney Outdoors, a local non-profit organization, is directly responsible for management of certain land and property within the easement area, identified in paragraphs IV.3 and IV.4 of the easement as the "back country ski slope area" and the "multi-use recreation area," in accordance with a Land Use and Operating Agreement with the Town. Ascutney Outdoors also continues to develop and maintain the recreational trail network, currently by way of an agreement with STAB, another local non-profit organization. *See Chapter 6 (Recreation) for more information.*

Mary Blood Memorial Library

Brownsville's public library, originally built in 1900, was refurbished during 1988-89. The hours during which the library is open are limited. There is sufficient room for expansion of the book collection within the existing building. In 2017 the library was connected to the sewer system and a bathroom was installed. The building is ADA compliant. Wireless high-speed internet service is accessible from inside or outside the building. The library is owned by the Town and managed by a seven-member Board of Trustees, appointed by the Selectboard.

The Trustees of the library initiated a strategic planning process in April 2019 which included a review of the hours, budgets, and staffing of comparable town libraries throughout the state as well as a survey of town residents. Major themes identified through both the review and the survey were the need for more hours of operation, a better collection, and more programming. In response, the Trustees adopted a new mission statement which reads: *The mission of the Mary L. Blood Memorial Library is to provide residents of West Windsor of all ages meaningful opportunities for life-long learning through books, periodicals, electronic media, and year-long programming. Additionally, the Library strives to partner with local organizations to strengthen and enrich our community.* At the 2020 Town Meeting, voters approved a budget that would enable extending hours of operation, making important additions to the collection, and planning additional programs in collaboration with other Town organizations, and in furtherance of the Library's mission.

Sheddsville Cemetery

Sheddsville Cemetery, located along Cemetery Road, is owned by the town. Numerous burial sites are available.

Other Facilities and Services

The Brownsville Cemetery

The Brownsville Cemetery, located just north of Albert Bridge School on the Brownsville-Hartland Road, is under the jurisdiction of the Brownsville Cemetery Association, a private entity. There are burial sites available in the lower northeast section of the cemetery for the foreseeable future.

The West Windsor Historical Society

In 1981, the Gleaner Grange Hall was deeded to the Historical Society with the provision that if the Historical Society ever ceased to exist, the property would be turned over to the town. In addition to serving as the headquarters of the Historical Society, the building is the home of the "Brownsville Baked Bean Suppers," which benefit both the local elementary school and the Historical Society. Many historic records pertaining to the town are housed in the historic records office while artifacts and memorabilia are displayed in the museum. The Historical Society is in the process of digitizing many of its records, which can then be backed up off site. The second floor of the building is ADA accessible due to the installation of a lift in 2010.

Hospitals

There are no medical or health care facilities in West Windsor. The nearest facilities are in Windsor and include Mount Ascutney Hospital and a number of assisted living facilities. Residents typically travel to hospitals located in Windsor and surrounding larger towns, such as Dartmouth Hitchcock Medical Center (DHMC) in Lebanon, NH; Springfield Hospital in Springfield, VT; Valley Regional Hospital in Claremont, NH; or the Veterans Administration Hospital in White River Junction, VT.

TOWN GOVERNMENT AND ADMINISTRATION POLICIES

1. Provide for an efficient system of public facilities and services to meet current and future needs.

TOWN GOVERNMENT AND ADMINISTRATION RECOMMENDATIONS

1. Assess the need for additional storage space (such as the vault) and other modifications to make the current spaces more usable in town buildings.
2. Review and update the town's Community Forest Management Plan every 10 years.
3. Assess the need to acquire additional land for municipal purposes such as infrastructure, parking, recreational facilities, or the relocation of existing structures or resources (e.g. fire station, town sand pile).
4. Encourage the Historical Society to continue digitizing and backing up their records of town history.
5. Evaluate the town computer system every five years and consider a fund for hardware and

software updates as part of a Capital Planning process.

6. Digitize files and encourage file-sharing to increase efficiency between departments.
7. Create a Sustainability Committee to advise the Town on actions the community might take to make West Windsor the best environmental citizen it can be.
8. Charge the Sustainability Committee, if formed, with reviewing – and updating as necessary – the 2010 energy audits of Town buildings, and recommending a plan of action to achieve identified energy saving objectives.

SOLID WASTE AND RECYCLING

West Windsor is part of the Southern Windsor/Windham Counties Solid Waste Management District (SW/WCSWMD), which has prepared a Solid Waste Implementation Plan. The Town of West Windsor must be prepared to meet state and district requirements. Since 2007, the Southern Windsor County Regional Planning Commission (SWCRPC) has provided administrative and management services under a contract with the District. A recycling coordinator at the SWCRPC assists district towns with solid waste issues and recycling efforts.

Residents of West Windsor may use the Weathersfield Transfer Station and Recycling Center for a fee, or they may arrange for private haulers to dispose of household trash. The Weathersfield facility accepts a broad range of items for recycling, helping to reduce the amount of waste sent for disposal. (See the District's website at http://www.vtsolidwastedistrict.org for detailed information on available trash disposal and recycling information.) Early in 2020, the Weathersfield Selectboard notified West Windsor that increases in the cost to dispose of recyclables are affecting the Transfer Station's financial stability. At the same time, some of the Transfer Station's infrastructure is nearing the end of its useful life and needs to be replaced. To address these issues, Weathersfield proposed a "per parcel" fee for every parcel in West Windsor and Reading, similar to the fee already charged to Weathersfield residents. After some discussion, it was agreed that the three towns – Weathersfield, West Windsor and Reading – would consider various options to support the viability of the Transfer Station after the 2020 Town Meeting.

Recycling is beneficial to the environment by conserving valuable energy and natural resources. For these reasons, local businesses, individual households, and institutions are encouraged to recycle and reuse materials. Both the financial and the environmental costs associated with waste disposal are reminders that source reduction and proper waste management make sense.

Twice a year, the District hosts a household hazardous waste collection, which provides for free disposal of paints, pesticides and other hazardous wastes. Homeowners are encouraged to participate in these events.

Recent laws will result in significant changes to the provision of solid waste services over the next few years, such as unit based pricing (i.e. pay as you throw). In 2012, the State passed the Universal Recycling Law (Act 148) which includes specific requirements and timelines for mandated recycling and food composting. Composting is mandatory as of July 1, 2020.

SOLID WASTE AND RECYCLING POLICIES

1. Support efforts to reduce solid waste generation and incineration.

2. Support efforts to reduce the unnecessary use of toxic and hazardous materials.
3. Support recycling, composting, waste reduction, and reuse programs that are dynamic and productive.
4. Promote environmentally friendly and cost-effective disposal methods for all solid waste that cannot be recycled, composted, or otherwise reused.
5. Support the implementation of reasonable waste disposal fees that are accurately determined and charged to waste generators.
6. Support programs for the recycling of household, commercial and special wastes.
7. Promote cooperation among participating municipalities in the implementation of source reduction, recycling, and composting programs on a District-wide basis.

SOLID WASTE AND RECYCLING RECOMMENDATIONS

1. Distribute recycling information to local households, businesses, institutions, and realtors through the Town Clerk's Office and the town website.
2. Educate residents on the benefits of home composting.
3. Support on-going educational campaigns for schools, youth, consumers, and businesses.
4. Work with the SW/WCSWMD to implement Act 148 requirements.
5. Clarify the solid waste disposal options available to West Windsor residents and determine if the Town should invest in the Weathersfield Transfer Station to ensure that it continues to be one of these options.
6. Charge the Sustainability Committee, if formed, with undertaking an examination of ways to improve solid waste management and recycling.

CHAPTER 5. EDUCATION

The Mount Ascutney School District oversees the education of the town's pre-kindergarten through 12th grade students. West Windsor is an equal partner with Windsor in the district, which is also a member of the Windsor Southeast Supervisory Union (WSESU) along with Hartland and Weathersfield. Education in Vermont is paid for with a state-wide property tax. Please see Appendix C for more information on education funding.

ELEMENTARY EDUCATION

In West Windsor, the Mount Ascutney School District (MASD) provides education to kindergarten through sixth-grade students at Albert Bridge School (ABS). The Town of West Windsor owns the property on which the local elementary school building sits, but does not own the building and does not have any authority with regard to school policies. In June 2004, ABS brought all its programs into one space with a building project expanding the school's footprint from 9,000 square feet to 18,000 square feet. The entire facility was renovated and enlarged and the playing fields were resurfaced. In 2007, the community removed the old playground equipment and erected several new play structures on the school grounds.

In 2015-16, the town of West Windsor expanded the town's wastewater disposal system to serve the village area, including the Albert Bridge School. As a result, the school now has the capacity for cafeteria services. With the addition of a generator to run the well pump that serves the school, church, town hall and library, the school could also become an integral part of an emergency shelter "complex" for townspeople in times of disaster or extreme weather.

Transportation to and from school occurs in several ways. Approximately 15% of the students attending Albert Bridge ride the bus to school, while 5% walk or ride their bikes, and 80% are dropped off by their parents. Approximately 65% of the students take the bus home from school. Additional sidewalks, crosswalks and wider shoulders on roads near the school would improve the safety of walking and biking.

According to the Vermont Department of Education, there were 60 students enrolled in the Albert Bridge School (including pre-K) during the 2018-2019 school year, and the student/teacher ratio was 13 students per teacher (10.57 was the state average student/teacher ratio).

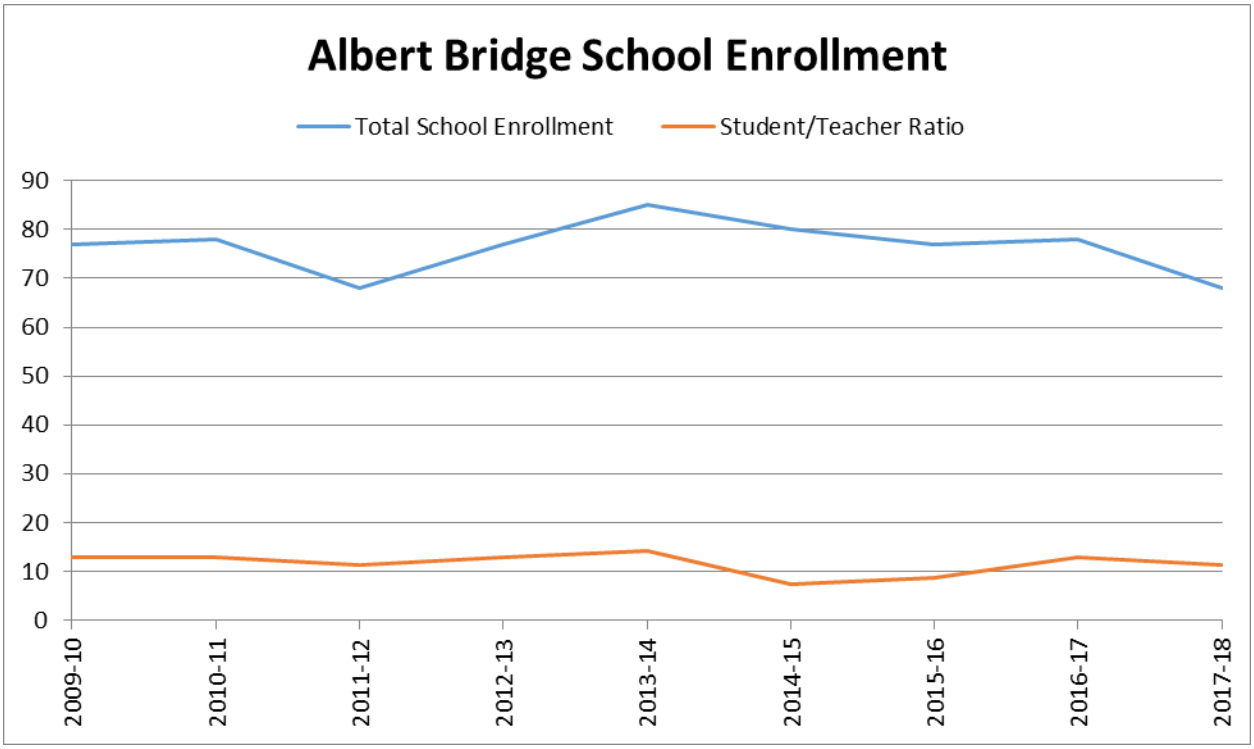
The town's elementary school provides students with an excellent education, but operating a small school of fewer than one hundred students is a financial challenge. Many of the school's enrichment programs are made possible through fundraising and volunteer support. The general sentiment of the town is that the benefits of operating a small school, with an emphasis on community involvement, outweigh the challenges.

A 2018 merger with neighboring Windsor was brought about to extend the life of Albert Bridge School and to lower state education taxes, a desire expressed by townspeople who participated in several surveys. The merger proposal was passed by voters in both towns. In West Windsor, there were 243 votes in favor, and 138 opposed, with a turnout of 44% of registered voters. In Windsor, there were 347 votes in favor, and 153 opposed, with a turnout of 37% of registered voters. The school merger expands the tax base, which in turn reduces the tax burden on West Windsor property owners.

There are many implications of the merger, including the planned provision of intra-district elementary school choice for students in grades K-6, and the loss of school choice for students in grades 7-12. The merger's Articles of Agreement set a deadline of July 1, 2020 for the district to come up with a plan that would allow West Windsor K-6 students to transfer to Windsor and vice versa. On the other hand, West Windsor students entering grades 7-12 as of July 1, 2019 will attend the Windsor School unless private arrangements are made and financed by parents, or the student is grandfathered into a school choice arrangement made in a prior year, in which case the student will be allowed to complete their secondary education at the school of their choice.

The Articles of Agreement also included a "hybrid" model of governance; that is, equal representation (three members from each town) on the district board chosen by voters in both towns. The new Mt. Ascutney School District board, elected by Australian ballot, came into effect on July 1, 2019. Ownership of the debt associated with the previously mentioned school expansion, which in 2018 had a remaining balance of $108,335, remains with the Town of West Windsor, annually paid down by its taxpayers.

One of the ideas advanced during merger discussions was the idea of incorporating Mt. Ascutney into the district's curriculum as a resource for teaching and learning across a variety of subject areas. Many West Windsor voters were persuaded to support the merger by this idea and the Town continues to support the district's efforts to implement this innovative approach to education. In fact, outdoor education offers additional advantages during times of pandemic when being outside is less risky and students need a break from on-line learning.



Source: Vermont Department of Education

According to the National Vital Statistics Report (Volume 67, No. 1, January 1, 2018) Vermont had by far the lowest birth rate in the nation in 2016. Vermont's birth rate was 9.2 births per 1,000

of population, down from 10.6 in 2007, and significantly lower than the average for the United States (12.2). Unfortunately, the trend in Vermont's birth rate is likely to result in an overall decrease in enrollment statewide, and continued focus on the issue of school consolidation.

MIDDLE & HIGH SCHOOL EDUCATION

As stated previously, the district merger requires students entering grades 7-12 after July 1, 2019 to attend the Windsor School unless the student is "grandfathered" or the student's family makes other arrangements. As of January 1, 2019, there were 60 West Windsor students in grades 7-12.

Prior to the merger, the town had limited control over rising secondary tuition costs. In 2018-2019, public school tuition in our area ranged from $16,355 (Windsor) to $17,500 (Woodstock) to $22,185 (Richmond Middle School, Hanover, NH), and the state provided an allowable tuition rate (state average) of $15,618 for students attending private secondary schools. (Source: Vermont Agency of Education)

VOCATIONAL, CONTINUING & HIGHER EDUCATION

Additional education, beyond high school, helps prepare residents for careers in various trades and professions. Many types of higher education are offered in communities near West Windsor. Community College of Vermont has two convenient sites, one in White River Junction and the other in Springfield, VT. In New Hampshire, River Valley Community College in Claremont, Granite State College in Lebanon, and Dartmouth College in Hanover also offer higher education and continuing education programs. In Windsor, various enrichment and health related programs are offered by the Prevention Partnership through the Mt. Ascutney Hospital.

EDUCATION POLICIES

1. Work with state, regional, and local leaders to influence and shape educational policy that advances Vermont's World Class Education Agenda.
2. Continue to develop an inclusive education model, beginning with the youngest students and their families (birth to pre-K) and continuing throughout, that directs resources to students who are at a higher risk of not reaching their full potential.
3. Support the use of the school building, and other public facilities, for educational activities for all ages, including activities provided by local organizations, such as the Aging in Place Committee of Reading/West Windsor and Ascutney Outdoors.
4. Celebrate diversity in its many forms, and offer educational opportunities on related topics such as implicit bias.

EDUCATION RECOMMENDATIONS

1. Develop an effective school governance model based on policies created by the board of education directors and teachers, in collaboration with members of the student body.
2. Consider improving safe walking and biking access to the Albert Bridge School.

3. Pursue funding for a generator to provide back-up power for the school, the church, and the water supply that serves both buildings, as well as the Town Hall, thereby enabling these three buildings to serve as an emergency shelter complex for the Town.
4. Support efforts by the Mt. Ascutney School District Board to develop a curriculum that incorporates outdoor education and takes advantage of local resources like Mt. Ascutney.

EARLY CHILDHOOD EDUCATION & CHILD CARE

While the town is not required to provide child care for infants, toddlers and preschoolers, ensuring the availability of safe and affordable child care is essential to all communities. To assist with affordability, the State of Vermont provides childcare subsidies for qualifying families through its Building Bright Futures initiative. Although there may be informal child care arrangements that take place in town, according to the Vermont Department for Children and Families, there are no registered child care homes or licensed child care centers for pre-school-aged children located in West Windsor as of January 2019.

With regard to early childhood education, in 2014 the Vermont legislature passed Act 166 to ensure universal access to pre-kindergarten programs for all Vermont children ages three to five. Initially, towns were responsible for paying $3,000 per child for tuition at an approved pre-Kindergarten facility. Tuition allowance increases at a rate of 3% per year and was $3,356 for the 2019-20 school year. If tuition for a specific pre-K program exceeds the allowance, parents are responsible for paying the difference. In 2020, there were 19 pre-K students in West Windsor. Although Albert Bridge School does not have a pre-K program, there are 21 approved pre-K facilities in the Windsor Southeast Supervisory Union. The Supervisory Union also offers free parenting classes.

EARLY CHILDHOOD EDUCATION & CHILD CARE RECOMMENDATIONS

1. Encourage families to use the pre-K allowance to take advantage of early childhood education and development programs, so that more children and families succeed in school and life.
2. Improve the quality and frequency of child-centered programs offered at the local library.
3. Facilitate local agency coordination in pursuit of the above.

CHAPTER 6. RECREATION

For approximately 30 years, recreation in general, and the ski area in particular, were the twin engines that drove the local economy. In 2008, the housing market collapsed and, in 2010, the ski area closed. As a result, the local economy experienced a substantial decline. However, the community has worked together to address these issues since then: The town partnered with the Trust for Public Land to acquire the ski area property. Ascutney Outdoors was established to operate the ski area and offer a broad range of year-round recreational opportunities. The town coordinated with Ascutney Outdoors to expand the trail network and host events, such as the Vermont 50 and Ragnar trail running relay event.

Hiking, biking, skiing, snowmobiling, horseback riding, events and other outdoor activities have made West Windsor an attractive choice for people who value the opportunity to enjoy various forms of recreation in a rural setting. Backcountry skiing has also become very popular in recent years. The T-bar and rope tow operated by Ascutney Outdoors provide options for skiers to enjoy the lift-accessed trails on the lower half of the mountain or to explore the backcountry trails higher up. Ascutney Outdoors also operates a tubing park just uphill from the resort hotel.

Our planning for the future must support, and expand on, these efforts to improve recreation in West Windsor. We must also work with our neighboring communities to enhance and promote the region as an outdoor recreation destination.

INVENTORY OF RECREATIONAL FACILITIES AND SERVICES

Mount Ascutney

The mountain is a dominant physical feature in town and a popular area for recreation. Public ownership of large tracts of land around the mountain facilitates the protection of wildlife, water quality, scenic views and recreational trails. These large tracts include the West Windsor Town Forest, Ascutney State Park (Windsor), Little Ascutney Wildlife Management Area (Weathersfield), and Weathersfield Town Forest. The West Windsor Town Forest was expanded by 469 acres when the adjacent ski area land was purchased by the Town in 2015. A system of public hiking trails, including the Brownsville Trail, Windsor Trail, Weathersfield Trail and Futures Trail, attract many visitors to the mountain. These trails are maintained by the Ascutney Trails Association (ATA). The Vermont Bicentennial Trail, accessed from the West Windsor Town Forest parking area off Coaching Lane, is maintained by local volunteers. Re-routing a section of the Bicentennial Trail is being planned. There are two hang gliding platforms near the summit of the mountain, one in the West Windsor Town Forest and the other in the Ascutney State Park in Windsor. Both are accessed through the state park**.**

West Windsor Town Forest

The Conservation Commission oversees the Forest primarily to conserve natural and scenic resources and to provide for outdoor recreation activities (see the 2017 *Community Forest Management Plan* and the **2015 conservation easement** for more information). A 35-mile trail system originally developed by Sports Trails of the Ascutney Basin (STAB) for hiking, jogging, snow shoeing, cross-country skiing, mountain biking and other activities extends from the town forest onto adjacent property. This trail network is enjoyed by both residents and visitors, and is

used for annual events such as the Vermont 50, West Windsor 5 & Dime Trail Run, and Ragnar Trail Vermont. For more information, see "West Windsor Town Forest" in Chapter 4.

Ascutney Trails & the Ascutney Outdoor Center
Ascutney Outdoors (AO) is a registered 501(c)(3) organization established to offer outdoor recreation opportunities under a renewable Land Use and Operating Agreement with the Town. Ascutney Outdoors oversees public access to the trails, forests and fields for mountain biking, hiking, trail running, backcountry and alpine skiing, snowshoeing and snow-tubing.

AO currently operates an 800-foot long rope tow, tubing lift and park, and owns a snow cat for ski trail grooming. An 1,800-foot-long T-bar lift was completed in 2020 to serve over 10 alpine ski trails for all abilities on the lower mountain slopes.

Constructed in 2018, the Ascutney Outdoors Center (AOC) is the hub for AO's recreational activities, and serves as a gathering place for outdoor education and conservation programs, cultural activities and community events.

Sports and Fitness Center
The Climb Fitness Center is owned by Holiday Inn Club Vacations Inc. At one time, the fitness center offered a variety of recreational opportunities to the general public as well as its guests. However, in 2020 Holiday Inn Club Vacations decided to close all areas of the fitness center except for the indoor and outdoor pools, and to restrict access to guests only.

Other Trail Networks
Trails are also found off of the mountain, throughout West Windsor on both public and private land. Sports Trails of Ascutney Basin (STAB) has been creating, mapping, improving, and maintaining low-impact recreational trails since 2005. STAB and the Ascutney Trails Association (ATA) are planning to merge in the near future. The West Windsor Moonlighters, a local chapter of the Vermont Association of Snow Travelers (VAST), maintains two snowmobile trails through West Windsor covering more than 23 miles. The Green Mountain Horse Association (GMHA) and local horseback riders have established riding trails throughout Town. Cross-country ski trails are available on privately-owned Mile Long Field, thanks to the generosity of the property owners.

Town Roads
Town roads are valued for recreational uses, including walking, bicycling, jogging and horseback riding. Town roads are also used for recreational events. With so many people using the roads for purposes other than transportation, it is important to consider safety improvements (e.g. signage, increased shoulder width) where feasible. The state maintains over 5 miles of state highway (VT Route 44). The town maintains over 48 miles of town highway. In addition, there are 4.5 miles of Class 4 roads and legal trails available for public use.

Other Public Recreation Sites or Facilities
Although the town forest comprises the largest land area for public recreation, the school grounds, the Cady Trail, and Tribute Park are also used by townspeople. Tribute Park, which is owned by the Brownsville Community Church, is located along Beaver Brook in the village. Picnic tables, stone fireplaces, and tall pine trees make the park an ideal setting for family and group get-togethers. Although serving the outdoor recreational needs of the students is the primary function of the school grounds, the playground and soccer field at the school also provide an area for public recreation when school is not in session. An outdoor skating rink, on the school soccer field, is

available during the winter months. There are no other public playgrounds or ball fields in West Windsor. The Cady Trail is located on a parcel of town-owned land just north of the school, between Beaver Brook and the Brownsville Cemetery. In addition, the Town Hall and the Albert Bridge School gym serve as venues for a variety of activities including indoor sports, concerts, plays, and community events.

REGIONAL RECREATIONAL ASSETS

There are many outdoor recreational facilities in the surrounding towns which, when combined with West Windsor's assets, represent an impressive collection of opportunities for both residents and visitors. There are nearly 9,000 total acres of public lands in West Windsor, Weathersfield and Windsor combined that allow for varying levels of recreation. Recreational opportunities in surrounding towns include the Connecticut River Paddlers' Trail, Hartland winter trail network, ATV trail network in Reading, State Park campgrounds, and many other facilities. In 2019, West Windsor worked with neighboring towns to develop a regional outdoor recreation plan. Some of the key recommendations from that plan are incorporated in the recommendations below.

RECREATION POLICIES

1. Development shall minimize negative impacts on established local trail easements and rights-of-way.
2. Consider adoption of permanent easements to allow for planned trail connections when development is proposed for lands located between two key recreational trails.
3. Focus development of commercial recreational activities within the existing Resort/ Residential District.
4. Conservation Fund revenues may be used for Town recreation facilities.

RECREATION RECOMMENDATIONS

1. Work with partnering towns and organizations1 to maintain, improve and promote the existing trail networks.
2. Ensure that the Conservation Commission monitors whether the use of the Town Forest is in conformance with the *Community Forest Management Plan* and the Conservation Easement.
3. Work with partner organizations and the towns of Weathersfield and Windsor to plan for and develop a trail around the lower portion of Mount Ascutney (i.e. trail around the mountain). The trail should accommodate a variety of uses, such as hiking, horseback riding, mountain biking, and cross-country skiing.
4. Coordinate with partner organizations and the Department of Forests, Parks and Recreation to plan for a trail to connect with the existing road in the Little Ascutney Wildlife Management Area, providing access from West Windsor, in compliance with the requirements of the conservation easement.

[1] Partners are defined broadly in this context to incorporate recreational groups and neighboring towns that have been involved with the multi-jurisdictional outdoor recreation plan or that have an interest in collaborating with West Windsor to plan, design, build and/or maintain recreation facilities in and around town.

5. Consider coordinating with the West Windsor Moonlighters and Green Mountain Horse Association to allow parking in the lot located along Ski Tow Road and developing spur trails to connect onto their existing trail networks.
6. Consider developing an accessible trail network by building new trails and/or improving existing trails.
7. Develop a policy regarding the use of pedal-assist bikes and other mobility devices on town-owned property.
8. Coordinate with neighboring towns and partner organizations to develop a marketing plan, create a one-stop source for information about the area, and cooperatively promote the area as a destination for outdoor recreation.
9. Plan for widening roadway shoulders along VT Route 44 and sections of the Brownsville-Hartland Road. Coordination with the Vermont Agency of Transportation will be required for VT Route 44 shoulders.
10. Consider increased annual contributions to the Conservation Fund for the purchase of trail easements.
11. Once reclamation of the tailings ponds located at the former talc plant is complete, the town should explore if the owner will donate the land to the town. If so, the town should consider recreational opportunities for the parcel.
12. Improve signage to Town Forest trailhead and Ascutney Outdoors Center.

CHAPTER 7. NATURAL, SCENIC AND HISTORIC RESOURCES

West Windsor has important natural, cultural, historic, scenic, and recreational resources, which should be considered during the planning process.

NATURAL RESOURCES

The following natural areas warrant consideration for protection: agricultural soils, surface waters, wetlands, riparian zones, floodplains, wildlife habitat, and large contiguous tracts of undeveloped land, including Mount Ascutney, Ascutney Basin, Mile Long Field and Pierson's Peak. In addition, the VT Route 44 valley area, west of the village of Brownsville, is important for its prime agricultural land, flood hazard potential and scenic view of Mount Ascutney.

Much has already been done to preserve the natural condition of these areas. Several large tracts have been in public ownership for some time and additional lands, creating a corridor between Mount Ascutney and Little Ascutney Mountain, have been protected through public acquisition, conservation easements, and purchase of development rights. Efforts to preserve the natural beauty of these areas should continue. To the extent that regulatory measures can contribute to this objective, the town should maintain standards that will encourage low density, minimum impact development outside the primary and secondary growth areas. The town should also continue to support the West Windsor Conservation Fund for the purchase of conservation easements or development rights on land with exceptional scenic beauty, significant natural resources, critical wildlife habitat, or important recreational trails.

Surface Waters

Surface waters (rivers, permanent and intermittent brooks, streams, ponds, vernal pools, and wetlands) are an abundant and valuable resource providing habitat, fishing, swimming, drinking water, irrigation, aquifer recharge, and scenic beauty. Measures to protect one of these uses may also protect others. For example, steps taken to assure that pollutants and turbidity do not exceed acceptable levels will protect these waterways for swimming and fishing.

Farm runoff, failing septic disposal systems, inadequate stormwater infrastructure, and stream bank erosion contribute to poor water quality in local ground and surface waters. Stream crossing structures (bridges and culverts), road run-off, and the presence or absence of vegetated buffer strips along rivers and streams also affect water quality, fish habitat, and scenic beauty.

The location of surface waters often influences both the location and form of development. Major waterways in West Windsor include the Mill Brook and its tributaries: Willow Brook and Beaver Brook. (See Map #4).

The expansion of the sewage collection system into the village in 2015-16 allowed for the decommissioning of twenty-eight on-site septic systems. Some of these systems were more than forty years old and were too close to Mill Brook to meet current state regulations. Many were also within the water supply isolation zone of a neighboring well. While these risks to ground and surface waters have been eliminated, there are still some risks associated with agricultural land uses upstream from the village.

Wetlands

Wetlands are those areas that are inundated by surface or ground water sufficient to support vegetation and/or aquatic life that depend on saturated or seasonally saturated areas for growth and reproduction. Such areas include marshes, swamps, vernal pools, mud flats, bogs and ponds. Wetland benefits include fish and wildlife habitat, flood and erosion protection, pollution filtration, ground water recharge, and sites for education, recreation and scenic enjoyment. Map #4 depicts inventoried Class 2 wetlands in West Windsor, but does not include Class 3 wetlands

Riparian Buffers

A riparian buffer zone is defined as the strip of land bordering a body of surface water, whether still or flowing. A vegetated buffer zone is meant, at a minimum, to provide a protective strip between a body of water and any adjacent land that has undergone human transformation to farmland, roadway, or other type of development and, at an optimum, to contribute to the well-being of the animal and plant life both in and adjacent to the body of water. Currently, West Windsor Zoning Bylaws require a minimum 50-foot buffer along wetlands, streams and rivers that are under state or federal jurisdiction. Wider buffer widths may be required for adequate pollution and erosion protection due to the soil and slope conditions of each site. Narrower buffer widths may be allowed under certain circumstances.

Watershed Planning

Tactical basin plans (TBP) for Vermont's watersheds are developed by the Vermont Agency of Natural Resources. In order to facilitate its implementation, each TBP contains objectives, prioritized strategies, benchmarks and tasks. West Windsor and its waters are addressed in the Basin 10 Plan for the Black and Ottauquechee river watersheds. The TBP is the guidance document for the ANR's work on water resources. It is used to prioritize projects and target resources for restoration and protection. The Vermont Agency of Natural Resources completed the Tactical Basin Plan for the Black and Ottauquechee Rivers in June 2018.

Flood Hazard Areas

See Chapter 8: Flood Resilience.

Agricultural and Forest Lands

Second-home growth has increased development pressure in open, agricultural, and forested areas. Forestry plays an active role in the ecological, economic, and social health of the area. This type of land provides habitat for wildlife, contributes to water and air quality, provides for a forestry industry and enhances recreation and the tourism industry. For these reasons, it is vital to maintain sound forestry practices, limit the spread of development and prevent fragmentation of large (generally 50 acres and larger) tracts of contiguous forested lands.

Agriculture plays an important role in defining the area's lifestyle and landscape and contributes to the stability and diversity of the economy and local communities. Although the amount of farmland in the State is decreasing, the number of small farms is actually on the rise. There is a growing demand for local retail products, including maple syrup, cheeses, fruits and vegetables, meat and wool. There are also many horse farms and active horse pastures located in town.

Map #5 shows the most likely productive agricultural soils as identified by the Natural Resources Conservation Service (NRCS). Soils categorized by the NRCS as "prime agricultural soils" have the greatest potential for productivity and are important for current and future food production. Areas designated as having "soils of statewide significance" are also important, but limited in their productive capacity by slope or other mitigating factors. Development shall be designed to minimize, or reasonably mitigate, impacts on these agricultural soils.

Vermont's Use Value Appraisal Program (AKA "current use") encourages landowners with 27 acres or more to use their property for farming or forestry by reducing the assessed value, and therefore the tax burden, on the property. The amount of land enrolled in "current use" in West Windsor has increased from 6,087 acres in 2012 (38.5% of the total acreage of the town) to 6,388 acres in 2017 (40.4% of the total acreage of the town). By providing tangible financial incentives to keep land open and undeveloped, current use helps maintain the town's rural character. See Map #9.

Forest Blocks and Habitat Connectors

Many animal species rely on large contiguous areas of forests, fields and other undeveloped lands for habitat. The fragmentation of such land can result in decreases in the number of species and the size of populations of many species. Connections between large contiguous wildlife habitat areas may serve as wildlife travel corridors.

Act 171, passed in 2016, amended Vermont's State Planning Goals to include the protection of forest blocks and habitat connectors. In addition to the statewide and regionally significant forest blocks identified by the Agency of Natural Resources, West Windsor's Planning and Conservation Commissions have identified locally significant forest blocks and habitat connectors within West Windsor (see the Forest Blocks Map). The already conserved lands around Mount Ascutney – including the Ascutney State Park and West Windsor Town Forest – form the largest forest blocks in Town. Additional forest blocks and riparian areas along West Windsor's eastern and southern boundaries form important habitat connectors between West Windsor and surrounding towns that allow wildlife to move through the Town and the wider region.

Infestations of emerald ash borer (EAB) in parts of Vermont and much of New Hampshire pose a threat to ash tree stands in the West Windsor Town Forest and throughout town. Although the eventual arrival of this invasive beetle is probably inevitable, residents can help delay the arrival and the damage that will follow by buying locally harvested firewood. Residents who think they have identified an emerald ash borer, or a tree infested by EAB, should contact the UVM Forest Pest Coordinator or a local representative of the VT Forest Pest First Detector program.

In the winter of 2019-20, a group of volunteers inventoried and mapped the ash trees located within public highway rights-of-way in West Windsor. This information will help the Town evaluate the potential impact of a local infestation of emerald ash borer.

Soils and Steep Slopes

Soils vary greatly in their composition, which can determine what types of land use are most appropriate. Outside of the resort base area, which is served by a sewer system, one of the major factors in determining the development potential of each site is its capacity for on-site wastewater

disposal (See Map #6). Water supply and wastewater disposal are currently regulated by the State of Vermont.

Steep slope areas may not be suitable for development due to limitations for septic systems, erosion and stormwater runoff problems and high construction costs. (See Map #5) All proposals for development on slopes with gradients in excess of 25 percent must include erosion and sedimentation control plans to avoid these potential problems. Driveways over 15 percent in grade are generally considered too steep for safe emergency vehicle access.

STRATEGIES FOR PROTECTING NATURAL RESOURCES

There are a number of pressures on West Windsor's natural resources, which are already highlighted in the Special Considerations section of the Land Use chapter. Chief among these threats are poorly planned development, fragmentation of habitat by new roads, pollution in the form of farm and road runoff, failed septic systems, inadequate stormwater infrastructure, erosion, and invasive exotic plant and animal species, such as emerald ash borer.

There are a number of strategies that can be used to minimize these threats to our natural resources including regulations, buffers, monitoring, education, and incentive programs like current use. For example, existing zoning regulations protect wetlands, streams, floodplains, and critical wildlife habitat. Subdivision regulations protect agricultural soils, forest land, ridgelines, open space and threatened or endangered species. Buffers can be an effective means of separating scenic or natural resources from incompatible uses.

NATURAL RESOURCE POLICIES

1. Encourage the protection of ground and surface waters, wetlands, steep slopes, shallow soils, and areas supplying significant recharge waters to aquifers and watersheds for future water supplies.
2. The storage and transportation of hazardous chemicals should not pollute water resources.
3. Encourage landowners to establish and/or maintain appropriate undisturbed vegetated buffers along watercourses, ponds, wetlands, and vernal pools in order to protect shorelines, provide shading to prevent undue increase in stream temperatures, minimize effects of erosion, sedimentation and other sources of pollution, and maintain scenic, recreational, and habitat values.
4. Encourage the safe and sustainable use of forest land for fuel, wood products, maple syrup, recreation, wildlife habitat, and scenic beauty.
5. Support the development of local industries which produce "value added" agricultural and forest products.
6. Maintain standards that will encourage low density, minimum impact development in the vicinity of Mount Ascutney, Little Ascutney Mountain, Ascutney Basin, Pierson's Peak, Mile Long Field and associated acreage, and the valley area along Route 44, west of the village of Brownsville.

NATURAL RESOURCE RECOMMENDATIONS

1. Consider increasing the town's annual contribution to the Conservation Fund for the purchase of land, conservation easements or development rights on land with exceptional scenic beauty, significant natural resources, critical wildlife habitat, or important recreational trails.
2. Consider creating policies and regulations that encourage the preservation of farms, agricultural lands, and forest lands.
3. Ask the Conservation Commission to provide local property owners with information on identifying and controlling common invasive exotic species (e.g. wild parsnip). Make the information available at the Town Hall, and publish it on the town's website.
4. Support the efforts of the Selectboard and the Health Officer to identify, assess and mitigate pollution problems caused by septic systems and other sources.
5. Participate with agencies and organizations that sample water quality in Mill Brook and take action to address any problems that are discovered.
6. Update all local regulations, bylaws and ordinances to reflect current state rules as they relate to natural resources.
7. Coordinate with neighboring towns to maintain large tracts of undeveloped land.

EARTH RESOURCE EXTRACTION

The extraction of earth resources (i.e. sand, gravel, talc, rock) is a typical activity in rural, working landscapes. It provides jobs and can be a valuable source of income for rural communities. Historically, quarrying occurred on Mount Ascutney. The former talc plant located south of VT Route 44 near the Reading town line is no longer in operation. There are no other active extraction sites in West Windsor at this time. However, there are a few potential local sources for sand, gravel and stone for local highway and construction uses. While extraction activities can be a benefit, they can also adversely affect the roads, natural environment, rural landscape, and the peace and quiet of the rural community. These activities are regulated under Section 4.7 of the Zoning Bylaws and are subject to applicable performance standards.

EARTH RESOURCE POLICIES

1. The extraction of any earth resource shall be permitted only when the effects of such extraction, or related processing, do not have an adverse impact on surrounding properties, essential wildlife habitat, and/or the environment.
2. Property owners shall restore the natural appearance of extraction sites within two years of the discontinuance of regular on-going extraction activities.

AIR RESOURCES

West Windsor does not have a heavy industrial base or concentrated population. Accordingly, the town's air quality is good and constitutes an environmental resource that has aesthetic as well as human health benefits. Activities that produce noxious odors, particulate matter (from dust, smoke or fumes), radiation, chemical vapors, motor vehicle exhaust or power plant emissions, could have a negative impact on air quality and should be minimized or mitigated.

AIR RESOURCE POLICY

1. All applicable development shall meet the Performance Standards under Section 3.11 of the West Windsor Zoning Bylaws in order to maintain the town's good ambient air quality.

AIR RESOURCE RECOMMENDATIONS

1. Maintain town equipment to meet or exceed emission standards.

2. Consider using biodiesel in town vehicles.

WILDLIFE HABITAT

Housing, resort, and commercial development can severely diminish the ability of wildlife habitat to support wildlife populations. West Windsor has a variety of fish and wildlife resources including upland forested areas that provide cover and habitat for deer, bear, game birds, small mammals and other species; deeryards which provide a particularly important winter shelter area for deer; and open meadows that support a variety of bird species. (Map #4 shows deer wintering areas.) Water habitats support trout and other aquatic organisms and attract a variety of migratory waterfowl. Undeveloped riparian habitats support amphibians, reptiles, birds, mammals and rare vegetation. Wetland habitats support songbirds, game birds, beaver and otter, and are important breeding areas for a variety of species. See the related discussion under the Forest Blocks and Habitat Connectors section in this Chapter.

For more detailed information and recommendations on wildlife habitat in the town forest see the Community Forest Management Plan for the West Windsor Town Forest (2017) and the Natural Communities Report and Management Plan for the West Windsor Town Forest (2011).

West Windsor's zoning and subdivision regulations protect some critical wildlife habitat (e.g. deer wintering areas) and require buffers along streams and around wetlands. Strategies for protecting other habitats (e.g. open meadows) should be explored.

WILDLIFE HABITAT POLICIES

1. Plan development to minimize impact on wildlife habitat and encourage retention and improvement of wildlife habitats using state maps and local resources.

2. Encourage responsible use of wildlife resources as an economic benefit to the town.

3. Protect riparian corridors for wildlife habitat, as well as water quality.

WILDLIFE HABITAT RECOMMENDATIONS

1. Manage the Town Forest in accordance with the "Community Forest Management Plan for West Windsor Town Forest" and consider implementing recommendations in "West Windsor Town Forest: Ecological Assessment and Natural Community Mapping Project, 2011."

2. Charge the Conservation Commission with identifying, mapping, and developing non–regulatory means for protecting wildlife habitat (including open meadows) through education,

easements, or land trusts, or by using our local conservation fund to purchase development rights.

SCENIC AREAS

The rural character of West Windsor is composed of a scenic natural landscape with traditional New England settlement patterns and architectural designs that are of great importance to the community. The natural landscape includes open space, working and non–working agricultural lands, wildlife habitat, and forest land. The town recognizes the irreplaceable value of all these resources and the need to protect them as they serve to preserve local heritage, while enhancing the rural environment, economy, and way of life for residents and visitors.

Few things exemplify the universal enjoyment of, and appreciation for, the Vermont landscape as much as a walk or drive down a country road or an expansive view of the landscape from a hill or mountain top. Unobstructed, unlit views of the night sky and rural roads lined with mature trees are cherished aspects of life in Vermont. West Windsor has managed to retain virtually every scenic quality that people consider valuable: open mowed fields outlined by stone walls and fencerows; actively cultivated farmland; large tracts of undeveloped forest land; streams and ponds; and, from countless vantage points throughout the town, the dominant presence of a singular large mountain. Enjoying the visual qualities of the land is a form of recreation in itself; one that has value and is worthy of attention when considering ways to direct the changes that will, without question, occur in West Windsor.

Important scenic resources that define West Windsor's rural character include:

- Mt. Ascutney
- Pierson's Peak
- Mile Long Field and associated acreage
- Best and Bowers Historic Covered Bridges
- Unpaved, tree-lined roads
- Ridgelines

Although "scenic beauty" and "views" are intangible qualities, held principally in the eyes of the beholder, townspeople should remember that the local economy is dependent, in large part, on tourism, and that these qualities are what commonly draw visitors to the area. The visual characteristics of the town also contribute to the quality of life that is appreciated and cherished by those who live in West Windsor.

SCENIC AREA POLICIES

1. Maintain natural and man–made features of local scenic and historic significance and protect them from activities that impair their integrity, character and/or quality.

2. Encourage landowners to consider the town's heritage and natural resources when developing their property through careful design and siting of all structures, accesses, parking lots, utility installations (including solar arrays and windmills), landscaping, and screening.

3. Encourage development patterns that prevent the fragmentation of larger parcels of land in order to retain open space and maintain habitat areas.

4. Encourage compatible and responsible use of lands adjacent to or including areas of scenic, historical, educational, architectural, or archaeological value.
5. In order to protect the view of the night sky undiminished by light pollution, lighting should be kept to the minimum necessary for safety and security.
6. Paving of gravel roads should be avoided to retain the existing rural and scenic quality of the town's gravel roads.
7. Encourage preservation of existing tree canopies along town roads, and mowing of unused pastures to maintain open space.

SCENIC AREA RECOMMENDATIONS

1. Identify locally significant scenic resources and develop strategies for their protection, including local ordinances.
2. Consider reviving the Planning Commission's efforts to incorporate standards for ridgeline development in West Windsor's land use regulations.
3. The Planning Commission and the Highway Department will jointly review the Highway Department's Environmental Mission Statement, a non-regulatory set of road maintenance guidelines, and revise them if necessary to reflect new information, including recently adopted codes and standards.
4. Encourage property owners and businesses to avoid storage of unsightly debris.

HISTORIC RESOURCES

West Windsor's historic resources include settlement patterns which feature a distinct village with lower density housing and open space in the surrounding areas. The village of Brownsville and 15 local sites are listed on the State Register of Historic Places by the Vermont Division for Historic Preservation. In addition, there are two covered bridges in town which are on the National Register, Best's covered bridge and Bowers covered bridge. Opportunities to protect important landmarks of the town's history, including individual buildings, settlements, cellar holes, cemeteries, stone walls, or other important features and their environs, should be considered by the community when they arise. Since the state designated Brownsville as an official "village center," property owners who renovate historic structures in the village may be eligible for tax credits. The local historic resources[2] listed below deserve recognition and protection:

1. Raymond Spackman House (built circa 1848) on Kimball Farm Road
2. Leigh Harlow House on Route 44, 2.4 miles west of the village
3. Marcus Hurlburt House (AKA The Best House, in the Best family from 1896 to 1972) built circa 1820 on Route 44, 2.9 miles west of the village
4. Louis McMillen House (AKA The Churchill House) built circa 1852 on Churchill Road, 0.2 miles south of Route 44

[2] The Heritage of West Windsor by Earla Bear Scull

5. Leigh Banister House, built circa 1808, on Banister Road
6. Edward Langenback House (AKA The Augur Hole, The Delano Place) built circa 1825 on Auger Hole Road
7. Helen Culin House (in the Davis Family from 1861 to 1932) built circa 1825 on Delano Road
8. Hugh Tatlock House (AKA The Ralph Farm) built circa 1825 on Rush Meadow Road, 2.8 miles north of Route 44
9. William Bryant House, built circa 1790, on Bryant Road
10. Dr. Catherine Riley House (built circa 1848, by Peter Taylor) on Dugdale Road
11. Howard Furnas House (AKA Bosson House), built circa 1808 at the intersection of Sheddsville & Cemetery Rd. (north side)
12. The Birmingham House (AKA The Stone House) built circa 1830 at the intersection of Sheddsville & Cemetery Rd. (south side)
13. The Westgate House, built circa 1820, on Westgate Road
14. Brownsville Historic District, including the Sykes house (c. 1827), the Parsonage (c. 1830), the Bascom house (c. 1799), the Church (c. 1859), the Library (c. 1901), the Town Hall (c. 1915), the Pierce house (c. 1828), the Grange Hall (c. 1915), the Bertrand house (c. 1840), the Swallow house (c. 1810), and the old General Store
15. Daniel Cady Mausoleum on Strawberry Hill

HISTORIC RESOURCE POLICIES

1. Help protect places of significant cultural, aesthetic, archeological and/or historical value from development that impairs their character and quality by educating the public about their importance to the community.
2. Encourage rehabilitation that preserves, and development that is compatible with, the historic, cultural and architectural character of the town.

HISTORIC RESOURCE RECOMMENDATIONS

1. Revise local land use regulations to support the adaptive reuse of architecturally or historically significant structures and provide guidelines for development in the historic village area.
2. Encourage “village center” property owners to take advantage of tax credit programs for renovating historic structures.
3. Encourage the West Windsor Historical Society to participate in the state historic sites and structures survey to further identify locally significant historic resources.
4. Continue to identify and map locally significant historic resources with assistance from the West Windsor Historical Society.

CHAPTER 8. FLOOD RESILIENCE

In accordance with 24 V.S.A.§4382(a)(12)(A) and §4385, West Windsor's municipal plan includes this flood resilience chapter. This chapter identifies flood hazard and fluvial erosion hazard areas, based on river corridor maps provided or recommended by the Secretary of Natural Resources pursuant to 10 V.S.A. §1428(a). The chapter designates areas to be protected, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forests. Protecting these areas will reduce the risk of flood damage to infrastructure and improved property. Policies and strategies that protect the hazard areas identified and mitigate risks to public safety, critical infrastructure, historic structures, and municipal investments, are included.

On August 28, 2011, West Windsor and much of Vermont experienced significant infrastructure and personal property damage from Tropical Storm Irene. The West Windsor Volunteer Fire Department was flooded. The historic Bowers Covered Bridge was washed down stream. Twenty-four town roads and numerous culverts were washed out. The cost of repairing the damage to town infrastructure totaled $750,000. Ninety-five percent of the cost was reimbursed by FEMA and the Vermont Agency of Transportation. For many Vermont towns, including West Windsor, "Irene" was the first major flood since 1973 but, if recent studies are correct, it won't be the last.

According to *Global Climate Change Impacts in the United States* by Thomas Karl, Jerry Melillo, and Thomas Peterson (2009), the amount of precipitation falling in very heavy events (defined as the heaviest 1% of all daily events) increased by 67% in the Northeast from 1958 to 2007. The increase was greater in the Northeast than in all other areas of the country.

In 2013, to encourage towns to prepare for future flood events, the Vermont legislature passed Act 16, which requires town plans adopted after July 1, 2014 to include a "flood resilience" element. Act 16 puts forth the following goals:

1. New development in identified flood hazard, fluvial erosion, and river corridor protection areas should be avoided. If new development is to be built in such areas, it should not exacerbate flooding and fluvial erosion.
2. The protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion should be encouraged.
3. Flood emergency preparedness and response planning should be encouraged.

In Vermont there are generally two types of flooding, inundation and fluvial erosion. Inundation occurs when water rises onto low lying land. Fluvial erosion occurs when a river wears down its banks – sometimes gradually, sometimes suddenly - undermining or sweeping away adjacent development in the process. Inundation hazards are addressed by the National Flood Insurance Program (NFIP) while fluvial erosion hazards are addressed by the Vermont ANR's River Corridor and Floodplain Management Program.

The NFIP provides subsidized flood insurance in communities that have adopted flood hazard area regulations to reduce the risk of property damage from inundation. West Windsor has adopted Flood Hazard Area Regulations. Flood insurance rates are based on Flood Insurance Rate Maps (FIRMs), which delineate areas likely to be inundated during a flood. FIRMs are available at the town office, at the FEMA Map Service Center (www.msc.fema.gov) and on the Vermont Natural Resources Atlas (http://www.anr.state.vt.us/site/html/maps.htm). West Windsor residents or

business owners with buildings in or near the floodplain may purchase flood insurance through the NFIP. All development in flood hazard areas requires local flood hazard review.

Two-thirds of Vermont flood damages occur outside of the special flood hazard area (SFHA) shown on the FIRM. This may be due, in part, to map inaccuracies but it is also due to the fact that FIRMs do not identify fluvial erosion hazard (FEH) areas. To correct this deficiency, the VT Agency of Natural Resources developed River Corridor maps. The River Corridor maps are based on studies of each stream's physical condition and sensitivity to erosion.

Flood maps and river corridor maps often differ. In some situations, the river corridor is narrower than the SFHA (as a result of bedrock that controls channel adjustments, for example). In other situations, the river corridor may extend beyond the SFHA. Special flood hazard areas and river corridors are depicted on the Water Resources Map.

NATURAL PROTECTION FROM FLOODING & FLUVIAL EROSION

Upland forests, undeveloped floodplains, wetlands, and vegetated stream buffers help protect West Windsor from damage caused by flooding and fluvial erosion. These natural features also protect our downstream neighbor, the town of Windsor.

Upland Forests
Maintaining an adequate forest cover in rural upland areas and steep slope areas helps to maximize infiltration of water into the soil, and minimize or slow down stormwater runoff in ways that mitigate flooding hazards to downstream locations. Efforts to minimize heavy cutting in forestry activities, limiting the extent and densities of developments, and properly managing stormwater in these upland areas will help contribute toward community flood resilience. In accordance with Act 16, West Windsor should do everything possible to protect upland forest areas in the Mill Brook Watershed.

Undeveloped Floodplains
Floodplains are a natural storage area for flood waters, allowing them to slow down, spread out, and infiltrate into the soil. Floodplains also capture sediment and debris. Generally, in-stream debris provides important wildlife habitat and should not be removed except to protect public safety or prevent severe property damage. When debris does threaten life or property, property owners should contact a Vermont River Management Engineer and request permission to remove it. In an emergency situation, the town may file an "emergency protective measure" report online.

Approximately ¾ of a mile of floodplain between Mill Brook and Route 44, west of Kimball Farm Road, is protected by a conservation easement. Additional easements along Mill Brook should be pursued, and the town should consider offering tax incentives to property owners who agree to conserve land in a floodplain or river corridor.

In 2015, Fitzgerald Environmental Associates, LLC completed a River Corridor Plan for Mill Brook in Windsor, West Windsor and Reading, Vermont. The Plan identifies and prioritizes river corridor restoration projects in each town that will "mitigate flood and erosion hazards and improve ecological integrity and water quality." Nine of the twenty-two projects in West Windsor fall under the Town's jurisdiction and involve bridge or culvert replacement, bank stabilization, or dam removal. One of the projects, the removal of the concrete block dam behind the Fire Station, has been completed. Another dam, on private property along Harrington Road, has also been removed. As funding allows, the Town should consider pursuing additional restoration projects

identified in the River Corridor Plan, as well as the Tactical Basin Plan for the Black and Ottauquechee Rivers (see Watershed Planning in Chapter 7). .

Wetlands & Vegetated Stream Buffers
Naturally vegetated riparian buffers are an integral part of river corridors. In addition to reducing flood hazards and stabilizing stream banks, buffers provide wildlife habitat and filter runoff. West Windsor's zoning regulations require a 50' vegetated buffer along all streams and wetlands. Riparian buffers should be "undisturbed" (i.e. earth-moving activities, the storage of materials, the removal of non-invasive trees and shrubs, and mowing should be avoided or prohibited in riparian buffers).

ENCROACHMENTS THAT CONTRIBUTE TO FLOODING & FLUVIAL EROSION

Agricultural development, impervious surfaces, elevated ponds, and armored stream banks can contribute to flooding, fluvial erosion, and surface water pollution, with harmful effects both upstream and down.

Agricultural Development
When it comes to floodplain management, agricultural development is a mixed blessing. On the one hand, undeveloped farm fields help maintain the functions of floodplains, storing water and allowing it to spread out and slowly infiltrate into the ground. On the other hand, most agricultural structures and uses are exempt from local zoning and flood hazard area regulations. As a result, it's not unusual for farm structures to be built in the floodplain and for farm materials and equipment (hay bales, tractors, etc.) to be stored in the floodplain. In West Windsor, hay bales stored in the floodplain were washed downstream during Tropical Storm Irene and exacerbated an already dangerous and destructive situation. The town strongly encourages farmers and other landowners to not store hay bales and other materials and equipment within special flood hazard areas and the river corridor. It is certainly in the best interest of the farmer to protect his or her farm structures, equipment, livestock, feed stores, and crops. Any protective actions by the farmer will also protect town infrastructure and abutting property, and most likely reduce the farmer's insurance costs. In addition, to protect public safety and prevent future damage to public and private property, the town should consider adopting policies or ordinances addressing the storage of unsecured objects in the floodplain.

Impervious Surfaces
Because impervious surfaces, such as paved parking lots, do not allow water to soak into the soil, they can increase flood levels if storm water is not properly managed through Low Impact Development or other best management practices. Other than Route 44, the Brownsville-Hartland Road, Hotel Road, and portions of Ski Tow, Seems, and Pierce Hill Roads, the roads in West Windsor are not paved. In addition, except in commercial areas (the resort, former pellet plant, and humane society) and in high-traffic areas in the village (the school, town hall, general store, fire station and post office), most parking areas are unpaved. As a result, the amount of impervious surface in West Windsor is relatively small. To prevent runoff from impervious surfaces from increasing flood levels and carrying pollutants into our waterways, additional paving in flood hazard areas and river corridors should be subject to conditional use review by the Development Review Board. Approval should be limited to high-traffic areas and conditioned on the use of porous pavement materials and riparian buffer enhancements. Any approval should specify that

improvements may not be protected from future damage with channel constraints such as berms or armored stream banks.

Ponds
Ponds located above the elevation of the adjacent roadway can damage the roadway if they overflow their banks or if their containment structures fail. West Windsor's zoning regulations currently require applications for such ponds to include a letter from the West Windsor Highway Foreman approving the proposed pond design. An unlined pond in a floodplain, outside the river corridor and below the level of the adjacent road, should not have an impact on the floodplain as long as fill is not placed above grade to create an embankment. Even so, pond construction should not be allowed if it would impact an existing wetland or a neighboring property. In a river corridor, the river may eventually migrate and "consume" the pond. As a result, ponds in river corridors should be prohibited and ponds in floodplains should be subject to conditional use review.

Berms & Armored Stream Banks
While berms and stream bank armoring can protect existing development from flood damage, such encroachments typically transfer flood water, stream sediments, and erosive energy to another location, increasing flood elevations and velocities and triggering channel adjustments and erosion downstream.[3] Because of their potentially damaging impacts, berms and stream bank armoring projects cannot be constructed without a Stream Alteration Permit issued by the State of Vermont. Avoiding new development in floodplains and river corridors should prevent the need for new berms and bank armoring projects.

DEVELOPMENT AT RISK FROM FLOODING & FLUVIAL EROSION

Existing structures, transportation infrastructure, and public utilities in hazard areas are at risk from flooding and fluvial erosion. Single-access housing developments are also at risk, even if they are not located in a hazard area.

Existing Structures
Not including bridges, there are currently 10 structures in the floodplain in West Windsor. These include homes, barns, and sheds. The Brownsville Butcher & Pantry and the Fire Station are also in the floodplain. Of West Windsor's 915 total parcels, 139 or 15% are within the floodplain; however, only six are substantially (80% or more of their land area) within the floodplain. 185 parcels, or 20% or the total, are within the mapped river corridor[4] of which 34 are substantially within the river corridor.

In 2011, flooding from Tropical Storm Irene damaged the firehouse, the adjacent pump house and the parking area. Fortunately, the fire trucks had been moved to higher ground and were not damaged. Although the Fire Station is not owned by the town, it serves the public and is considered a critical facility. To ensure the safety of its citizens, the town should partner with the Fire Department in planning for the protection of the facility from future flood events. Alternate locations should be considered. If there are no suitable alternatives, consideration should be given

[3] VT Agency of Natural Resources, Department of Environmental Conservation, Flood Hazard Area and River Corridor Protection Procedure; October 6, 2014.
[4] This analysis used river corridors as mapped in 2015. ANR is currently updating statewide river corridor maps to more accurately reflect stream geomorphology. River corridors in West Windsor may change as a result of this update.

to improving the building to minimize future flood damage. The fire station is insured through the Vermont League of Cities and Towns.

Abandoned or unusable buildings or other structures (e.g. dams) located in the floodplain and/or the river corridor, especially those that have experienced damage more than once, should be considered for removal or relocation with funding from hazard mitigation programs. In 2014, West Windsor received grant funding to remove an inaccessible mobile home from the floodplain.

Some of the buildings damaged during Tropical Storm Irene were not in the floodplain. As noted above, two-thirds of the flood damage that occurs in Vermont occurs outside the floodplain. Local property owners are encouraged to review the flood hazard and river corridor maps and to consider purchasing flood insurance if their property is in (or near) a hazard area, or has experienced flooding in the past. Property owners can also flood proof their property and implement storm water management techniques to minimize damage caused by flooding. Reducing the amount of impervious surface on the property, directing runoff into rain gardens or swales, expanding vegetated buffers, and planting trees can all help manage storm water.

In the interest of public safety, Act 16 allows towns to prohibit accessory dwelling units in hazard areas. To minimize the number of residents at risk during flood events, the Planning Commission should consider revising West Windsor's zoning regulations to include the allowed restrictions on the creation of new accessory dwelling units.

Transportation Infrastructure

The town should consider the factors that exacerbated flood damage to transportation infrastructure (e.g. storage of hay bales in the floodplain, pond location) and pursue projects and polices that will help mitigate those factors in future flooding events. The town should also address the structural deficiencies of the infrastructure itself.

Undersized Culverts. As recent storms have revealed, West Windsor has a number of undersized culverts. Every two to three years, the Highway Department inspects the culverts and notes their condition in a culvert inventory. The inventory also indicates the size, type and location of all the culverts in town.[5] Residents might be surprised to learn that West Windsor's transportation infrastructure includes more than 500 culverts. Factors that should be considered when prioritizing culvert replacements include: the amount of traffic on the road, the presence or absence of an alternate route to the homes served by the road, past flood damage to the culvert, the degree to which the culvert is undersized, and the overall condition of the culvert. Hydraulic studies should be requested for all undersized culverts and replacement costs should be estimated and included in a capital budget.

Bridges. Repairing or replacing structurally deficient bridges will help them withstand flood forces and avoid collecting debris, which could form a temporary dam and increase flood levels upstream. New and replacement bridges are generally required to have a span equal to 1.2x bankfull width[6] in order to accommodate minor flood events. Exceptions are sometimes made for historic structures. The Bowers Covered Bridge was washed downstream during Tropical Storm Irene and both abutments were damaged. Because it wasn't possible to increase the span of the bridge while

[5] The Municipal Roads General Permit (MRGP) established by Act 64 sets out culvert sizing requirements and other best management practices for all town roads mapped as "hydrologically connected." https://dec.vermont.gov/watershed/stormwater/permit-information-applications-fees/municipal-roads-program.

[6] "bankfull width" is defined as the stream channel width when water just begins to overflow into the active floodplain.

maintaining its historic integrity, the new abutments were rebuilt one foot higher than the old abutments.

West Windsor's Capital Improvements Plan identifies bridges currently targeted for upgrades/replacement along with estimated costs and potential funding sources.

Roads. The topography of Vermont is such that, in many cases, the most practical location for a road is next to a stream. As a result, many roads are located in floodplains and river corridors. Roads that are not parallel to streams are usually bisected by them at one or more points along their length. Because relocating roads is generally impractical and prohibitively expensive, other means of protecting the road from the river should be explored. Ensuring that bridges and culverts are adequately sized in accordance with hydraulic studies is one way to protect the road. Armoring stream banks should only be considered when the stream bank is immediately adjacent to the road and erosion has undermined, or is threatening to undermine, the road base.

Public Utilities

Sometimes it is necessary to place utilities in a floodplain or river corridor in order to serve an existing population center. In such cases, the utility can be designed and built in a way that will prevent it from being damaged by flood waters. In other situations, utilities were placed in a hazard area a long time ago and it is impractical or prohibitively expensive to move them. Green Mountain Power, for example, has a substation in the floodplain at the intersection of Route 44 and Churchill Road. When considering future utility installations (e.g. the placement of telephone poles or free-standing solar panels) towns and developers should keep in mind that such structures may not be appropriate for river corridors where they can be dislodged by fluvial erosion. On the other hand, they may be fine for floodplains provided that the foundation is secure in saturated soil conditions and vulnerable components (e.g. wires, panels, conduit, etc.) are located at least one foot above the base flood elevation or sealed to prevent infiltration.

Development with Limited Access

Although many areas of town, including Yale Heights and Happy Canyon, were initially inaccessible following Tropical Storm Irene, most had adequate access restored within 48 hours. An exception was the resort. Because the storm washed out both Bridge #7 on Route 44 and the bridge over Mill Brook on Brook Road, the Resort was cut off from the rest of town for 12 days and therefore could not be effectively served by the West Windsor Volunteer Fire Department or the West Windsor FAST Squad. Fortunately, the town has mutual aid agreements in place with the other towns in our area and there were no serious illnesses, injuries or fires during the time the resort was isolated from the rest of town. Since then, the Town has acquired an emergency access right-of-way to the resort area, which ameliorates the problem somewhat.

A similar situation occurred in 2010, when flood waters prevented an ambulance from reaching an injured resident in Yale Heights. In this instance, the highway department was able to ferry EMTs and the patient across the flood waters in the bucket of the town's loader. However, both of these situations highlight the need to investigate alternative means of access to areas that may be cut off from emergency services in a future flood event.

EMERGENCY PREPAREDNESS & RESPONSE

To the extent possible, municipalities have an obligation to protect their citizens from known risks. Recent experience has enabled local officials, town employees and emergency service providers

to identify new risks, confirm known risks, assess response capacity, and evaluate the effectiveness of existing plans and regulations. Armed with this knowledge, community officials have begun to address known deficiencies in infrastructure and policy and should continue to do so as resources allow.

The risks, both previously known and newly identified, have been enumerated in this document. Emergency response and hazard mitigation plans should be reviewed and updated as necessary to ensure that they adequately address these risks. Zoning and flood hazard area regulations should also be reviewed and updated to incorporate the newly released river corridor maps, recommended restrictions on new development in hazard areas, and requirements for the elevation and/or flood proofing of existing structures. A capital improvement plan should be developed and should include funds for the replacement of undersized culverts and structurally deficient bridges, the protection of vulnerable sections of public highways, the purchase of river corridor easements, and possibly the relocation of the Fire Station. The capital improvement plan should also allocate resources for the construction of a second access to single-access developments. Where the construction of a second access is not possible, emergency service providers should develop contingency plans. Policies prohibiting heavy cuts in upland forest areas and the storage of unsecured objects in the floodplain should be adopted.

Plans

West Windsor has an Emergency Management Handbook (nicknamed the "Green Book") that identifies the resources needed to respond to a variety of emergency situations, including floods. The town also has a Local Emergency Management Plan on file with the Vermont Division of Emergency Management and Homeland Security. Both of these plans are updated annually. The town's All-Hazard Mitigation Plan is updated every five years in conjunction with local emergency service providers and the Southern Windsor County Regional Planning Commission.

Most of West Windsor is in the Mill Brook watershed, along with portions of Reading and Windsor. Because we share a watershed, the decisions that each town makes can affect the other two towns. Before new plans or regulations are adopted or major projects are approved, West Windsor should consider any potential negative impacts on Reading and Windsor and provide each town with an opportunity to comment.

Emergency Service Providers

When the natural features that typically mitigate the effects of flooding (e.g. upland forests and floodplains) are overwhelmed, as in Tropical Storm Irene, rapid response by skilled employees and well-trained emergency service providers is critical.

Fortunately, there were no fires or injuries during Tropical Storm Irene but the Fire Department was busy anyway. When they weren't checking on the elderly and infirm, pumping out basements or loaning portable generators to those in need, they were working on the damaged fire station, which took a direct hit from Irene.

Highway Department

West Windsor's experienced four-person highway department does an excellent job maintaining the town's roads and bridges under normal circumstances. To ensure that additional help will be available if needed, West Windsor maintains a mutual aid agreement with the municipalities of Orange and Windsor Counties and with adjacent New Hampshire municipalities. This agreement came in handy following Tropical Storm Irene when West Windsor both provided assistance to,

and received assistance from, neighboring communities. In the wake of "Irene," the highway department also recruited a number of local contractors to help repair the extensive damage to the town's transportation infrastructure.

Going forward, the Highway Department will continue to evaluate culverts and replace them as funds allow. Town employees will also continue to participate in workshops and trainings that enhance their disaster response capabilities, and the Highway Foreman will assist the Selectboard in prioritizing larger projects for inclusion in a capital improvement plan.

REDUCING COSTS

Minimizing Damage

One way to reduce costs associated with flood damage is to prevent the damage from occurring in the first place. Prohibiting new construction in the floodplain and the river corridor, relocating critical facilities such as the fire station, replacing undersized culverts, and regulating the storage of unsecured objects in the floodplain are some of the ways West Windsor can prevent damage from occurring. Once damage has occurred, however, it's important for the town and its residents to be able to access the funding needed to rebuild without overburdening local tax payers.

Obtaining State and Federal Assistance

Repairing damaged transportation infrastructure can be very expensive. Fortunately, there are systems in place to provide state and federal funding assistance for repairs when damages are of sufficient magnitude to warrant a presidential disaster declaration. Generally, the federal government covers 75% of the cost and the remaining 25% is covered by the state and the affected town. The amount provided by the state through the Emergency Relief and Assistance Fund (ERAF) varies depending on whether or not the affected town has adopted certain hazard mitigation measures. Towns that have adopted the following measures pay half of the required 25% match, or 12.5% of the total repair costs:

- Agency of Transportation Town Road and Bridge Standards;
- Flood hazard regulations that meet or exceed minimum NFIP standards;
- A local Hazard Mitigation Plan; and
- A local Emergency Management Plan.

Towns that have not adopted the measures listed above pay for 17.5% of total repair costs. Towns that are actively participating in FEMA's Community Rating System, or that have adopted river corridor regulations that meet or exceed state standards pay only 7.5% of total disaster repair costs. West Windsor has adopted all of the measures listed above and currently qualifies for a 12.5% match. To further reduce the financial impact of disaster repairs on local tax payers, the town should update its Flood Hazard Area Regulations to include standards for development in river corridors.

For localized damage not resulting from a presidentially declared disaster, funding assistance is available through the Vermont Agency of Transportation's town highway emergency grant program. Without state and federal assistance, the costs associated with repairing storm-damaged roads and bridges could cripple a town financially. If West Windsor had not received state and federal aid following Tropical Storm Irene, the municipal tax rate would have had to increase by 72% to cover the $750,000 in costs.

Insurance

Because West Windsor participates in the National Flood Insurance Program, local property owners are eligible for flood insurance. However, owners with property in a special flood hazard area should be aware that, as a result of the 2012 Biggert-Waters Flood Insurance Reform Act, subsidized flood insurance rates are being phased out. Although the Biggert-Waters Act was amended in 2014 with the passage of the Homeowner Flood Insurance Affordability Act, flood insurance rates are still being increased by 5 to 18% per year for owner-occupied residences, and by 25% per year for vacation, rental and business properties. Currently, only two of the West Windsor property owners who have property in the floodplain are insured against flooding.

FLOOD RESILIENCE POLICIES

1. To the extent possible, West Windsor has a responsibility to protect its citizens from known hazards.
2. In accordance with 24 V.S.A. 4302 (14), West Windsor restricts new development in special flood hazard areas and river corridors unless it can be shown that such development will not exacerbate flooding or fluvial erosion. All development in SFHAs requires review.
3. In conjunction with these restrictions, West Windsor requires the protection and encourages the restoration of river corridors, flood plains, wetlands and upland forest areas that attenuate and moderate flooding and erosion.
4. West Windsor discourages the removal of in-stream debris except as necessary to protect public safety or prevent property damage.
5. Property owners who make voluntary improvements to property in the floodplain or the river corridor may not protect their investment with channel constraints such as berms and bank armoring.
6. Subject to water and sewer availability, West Windsor encourages development in those portions of the Primary Growth District that are outside of the river corridor and the special flood hazard area.
7. Structural deficiencies in transportation infrastructure should be addressed as soon as possible.
8. Potential impacts on neighboring towns should be considered before new plans or regulations are adopted and before major projects are approved.
9. West Windsor encourages on-going emergency preparedness and response planning.

FLOOD RESILIENCE RECOMMENDATIONS

1. Review and revise the West Windsor Zoning and Flood Hazard Area Regulations to:
    - Ensure compliance with 24 V.S.A. §4424 and the National Flood Insurance Program (44 C.F.R.);
    - Limit new structures, including accessory dwelling units, in special flood hazard areas and river corridors;

- Prohibit heavy cuts in the Mill Brook Watershed and restrict logging to the extent necessary to protect upland forest areas that attenuate and moderate flooding and erosion;
- Require conditional use review for paving projects in the floodplain or the river corridor;
- Prohibit ponds in river corridors and require conditional use review for ponds in floodplains.

2. Investigate alternative means of access to developed areas that may be cut off from emergency services during a flooding event if the primary access is destroyed. If a second access cannot be established, develop contingency plans for emergency response.
3. Adopt policies to address the storage of unsecured objects (e.g. hay bales) in the floodplain.
4. Pursue conservation easements along Mill Brook and consider offering tax incentives to property owners who conserve land in a floodplain or a river corridor.
5. Consider applying for grants to restore the Mill Brook's connection to its floodplain.
6. Seek funding to remove or relocate abandoned structures in the floodplain or river corridor.
7. Engage local farmers in discussions about the mutual benefits of storing hay bales and other materials and equipment outside of the special flood hazard area and river corridor.
8. Partner with the Fire Department to plan for the protection of the fire station from future flood events.
9. Review and update emergency response and hazard mitigation plans.
10. Encourage property owners to review the flood hazard and river corridor maps and consider flood proofing their property, implementing storm water management techniques, and/or purchasing flood insurance.
11. Identify undersized culverts, request hydraulic studies, prepare cost estimates, and seek grant funding for their replacement.
12. Maintain mutual aid agreements with neighboring municipalities.
13. Develop a capital improvement plan that addresses: the replacement of undersized culverts and structurally deficient bridges, the protection of vulnerable sections of public highways, the purchase of river corridor easements, the relocation of the Fire Station, and the construction of a second access to single-access developments.
14. Review and prioritize the flood resiliency recommendations included in the Geomorphic Assessment and the Basin 10 Tactical Plan.
15. Evaluate flood hazard regulations and maps at least every five years, or after a flooding incident, and seek funding to mitigate areas prone to flooding.

CHAPTER 9. TRANSPORTATION

West Windsor is a rural community located at the base of the northwestern slope of Mount Ascutney. The road network consists of one paved, secondary state highway and 47 miles of mostly unpaved local public roads.

TRANSPORTATION INVENTORY

Regional Highways

Regional highways, including state highways and Class 2 town highways, connect to large population areas and other state highways outside West Windsor. These paved roads include VT Route 44, Brownsville-Hartland Road and Ski Tow Road. VT Route 44 connects West Windsor to Windsor, and to Reading and Woodstock, via VT Route 106. Brownsville-Hartland Road is a Class 2 town highway that connects Brownsville to Hartland. These roads provide access for businesses in West Windsor and to broader job opportunities in other towns for residents. VT Route 44 is the primary access into town. Ski Tow Road, off VT Route 44, is currently the only public road into the Resort. For emergency purposes, consideration should be given to establishing a second public access to this densely populated area, in addition to the existing emergency access easement through private property.

Town Highways

Town highway classifications, as defined in 19 V.S.A. §302, indicate the hierarchy of the local road system, as determined by the prevailing use of each road. West Windsor maintains nearly six miles of paved Class 2 town highways, including Brownsville-Hartland Road and Ski Tow Road, which serve as "regional highways" that connect to other towns or destination areas. Class 2 town highways are considered the most important local roads in town.

There are over 41 miles of Class 3 town highways in West Windsor. Class 3 town highways are all other town highways that can be travelled year-round. With the exception of a few paved roads near Brownsville, the remainder of these roads are gravel roads, the quality of which is unrivaled in the surrounding area. Portions of Seems Road and Pierce Hill Road are paved due mainly to the steepness of grade.

West Windsor Highway Miles by Classification

Highway Classification	*Miles*	*Total Miles*
State Highways	5.044	5.044
Town Highways		
Class 2 Town Highway	5.931	
Class 3 Town Highway	41.1	
Total town-maintained highways		47.031
Class 4 Town Highway	4.22	
Legal Trails	0.330	
Private Roads	10.334	
Total **not** maintained by town		14.884
Total rights-of-way		66.959

Source: VTrans, VCGI

West Windsor has no interstate highways or Class 1 Town Highways. Class 4 mileage may be underestimated because accurate inventories are not maintained. Class 4 town highways are all town highways that are not Class 1, 2 or 3 town highways or unidentified

corridors, and that are not regularly maintained by the town. The Selectboard determines which highways are designated as Class 4.

Class 4 town highways are important resources for recreation, forestry access, and agricultural activities. Recognizing the recreational value of Class 4 highways, the town should discourage development on these roads and consider reclassifying them as Legal Trails, following required procedures and negotiations with adjacent land owners.

Legal Trails are public rights-of-way, but are not considered highways. The town is not responsible for the maintenance of trails. A Class 4 road can be reclassified as a Legal Trail to retain the public right-of-way but eliminate the burden on the town to provide maintenance.

There are over 10 miles of privately-maintained roads in West Windsor. It is important that private roads and driveways provide adequate and safe access for both residents and emergency vehicles. Private roads, which serve three or more residences, should be held to the same standard as class 3 town highways for safety reasons and to protect the town's interest in the event that a private road is reclassified as a Class 2 or 3 town highway. Driveways, which serve one or two residences, shall be held to standards for residential drives to allow vehicular access from the adjacent street and emergency vehicle access to properties.

Bicycle and Pedestrian Facilities

West Windsor's bicycling facilities include the existing road network and the mountain bike trail network. VT Route 44, which is classified as a "high use/high priority" corridor in the VTrans Bicycle Corridor Priority Map (March 2016), has narrow shoulders; widening them would more safely accommodate bicycle and pedestrian travel. The highway is scenic with many sharp curves, and steady or declining traffic volumes. Town roads provide additional bicycle access. Because many town roads are unpaved and some are quite steep, younger, less experienced cyclists and cyclists on touring bikes may be reluctant to use them.

The village of Brownsville has five-foot wide sidewalks primarily on the north side of Route 44. The sidewalks were constructed in 1964 and are in need of maintenance. Existing sidewalks on Route 44 in the village provide access from:

- Brook Road to the town offices;
- The intersection of Brownsville-Hartland Road and Route 44 to Seems Road;

There is also a four-foot wide pedestrian bridge owned by Holiday Inn Club Vacations Inc. crossing Mill Brook behind the West Windsor Fire Station, and connecting the resort and the village via the Trail to Town. Improving the connection would encourage students to walk to and from school; hotel guests to visit the Brownsville Butcher & Pantry; and village residents to dine at the Maple Kitchen.

In 2018, the Agency of Transportation made a number of improvements in the village as part of its "School Zone Safety Initiative." These improvements included two sidewalk handicap ramps, a crosswalk at the intersection of Route 44 and the Brownsville-Hartland Road, and updated signage. Currently, there are no signalized intersections in West Windsor.

In addition to the improvements made in 2018, future improvements to the pedestrian facilities should include walking path and sidewalk connectivity throughout Brownsville, as identified in the 2015 Bicycle and Pedestrian Master Plan, and a crosswalk over Route 44 near the Brownsville Butcher & Pantry. In order to install a crosswalk over Route 44, the sight distances would have to be improved and/or the speed limit would have to be lowered. Services in Brownsville include the library, post office, town hall, elementary school, and general store. Participation in the "Safe Routes to School" program may result in additional improvements that the town should consider implementing. Implementation of Bicycle and Pedestrian Master Plan recommendations should be coordinated with other projects such as bridge replacement, sidewalk repair, burying utility lines and paving.

Parking

Parking requirements are outlined in West Windsor's Zoning Regulations. Parking is generally limited to off-street, on-site parking spaces. In the village, existing parking standards and the absence of a public parking lot constrain future development or expansion of small lots. Consideration should be given to acquiring land for a public parking area in the village. As electric vehicles become more commonplace, the Town should also consider installing charging stations in convenient village locations.

Depending on future recreation plans for the Town Forest, there may also be a need to expand the parking area that serves the Town Forest trail network off Coaching Lane.

Public Transportation, Rail and Air

Currently there are no rail or air services in West Windsor. The Current, based in Bellows Falls, is the primary transit provider in the region and offers "on demand" service in West Windsor. Volunteers in Action also provide "on demand" service, primarily for elderly residents.

Dartmouth Coach and Greyhound provide long-distance bus service connecting the Upper Valley to many northeast metropolitan areas. Both transit companies also provide service to Logan airport and limited service to Manchester airport.

Amtrak stops at the train station in Windsor, providing West Windsor residents good access to passenger rail service.

Numerous airports – including Rutland; Burlington; Lebanon, NH; Manchester, NH; Hartford, CT; and Logan Airport in Boston – provide West Windsor residents with options for commercial air service. Hartness State Airport in Springfield offers general aviation services.

EXISTING TRAFFIC CONDITIONS

Existing traffic volumes are relatively light on VT Route 44 in West Windsor. The table below shows annual average daily traffic (AADT) volumes at select locations. AADT represent the combined two-way traffic volume at each location. The data have been adjusted to correct for seasonal variation. Road segments in adjacent towns have been included due to a lack of local data.

Traffic Count Data

Roadway	Location	Annual Average Daily Traffic (AADT)			
		2015	2016	2017	2018
Brownsville-Hartland Road	About 0.5 miles north of VT 44		950	940	928
Brownsville-Hartland Road	About 0.3 miles south of Hartland town line		756	764	754
Hotel Road	Between Ski Tow Rd and Skyhawk Ln			467	461
Ski Tow Road	300 ft. south of VT 44	773	788	796	786
Coaching Lane	Just south of VT 44			107	106
VT Route 44	Between Brownsville-Hartland Rd and Brook Rd	1,836	1,871	1,890	1,865
VT Route 44	Between Shattuck Hill Rd and Flat Iron Rd	829	845	853	842

Source: VTrans

Vehicular traffic speed and truck traffic on VT Route 44 are concerns raised by residents, especially in the village area. The town should seek to identify appropriate traffic calming measures along VT Route 44 through Brownsville in order to slow traffic speeds in the village. Medium- and heavy-duty trucks account for between 4% and 6% of the traffic volume on VT Route 44 at both locations described in the AADT Table above. On Brownsville-Hartland Road, trucks are about 6% of the total traffic volume. Traffic speed data are not currently available for the Brownsville area. In 2018, the towns of Windsor and West Windsor jointly acquired a mobile speed cart to measure vehicle speed in various locations in both towns.

COMMUTER PATTERNS

Commuter travel patterns are an important consideration for the transportation network. According to the 2007-2011 American Community Survey (U.S. Census Bureau), 51% of working residents commuted less than 30 minutes to a job. The median travel time for West Windsor workers is 25.9 minutes.

Transportation connections to surrounding towns and major travel corridors are important for the local economy. According to 2010 LEHD Origin-Destination Employment Statistics from the U.S. Census Bureau, only 4% of local working residents are employed in West Windsor. There are likely a number of self-employed or home occupations that are not reported in this data set. The most common work destinations include Lebanon, Hanover, Woodstock, Bridgewater, Windsor, Killington, Ludlow and Springfield.

The predominant mode of transportation for commuters is by automobile. According to the American Community Survey, only 2.3% of resident workers commuted by walking, 8.4% carpooled and 80.8% drove alone to work; no one used public transportation. Only 8% of residents worked from home; however, home-based employment remains important in West Windsor.

Home-based employment opportunities should increase with the expansion and improvement of broadband technology in town.

ROAD POLICY AND MAINTENANCE

The Town adopted new road and bridge standards in 2019, and should continue to maintain the existing highway network in good condition, which can help reduce long-term roadway maintenance costs. The development of additional town roads should be discouraged. Scenic features on existing roads, such as tree canopies and stone walls, should be preserved wherever possible. As noted in Chapter 6, town highways are the most frequently used public recreation facility in West Windsor. Given that fact, safety improvements (such as wider shoulders or signage) should be considered where needed and where implementation can be accomplished without damage to scenic features.

Residents generally indicate a preference for all existing gravel roads to remain unpaved.

Drainage infrastructure includes ditches, culverts and bridges along the town highway system. The Highway Department currently maintains about 533 culverts and bridges, and many miles of drainage ditches. Culverts and drainage ditches should allow for an adequate flow of stormwater so as to protect infrastructure from damage during typical snowmelt and rain events, and to protect waterbodies from the impacts of stormwater runoff.

In 2015, when West Windsor acquired Hotel Road and 469 acres of the former Ascutney Mountain Resort, the Town also became a party to an expired stormwater permit that covers the drainage system for most of the resort development. Together with the other owners whose property is included in the permit, the Town should make it a priority to renew the permit. Before the permit can be renewed, the stormwater infrastructure needs to be inspected by an engineer and repaired if any deficiencies are discovered. Adjacent but not related to this permit issue, are two gully erosion problems north of Hotel Road that need to be investigated and repaired.

Also in 2015, the Vermont legislature passed Act 64 (Vermont Clean Water Act). As a component of Act 64, the Vermont Agency of Natural Resources (VT ANR) was tasked with the development and implementation of the Municipal Roads General Permit (MRGP) to regulate stormwater discharges from municipal roads to waters of the State. The MRGP has jurisdiction over municipally owned and maintained roads that have been modeled or field verified as "hydrologically connected."

A hydrologically connected road segment is defined in statute as follows: "a road segment, equal to 100 meters in length, where the Secretary (of VT ANR) has determined that road and drainage characteristics indicate a likelihood of discharges to surface waters or wetlands. This definition includes those road segments identified as hydrologically connected on the ANR Atlas. The Secretary has developed a hydrologically-connected road segment layer using GIS analysis of roadway distance to receiving waters." In other words, a hydrologically connected road segment is any 100-meter segment of roadway that has the potential to impact surface water quality.

All Vermont municipalities are required to complete an MRGP compliant Road Erosion Inventory (REI) and file a Road Stormwater Management Plan (RSWMP) with the Agency by December 1, 2020. With assistance from the Southern Windsor County Regional Planning Commission

(SWCRPC) West Windsor completed its REI in June of 2018. The inventory involved visiting every mapped hydrologically connected road segment in West Windsor to field verify its hydrologic connectivity and determine whether it fully meets, partially meets or does not meet the standards.

All town roads will have to be fully compliant with MRGP standards by 2036, and towns will have to address high priority segments by 2025. High priority segments are defined as hydrologically connected segments that do not meet standards and have a slope of 10% or greater. Given West Windsor's topography, a substantial amount of work will need to be done to meet permit standards. However, the Town is also heavily constrained by historic stone walls, old growth trees, ledge outcroppings, steep valley walls, and narrow road widths, which will make it impossible to meet the standards in some instances. In these instances, the town may apply for an exemption from the standards.

As of June 2018, when West Windsor's REI was completed, the town had 445 hydrologically connected road segments. One hundred eighteen (118) of those segments met the MRGP standards and 337 did not. Forty-five (45) of the 337 segments were high priority segments. During the 2018 and 2019 construction seasons, West Windsor brought fifteen (15) segments into compliance, including eight (8) high priority segments. As a result, we have 322 segments to bring into compliance over the next seventeen years. To do that, we'll have to work on 19 segments per year. Each segment is 100 meters, or 328 feet, so that's a total of 6,232 feet per year, which is more than a mile.

Needless to say, doing all this work will cost a lot of money. While the state offers some grant funding through the Better Roads program and the Grants-in-Aid program, it's not nearly enough. West Windsor should continue to appeal to our representatives in Montpelier for relief from this partially-funded mandate and/or additional financial assistance to cover the costs of complying.

Flood Damage

In August 2011, Tropical Storm Irene caused considerable damage to West Windsor's transportation infrastructure. Bowers Bridge was washed downstream. Much of Banister Road was destroyed. Culvert and slope failures closed Harrington Road. Brook Road was impassable due to a slope failure in West Windsor and the destruction of the Brook Road Bridge in Windsor. Twenty-one other local roads also experienced damage - some minor, some extensive.

Sections of Brook Road and the Brook Road Bridge in Windsor have not been replaced. As a result, Brook Road is no longer a through road for pedestrian, bike, horse, or motor vehicle traffic. Likewise, it is no longer an alternate route to and from Windsor in emergency situations. Consideration should be given to contingency planning for emergency response, and to improving Route 44 to safely accommodate foot and bike traffic.

The town should also consider the factors that exacerbated flood damage to transportation infrastructure and pursue projects and policies that will help mitigate those factors in future flooding events. Some factors that contributed to the damage include: storage of hay bales and other materials in the floodplain, pond location and construction techniques, and undersized culverts.

The two covered bridges in West Windsor, the Best Bridge on Churchill Road and the Bowers Bridge on Bible Hill Road, are important scenic and historical resources and should be protected and maintained. After Tropical Storm Irene, Bowers Bridge was restored and replaced on new, higher abutments in the summer of 2012.

On November 1, 2003, after several days of heavy rain, a steep section of road bank on the Brownsville-Hartland Road collapsed. Following Tropical Storm Irene, Town officials noticed pavement cracks on the Brownsville-Hartland Road, north of the intersection with Coon Club Road, in the vicinity of the 2003 collapse. The Town hired GeoDesign Inc. to evaluate and monitor the slope movement periodically for the next five years. The Town should consider reinstituting periodic monitoring of this slope.

Access Management

Access management refers to the systematic control of the location, spacing, design, and operation of driveways, median openings and street connections to a roadway. The purpose of access management is to provide vehicular access to land development in a manner that preserves safety and efficiency. Access in terms of highway capacity is not a big concern today in West Windsor, however, the safety of access points and their impacts on the public highway infrastructure are concerns. Driveway permits are required in West Windsor. All driveways must meet Agency of Transportation B-71 Standards for Commercial and Residential driveways. Driveways may not have negative safety or drainage impacts on town highway infrastructure.

According to West Windsor Zoning Regulations, all new development, including development on Class 4 town highways, private roads and driveways, is required to meet appropriate road and driveway standards. Coordination among town officials, including the Selectboard, the Development Review Board, the Highway Department, and Emergency Services, is important in reviewing development proposals for potential transportation impacts.

Scenic Roads

On the recommendation of the Scenery Preservation Council, the transportation board may designate or discontinue any state highway, or portion of a state highway, as a state scenic road per 19 V.S.A. §2501. The corridor that includes VT Route 44A to VT Route 44 to the resort area is designated as a scenic byway and is part of the Connecticut River Scenic Byway.

Towns in Vermont are enabled to designate municipally-maintained roads as “town scenic roads,” as established by 19 V.S.A. §2502. Local scenic roads are subject to the standards established by the State Transportation Board, which address appropriate minimum roadway widths, alignment, landscaping and traffic control methods, pursuant to 10 V.S.A. §425. Although there are no town scenic roads in West Windsor at this time, the scenic qualities of local roads, including tree canopies and stone walls, are highly prized by residents, and should be preserved.

TRANSPORTATION POLICIES

1. Ensure that future transportation related facilities in the town of West Windsor are designed to maintain the beauty, integrity and rural character of the town.

2. Encourage transition to transportation options that minimize carbon emissions, e.g. the shift to electric cars and the establishment of public electric vehicle recharging stations.
3. When considering roadway widening on gravel roads, town officials should use construction and maintenance techniques that balance cost effectiveness, public safety and aesthetic considerations, especially with regard to the preservation of the tree canopy.
4. Maintain the existing quality of the transportation network to provide for the safe, efficient and cost effective movement of people, goods and services, and to avoid costly replacement in the future.
5. Maintain reasonable standards for road and driveway construction to ensure safe access by emergency vehicles to homes and other buildings.
6. Preserve existing covered bridges.
7. Retain undeveloped Class 4 town highways and legal trails as recreational resources for West Windsor residents.
8. Encourage coordination among town officials, including the Selectboard, Planning Commission, Development Review Board, Highway Department and Emergency Services, in reviewing development proposals for potential transportation and safety impacts.
9. Continue using best management practices during highway maintenance activities in order to minimize erosion, protect water quality, contain costs, and preserve the scenic qualities of local roads.

TRANSPORTATION RECOMMENDATIONS

1. Periodically review local highway, driveway, road construction and maintenance standards and policies to ensure a balance between public safety and the protection of scenic resources and rural character.
2. Review the West Windsor Highway Department's Environmental Mission Statement, a non-regulatory set of road maintenance guidelines.
3. Review and update the 2015 Bicycle and Pedestrian Master Plan for West Windsor.
4. Ask the Agency of Transportation to consider safety improvements to intersections, sidewalks, cross walks and shoulders along Route 44.
5. Consider amending the subdivision regulations to require a second entrance for subdivisions that exceed a certain size.
6. Facilitate the safe use of the transportation network by pedestrians, bicyclists and horseback riders by maintaining or expanding existing facilities in the village area and improving or widening shoulders along roads, where doing so can be accomplished without damaging scenic features.
7. Coordinate pedestrian safety, bridge replacement, sidewalk maintenance, utility and paving projects.

8. Pursue projects and policies that will help minimize damage to transportation infrastructure during flood events by addressing known hazards such as the storage of hay bales in the floodplain, pond location and construction techniques, and undersized culverts.

9. Participate in the Safe Routes to School program.

10. Facilitate the financing and placement of at least one public electric vehicle recharging station in the Village Center.

11. Continue to inspect and evaluate the condition of bridges and culverts, and replace deficient or undersized drainage structures annually as funding allows.

12. Work with other property owners to renew the expired stormwater permit for the resort area.

13. Appeal to our representatives in Montpelier for relief from the requirements of the Municipal Roads General Permit to the extent that those requirements are unfunded, and/or for additional financial assistance to cover the costs of complying.

14. Annually review plans for, and progress toward, meeting Municipal Roads General Permit requirements.

15. Consider reinstituting periodic monitoring of the road bank on the east side of the Brownsville-Hartland Road, north of Coon Club Road.

CHAPTER 10. ENERGY

It is the intent of this chapter to encourage the efficient use of energy and the development of renewable energy resources in accordance with 24 V.S.A. §4302(c)(7), and to be consistent with the town's sustainability goals, including the reduction of carbon emissions. It is also the intent of this chapter to address the requirements of Act 174 of 2016 and to meet the enhanced energy planning standards developed by the Vermont Department of Public Service (DPS), as outlined in the *Guidance for Municipal Enhanced Energy Planning Standards* (DPS; March 2, 2017). Meeting these standards allows the West Windsor Town Plan to be given greater weight in the Section 248 process. This chapter describes existing conditions in West Windsor, conveys community policies on energy conservation and renewable energy production, and explains how land uses can contribute toward energy conservation.

The Southern Windsor County Regional Planning Commission (SWCRPC) has developed a 2018 *Regional Energy Plan* to meet these standards in order to receive Section 248 "substantial deference." West Windsor has coordinated the development of this municipal energy plan with the SWCRPC so that:

1. The municipal plan is informed by the ongoing regional energy planning process; and,
2. The municipal plan is compatible with the regional plan.

This energy chapter was developed with assistance from the SWCRPC through funding provided by the Vermont Department of Public Service.

Unless otherwise indicated, data presented in this chapter and in Appendix D are using 2015 as the base year. We recognize that conditions have changed between 2015 and 2020. Any renewable energy projects completed since 2015 will count toward meeting our targets.

Due Consideration: To give such weight or significance to a particular factor as under the circumstances it seems to merit, and this involves discretion. [*Black's Law Dictionary, 6th ed. 1990*]

Substantial Deference: Means that a land conservation measure or specific policy shall be applied in accordance with its terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure or policy. [*30 V.S.A. §248*]

The Energy Plan presented in this chapter has a planning horizon of 2050. The Town Plan, once adopted, will be in effect for eight years, and will need to be updated and re-adopted four times before 2050. Each time the Town Plan is updated, the Town will re-evaluate its energy goals and the progress made toward achieving them.

ENERGY GOALS

The Town of West Windsor endorses the goals established in the 2016 Comprehensive Energy Plan for Vermont and, through the detailed policies and actions contained in this plan, West Windsor will strive to help achieve these goals, which include:

1. Reducing total energy consumption per capita by 15% by 2025, and by more than one third by 2050. Vermont's total energy consumption per capita was estimated to be 225.4 million BTUs in 2015 (U.S. Energy Information Administration).

2. Reducing greenhouse gas (GHG) emissions from 1990 levels by 40% by 2030, and by 80% to 95% by 2050. GHG emissions in Vermont were estimated to be 8.59 million metric tons CO_2 equivalent ($MMTCO_2e$) in 1990, and 9.99 MMTCO2e in 2015 (*Vermont Greenhouse Gas Emissions Inventory Update 1990-2015*, DEC).

3. Using renewable energy sources to produce 25% of energy consumed by 2025, 40% by 2035, and 90% by 2050. About 16% of Vermont's energy was from renewable sources in 2015 (*Vermont Comprehensive Energy Plan 2016*, DPS).

Reaching these goals will require significant changes in how we heat our homes and businesses, how we travel, and how much electricity we use. It will not be easy. Weatherization of homes and changes in transportation are two areas that will be particularly challenging.

ANALYSIS OF ENERGY USE

Power Generation and Transmission Facilities

Green Mountain Power (GMP) is the electric utility provider in West Windsor and surrounding towns. There are no utility-scale power generation facilities located in West Windsor. As of 2015, there were 16 known net-metered solar energy generation sites in town with an installed capacity of 109.86 kW. See Appendix D for more detail about existing energy generation. At the end of 2019, there were 50 solar sites in West Windsor with a capacity of 873.22 kW. In addition, there are two residential wind turbines in West Windsor; one off Knob Hill Road and one off Hammond Hill Road. Neither is believed to be net-metered.

Electric transmission is provided by the Vermont Electric Power Company (VELCO). Transmission facilities located in West Windsor include the following, which are shown on the solar and wind maps:

- Brownsville Substation, located along VT Route 44 east of the intersection with Churchill Road;
- A high-voltage power line that enters the town from Weathersfield and terminates at the Brownsville substation;

Energy Usage

As discussed in the *2016 Vermont Comprehensive Energy Plan* (CEP), "fossil fuels currently play a dominant role in meeting Vermonters' demand for energy services, with gasoline and distillates (namely diesel and heating oil) alone supplying around half of all of Vermont's primary energy consumption." The CEP states that less than 20% of the statewide consumption of primary energy is from renewable energy sources. More than two thirds of that renewable energy comes from the electric power supply, which includes power generated by hydro, biomass, wind, solar and other facilities. The remaining renewable energy consumption in Vermont is largely comprised of wood for home heating and ethanol blended into gasolines[7].

[7] *Vermont Comprehensive Energy Plan* (Department of Public Service, 2016)

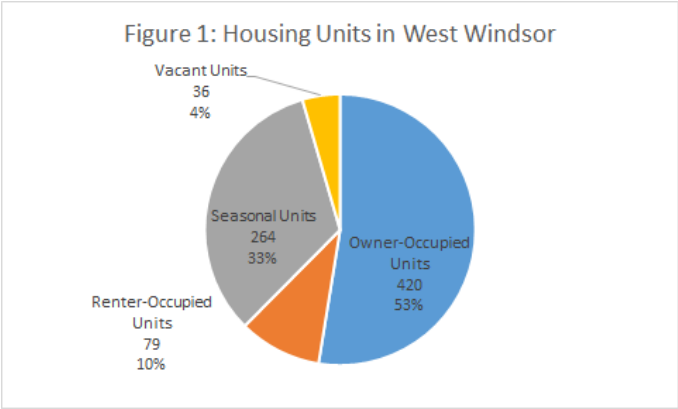
Electricity
According to Efficiency Vermont, West Windsor used a total of 8,020,932 KWh of electricity in 2015; 73% of the usage was residential, and 27% was commercial or industrial. Average residential usage was 7,315 KWh in 2015.

According to the Department of Labor Statistics, there were 28 commercial establishments in West Windsor in 2015.

Total electricity consumption has essentially leveled off in recent years. (There was a slight decrease in total electricity usage in West Windsor between 2014 and 2016.) See Appendix D for more detail.

Heating
Of the 799 total household units in West Windsor, 33% are seasonal and 10% are renter-occupied. See Figure 1 which summarizes total housing units in West Windsor by type from the 2010 Census Bureau.

Fossil fuels are currently the primary fuel type used for heating structures in Vermont[8]. According to American Community Survey (ACS) data (2011-2015), the predominant ways to heat homes in West Windsor include fuel oil (46%), wood (24%) and propane/LP gas (24%). In 2015, the estimated average annual cost to heat a home was $1,878 and about $4,570 to heat a business. See Appendix D for more detail about heating existing buildings.



Wood is the only form of these heating fuels that is renewable and locally produced. Sustainable forestry operations are important not only to supply fuel wood for residents, but also to maintain an active working landscape in rural West Windsor and support a local forestry economy.

Transportation
In rural areas like West Windsor, transportation options for residents are dominated by the personal automobile (see the Transportation Chapter for more information about other modes of travel). The negative environmental impacts of single-occupant vehicle driving are well documented. Costs associated with using an automobile for most of your travel needs can be significant (see the Housing Chapter for more information on household transportation costs). About 98% of the local work force travels to jobs located in another town. Common work destinations are Woodstock, Lebanon, Hartford, Bridgewater, and Windsor. Approximately 79% of employed West Windsor residents drive alone to work. The average commute time is 28 minutes.

According to ACS data, there were about 2.0 vehicles per owner- or renter-occupied household in 2015. The average vehicle miles traveled in a year is estimated at nearly 12,900, which accounts

[8] *Vermont Comprehensive Energy Plan* (Department of Public Service, 2016)

for approximately 668,000 gallons of total fuel used and an estimated total fuel cost of more than $1.5 million.

Fuel costs are volatile. Gasoline costs of around $4 a gallon in 2008 and $3.70 in 2014 were challenging for many household budgets. In 2019, the average price of gas was $2.56 per gallon and the average price of diesel was $3.13 per gallon.

ENERGY TARGETS

The standards that the Department of Public Service has established for energy targets must be met if this Plan is to receive substantial deference in Section 248 energy siting proceedings. West Windsor's energy targets were developed by the SWCRPC using the Long-Range Energy Alternatives Planning (LEAP) Model. The background for the targets is described in more detail in the *2018 Southern Windsor County Regional Energy Plan*. The purpose of the targets, when combined with the analysis presented in the previous section, is to provide an overview of existing energy use and projections for the pace of change that is needed over the next three decades. **The targets demonstrate that, in order to meet 90% of Vermont's energy need from renewable sources by 2050, a significant amount of change will be needed in the forms of energy conservation, behavior modification, and development of new local renewable energy generation.**

In order to meet the 90% by 2050 goal, total energy use in southern Windsor County will need to decrease by 50%. Primarily this must involve a vast reduction in the use of non-renewable fuels, such as gasoline and fuel oil. The LEAP model relies on a number of generalized assumptions to reach the 90% by 2050 goal, such as:

- Electricity use today is about 20% of total energy consumption, but it will need to increase to 35% of total consumption in 2050;
- The use of non-renewable fuels will need to be vastly reduced from about two-thirds today to about 10% by 2050;
- Renewables will need to increase from about 18% now to more than half by 2050. This involves wood consumption remaining relatively constant and biodiesel usage increasing substantially.

Please note that the above section is intended to summarize the assumptions made for this LEAP model. In the years between 2020 and 2050, there are likely to be technological advances that may help us achieve our energy goals and targets in ways that we cannot anticipate today.

Electricity

Targets for electricity are mixed. On the one hand, significant efforts to reduce electricity usage through conservation and efficiency measures will be needed. On the other hand, the LEAP model relies on the increased use of electricity to achieve the energy goals for both transportation (i.e. electric vehicles) and heating (i.e. cold-climate heat pumps). See Figure 2 below.

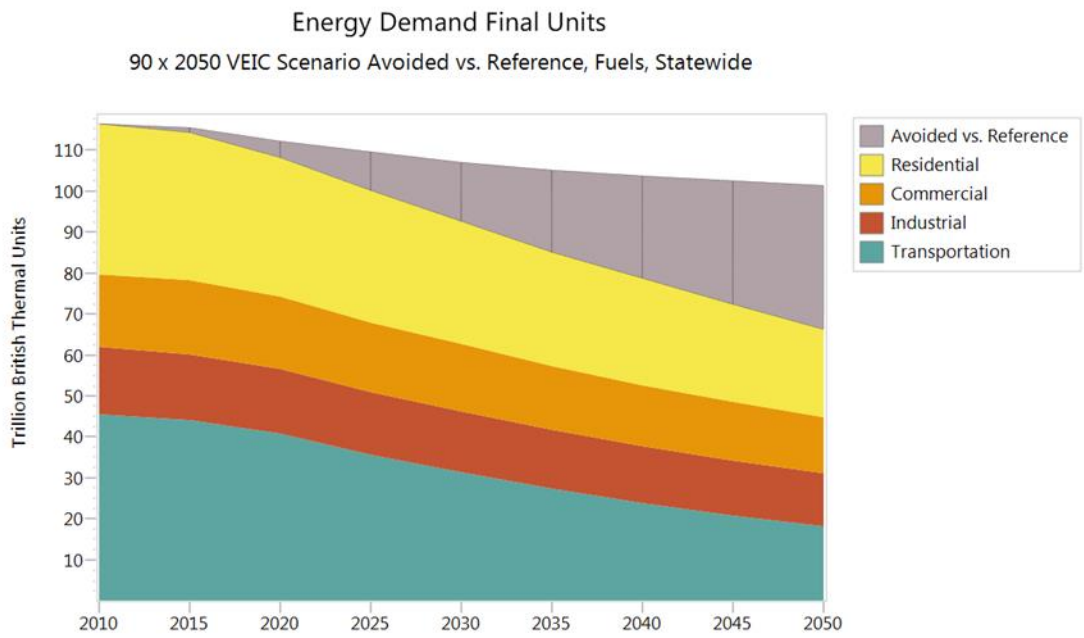


Figure 2: Vermont must significantly reduce total energy use by 2050 to be successful in implementing the goals of the Comprehensive Energy Plan. The LEAP model referenced in this Plan calls for substantial reductions in energy use by residences and transportation. The line above the grey area represents projections for if we do nothing else to reduce energy demand. The grey area itself represents efforts needed to reduce total energy demand.

Reducing electricity demand through energy conservation and efficiency measures will involve taking advantage of programs offered by Efficiency Vermont, utilization of high-efficiency/energy star appliances, LED lighting upgrades, and other efforts at energy demand management.

Electricity targets also include the development of additional renewable energy generation. The LEAP model includes assumptions for additional imported renewable energy from sources such as Hydro Quebec. However, local generation is also required. Past and present renewable energy generation, along with targets for future generation, is summarized below in Table 1 and discussed in more detail in the renewable siting discussion under the Implementation Actions section of the Energy Chapter.

Table 1: Renewable Energy Generation & Targets for West Windsor (in MWh)					
	2015	**2019**	**2025**	**2035**	**2050**
MWh	135	1,071	2,471	4,942	9,884

Thermal (Heating Buildings)

The first step to reduce energy demand for space heating is to weatherize homes and businesses (e.g. air sealing, insulation). West Windsor's goal is to weatherize 25% of existing homes and businesses by 2025; 50% by 2035; and 90% by 2050. Note that the LEAP model-based targets for weatherization in West Windsor did not appear to be reasonable, so these targets were modified to be more consistent with statutory goals. Based on the town's experience over the past few years, it will take a concerted effort to reach these weatherization targets for existing structures. It is assumed that all new applicable structures will comply with the State energy building codes (i.e. Residential Building Energy Standards, Commercial Building Energy Standards).

The next step is to move toward the widespread utilization of renewable energy to heat homes and businesses. The LEAP model established the following targets for doing so in West Windsor. Table 2 shows the scale to which buildings should switch over to renewable heating systems in order to meet the state energy goals.

	Table 2: Use of Renewables for Heating in West Windsor			
Thermal renewable energy use	**2015**	**2025**	**2035**	**2050**
	24%	46%	62%	93%

In order to achieve the overall renewable target for heating, the LEAP model calls for investing in new efficient wood heating systems, cold-climate heat pumps or ground-source heat pumps. (See Table 3.)

Table 3: Thermal Fuel Switching Targets for West Windsor (by Number of Heating Units)			
New efficient wood heating systems	**2025**	**2035**	**2050**
	2	20	53
New heat pumps	130	349	674

Cold-climate heat pumps are also referred to as air-source heat pumps, mini-splits or ductless heat pumps. These systems are a good option to retrofit existing houses, and can be used to supplement an existing heating system. As explained on the Efficiency Vermont website, "heat is collected from the exterior air, concentrated via an outdoor compressor, and distributed inside through an indoor room unit. Heat pumps require electricity to run, but can deliver more energy than they use." They also provide air conditioning during the warmer months.

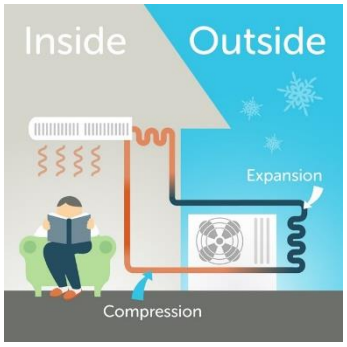


Figure 3: Illustration of how cold-climate heat pumps work. Source: Efficiency Vermont.

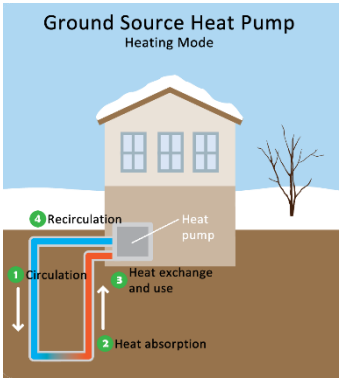


Figure 4: Illustration of how ground-source heat pumps work. Source: US EPA.

Ground-source heat pumps provide heating and cooling for buildings. They work similarly to air-source heat pumps, but instead they pump water or other fluid through pipes buried in the ground to collect energy. A more detailed description of how these systems work can be found on the US EPA website. These are generally a better option for new construction installations.

Heating with wood is generally encouraged as it uses a locally-available fuel. However, sustainable wood harvesting is important in order to protect the environment and provide a viable, long-term local energy source. New efficient wood stoves that are EPA-certified are encouraged. Wood-chip heating systems are considered a good option to heat larger commercial, industrial or institutional buildings. See the Efficiency Vermont website for more information. A number of schools in the region use such heating systems.

Transportation

Transportation is probably the most difficult area to "bend the curve" to meet the energy goals, considering the rural nature of this area and how challenging it is to change human behavior. However, it must be done if we are to achieve the 90% by 2050 goal. The LEAP model used a

number of assumptions in addressing this issue. The following targets are based on that LEAP model.

Table 4: Renewable Energy Use Targets for Transportation in West Windsor			
Use of renewables for transportation	**2025**	**2035**	**2050**
	10%	31%	90%

Overall, transportation needs to shift to renewable fuel sources as shown in Table 4. The LEAP model is largely expecting this to happen through using electric vehicles, and the use of biodiesel by the trucking industry. Table 5 below shows the fuel switching targets for West Windsor.

Also required to meet the goals will be additional efforts to lessen the use of energy for transportation, including land use patterns that encourage walking and bicycling, public transportation, telecommuting, driving less, and ride sharing. Efficiency Vermont has information on its website about ways to achieve transportation efficiencies.

Table 5: Transportation Fuel Switching Targets for West Windsor			
	2025	**2035**	**2050**
Passenger cars switch to electric vehicles	79	540	1,113
Diesel vehicles switch to biodiesel	136	253	421

IMPLEMENTATION ACTIONS (PATHWAYS)

In order to meet our stated energy goals and targets, the Town of West Windsor identifies the following implementation actions, also referred to as "Pathways". These implementation action categories are intended to be consistent with those used in the *Guidance for Municipal Enhanced Energy Planning Standards* (DPS; March 2, 2017).

Conservation and Efficient Use of Energy

The Town of West Windsor encourages the conservation and efficient use of energy, and has identified the implementation actions outlined below to achieve this policy.

To assist in implementing these actions, the Town will consider establishing a Sustainability Committee or Energy Committee under 24 V.S.A. §§4433, 4464. The Town will also consider including priority municipal energy efficiency projects in its Capital Budget and Program, and may consider establishing a fund to support such projects (e.g. capital projects, outreach efforts, incentives).

Encourage Conservation by Individuals and Organizations

West Windsor cannot control the use of energy by individuals and organizations. However, the Town can lead by example, serve as a resource, and encourage individuals and organizations to conserve and use energy efficiently. To do so, West Windsor will:

a) Inform residents about energy efficiency programs through Efficiency Vermont and the Weatherization Assistance Program for low-income households through Southeastern Vermont Community Action (SEVCA) and encourage residents to participate.

b) Communicate to the Legislature the importance of the programs offered by Efficiency Vermont and SEVCA.
c) Publicize local energy conservation projects to encourage others to participate.
d) Identify large energy usage customers as a target audience and encourage participation in commercial and industrial efficiency programs through Efficiency Vermont.
e) Encourage local businesses to conduct energy audits.

Promote Efficient Buildings

Heating buildings accounts for about 30% of all energy consumed in Vermont. Creating more efficient buildings can be achieved through weatherization and high-performance construction methods. West Windsor identifies the following to encourage efficient buildings:

a) Continue to promote the use of the Residential Building Energy Standards and Commercial Building Energy Standards by distributing State energy code information to all applicants seeking a zoning permit for a structure that is heated or cooled.
b) Encourage contractors to incorporate net-zero ready construction methods in new buildings.
c) Consider providing incentives (e.g. density bonuses) to developments that exceed the state's stretch energy code, or net-zero ready or net-zero demonstrated requirements, and that are located in an area identified as appropriate for growth.
d) Promote building placement and location with passive solar and active solar in mind, and promote the use of landscaping for energy efficiency.

Net-Zero: A construction method for buildings that generate as much energy as they consume. Also known as a zero-energy building.

Net-Zero Ready: A building constructed in a manner that, with subsequent on-site renewables installed, it can make as much energy as it uses.

Stretch Code: A building energy code that achieves greater energy savings than the base Residential Building Energy Standards (RBES). The Stretch Code is required for Act 250 projects and may be adopted by

Promote Decreased Use of Fossil Fuels for Heating

Heating buildings is the second largest contributor to greenhouse gas emissions. Home heating is heavily reliant on fossil fuels at this time. Solutions to address this situation involve high-efficiency heating system upgrades and fuel switching. West Windsor identifies the following to encourage using less fossil fuels to heat buildings:

a) Promote the use of either cold climate or ground-source heat pumps with education/presentations in coordination with Efficiency Vermont/electric utilities.
b) Identify municipal buildings that would be good candidates for cold climate heat pumps, and develop a plan and schedule to add heat pumps to those buildings.
c) Encourage, promote, and incentivize the conversion of existing fossil fuel heating systems to wood.
d) Promote wood stove change-out programs that take older non-EPA certified stoves out of service and replace them with more efficient and lower emitting cord or pellet stoves.

Lead by Example with Respect to the Efficiency of Municipal Buildings
To demonstrate the benefits of building efficiency West Windsor will:

a) Review energy audits performed in 2010 and 2011, and implement audit recommendations where appropriate.
b) Incorporate weatherization/energy efficiency projects in the municipal Capital Budget and Program.

Transportation
The Town of West Windsor encourages the reduction of transportation energy demand and single-occupant vehicle use. The Town also promotes the use of renewable or lower-emission energy sources for transportation (e.g. electric vehicles or hybrid vehicles), and has identified the following implementation actions to help achieve these policies.

Encourage Increased Use of Public Transit
There is currently no regular public transit provider in West Windsor. Southeast Vermont Transit, a.k.a. "The Current," serves the neighboring towns of Windsor and Hartland. West Windsor will implement the following actions to encourage public transit:

a) Increase awareness of existing nearby services, including The Current and Volunteers in Action.
b) Consider increased town support for these services.

Promote a Shift Away from Single-Occupancy Vehicle Trips
Public transit can meet some mobility needs, but additional efforts will be needed to reduce transportation energy use. West Windsor will work to encourage a reduction in single-occupant vehicle trips by:

a) Promoting telecommuting, which is feasible due to the recent expansion of high speed internet throughout town, courtesy of EC Fiber.
b) Promoting the Go Vermont webpage, which provides rideshare, vanpool, public transit and park-and-ride options.

Promote a Shift Away from Gas/Diesel Vehicles to Electric or Other Non-Fossil Fuel Transportation Options
To meet State energy goals, municipalities will need to help reduce the number of miles traveled in vehicles powered by fossil fuels, and encourage residents to switch to renewable, non-fossil fuel transportation options. West Windsor will do this by:

a) Increasing awareness of the benefits of electric and alternative-fuel vehicles.
b) Seeking grants to fund the installation of DC fast-charging infrastructure at strategic locations.
c) Encouraging the establishment of a local biofuel supplier.

Facilitate the Development of Walking and Biking Infrastructure
Active transportation, such as walking and bicycling, offers significant health benefits and requires no outside energy resources. To encourage residents to complete short trips by walking or bicycling instead of driving, West Windsor will plan for safe and convenient infrastructure that

supports "Complete Streets Principles." In order to do this, West Windsor has identified the following pathways:

a) Implement the recommendations identified in West Windsor's Bicycle and Pedestrian Master Plan.

b) Update the Bicycle & Pedestrian Master Plan to improve pedestrian and bike connections between the village and the resort.

Lead by Example with Respect to the Efficiency of Municipal Transportation
West Windsor will lead by example and demonstrate the benefits of energy efficiency in transportation by:

a) Using the highest biodiesel blend available that won't compromise the manufacturer's engine warranty. All manufacturers fully warranty their engines with the use of B5, a blend of 5% biodiesel and 95% diesel.

Land Use Patterns and Densities
West Windsor will promote energy conservation with land use policies, patterns and densities that:

- reduce sprawl and minimize low-density development; and
- prioritize development in a compact mixed-use center.

Reduce Sprawl and Minimize Low-Density Development
The reduction of sprawl and low-density development not only reduces energy consumption, but also can improve the local and regional economy. The Future Land Use Map and corresponding descriptions in the Land Use Chapter of the Town Plan generally call for growth to occur in the Village area, and the Ascutney Mountain Resort base area, thereby encouraging the types of land use patterns and densities that are likely to result in the conservation of energy. Maintaining the historic settlement pattern of a compact village center surrounded by rural countryside in accordance with 24 V.S.A. §4302 allows for land uses that support state and local energy goals such as:

- sustainably harvested wood-lots that produce renewable energy in the form of firewood for wood-burning furnaces;
- ground-mounted solar facilities that produce renewable energy in the form of electricity;
- farms and fields that produce agricultural products for local and regional consumption.

Prioritize Development in a Compact Mixed-Use Center
Compact development furthers State and local planning and energy goals. As indicated in the enhanced energy planning guidance, households within a compact, mixed-use center typically use less energy than those located in outlying areas. The energy savings are realized through reduced vehicle-miles-traveled and generally smaller homes, which require less energy to heat and cool. Transportation energy use can be further reduced by locating services such as shopping or daycare within walking or biking distance of the places where people work and live. This enables people to either choose an alternative to driving a single-occupancy vehicle or to significantly reduce the length of their drive. West Windsor will encourage this by:

a) Maintaining Brownsville's "Village Center" Designation, and encouraging property owners to take advantage of tax credit opportunities to help pay for improvements to eligible buildings;
b) Evaluating the Town's zoning regulations with the intent to reduce or eliminate barriers to additional residential development and/or low-impact business development in the village center; and
c) Coordinating with The Current and Go Vermont to promote car-sharing and public transit services.

Policy on the Development and Siting of Renewable Energy Resources

Achieving the heating, transportation and conservation targets noted above would not be sufficient to meet the 90% by 2050 energy planning goal. The LEAP model also assumes the purchase of additional out-of-state renewable energy. Even that, however, would not provide enough renewable energy to meet the goal. New local renewable energy generation will be needed to achieve the ambitious "90 by 50" energy goal. The following sections discuss how the municipality wishes renewable energy generation to take place in West Windsor.

Evaluate Existing Renewable Energy Generation

According to existing data, there were 16 known net-metered solar energy generation facilities in West Windsor as of 2015[9], as summarized in Table 6. Existing facilities amount to 0.10986 MW of installed capacity. In order to more easily compare existing facilities with the targets for new renewable energy needs, generation output was estimated in MWh based upon the conversion factors found in the guidance for regional enhanced energy plans. Because the two residential wind turbines in town are not net-metered, their capacity and output are not included in Table 6.

Table 6: Existing Renewable Generation in West Windsor[4]

Type	**Number of Sites**	**Installed Capacity (MW)**	**Est. Output (MWh)**
Solar	16	0.10986	134.732
Wind	2	n/a	n/a
Hydro	0	0	0

Analyze Generation Potential from Preferred Sites and/or Potentially Suitable Areas

An analysis of renewable energy generation potential was conducted for West Windsor by the SWCRPC. This consisted primarily of an analysis of existing and available GIS mapping data based on the guidelines established by the DPS for enhanced energy planning. Table 7 (below) summarizes the findings of this analysis.

Table 7: Potential Renewable Energy Generation[10]

Type	**Capacity (MW)**	**Generation Output (MWh)**
Roof-top Solar	1.11	1,361
Ground-mounted solar	157.5	193,158
Wind	338.9	1,039,067
Hydro	0	0
Total	**497.51**	**1,233,586**

[9] Vermont Energy Dashboard (2015)
[10] Derived from GIS mapping analysis (SWCRPC, 2017)

Based on this analysis, there is significant potential to generate power from renewable sources in West Windsor, primarily through ground-mounted solar and wind. There is no potential to generate hydropower from any existing dam sites, and the potential for rooftop solar projects is limited. Without ground-mounted solar and/or some form of wind power, there is not adequate generation potential from hydro and rooftop solar to meet the "90 by 50 goal."

Identify Sufficient Land for Renewable Energy Development to Reach the 2050 Targets

Table 8 summarizes West Windsor's targets for renewable energy generation[11]. There is more than enough land with solar potential in West Windsor (See map #9) to meet our 2050 renewable energy generation target of 9,884 MWh, which is the equivalent of approximately 8.06 MW of ground-mounted solar at the installed capacity. The guidance assumes 8 acres of land is generally needed to support 1 MW of solar, which means about 64.5 acres of land would be needed to meet this target. West Windsor has approximately 1,112 acres with the potential to generate solar power. Sixty-four and a half acres represents 5.8% of the local land area with solar potential.

Given that West Windsor only produced 135 MWh in 2015, and 1,071 MWh in 2019, it will take a lot of work to increase production to 2,471 MWh in the next five years. That level of production will require the installation of 9.13 acres of ground-mounted solar, or several smaller projects.

Table 8: Renewable Energy Generation Targets[9]

Renewable Energy Generation	**2025**	**2035**	**2050**
West Windsor Targets (in MWh)	2,471	4,942	9,884

Ensure that Local Constraints do not Prohibit the Generation of Sufficient Renewable Energy to Meet Local Targets

Local constraints have been analyzed, and the Town does not believe that these constraints prohibit, or have the effect of prohibiting, sufficient renewable projects needed to meet the state, regional or local energy goals.

The following resources are not appropriate locations for renewable energy projects and are hereby excluded from the potential wind and solar sites as depicted on the map. The following are consistent with the "known constraints" described in the DPS mapping guidance.

a) Vernal pools with a surrounding 50-foot buffer;
b) Department of Environmental Conservation (DEC) river corridors;
c) Federal Emergency Management Agency (FEMA) floodways;
d) Areas with State significant natural communities and rare, threatened or endangered species;
e) National wilderness areas; and,
f) Class 1 and Class 2 wetlands.

[11] SWCRPC, derived from Regional Shares of In-State Generation Target (DPS, 2017)

The following represent constraints that will likely require mitigation and that may prove a site unsuitable after a site-specific study has been conducted based upon state, regional or local policies that are adopted and currently in effect. Points a) through g) below are consistent with the "possible constraints" described in the DPS mapping guidance.

a) Agricultural soils (NRCS-mapped prime agricultural soils, soils of statewide importance or soils of local importance);
b) Act 250 agricultural soil mitigation areas;
c) FEMA special flood hazard areas (floodplain);
d) Protected lands (state fee lands and private conservation lands);
e) Deer wintering areas;
f) ANR conservation design highest priority forest blocks; and,
g) Hydric soils.

Undue Adverse Effect (Impact)

An undue adverse impact is one that meets any of the following criteria:

(1) Violates a clear, written community standard intended to preserve the aesthetics or scenic, natural beauty of the area;

(2) Offends the sensibilities of the average person (i.e. it is offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area); or,

(3) Fails to take generally available mitigating steps that a reasonable person would take to improve the harmony of the proposed project with its surroundings.

This definition is based upon Vermont case law. The term undue adverse effect is used in accordance with 30 V.S.A. §248.

Statements of Policy on Renewable Energy Projects

To promote the development of renewable energy generation and achieve the energy goals and targets established in this plan, West Windsor will:

a) Encourage all new development to be sited to accommodate solar.
b) Encourage rooftop solar projects.
c) Encourage residents, especially those who do not have a suitable site for a renewable energy installation, to support renewable energy generation through Green Mountain Power's Cow Power or GreenerGMP programs.
d) Encourage residential-scale wind turbines provided they comply with West Windsor's noise ordinance.

Renewable Energy Project Development Standards

The development of renewable energy projects must comply with the following standards:

a) Renewable energy projects, including ground-mounted solar projects of 15 KW or more, must not be located in the areas noted in Section 4.4.4 of this chapter, or within 50 feet of a stream or a Class 1 or Class 2 wetland. All ground-mounted solar projects must meet or exceed the setback standards in 30 V.S.A. §248(s).
b) Any new biomass facility and all ground-mounted solar projects of 150 kW or greater that are within view of public roadways (i.e. state highways, US routes, and Class 1, 2 and 3 town highways) must include plantings that blend the project with its surroundings, using a mix of native plants and avoiding the introduction of invasive species.
c) The owner of the facility must replace any dead or diseased vegetation serving as part of the landscape mitigation measures throughout the life of the project or until the project ceases commercial operation.

d) Proposed renewable energy facilities must not have undue adverse impacts on significant wetlands, significant wildlife habitat, wildlife travel corridors/habitat connectivity, stormwater, water quality, flood resiliency, agricultural soils, important recreational facilities or uses, scenic resources identified in this plan, or inventoried historic or cultural resources.
e) Proposed renewable energy facilities must not result in forest fragmentation or perpetuate invasive species.
f) For all utility-scale wind facilities (i.e. hub height of 70 meters/230 feet) and commercial-scale wind projects (i.e. hub height of 50 meters/164 feet), the applicant must demonstrate that the proposal was evaluated and that reasonable mitigation was considered with respect to the following criteria:
    1. Operational noise levels, measured at the property line, will be consistent with local and state standards.
    2. Avoid or minimize "shadow flicker" through careful project siting, planting trees or other methods.
    3. Avoid or minimize adverse impacts to significant wildlife habitat and wildlife travel corridors, including applicable terrestrial, aquatic and aerial species (e.g. migratory, resident and breeding bird and bat populations).
    4. Avoid or mitigate safety hazards in the vicinity of the project area (i.e. ice shedding or ice throw hazards, blade throw hazard, and tower fall zones).
    5. Avoid negatively impacting the scenic nature of the landscape.

Wind Turbine Categories

Residential-scale – wind turbines that are up to 30 meters (or 98 feet) tall, measured at the hub, or the center of the wind turbine blades.

Community-scale (sometimes referred to as commercial-scale) – wind turbines that are up to 50 meters (or 164 feet) tall, measured at the hub.

Utility-scale – wind turbines that are usually 70 meters (or 230 feet) tall or greater, measured at the hub.

Shadow Flicker

A flickering effect caused when rotating wind turbine blades periodically cast shadows, such as through the windows of adjacent homes. Shadow flicker is considered by some individuals as a nuisance and may cause headaches. No more than 30 hours per year is commonly used as a limit to reduce nuisance complaints.

Maximize the Potential for Renewable Generation on Preferred Locations

West Windsor has identified a number of specific areas or parcels that are preferred locations for siting renewable energy facilities. Identifying preferred sites informs the community where renewable generation is desired and can help to streamline the permitting process.

Preferred sites for West Windsor include:

a) Rooftops;
b) Parking lots;
c) Brownfield sites; and,
d) Disturbed portions of extraction sites (i.e. gravel pit, quarry).

Demonstrate the Municipality's Leadership by Example

West Windsor will work with partner organizations to identify opportunities for local renewable energy generation that benefit the community and further the goals and policies of this plan. The town should establish a local Sustainability Committee to help implement the sustainability and energy goals identified in this Plan.

ENERGY POLICIES

1. Encourage the development of local renewable energy resources.
2. Reduce energy usage through conservation and efficiency measures.
3. Any logging activities in the West Windsor Town Forest will be accomplished using sustainable forestry practices.

ENERGY RECOMMENDATIONS

1. Encourage residents to take advantage of programs offered by Efficiency Vermont, use high-efficiency/energy star appliances, and upgrade to LED lighting.
2. Investigate the feasibility of installing small solar facilities on town-owned property, including the former Burke property.
3. Weatherize municipal buildings and encourage residents and business owners to weatherize their homes and businesses.
4. Establish a Sustainability Committee.
5. Include priority municipal energy efficiency projects in the Town's Capital Budget and Program.
6. Consider establishing a fund to support appropriate municipal energy projects.
7. Serve as a resource for information about solar energy, cold climate heat pumps, EPA-certified wood stoves, and net zero construction.
8. Encourage residents to consider roof-top solar installations, appropriately sited ground-mounted solar installations, and residential-scale wind turbines that comply with the noise ordinance.
9. Encourage residents to support renewable energy generation through Green Mountain Power's Cow Power or GreenerGMP programs.
10. Encourage the use of sustainable forestry practices to supply firewood for residents, maintain an active working landscape, and support the local economy.
11. Promote the Go Vermont webpage, which provides rideshare, vanpool, public transit and park-and-ride options.
12. Encourage the use of electric and hybrid vehicles by installing DC fast-charging stations in key locations.
13. Encourage walking and biking by providing safe infrastructure (e.g. bike lanes, wide shoulders, signage) that supports "Complete Streets Principles."
14. Use B5, a blend of 5% biodiesel and 95% diesel, in Town vehicles.

CHAPTER 11. HOUSING

Note: See Chapter 1 and Appendix D for more housing related data.

Housing is a key element of any sustainable community. The amount and type of housing available for sale and for rent can have a direct impact on the landscape and the costs of municipal services. The supply of housing should be adequate to house those who work in the community and should expand at a rate that can accommodate economic growth. Currently, West Windsor's zoning regulations do not address "on farm" housing for agricultural workers who support local farming enterprises. The Planning Commission should evaluate the need for such housing when the regulations are revised.

A variety of housing options should be available for the region's expanding elderly population to ensure that "aging in place" remains a feasible option. In addition, housing should be sufficient to sustain a viable enrollment in our school. With careful planning, housing that is both affordable and attractive can serve area residents and enhance the character of a community.

According to the 2017 Grand List, West Windsor's housing stock consists of 618 single-family homes with an average value, not including land, of $233,033; 121 condominiums with an average value of $103,361; and 11 mobile homes with an average value of $52,109. There are a handful of camps, duplexes and multi-family homes and approximately 18 accessory dwelling units (AKA apartments).

According to the 2010 Census, 53% of all housing units are owner-occupied, 10% are renter-occupied, 33% are seasonal, and the remaining 4% are vacant, for sale or for rent.

Generally, housing is considered affordable if rent or mortgage, taxes, and insurance costs are no more than 30 percent of a household's annual income. According to the Vermont Department of Taxes, the median adjusted gross income for a West Windsor family in 2017 was $89,604. According to VHFA's Affordable Home Price Calculator, a family with that income theoretically could afford a house that costs approximately $306,000. According to data from the Department of Taxes, the median prices of primary homes sold in West Windsor were $150,000 in 2016, $185,000 in 2017 and $170,000 in 2018.

However, American Community Survey (ACS) data suggests that there is a significant affordability problem in West Windsor, based on five year averages. ACS reveals that the income of renters is significantly lower than that of homeowners (see Appendix D). ACS shows that 60% of renter households and 42% of owner-occupied homes pay 30% or more for a place to live, and nearly 1 in 5 households pay 50% or more of their income for housing.

The bursting of the housing bubble in 2008 and the closure of the ski resort in 2010 significantly impacted the real estate market in West Windsor. See Appendix D which shows that home prices were at their peak in 2006 and 2007, and then declined sharply until 2010. After a short increase, home prices dropped again between 2014 and 2016. The ski area closure appears to have affected units in the resort area more than homes in other parts of town. Condo values dropped precipitously after 2010 and remained fairly low in 2018. According to data from the Department of Taxes, only 6 condos were purchased as primary residences between 1998 and 2011, compared to 33 condos between 2012 and 2018. It appears that the lower costs encouraged more people to purchase condos in West Windsor as their primary homes. This influx of families also seems to have helped stabilize school enrollment during the last decade.

Vermont statute, 24 V.S.A. §4412(1)(E), allows any owner-occupied single-family dwelling to have one accessory dwelling unit provided it meets certain criteria. State statute also allows local bylaws to be less restrictive of accessory dwelling units. West Windsor's zoning regulations include less restrictive provisions, allowing accessory dwellings to be 1,000 square feet or 30% of the total habitable floor area of the associated single-family dwelling, whichever is greater. West Windsor's regulations also allow accessory dwellings to have two bedrooms and allow the owner to occupy either the house or the apartment. These less restrictive regulations allow for more flexible housing options to accommodate seniors and young families. The recent expansion of sewer service more easily enables accessory dwelling units within the village.

Other than in the Resort/Conservation and Light Industrial/Commercial districts, two-family dwellings are allowed in all districts on the same size lot required for a single-family dwelling as long as all required permits (e.g. wastewater) are obtained. Allowing single-family homes to be converted to two-family homes creates the potential for additional affordable housing.

The "tiny home" phenomenon may also provide opportunities for affordable housing. The unique challenges presented by tiny homes should be considered when the zoning regulations are updated.

HOUSING POLICIES

1. Encourage housing development, including the improvement or rehabilitation of existing units, that meets the needs of residents of all ages and income levels.
2. Promote the use of innovative construction and design techniques, as developed by "Efficiency Vermont," that enhance the affordability, energy efficiency, and environmental sustainability of housing for all residents.
3. Site new rural housing development to preserve as much open space as possible, to take advantage of solar opportunities, and to blend harmoniously with the natural environment.

HOUSING RECOMMENDATIONS

1. Promote federal and state tax credit programs available to property owners within the designated Village Center to renovate certain structures, including for income-producing projects, such as shops and apartments.
2. Periodically review the housing stock available for seniors and low to moderate income families to ensure the balance necessary for a sustainable community.
3. Support housing practices that advance the Town's energy goals such as net zero construction, solar panel installation, weatherization, and heating with cold climate or geothermal heat pumps or EPA-certified wood stoves.
4. Work with the Windham and Windsor Housing Trust to address local housing issues and promote their existing programs, such as home ownership counseling and educational services, and a shared equity program. For more information about these programs, see the Housing Trust's website.
5. Evaluate the need for housing options (e.g. tiny homes; farm worker housing) that are not addressed in the current zoning regulations.

CHAPTER 12. ECONOMIC DEVELOPMENT

For many decades, West Windsor's economy was largely centered around a commercial ski resort, which ceased operations in 2010. Since then, a local non-profit organization, Ascutney Outdoors, has created a new vision for outdoor recreation in the community on a smaller, more sustainable scale, with a four-season focus.

In addition to its recreational assets, the local economy supports 28 businesses, including many small home-based operations. Most workers who are not self-employed commute to jobs located in the larger surrounding towns. The future of the local economy depends on enhancing and promoting its recreational assets, revitalizing the Village Center, encouraging entrepreneurialism, and supporting existing local businesses.

The Land Use Chapter generally indicates the location, type and scale of the desired land uses that are identified in this Chapter.

BACKGROUND

Until the early 1900's, the economy of West Windsor was centered on agriculture. Most residents made their livelihood by farming or in businesses that were associated with the farm industry. Mills of various types could be found along the brooks throughout the town, and factories that made everything from woolen clothing to cheese prospered. Smaller, home-based businesses and industries completed the picture of a town that appears to have had a solid economic base and low unemployment.

In the mid-1900's, West Windsor's economy began to shift away from agriculture. Residents left the farm to work in the large machine shops and factories in Windsor and Springfield. These jobs were attractive because they provided an excellent salary, benefits and other amenities that weren't provided in an agricultural economy. The manufacturing sector remained strong until the 1970s. Beginning in the mid-1970's the manufacturing sector started to decline due to industry consolidation, overseas competition and a host of other financial factors. Cone Blanchard Machine Co., the last large machine tool plant located in the Precision Valley, closed its doors in 2000. Since the mid-1990s, the primary sources of employment in the area are in government, technology, light manufacturing, health care, tourism and services. While the economy seems to transform itself every twenty-five years or so, there still remains a close relationship to agriculture in West Windsor. Although the farms are now smaller and there are more horses than cows, the residents in West Windsor still enjoy and feel strongly about the importance of a working landscape in town.

Much has changed since the last Town Plan was adopted. The town acquired 469 acres of former ski area land, along with the resort's water and sewer systems, and expanded the sewer system into the village. As noted above, the non-profit Ascutney Outdoors expanded the recreational opportunities available to the community and re-established a small ski area. The town applied to the state for designation as a Village Center, which provides tax credits and other incentives to encourage business investment in Brownsville. The Friends of the Brownsville General Store purchased the old store and leased it to a new market café business, the Brownsville Butcher & Pantry, which opened in 2018 after renovating the old store building. EC Fiber has made high-speed fiber optic internet service available throughout West Windsor.

As we look to the future, townspeople should consider the implications of the following issues:

VILLAGE CENTER REVITALIZATION

The town wishes to foster conditions that support vibrant local stores, community services and housing located within the village, especially now that the area is served by sewer infrastructure. In 2018, the state approved the designation of Brownsville's Village Center. Designation is an important tool to help implement the village revitalization efforts called for in this Town Plan.

Property owners with income producing properties in the designated village center are eligible for tax credit programs (e.g. 25% historic tax credits for façade improvements, 10% add on historic tax credit, 50% code improvement tax credits, and 50% technology tax credits). Projects within designated Village Centers are also given priority for a variety of state grant programs, such as Municipal Planning, VT Community Development Program (VCDP), and Bicycle and Pedestrian Program Grants. The designated Village Center is the desired location for retail and other commercial uses and the most intensive residential development in West Windsor.

ENCOURAGING HOME-BASED AND SMALL BUSINESSES

The town's policy is to support home-based and small businesses as a way to grow the local economy. West Windsor's zoning regulations were revised in 2008 to include performance standards that address some of the potentially adverse impacts associated with home-based businesses such as excess light, noise, dust, etc. Home-based businesses that create high volumes of traffic are encouraged to locate along the major routes in West Windsor. Wherever they are located in Town, businesses are likely to need signs. The zoning ordinance's existing signage rules need to be examined to ensure they provide clear guidelines for design and location that address both the business need for the sign and the character of the area in which it is located.

AGRICULTURE AND FORESTRY BUSINESSES

Agriculture in West Windsor has a history of evolution. Sheep production boomed and then declined and was replaced by dairy farming. In the 1930s, there were 94 dairy operations in town, today there are none. Instead there are beef cows, horses, llamas, alpacas, sheep, market gardens, greenhouses, tree farms and sugaring operations throughout the town. With existing and pending state law changes, hemp or cannabis enterprises could also be established, although local support for cannabis enterprises would depend on how well state legislation addresses municipal concerns as expressed in the "Resolution Supporting Municipal Authority in a Commercial Cannabis System" adopted by the Selectboard on December 9, 2019. The Selectboard favors an approach that allows towns to decide whether or not they want to permit the retail sale of cannabis in their community.

The town encourages farming and forestry operations that contribute toward a working landscape, embrace sustainability and employ best management practices. In keeping with healthy community and local food initiatives, the town encourages local production of farm-fresh foods and value-added farm products, improving access to fresh and healthy food, using public space for community gardens and farmers' markets, and supporting the Farm-to-School and Farm-to-Market initiatives.

It is becoming increasingly common for farms to diversify in order to stay economically viable. Many farms are now creating and selling value-added products on-site or establishing accessory on-farm businesses involving social events, farm stays, tastings or meals. The town encourages these types of accessory on-farm businesses provided they do not have an undue adverse effect on the capacity of town roads and facilities or on the character of the area. Vermont statutes were amended recently to allow for accessory on-farm businesses and enable zoning bylaws to regulate them through site plan review in accordance with 24 V.S.A. §4412(11).

Many traditional forestry and farming activities are exempt from local zoning, and may occur throughout town.

LIGHT INDUSTRIAL/COMMERCIAL AREA

The Light Industrial/Commercial district is located at the west end of Route 44, near its intersection with Route 106. The four parcels of land in the Light Industrial/Commercial district include a helicopter landing area, a veterinary clinic, the Lucy MacKenzie Humane Society, and the former wood pellet manufacturing plant.

In the mid-1960s, a talc plant was developed for the purpose of processing ore mined in nearby towns. In 2003, the talc plant ceased operations and Windsor Minerals, Inc. agreed to reclaim the 207-acre tailings disposal area south of Mill Brook. In 2004, Williams & Co. Mining purchased the 12-acre parcel containing the former talc building complex north of Mill Brook. In 2013, Pellet Property Holdings LLC purchased the 12-acre property and began to operate a wood pellet plant, but the facility is no longer operational. The town would like to see an appropriate, low-impact industrial use re-established on this property.

In 2011, the 207-acre property was acquired by Imerys Talc Vermont, which began the reclamation project in 2012. As of November 2016, the project had not been fully completed. In February 2019, Imerys filed for Chapter 11 bankruptcy protection throwing the timeline for completion of the project into question, although the company's recent application (April 2020) to renew the wastewater discharge permit for the project suggests progress. Discussions with Imerys, at the time the project began, indicated that the company might be interested in donating the property to the Town for recreational purposes, after the reclamation is completed. The Town is still interested in acquiring the property.

Because of West Windsor's desire to remain rural and conserve its natural features and resources, any new light industry in Town should be located in the Light Industrial/Commercial district. Any new industry considering the Town for its location would be evaluated based on its compatibility with the town's goals and its potential effects on the environment.

OUTDOOR RECREATION/VACATION HOME DEVELOPMENT

Outdoor recreation has been an important part of the Town's economy for many decades. While skiing remains important, the community recognizes the need to provide a diversity of recreational options (e.g. mountain biking, equestrian, hiking, snowmobiling, etc.).

Towns like West Windsor, with its mountain, open fields, farmland, scenic vistas and traditional village area are an increasingly sought after place for second home owners and visitors looking for

respite from ever expanding urban and suburban environments. Recreation-based tourism can provide opportunities for residents who want to open Bed and Breakfasts, Inns and other forms of lodging. Services provided to second home owners can create additional jobs, including maintenance, carpentry, snow plowing, electrical, plumbing and heating services.

The emergence of short-term rentals, courtesy of on-line purveyors like Airbnb and Vacation Rental by Owner (VRBO), and the impact of such rentals on neighboring properties should prompt the Town to consider whether some type of local oversight might be warranted. Short-term rentals are already subject to state requirements. For example, they must comply with the Vermont Fire and Building Safety Code, obtain a lodging license from the Vermont Health Department, and pay meals and rooms taxes. In 2020, a bill (H.567) was introduced in the Vermont legislature authorizing towns to regulate short-term rentals but, as of this writing, the bill has not advanced.

ASCUTNEY TRAILS & THE ASCUTNEY OUTDOORS CENTER

The first ski operation on Mount Ascutney began in the 1940s with the installation of a rope tow, which offered local families an affordable recreational pastime. In the 1980s there was rapid expansion of the area, including a marked increase in lodging and other forms of on-site accommodations. These changes were driven in part by ski industry market forces which compelled many ski areas, such as the former Ascutney Mountain Resort, to develop their real estate in order to try to remain profitable. However, this strategy did not prevent the Resort from declaring bankruptcy in the early 1990s. In 1993, the Plausteiner family purchased the Resort out of bankruptcy. Between 1993 and 2010, the Resort owners installed a high-speed quad chairlift, expanded the number of trails, built a skier bridge over Ski Tow Road, and made a number of other improvements to the Resort. In 2008, three of the five hotel buildings and the fitness center were sold to Florida-based Orange Lake Resorts. In 2010, the ski area was taken over in foreclosure, and did not open for the 2010-11 season. Over time, the five chairlifts were taken down and sold, starting with the high-speed quad lift, which was removed in 2012 and ending with the old East chair in 2018. The Base Lodge is also gone, destroyed by fire in January 2015.

Although these changes marked the end of an era, they also heralded a new beginning. As discussed previously in this Town Plan, the town purchased much of the ski area property in 2015 with assistance from the Trust for Public Land. In that same year, the newly-formed non-profit organization, Ascutney Outdoors, installed a rope tow, followed by a tubing park and outdoor center in 2018 and a T-bar in 2020. Ascutney Outdoors now provides a broad range of recreational activities in the community, including alpine and backcountry skiing. Supporting the efforts of Ascutney Outdoors to promote West Windsor as a recreation destination, manage the trail networks, and organize events in and around the new outdoors center, will further the community's economic development goals, as will working with our regional partners on mutually beneficial outdoor recreation initiatives like the "trail around the mountain."

ECONOMIC DEVELOPMENT POLICIES

1. Support local businesses that provide well paying, sustainable jobs that support the local economy and are compatible with West Windsor's rural character.

2. Encourage compatible economic growth that includes commercial, residential or mixed use development in the Village Center.

3. Encourage recreational facilities and recreation-related businesses in the Resort area that further the goals of this Town Plan.
4. Encourage home-based businesses as long as they consider adjacent land uses, traffic, noise, and other issues that may be offensive to neighbors in the area.
5. Support agricultural enterprises in town that do not adversely impact ground or surface water quality, harm natural resources or degrade the quality of life of adjacent property owners.
6. Balance future tourism and vacation home development against the impacts that such development may have on the qualities that draw people to West Windsor in the first place.

ECONOMIC DEVELOPMENT RECOMMENDATIONS

1. Implement the recommendations identified in the Recreation Chapter to enhance and promote recreational assets in West Windsor and the surrounding area.
2. Encourage the redevelopment of under-utilized buildings and the development of vacant parcels in the Village by informing property owners about the benefits of Village Center designation (e.g. tax credit programs that can assist them with certain building improvement projects).
3. Consider possible uses for the Fire Station property once the Fire Station is relocated.
4. Encourage the expanded use of the Albert Bridge School, Town Hall, and Ascutney Outdoors Center for recreation, performing arts, and other community events that bring visitors to town and generate economic activity.
5. Monitor the status of the Imerys bankruptcy and the Town's prospects for acquiring the 207-acre parcel south of the talc plant.
6. Assess the needs of local businesses for infrastructure and support.
7. Consider regulation and/or taxation of short-term rentals, such as Airbnb and VRBO, to the extent allowed by law.
8. Revise the zoning regulations to allow for accessory on-farm businesses, subject to site plan review and conditional use approval.
9. Consider including a directory of local businesses and service providers on the Town website.
10. Advocate for cannabis legislation that adequately addresses the concerns of municipalities.
11. Review the sign regulations in the zoning ordinance.

CHAPTER 13. RELATIONSHIP TO TRENDS AND LOCAL AND REGIONAL PLANS

In order for the town of West Windsor to carry out its land use planning goals, the town must evaluate the Town Plan in relation to plans of neighboring towns and the region. West Windsor is bordered by the towns of Windsor, Hartland, Woodstock, Reading and Weathersfield, which are all located in Windsor County. West Windsor is in the northern portion of the Southern Windsor County Regional Planning Commission's 10-town region. West Windsor is served by the District 2 Environmental Commission, and is located in Maintenance District 4 of the Vermont Agency of Transportation.

This Chapter evaluates how West Windsor's Town Plan relates to state, regional and local plans or regulations including, but not limited to, the following per 24 V.S.A. §4350:

(A) Consistency with State Planning Goals (24 V.S.A. §4302);

(B) Compatibility with approved local plans in the region;

(C) Compatibility with the Southern Windsor County Regional Plan.

HOW THE PLAN RELATES TO DEVELOPMENT TRENDS

Significant population growth is not anticipated for the next 20 years in West Windsor. Therefore, many of the identified public infrastructure needs in this Town Plan are based upon maintaining the existing facilities. The Capital Budget and Program are intended to guide municipal capital expenditures strategically. In addition, in light of recent trends, this Plan seeks to encourage economic development initiatives in ways that reinforce Village Center revitalization, maintain rural character, and preserve/enhance quality of life.

NEIGHBORING TOWNS

West Windsor is surrounded by towns that share many similar planning concerns and are faced with varying degrees of development pressure. All of the towns abutting West Windsor have Town Plans and zoning regulations, except Hartland, which has a Town Plan, but no zoning regulations.

All neighboring towns share West Windsor's concern for the protection of natural resources. West Windsor shares the Mill Brook watershed with the towns of Reading and Windsor. Based upon a review of current town plans from neighboring towns, the land use and conservation plans of the neighboring towns appear to be compatible with those of West Windsor as summarized below.

Windsor's 2014 Town Plan (and draft 2019 Town Plan) focuses dense development within and surrounding the downtown area, with the areas located to the west of I-91 serving primarily as the rural countryside. The conservation area on Windsor's Future Land Use Map includes the Ascutney State Park which corresponds with West Windsor's conservation area in the southeast corner of town. The remaining areas along the Windsor/West Windsor town boundary are designated on Windsor's Future Land Use Map as forest or agricultural. These are compatible with West Windsor's rural residential and secondary growth districts, which require minimum lot sizes of 4 to 5 acres. West Windsor's primary growth district is limited to a small area surrounding

the sewer line, which extends all the way to Windsor's Wastewater Treatment Facility, providing similar development opportunities in both towns and having no negative impact on Windsor's Town Plan.

Weathersfield's 2017 Town Plan calls for rural areas to surround the villages and hamlets. It designates most of the area along its boundary with West Windsor for conservation, which corresponds to West Windsor's conservation area as shown on the Future Land Use Map. The northwest corner of Weathersfield is designated as rural, which allows for working landscapes, forestlands, recreation areas and low-density residential uses. This area is adjacent to and compatible with West Windsor's conservation area.

West Windsor's Town Plan appears to be compatible with the 2015 Reading Town Plan. Reading generally calls for dense development in and around the village of Felchville and hamlets of South Reading and Hammondsville, to be surrounded by rural countryside. Reading's Future Land Use Map calls for conservation areas that correspond to West Windsor's conservation area in the southwestern corner of town. Reading's industrial area is a logical extension of West Windsor's commercial/light industrial area, as they are both located where past mining/industrial uses were located. Reading's industrial area was reduced in size from the previous plan due to wildlife habitat areas and the new location of Reading's fire station. The remainder of Reading's forest area corresponds well with West Windsor's rural residential area.

Hartland does not have zoning, but their Town Plan includes specific policies to guide development subject to an Act 250 permit. Hartland's 2017 Town Plan includes a rural designation along the entire Hartland/West Windsor town boundary area. "Maintaining the Town's natural resource base, agricultural economy and forest industry are primary objectives" for their rural area, which allows for low density residential uses and home occupations. West Windsor's rural residential area, which supports forestry, agriculture, wildlife habitat, and low-density residential, appears to be compatible with Hartland's Town Plan.

Woodstock shares a very small boundary with West Windsor, about 1,100 feet in length in the northwestern corner of West Windsor. Woodstock has an R5 designation in that area as shown on their 2016 Town Plan Future Land Use Map. That area abuts West Windsor's rural residential area. At this time, the text of Woodstock's Comprehensive Plan is not available. However, it appears that Woodstock's R5 designation is compatible with West Windsor's rural residential designation.

SOUTHERN WINDSOR COUNTY REGION

The 2018 Southern Windsor County Regional Plan provides broad guidelines for planning, coordination and review of the natural, cultural, social and economic features of the Southern Windsor County region. The Southern Windsor County Regional Plan is a companion document to the West Windsor Town Plan, providing a broader framework and context for local planning efforts. The Town Plan is generally compatible with the land use and development goals of the Regional Plan as they both encourage the densest development in and around Brownsville and the resort area, to be surrounded by a rural countryside.

The Regional Plan identifies the village area of Brownsville as a "Village Center" characterized by a small area of concentrated development with a mix of residential, commercial and civic uses. The Future Land Use section of the Regional Plan indicates that Brownsville cannot sustain a large amount of growth based on its rural setting and limitations of available services. The Regional Plan directs growth and development within the higher density village area. This section and the West Windsor Town Plan are compatible, as they designate similar areas for concentrated growth surrounded by rural areas.

West Windsor's Town Plan and the Regional Plan are also compatible with respect to encouraging affordable housing in and around the village and expanding local economic development opportunities.

STATE PLANNING GOALS

West Windsor's Town Plan makes substantial progress toward attainment of the thirteen State Planning Goals in 24 V.S.A. §4302, and it addresses related findings of the Southern Windsor County Regional Planning Commission's most recent enhanced consultation report.

CHAPTER 14. TOWN PLAN IMPLEMENTATION

Implementation of the goals, policies and recommendations outlined in this Plan depends on the combined efforts of town residents and local officials, as well as the resources of the Southern Windsor County Regional Planning Commission, and other regional, state, federal and private entities involved in land use planning activities.

At the state and federal levels, the Plan can be used to justify and prioritize the use of federal funds for community development, transportation improvements, natural resource protection and management, and other investments. In addition, Act 250 requires developers to show that projects conform to local and regional plans.

At the regional level, the Regional Planning Commission can review the Town Plan for compliance with the requirements of Act 200. Act 200 approval makes the town eligible to apply for implementation funding from the State in the form of Municipal Planning Grants.

At the local level, the town may take some of the following actions to implement the goals of this Plan:

1. Review and amend, if necessary, zoning bylaws and subdivision regulations so that they are based on the goals, policies and recommendations outlined in the Town Plan.
2. Refer to the Town Plan when planning additions and improvements to local infrastructure such as local roads and public utilities. Such additions or improvements should allow for appropriate growth and development.
3. Work with public and private entities to help them design development or resource management plans in ways that will further the goals of this Plan.
4. Continue to plan and work to conserve important resource lands.
5. Request that the Regional Planning Commission create and update maps indicating the locations of state recognized natural resource areas.
6. Work with the Regional Planning Commission on meeting local housing needs.

ESSENTIAL PLANNING TOOLS

In order to implement our Town Plan, the Town should review, consider, update and adopt, when appropriate, the following tools:

- Capital Budget and Program;
- An inventory of natural areas, open space, agricultural and forest lands, aquifer recharge areas, wetlands, vernal pools, wildlife habitat, scenic views, historic sites, ridgelines and recreational trails;
- Recreation plan and trail map;
- “Village Center” designation;
- Zoning and Subdivision Bylaws;
- Zoning Overlay District;
- Flood Hazard Area Bylaws.

High Priority Recommendations

	Tasks	Town Plan section	Resp. Party	Timing	Est. Cost	Funding Method
1	Revise Land Use & Development Regulations so they are consistent with the purpose and intent of the Town Plan, especially with regard to: • Village development – Ensure that minimum lot sizes, permitted uses, parking standards, sign regulations, etc. allow for growth of the high density, mixed-use Village District. • Emergency access – Consider revising driveway slope standards and requiring subdivisions to have two points of access. • Review directional signage to Town Forest parking areas, the size and services provided at those areas and potential conflicts with adjacent land uses.	Chapter 2, 4, 6, 7, 9, 12	PC	1-3 yrs.	$10,000	MPG
2	Revise Flood Hazard Area Bylaws so they are consistent with 24 V.S.A. §4424 and the National Flood Insurance Program (44 C.F.R.), as well as the Town Plan, and include: • Limitations on development in the floodway as defined by the Mill Brook geomorphic assessment as well as in federally defined floodplains. • Restrictions on logging and heavy cuts in the Mill Brook Watershed to the extent allowable and necessary to protect upland forest areas that attenuate and moderate flooding and erosion. • Restrictions on construction of new ponds in wetlands to conserve the attenuation capacity of wetlands during flooding events.	Chapter 8	PC & CC	1-3 yrs.	$10,000	MPG
3a	Create a Disaster Preparedness Committee (DPC) with a charter and membership criteria.		SB	6 months	$0	n/a
3b	Begin a regular disaster planning preparedness process performing tasks such as: • Annually reviewing the "Green Book" and updating it as necessary • Annually reviewing and updating the Town's list of "at risk" citizens and their contact info; • Developing an inventory of local, regional, state, and national resources, with contact information, available to assist with various types of emergencies;	Chapter 4	DPC, EMC, TA, WWVFD, FAST Squad	Ongoing	$0	n/a

	• Researching and recommending an emergency power source for critical Village infrastructure, including emergency shelter facilities; • Ensuring that new wind socks are installed at designated DHART helicopter landing areas.					
4a	Create a Sustainability Committee with a charter and membership criteria.	Ch. 1, 4, 10	SB	6 months	$0	n/a
4b	Begin an analysis of the Town's environmental footprint and recommend ways to improve it by undertaking tasks such as: • Reviewing, updating and implementing the Town's energy audit recommendations, which include the weatherization of municipal buildings; • Reviewing and updating, if necessary, the Highway Department's Environmental Mission Statement; • Investigating the placement of at least one public electric vehicle recharging station in town; • Investigating the feasibility of installing small solar facilities on town-owned property, including the former Burke property.	Ch. 2, 3, 4, 9, 10, 11	SC	Ongoing	$0	n/a
5	Clarify the solid waste disposal options available to West Windsor residents and determine if the Weathersfield Transfer Station should continue to be one of the options. If so, participate in developing a fair and equitable funding strategy and long-range plan to ensure the financial stability of the facility.	Ch. 4	SB & SC	1-2 yrs.	$0	n/a
6	Coordinate with neighboring towns and partner organizations to advance area recreational opportunities and related economic development by: • Developing a marketing plan that promotes the area as an outdoor recreation destination and includes improved signage and a one-stop source for information; • Planning and developing a multi-use trail around the lower portion of Mt. Ascutney (i.e. trail around the mountain); • Developing a new interpretive walking trail nearby the AO Center, making it as accessible as possible; • Improving the accessibility of other trails in the Town Forest where possible.	Ch. 6	AO, ATA, CC, PC, SB, RPC, Towns of Windsor & Weathersfield, State of VT	1-5 yrs.	To be determined	Grants, donations & matching funds

7	Working with property owners located within the area covered by the expired stormwater permit located at the base of Mt. Ascutney, retain an engineer to assess the condition of the originally constructed stormwater management infrastructure, repair it as necessary and apply for permit renewal. Not a part of this process but also needing attention is assessment of adjacent gully erosion over Mill Brook to develop plans for remediation and to identify grant funding for this work.	Ch. 7 & 9	SB, RPC, State of VT & Property Owners	1-2 yrs.	To be determined	Grants & town budget
8	Maintain and improve West Windsor's highway infrastructure by: • Continuing to identify undersized culverts, request hydraulic studies, prepare cost estimates, and seek grant funding for their replacement; • Annually reviewing plans for, and progress toward, meeting Municipal Roads General Permit (MRGP) requirements; and appealing to our legislators for relief from MRGP requirements, to the extent that those requirements are unfunded, and/or for additional financial assistance to cover the costs of complying. • continuing, and expanding if necessary, efforts to control roadside growth of invasive species; • monitoring conflicts between vehicular and other uses of town roads and introducing measures to reduce them if possible (lower speed limits, speed and traffic assessments, etc,)	Ch. 4, 7, 8, 9	SB, Highway Dept, TA, AOT, RPC	Ongoing	To be determined	Grants & town matching funds
9	Continue energetic management of activities in the Town Forest by: • continually updating the Town Forest Management Plan; • monitoring the trail system to avoid over use, erosion, unauthorized construction or clearing and recreational conflicts; • relocating the Bicentennial Trail; • limiting spread of invasive species.	Ch. 4, 6, 7	CC , AO & ATA	Ongoing	To be determined	Grants & in-kind assistance
10	In concert with regulatory review (see #1 above), prioritize the revitalization of the Village by: • maintaining "Village Center" designation, which makes grant and tax credit programs available to village property owners for various building improvements; • encouraging mixed use development of existing buildings; • evaluating possibilities for redevelopment of the fire station site.	Ch. 1, 2, 7, 11, 12	SB, PC, WWVFD	Ongoing	$0	n/a

11	Evaluate the Town's computer system and information technology resources and consider the need for improvements (hardware and software updates; digitized files) to facilitate off-site work arrangements, remote access to records and meetings, and file-sharing between departments.	Chapter 4	SB, town employees, consultant	Ongoing	To be determined	Grants & Town budget

APPENDIX A

WEST WINDSOR STORY

By Mary B. Fenn

Looking north from the Brownsville Rock, high on Ascutney Mountain, one can view the hills, valleys, fields and forest of the West Windsor township. Deep in the valley below is the tiny village of Brownsville with its white steepled church, yellow brick Town Hall and the large red brick, seven chimneyed home. It is a snug clutch of buildings which has changed little in the last 150 years. Tight to the base of the mountain is the Ascutney Resort, a complex of gray structures. Ski trails sprawl down the steep slopes, merging together by a main lodge. A recently enlarged school/community building makes its own statement on the north edge of the village. One can make out a blacktop highway which threads east and west, between Windsor and Reading. Another one runs north from the village toward the township of Hartland. A few of the houses by the dirt roads that wind through the folding hills date back over 200 years.

West Windsor was organized as an independent township October 26, 1848. Previous to that time it had been the West Parish of Windsor.

It was July 6, 1761 that Governor Benning Wentworth of New Hampshire issued a charter to Colonel Josiah Willard of Winchester, New Hampshire, which "sued out" the grant for Windsor. Parcels of land were sold to settlers from New Hampshire, Massachusetts and Connecticut --to men and families who were anxious to move into this undeveloped country. Land was surveyed, roads laid out, trees were cut and homes were built, as a small community was cleared out of the wilderness.

The first recorded meeting of the proprietors was held November 3, 1767. It was noted that “New York lays claim to all lands west of the Connecticut River that were granted by the governor of New Hampshire." This was a confusing period in the history of what was later to become the state of Vermont. By 1769 early pioneers were making their "pitches" in the western part of the Windsor grant. Three years later the first map was drawn up. Lots and Ranges were laid out. A rough road/track was cut west from the settlement by the river, over several ridges through what was later to become the hamlet of Sheddsville, and on westward over more ridges.

At a July, 1778 town meeting the town of Windsor was officially divided into two equal parts. The East Parish, close to the river, was developing into a thriving commercial village. Self-sufficient farms were scattered through the hills of what was to become the West Parish. In 1783 the Vermont Legislature established the Parishes as two Ecclesiastical Societies.

Sheddsville, where several Shedd families settled, became the center of the West Parish. A meeting house was built and a cemetery laid out high on the hill above the tiny hamlet. A store, school and a blacksmith followed A road led to the valley where water from Mill Brook produced power for a sawmill and gristmill. Annual Town Meetings were held alternately in the East and West Parishes.

Not only did the family lifestyles in the two parishes differ but there was friction. It was difficult to determine where problems lay. Traveling back and forth over the several steep hills was difficult. Much of the conflict had to do with the roads, and caring for the poor. Disagreements developed. November 4, 1814 a law was passed by the Legislature of the State of Vermont recording, "An act dividing the East and West Parishes of Windsor into separate and distinct towns." Almost a year and a half later, March 1, 1816, that act was formally repealed.

It was in 1810 that Consul-General William Jarvis of Weathersfield had introduced the Spanish merino sheep into Vermont. Both the people-population and the sheep-count in the parishes were growing steadily as old problems kept surfacing. Education didn't seem to be an issue. In 1823 there were 425 students registered in the 11 West Parish one-room schools. Large families were the rule. By 1847 the population in the West Parish had reached over 1000 people. The festering separation difficulties finally came to a head. On October 26, 1848 the Governor of Vermont approved and signed the House Bill # 69 entitled, "An Act to Divide the Town of Windsor, It is hereby enacted by the general assembly of the state of Vermont, as follows: …" A line was drawn north and south between seventh and eighth ranges of lots. The portion east of said line was to be known as Windsor, and that portion lying westerly was to be known as West Windsor.

Water power and the mills attracted settlers to the valley. A second village, Brownsville, sprang up. A fulling and carding mill by the brook helped take care of the sheep farmers' wool processing needs.

Many farmers were motivated by the growing sheep industry. More trees were cut. Miles and miles of stone walls were built The bare hills of West Windsor were dotted with over 7020 heavily jowled merino sheep. 1860 was the height of the sheep era in West Windsor. It was about that time that the American west was opening up and families were being lured to land that was far better for agriculture than the hills of Vermont.

As the sheep bubble started to burst many local farmers who didn't head west were switching their farming efforts from sheep to cows. Cheese and butter were profitable products. The men did the farming. Women made the cheese. In 1850 153 farmers had 506 milch cows which turned out 18,512 pounds of butter, while 72 of them turned out 20,800 pounds of cheese. Thirty years later records show that 114 farmers with 232 cows were producing 41,233 pounds of butter and only 5,652 pounds of cheese.

With the advent of railroads which reached up through Vermont it became possible to ship dairy products to Boston. Late in the 1800s a cooperative cheese factory was built at the west end of the village of Brownsville -- close to Mill Brook. Large barrels of cottage cheese, as well as Neufchatel and other soft cheeses, were shipped to Boston. A few years later a cooling plant for milk was built where the West Windsor Volunteer Fire Department building stands today. After the milk was processed it was poured into 40-quart, heavily jacketed milk cans, packed in ice, and shipped to Windsor where it was loaded on a train for the big city.

For several decades the dairy business remained fairly static. Barns were built, pastures fenced in, hay fields cleared, plowed, fertilized and planted. Milk was cooled and processed before being

shipped to the cities. The Gleaner Grange #282 was the organization which supported the farm community with agricultural education, cooperative buying opportunities, and fun social activities. However, families kept leaving the area for "greener pastures." By the turn of the century the population had dwindled to half of what it once was. When automobiles came on the scene men looked for jobs in surrounding towns. Some of them worked in Windsor's machine tool shops -- often keeping a subsistence farm at home. They still kept shipping milk.

1915 was a special year for West Windsor. Members of the Gleaner Grange #282 had raised enough money and given enough of their personal hard labor to build their own hall. Saturday, August 16 the Hall was dedicated with great celebration.

When Dr. Darwin Story, from Proctorsville, died he left money to have a town hall built in the center of Brownsville, in memory of his father, Dr. Dyer Story. It was almost across the road from the Mary Blood Library, which had been given to the community in 1901 by Benjamin Blood. Dr. Dyer Story had cared for the people of West Windsor for over 50 years. At noon October 27, the day of the Town Hall dedication, a dinner was served at noon to 450 souls. It was an all day celebration with plenty of food and many speeches. It is said that 600 enjoyed dancing the night away.

West Windsor dairying reached its peak in 1930. 94 herds. 1706 cows.

For the next several decades, times were not easy. Farms began to lose their value. The "depression" somewhat affected the area, though many families had their gardens, chickens and other animals to sustain them. West Windsor felt the impact of World War II as 62 of their men and boys enlisted or were drafted. Only one was killed but many others, knowing that jobs were scarce at home, did not return to the hills and life on the farms. State requirements for dairy farms had becoming more stringent. Pay was low for hired hands.

The complexion of the township was changing. When skiing became a growing sport, a woman who had moved into the area installed a rope ski-tow at the base of Ascutney Mountain. It was a beginning. Trails were cut, slicing the face of the mountain. Bob Ely, back from the war, invented snowmaking. The white stuff helped cover the rocks and steep pitches. Over the years improved lifts were installed. Housing for the skiers was made available as a succession of owners enlarged and upgraded the area.

In 1963 the local selectmen agreed it would be beneficial to the town to have Eastern Magnesia Talc Co. build their talc ore processing plan in the western part of town. Though the ownership changed several times over the next 40 years, the talc plant was a quiet, clean asset to West Windsor. It closed in 2004.

West Windsor had always been a likable, attractive, rural community. Interstate 91 made it reachable for people from "down-country" -- not only to ski, but to stay a while. Some bought old houses; others bought land and put up new houses. Some young people from suburbia and the cities wanted to bring up their children in a small country town. There were those who had a "second home" in the hills. Some folks came and stayed. Others, after a few years, returned from whence they came or moved on. There was a core of families whose forebears dated generations

back, to the early days. In the 1960s land values began to rise. Because of the proximity to Woodstock, home of the Green Mountain Horse Association, and some 58 miles of dirt roads, old barns were shored up, new barns built, and a few large horse arenas broke the line of scenic beauty. Property values continued to rise as large parcels were divided into smaller housing lots.

Today, most of those who are employed locally have jobs with the school, the General Store or in their own homes, thanks to computers and the internet. Others have employment in surrounding towns: Windsor, Claremont, Hanover, Lebanon, Woodstock, Springfield. At the end of the day they return to their homes in West Windsor, a wonderfully warm, friendly community -- a community with a white steepled church, a bustling little library, a Town Hall where, on the first Tuesday in March many residents gather for the annual Town Meeting, to have their say in how their town is run.

There are always big doings on the Fourth of July: a flea-market, a fantastic parade, games for the kids, barbecue cookout and a chance to see and enjoy the day with friends in town. And there are always the Bean Suppers in the summer for the benefit of the Historical Society and the School. In the winter months there are the roast beef suppers[12] at the Methodist Episcopal community church. The residents of the town feel safe and protected knowing the high quality of the West Windsor Volunteer Fire Department, the FAST squad and our dependable constable[13].

[12] The church no longer offers roast beef suppers.

[13] West Windsor's law enforcement needs are no longer provided by a Constable, but rather by the Windsor Police Department.

APPENDIX B

WEST WINDSOR TOWN PLAN SURVEY RESULTS

1. On a scale from "strongly disagree" to "strongly agree", how do you feel about the following statement:

a. I would like to see a more vibrant Village Center.

Strongly Disagree		Disagree		No Opinion		Agree		Strongly Agree		Total
2.52%	4	5.66%	9	15.09%	24	42.77%	68	33.96%	54	159

b. What types of businesses would you like to see?

The top 5 responses to this question included:

1. Gas station
2. Arts and crafts
3. Ski and bike shop
4. Restaurant
5. Hardware

2. Regarding recreational and other activities on Mount Ascutney, including the trail networks, please answer the following:

	No		Yes		Total
a. I and/or my family members utilize the resources	26.75%	42	73.25%	115	157
b. I believe that visitors are a cornerstone of our local economy	18.18%	28	81.82%	126	154
c. I support attracting visitors by sponsoring more events	16.03%	25	83.97%	131	156
d. I support attracting visitors by further developing the town owned land on the mountain	33.33%	51	66.67%	102	153

e. How can we better utilize the mountain for uses other than biking, hiking and skiing?

The top 5 responses to this question included:

1. Events, such as concerts and arts/crafts festivals
2. Adventure park-like activities, such as ropes course, disk golf and zip lines
3. Nature/environmental programs
4. Farmers market
5. Horse trails

3. Should the Town Plan identify policies regarding adult substance (alcohol, tobacco, cannabis, etc.) use, sale or distribution? For example, the Town Plan could take a position on a recreational marijuana retail store opening up in the village.

Answer Choices	Responses	
Yes	49.68%	78
No	43.95%	69
Comments:	43.95%	69

4. Are you satisfied with the Town's infrastructure (roads, utilities, telecommunications, etc.)?

Answer Choices	Responses	
Yes	75.80%	119
No	17.83%	28
What improvements could be made?	34.39%	54

5. Do you support the concept of "Aging in Place" for our Town's aging population?

Answer Choices	Responses	
Yes	91.45%	139
No	5.26%	8

b. As residents get older, what do you think they need to stay in the community and maintain a good quality-of-life?

The top 5 responses to this question included:

1. Transportation
2. Social interaction
3. Meal deliveries
4. Affordable taxes
5. Help with home/yard maintenance

6. Would you like to see construction of additional housing in or near the Village Center to attract more residents?

Answer Choices	Responses	
Yes	33.99%	52
No	61.44%	94

b. If yes, what type?

The top 5 responses to this question included:

1. Single-family homes
2. Homes that residents can afford
3. Condos
4. Home options for seniors
5. Multi-family residences

7. If you answered NO to question 6, if not in or near the Village Center, would you like to see more residences constructed elsewhere?

Answer Choices	Responses	
Yes	20.41%	20
No	70.41%	69

8. On a scale from "strongly disagree" to "strongly agree", how do you feel about the following statement:

	Strongly Disagree		Disagree		No Opinion		Agree		Strongly Agree		Total
a. How strongly do you agree with the proposed "Vision?"	4.58%	7	3.92%	6	9.15%	14	47.71%	73	34.64%	53	153

b. Comments:

The top 5 responses to this question included:

1. Bring back school choice
2. Maintain rural character
3. Attract more businesses
4. Manage the school for students and taxpayers
5. Attract families/residents of all ages to move into town

9. On a scale from "strongly disagree" to "strongly agree", how do you feel about the following statement:

	Strongly Disagree		Disagree		No Opinion		Agree		Strongly Agree		Total
a. How strongly do you agree with the Proposed Strategic Community Goals?	4.05%	6	8.78%	13	8.11%	12	50.68%	75	28.38%	42	148

b. Which proposed Goal(s) would you eliminate?

The top 5 responses to this question included:

1. Relocating the Fire Station (Strategic Goal B)
2. Eliminate A[14]
3. Talc plant (Strategic Goal H)
4. Eliminate F[15]
5. Eliminate D[16]

c. Are there other Goals we should incorporate?

The top 5 responses to this question included:

1. Affordable taxes
2. Include the Library in Goal E
3. Support Ascutney Outdoors
4. Do not redevelop the Fire Station
5. Slow traffic down

[14] Strategic Goal A: Utilize the Village Center designation, with the new village wastewater system, to encourage redevelopment of under-utilized buildings and development of vacant parcels.

[15] Strategic Goal F: Develop programs that encourage more families to move to West Windsor.

[16] Strategic Goal D: Support the development of the "mountain curriculum" for the merged school district, utilizing our unique combination of natural resources, resident expertise and history, and ABS.

APPENDIX C

OVERVIEW OF VERMONT'S GENERAL EDUCATION FUNDING SYSTEM

As a result of the Vermont Supreme Court Brigham decision of 1997, Vermont now provides total state funding to its school districts. Prior to this court decision Vermont used a foundation formula to provide state aid to augment local school district property taxes.

In its simplest terms, a state funding system replaces a state aided local tax system. The state now pays each district the amount needed to fund the district's locally adopted budget through an education fund. This amount funded by the state equals the total voter approved expenditure budget less any amounts for expenditures that have specific funding. Examples of specifically funded amounts include federal programs and state categorical grant programs. The state funded portion is called the district's "education spending."

The state then divides each district's education spending by the district's equalized pupil count. The equalized pupil count uses a weighting system for various student types. The resulting spending per pupil amount is used to determine the district's homestead-state education-property tax rate. The rates start at a low level and are associated with a base per pupil spending amount, then increase proportionally at higher per pupil spending amounts. A district with a per pupil spending amount 20% above the base will have a tax rate 20% above the base tax rate.

The resulting school tax rates for residents will apply to one of two tax bases. The homestead education property tax rate is applied as a percentage to a resident's homestead market value. The second rate is applied to the household income of those living in the homestead. The second rate is for households with incomes of $90,000 or less as an alternative to the property tax should that method yield a lower tax bill.

The system is intended to apply pressure to voters if they approve spending amounts that result in high per pupil spending. If the voters in a district approve a budget that produces higher per pupil spending, the voters will have higher tax rates.

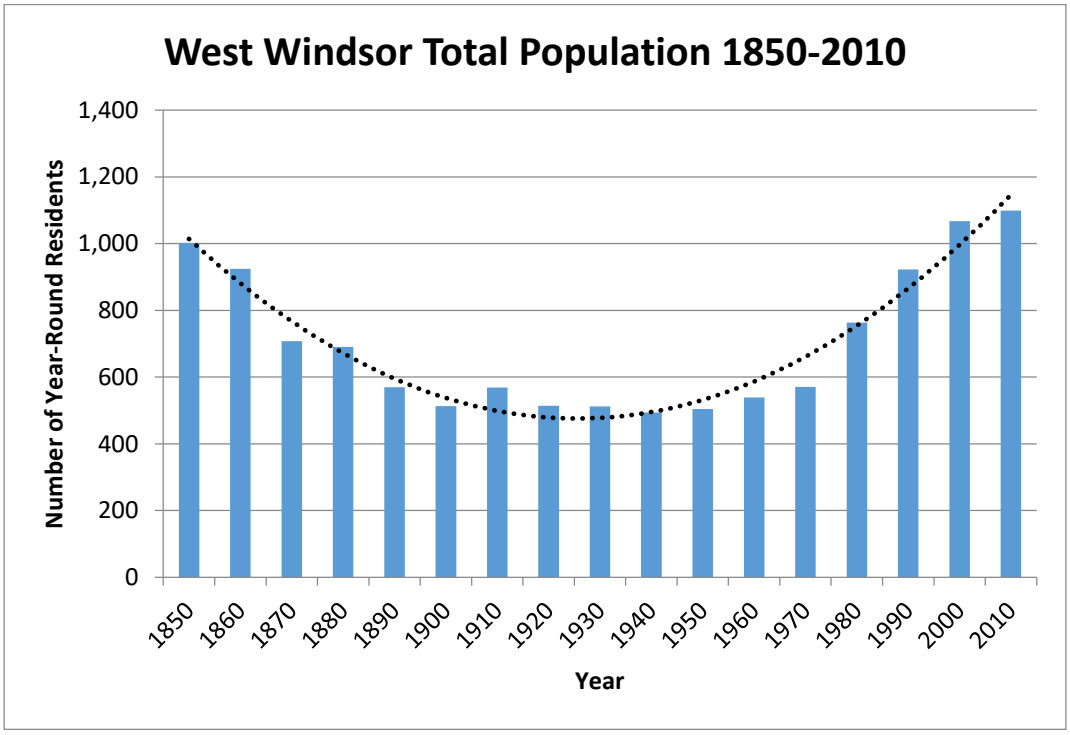
Regardless of the level of per pupil spending approved by the voters, property tax payers with homesteads of the same market value living in districts that have the same per pupil spending amount, pay the same tax within the tolerances of the system. That is, if two districts have the same per pupil spending amount, the tax rates will be the same and tax payers with the same market value homestead or household income will have equal tax bills. This taxing system provides the equity to Vermont's school funding system.

One complexity is a local adjustment to the homestead property tax rate. This adjustment is necessary because it is too difficult for towns to keep properties listed at the current market value. Applying state rates to property listings that vary significantly from market value would produce unequal taxing. Each year the tax department establishes a "common level of appraisal" (CLA) for each town. Homestead tax rates are then adjusted by the town's CLA so that tax amounts will be equalized.

For more information, see "Vermont's Education Funding System, June 2011" at
http://education.vermont.gov/documents/EDU-Finance_Education_Funding_System_2011.pdf

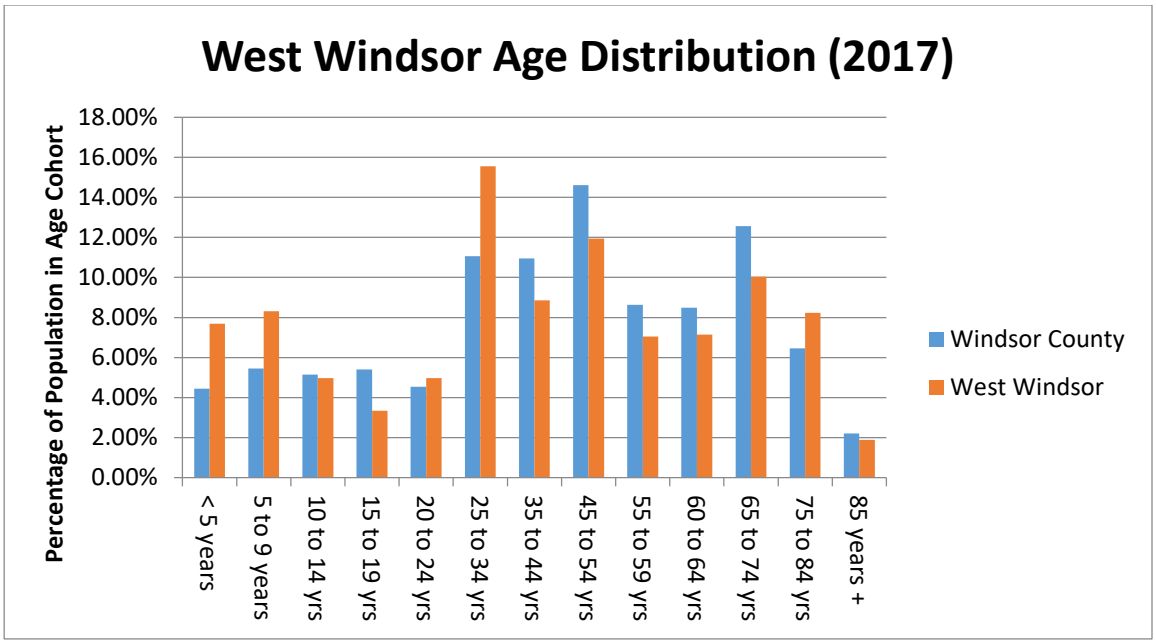
APPENDIX D – COMMUNITY DATA PROFILE

1. Population[17] [18]



- According to Decennial Census figures, the population in West Windsor increased sharply between 1970 and 2000. The growth rate after 2000 moderated.
- According to American Community Survey (ACS) data, West Windsor's population in 2017 is estimated to be 1,106.

[17] 2010 Decennial Census, US Census Bureau
[18] American Community Survey (2013-2017), US Census Bureau



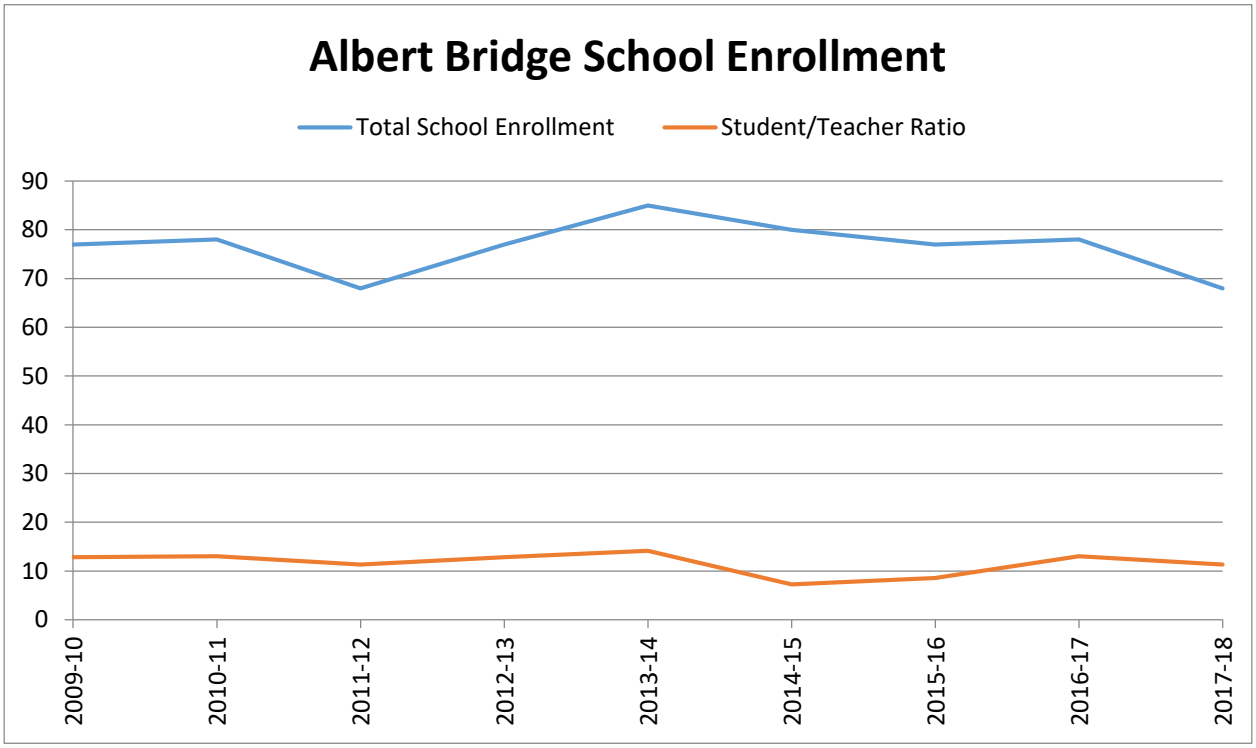
- According to 2017 ACS data, West Windsor has a younger population than Windsor County; note the higher proportions of those aged <5, 5-9, and 25-34.

Population Projections				
Year	Scenario A	% change from 2010	Scenario B	% change from 2010
2010 Census	1,099		1,099	
2020 Projection	1,192	8.5%	1,127	2.5%
2030 Projection	1,250	13.7%	1,128	2.6%

- An analysis conducted for the State of Vermont in 2013 estimates an increase in West Windsor's population over the twenty-year period between 2010 and 2030.
- The analysis may have some limitations:
  - These population projections involved two scenarios. Scenario A is based on 1990 to 2000 trends. Scenario B is based on trends during the 2000s, which generally had lower growth rates than in the 1990s.
  - The Decennial Census methodology changed for the 2010 Census. This generally resulted in lower 2010 population numbers for ski towns in Vermont.
  - As discussed above, the population in 2017 was estimated to have increased to 1,106.

2. School Enrollment[19]

School Participation Information	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	State of Vermont 2017-2018
Total School Enrollment	77	78	68	77	85	80	77	78	68	84,404
Student/Teacher Ratio	12.83	13	11.33	12.83	14.17	7.27	8.56	13	11.33	10.51

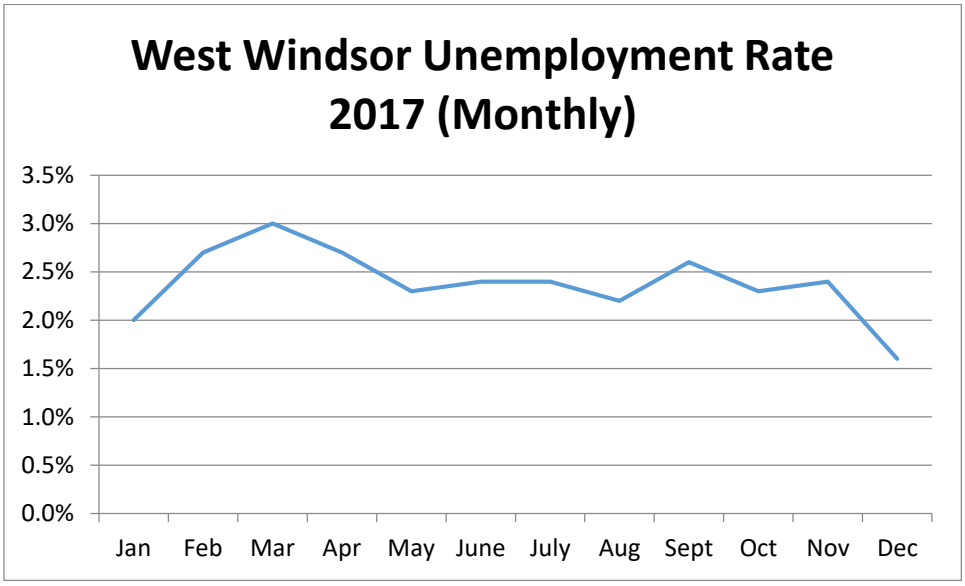


- Student enrollment at the Albert Bridge School has fallen since a peak of 85 during the 2013-14 school year.

[19] Vermont Department of Education (2018)

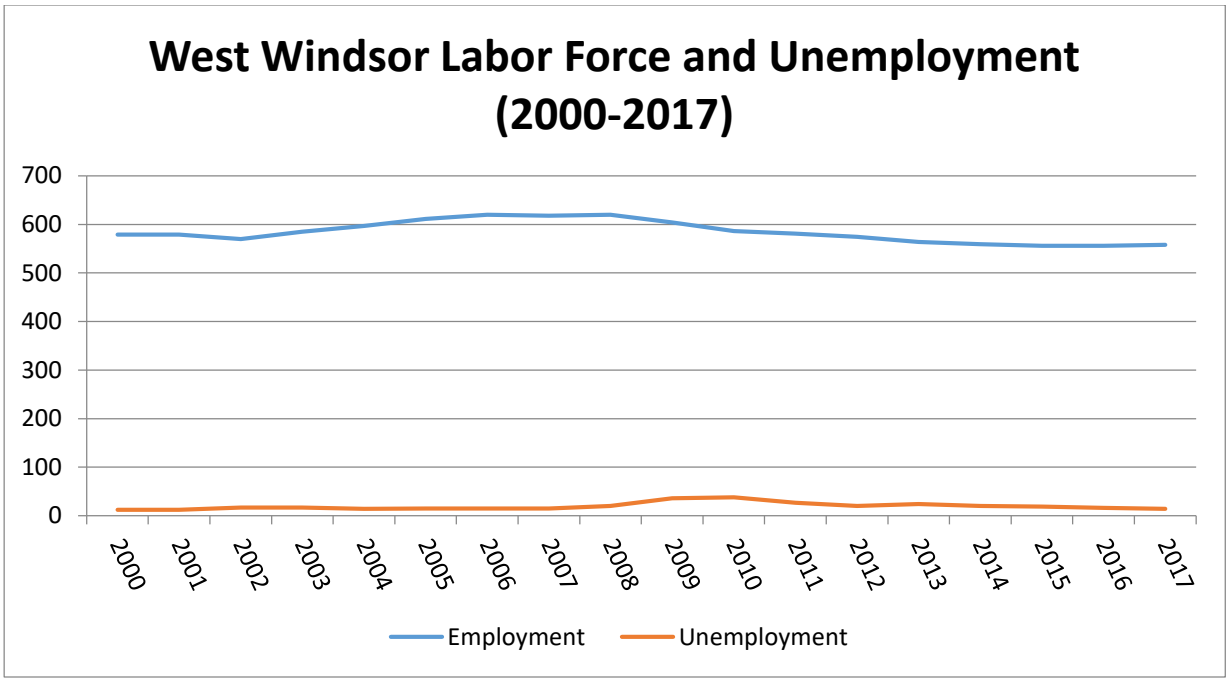
3. Economic Data

2017 Labor Force[20]



West Windsor Employment 2017 (Annual Average)	
Total Civilian Labor Force	572
Employment	558
Unemployment	14
Unemployment Rate	2.4%

[20] Vermont Department of Labor, Economic & Labor Market Information (2018)



- The labor force declined around 2009 and 2010, which mirrors the national economic recession. Additionally, Mount Ascutney Resort closed in 2010. West Windsor's labor force has been fairly steady since then.
- A corresponding spike in unemployment is observable in 2009-2010. The unemployment rate has returned to more "normal" levels since then.

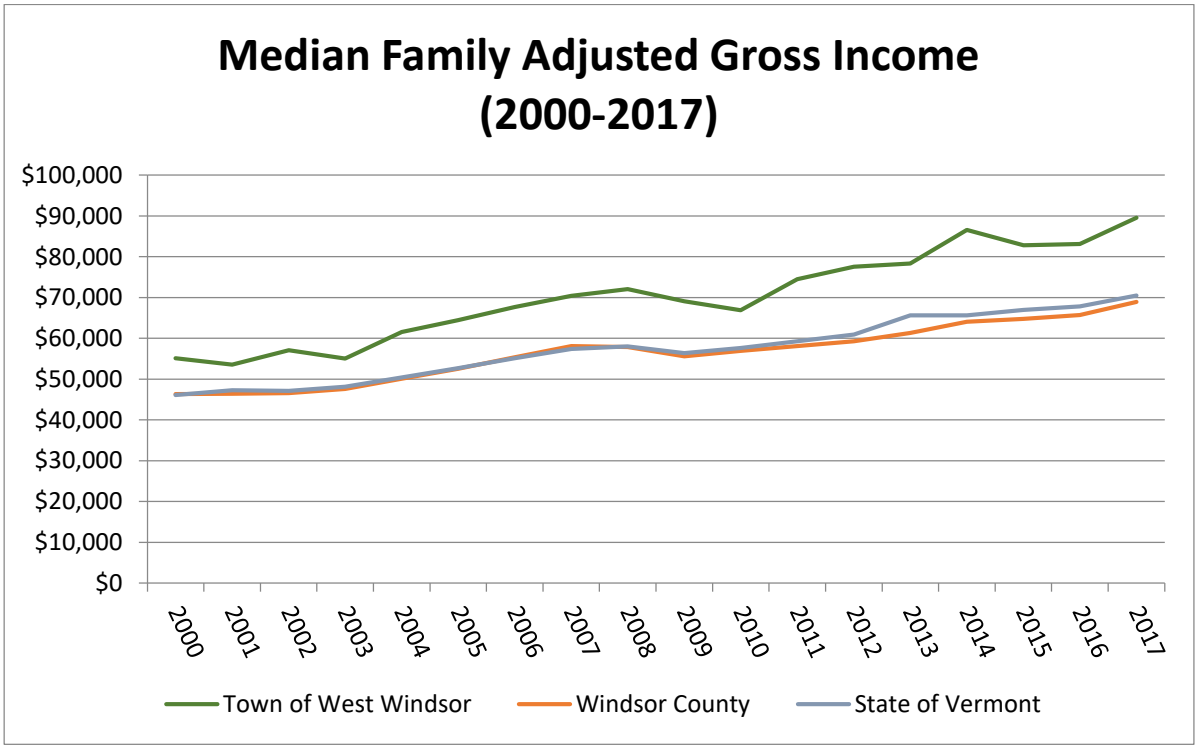
Employment and Work Establishments in West Windsor[21]

NAICS code	Economic Sector	Establishments				Employment			
		1990	2000	2010	2017	1990	2000	2010	2017
11	Agriculture, forestry, fishing & hunting		1				*		
21	Mining	2	1			*	*		
23	Construction	8	7	12	6	*	20	*	*
31-33	Manufacturing	6	4	2	2	29	*	*	*
42	Wholesale trade	1	3	6	6	*	*	*	*
44-45	Retail trade	3	1	1		*	*	*	
51	Information			1	2			*	
52	Finance & insurance				1				*
53	Real Estate & rental & leasing	3	2	2		*	*	*	
54	Professional & technical services	3	3	4	6	*	*	*	*
56	Administrative & waste services	3	2	1	3	*	*	*	*
61	Education services		1			*	*		
71	Arts, entertainment & recreation	2				*			
72	Accommodation and food services	2	1	1	1	*	*	*	*
81	Other services, except public admin.	1	4	2	1	*	*	*	*

- Common economic sectors in West Windsor include construction, wholesale trade, and professional and technical services.

[21] VT Labor Market Information, Vermont Department of Labor (2019)

2017 Vermont Personal Income Tax Returns School District Median AGI Report					
School District (Town)	**Median AGI per Return 2010**	**Median AGI per Return 2017**	**Increase 2010-2017**	**Percent change 2010-2017**	**Median Family AGI per Return 2017**
Andover	$33,717	35,095	$1,378	4.1%	$65,091
Baltimore	$32,003	32,543	$540	1.7%	$65,761
Cavendish	$32,747	34,949	$2,202	6.7%	$62,213
Chester	$27,012	36,697	$9,685	35.9%	$58,728
Ludlow	$27,385	32,102	$4,717	17.2%	$60,471
Reading	$33,324	40,863	$7,539	22.6%	$66,540
Springfield	$29,484	33,421	$3,937	13.4%	$54,052
Weathersfield	$34,189	40,058	$5,869	17.2%	$65,310
West Windsor	$42,056	58,577	$16,521	39.3%	$89,604
Windsor	$27,230	34,515	$7,285	26.8%	$58,124
Windsor County					$68,966
Vermont	$32,501	39,183	$6,682	20.6%	70,538



- West Windsor has a higher median family adjusted income in 2017 ($89,604) than both Windsor County ($68,996) and the State of Vermont ($70,538).

Job Locations for Working West Windsor Residents (2015)[22]

Destination	Count	Share
Woodstock town (Windsor, VT)	51	13.4%
Lebanon city (Grafton, NH)	45	11.8%
Hartford town (Windsor, VT)	30	7.9%
Bridgewater town (Windsor, VT)	21	5.5%
Windsor town (Windsor, VT)	21	5.5%
Plymouth town (Windsor, VT)	17	4.5%
Hanover town (Grafton, NH)	14	3.7%
Springfield town (Windsor, VT)	14	3.7%
Killington town (Rutland, VT)	11	2.9%
Ludlow town (Windsor, VT)	11	2.9%
Rutland city (Rutland, VT)	8	2.1%
West Windsor town (Windsor, VT)	8	2.1%

- Many West Windsor residents travel long distances for work.
- Nearly 1/4 commute to the Upper Valley (e.g. Lebanon, Hanover, Hartford).
- Only around 2% of West Windsor residents work in town.

Where Workers of West Windsor Jobs Live (2015)[23]

Origin	Count	Share
Bridgewater town (Windsor, VT)	9	8.8%
Reading town (Windsor, VT)	8	7.8%
West Windsor town (Windsor, VT)	8	7.8%
Plymouth town (Windsor, VT)	5	4.9%
Ludlow town (Windsor, VT)	4	3.9%
Springfield town (Windsor, VT)	4	3.9%
Weathersfield town (Windsor, VT)	4	3.9%
Woodstock town (Windsor, VT)	4	3.9%
Claremont city (Sullivan, NH)	3	2.9%
Barnard town (Windsor, VT)	3	2.9%
Cavendish town (Windsor, VT)	3	2.9%
Hartford town (Windsor, VT)	3	2.9%

- A small percentage of employees at West Windsor businesses live locally; 92% live elsewhere, many of whom travel modest distances to commute.

[22] 2015 Longitudinal Employer-Household Dynamics, US Census Bureau
[23] 2015 Longitudinal Employer-Household Dynamics, US Census Bureau

4. Housing

Total Housing Units

Housing Units in West Windsor

Year	Owner-Occupied	Renter-Occupied	Seasonal (Vacant)	Vacant	Total Housing
1940					159
1950					170
1960					174
1970	142	35			276
1980	241	59	9	169	487
1990	273	101	374	22	773
2000	377	79	226	34	716
2010	420	79	264	36	799

Source: U.S. Census Bureau - Census of Population & Housing, 2010

2013-17	391	101	325	75	892

Source: U.S. Census Bureau - ACS 5-Year Estimates

Median household income, 2013-2017[24]

Median household income, 2013-2017	$67,727
... homeowner households	$75,000
... renter households	$41,500

- Median household income for renters is significantly lower than for homeowners.

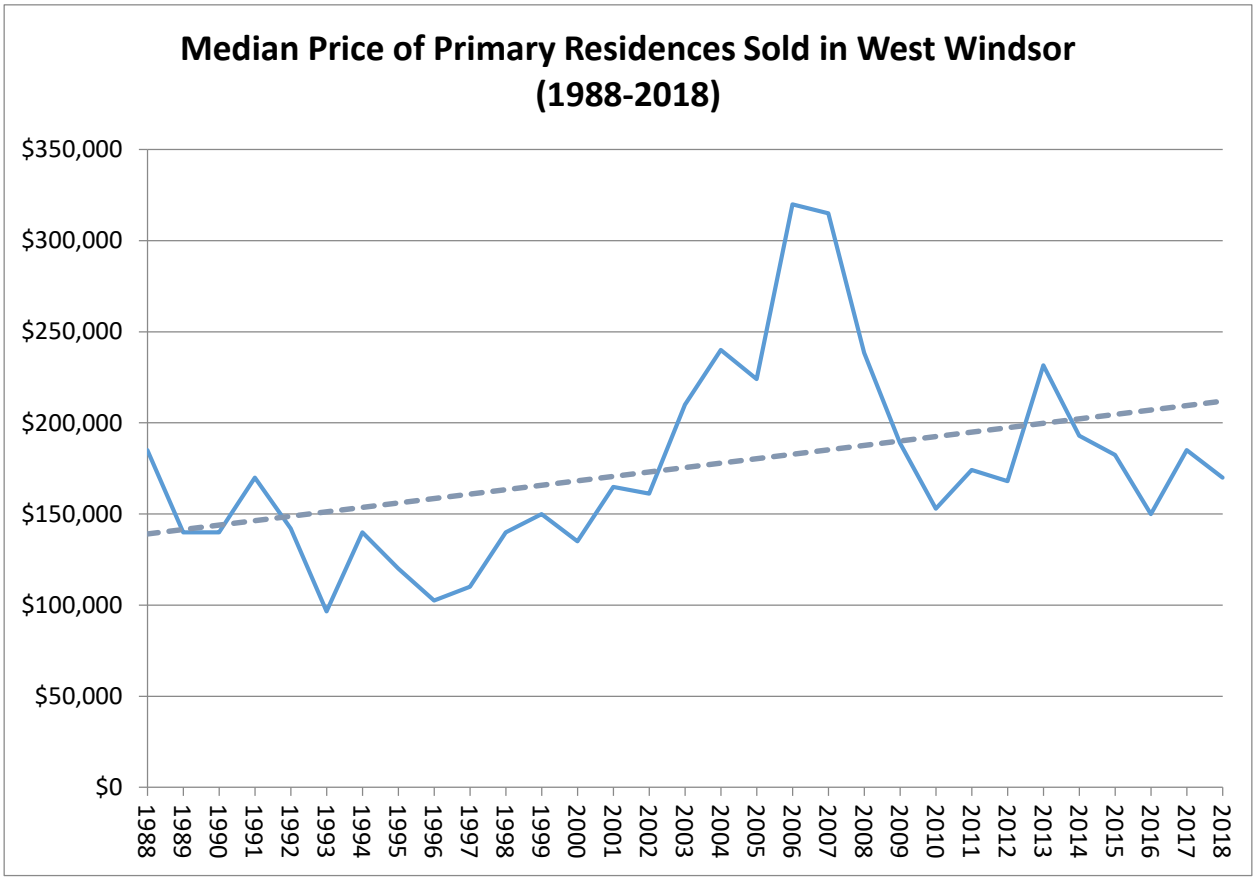
Ability to Afford, 2013-2017[25]

Owner-occupied housing units	**364**
... at or above 30% of household income	42%
... at or above 50% of household income	18%
Specified housing units with gross rent (total)	**72**
... at or above 30% of household income	60%
... at or above 50% of household income	16%

- The discrepancy in median household incomes between renter and homeowner households is reflected in the number of homeowners versus renters who pay 30% or more of their income for housing. About 2 out of every 5 homeowner households pay 30% or more of their income for housing, whereas about 3 out of every 5 renter households pays 30% or more of their income.

[24] 2013-2017 American Community Survey, US Census Bureau
[25] 2013-2017 American Community Survey, US Census Bureau

- Roughly the same proportion (under 20%) of homeowner and renter households pays 50% or more of their income for housing.



- The median price of primary residences in West Windsor has varied dramatically over the years, but the overall trend shows an increase.
- According to this data source, home prices were at their peak in 2006 and 2007, and then declined sharply until 2010. After a short increase, home prices dropped again in 2014 to 2016.
- In 2018, the median price home sold was $170,000.

PROPERTY TAX RATES (PER $100) 2017[26]

TOWN	SCHOOL/ RESIDENTIAL	SCHOOL/ NONRESIDENTIAL	MUNICIPAL
ANDOVER	1.2461	1.3234	0.41
BALTIMORE	1.545	1.53	0.4583
CAVENDISH	1.3945	1.4057	0.3626
CHESTER	1.2262	1.2781	0.6967
HARTLAND	1.5418	1.4611	0.4366
LUDLOW	1.7425	1.571	0.2927
READING	1.6789	1.5059	0.4665
SPRINGFIELD	1.4817	1.3955	1.6053
WEATHERSFIELD	1.5574	1.5538	0.6544
WEST WINDSOR	1.5777	1.4436	0.4399
WINDSOR	1.1772	1.4085	1.4728
WOODSTOCK	1.6603	1.5503	0.4073

- In 2017, West Windsor had the fourth highest residential school tax rate in the area ($1.5777 per $100), the median municipal property tax rate ($0.4399 per $100), and the sixth lowest non-residential school tax rate ($1.4436 per $100).

5. Transportation

Highway Mileage[27]

Town	Class 1	Class 2	Class 3	Class 4	Legal Trail	State Hwy	Total Public Highway
West Windsor	0.000	5.931	42.100	4.340	0.330	5.044	53.075

- The Town of West Windsor is responsible for the maintenance of over 48 miles of road (Class 1, 2 and 3 town highways)

[26] VT Department of Taxes 2017 Annual Report
[27] VT Agency of Transportation, 2018

Traffic Count Data (Average Annual Daily Traffic)[28]

Route/Road	Location	Town	2018	2017	2016	2015	2012	2011	2010
VT 44/ Ascutney St	0.1 mile west of Union St	Windsor	2,343	2,374	2,350	2,306			2,900
VT 44	0.3 mile east of Sunset Ln	Windsor	1,720	1,743	1,726	1,694			1,800
VT 44	mile marker 2.6	West Windsor							
VT 44	0.1 mile east of VT 106	Reading	845	856	848	832			900
VT 44A/ Back Mtn Rd	0.1 mile south of I-91 bridge	Weathersfield	1,207				1,000		
Brownsville-Hartland Rd	0.6 miles north of VT 44	West Windsor	928	940	950			990	
VT44	Between Shattuck Hill & Flat Iron Rds	Reading	842	853	845	829			
Ski Tow Road	200 feet south of VT 44	West Windsor	786	796	788	773			

6. Land Use

Lands Enrolled in the Current Use Program (2017)[29]

Total Taxable Parcels	Enrolled Parcels	% Enrolled of total
888	86	9.7%

Total Acres (Town Wide)	Total Enrolled Acres	% Enrolled of total
15,808	6,388	40.4%

Enrolled Acres (Residential/Non-Residential)			
Residential/Homestead	% of Enrolled	Non-Residential	% of Enrolled
3,162	49.5%	3,226	50.5%

[28] VT Agency of Transportation, 2018
[29] VT Department of Taxes 2017 Annual Report

Enrolled Acres (Forest/Agricultural)			
Forest	**% of Enrolled**	**Agricultural**	**% of Enrolled**
5,092	79.7%	1,296	20.3%

- Only 9.7% of West Windsor's taxable parcels are enrolled in the Current Use program, but these represent 40.4% of the total town area
- The majority of land enrolled is forest (79.7%)
- The land enrolled in the Current Use Program is roughly evenly split between residential and non-residential uses.

Current Land Use Summary[30] (2017 Grand List)

Category	Number	Acres	Avg. Acre per Unit	Total Property Value	Avg. Property Value per Unit
Commercial	20	78.36	3.92	$13,412,700	$670,635
Commercial Apartments	1	2.00	2.00	$223,400	$223,400
Industrial	*	*	*	*	*
Residential with Less than 6 Acres	313	751.58	2.40	$74,760,400	$238,851
Residential with 6 or More Acres	314	10681.84	34.02	$164,242,500	$523,065
Mobile Home (Landed)	10	153.02	15.30	$1,493,000	$149,300
Mobile Home (Un-Landed)	*	*	*	*	*
Seasonal Home with Less than 6 Acres	2	6.46	3.23	$236,000	$118,000
Seasonal Home with 6 or More Acres	1	11.40	11.40	$186,500	$186,500
Utilities	3	2.00	0.67	$3,536,900	$1,178,967
Woodland	*	*	*	*	*
Miscellaneous	128	3727.60	29.12	$17,832,300	$139,315
Other	122	0.00	0.00	$12,794,600	$104,874
TOTAL	**914**	**15414.26**	**16.86**	**$288,718,300**	**$315,884**

- There appear to be a large number of condos included in the "Other" category in the 2017 Grand List.

[30] 2017 West Windsor Grand List (VT Department of Taxes)

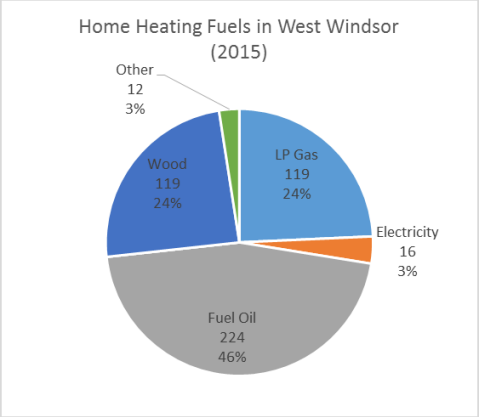
7. Energy

Population

Total Population[i] (2015):	1,136
Proj. Annual Avg. Growth Rate[ii]:	↑ 0.001303
Population Density:	46 persons/ square mile

Households

Owner-Occupied Units[iii]:	420
Renter- Occupied Units[iii]:	79
Total Households[iii]:	799
Avg. Household Size[iii]:	2.2 people/ household



Businesses[iv]

Total businesses in West Windsor:	28
Employees working in West Windsor:	121
Average wage:	$35,678

Heating

Residential[i] (see pie chart)

Businesses[v]:

Estimated avg. building space:	3,338 sq. ft.
Total energy use:	5.4 billion BTUs
Estimated total annual cost:	$127,961
Avg. annual cost per business:	$4,570

Transportation

Number of vehicles[vi]:	962
Estimated vehicle miles traveled[vii]:	12.4 million
Estimated gal. fuel used per year:	667,693
Estimated fuel cost per year:	$1.5 million
Residents driving alone to work:	79%
Average commute time:	28 minutes

Electricity Use

Electricity Usage in 2015[viii]:	8,020,932 KWh
Residential Usage:	5,829,832 KWh (72.7%)
Commercial Usage:	2,191,100 KWh (27.3%)
Avg. Annual Residential Usage:	7,315 KWh
Decrease in Total Usage (2014-16):	↓485,779KWh
Percentage decrease	↓5.9%

Energy Generation

Existing Renewable Energy Generation

Solar	16 sites	109.86 kW	134,732 kWh
Wind	2	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[ix]

2015 (Baseline)	134.7 MWh
2025	2,471 MWh
2035	4,942 MWh
2050	9,884 MWh

Potential for Renewable Energy Generation[x]

Rooftop Solar	1.11 MW	1,361 MWh
Ground-Mounted Solar	157.5 MW	193,158 MWh
Wind	338.9 MW	1,039,067 MWh
Hydro	0	0

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[vii] Miles per vehicle from VTrans (2015) 2013 Energy Profile
[viii] Efficiency Vermont (2017)
[ix] SWCRPC
[x] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)