TOWN AND VILLAGE OF WATERBURY
MUNICIPAL PLAN UPDATE
Planning Commission Draft #1, July 9, 2018
Report

The Planning Commission has prepared the attached Draft #1 of the update to the Municipal Plan for the Town of Waterbury dated July 9, 2018. The Planning Commission will convene a Public Hearing on Monday, August 13, 2018, at 7:15 p.m. in the Steele Community Room in the Waterbury Municipal Center located at 28 N. Main St. in Waterbury, to consider and receive public comment on this draft update.

This is an update to the 2013 Municipal Plan that was approved on December 9, 2013. That Plan was a major re-write that incorporate the results of the 2010 U.S. Census and other available statistics. At that time the consultant firm, Place Sense, also assisted with a Community Survey that was mailed to a statistical sample of approximately 20% of the Town Voter Checklist (658 individuals) and was made available to any other residents to fill out and submit. The numerical results in the survey results are separated into these two groups of respondents. The Report of the Survey Results is attached to this Draft Plan as Appendix A.

This report concludes that the Municipal Plan, as amended, is consistent with the goals established in 24 V.S.A. §4302. The proposed Plan will not alter the designation of any land area. The Future Land Use Plan that is part of the draft Municipal Plan does not lead directly to a proposal to re-zone any particular areas of the Town or Village of Waterbury. However, the draft Municipal Plan does recommend that the community re-examine our two designated Growth Centers of the Village of Waterbury and Waterbury Center village and explore way that we can utilize zoning and other available tools to promote higher density and more affordable housing in the appropriate locations.

The Plan recommends that the community examine our commercial and industrial zoning district boundaries and requirements to explore ways that we can promote the economic development and re-development of our existing commercial and industrial areas. The Plan also recommends that the community explore ways that our Zoning Regulations and other tools can promote the voluntary conservation of land, especially in the areas where significant natural resources exist.

In accordance with 24 V.S.A. §4302, the intent of this draft Plan is to be part of a coordinated, comprehensive planning process and policy framework to guide decisions of the Town and Village of Waterbury. The intent of this Plan is to encourage citizen participation at all levels of the planning process, and to assure that decisions made at the local level are commensurate with their impact. Furthermore it is the intention of the Plan to help fulfil the following goals outlined in this section of statute:

- To plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside.
- To provide a strong and diverse economy that provides satisfying and rewarding job opportunities and that maintains high environmental standards….

- To provide for safe, convenient, economic and energy efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.
- To identify, protect and preserve important natural and historic features of the Vermont landscape.
- To maintain and improve the quality of air, water, wildlife and land resources.
- To encourage the efficient use of energy and the development of renewable energy resources.
- To maintain and enhance recreational opportunities for Vermont residents and visitors.
- To encourage and strengthen agricultural and forest industries and minimize forest fragmentation.
- To provide for the wise and efficient use of Vermont's natural resources and to facilitate the appropriate extraction of earth resources and the proper restoration and preservation of the aesthetic qualities of the area.
- To ensure the availability of safe and affordable housing for all Vermonters.
- To plan for, finance and provide an efficient system of public facilities and services to meet future needs.
- To ensure the availability of safe and affordable child care and to integrate child care issues into the planning process, including child care financing, infrastructure, business assistance for child care providers, and child care work force development.

This plan is intended to reflect the common goals of Waterbury's individual, business, and government residents. This 2018 plan is an update to the 2013 Municipal Plan with a focus on the following chapters:

- 4. Local Economy: Text and recent statistics have been added reflecting the recovery from Tropical Storm Irene. Revitalizing Waterbury's role with its Economic Development Director and the creation of the Economic Development Strategic Plan is also discussed.
- 6. Natural Resources: Text has been added addressing forest fragmentation as required in the state's Act 171. The new Forest Resources and Connectivity Map 2-7 is referenced.
- 7. Energy: This chapter has been completely re-written with assistance from CVRPC staff to summarize and reflect the new Energy Plan that is attached to this plan as Appendix B. This chapter and the Energy Plan are intended to address the standards in the state's Act 174.
- 9. Facilities and Services: Text has been added reflecting the fact that the Village of Waterbury no longer exists as a municipality and the creation of the Edward Farrar Utility District that has assumed ownership of all the former Village's assets including the public water and sewer systems. The chapter also addresses the creation of a town-wide police department.

- 10. Local Government: This chapter has been re-written with assistance from William Shepeluk, the Municipal Manager, to reflect the fact that the Village of Waterbury no longer exists as a municipality. The statistics in this chapter have also been updated.
- 11. Land Use: Text has been added addressing forest fragmentation and the implications for land development, especially in the Forest Area as shown on the revised Land Use Maps.

The other chapters and the majority of the statistics in the plan remain primarily as they were drafted and adopted in 2013.

We encourage public comment on this draft Plan by contacting Stephen Lotspeich, the Community Planner, by calling (802) 244-1012 or by e-mail: slotspeich@waterburyvt.com

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TOWN OF WATERBURY, VERMONT

MUNICIPAL PLAN

2018

Draft #1 July 9, 2018

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1. Introduction

1-1 About This Document

The Waterbury Planning Commission, appointed by the Town of Waterbury Select Board, is responsible for preparing this Municipal Plan. The 2018 Waterbury Municipal Plan represents the community's vision for Waterbury. The goals, objectives, actions, and other implementation strategies expressed in this plan are based first and foremost on the desires of Waterbury residents, local officials, community partners, and other stakeholders, to move forward with community development while maintaining an environment that respects our historic strengths, unique attributes, and finite natural resources. The plan is intended to be a vision and road map for the future. It may be helpful, as you read the plan, to keep the following in mind:

Goals describe in general terms the desired condition or outcome Waterbury wants to achieve in the future. They set direction.

Objectives are intended to provide steps, or benchmarks, toward achieving a particular goal. They are intended to help track or measure relative success.

Actions are a combination of specific recommendations and strategies to guide Waterbury residents, local officials, developers, and others toward achieving the goals, values, and vision that are set forth in this plan.

Each chapter begins with an introductory summary that in many cases identifies the overarching priority for the goals, objectives, and actions identified in the chapter. The local and regional partners that will help implement the actions for each chapter are identified and discussed in the text for that chapter. In many cases these partners are also identified in the specific actions. In general the goals, objectives and actions are listed in priority order for each chapter. However, it is understood that priorities will shift during the eight-year period of this plan and beyond, as actions are accomplished and new opportunities for implementing the specific actions arise.

In formulating this plan, the Planning Commission has also relied heavily upon an inventory and analysis of available information from the U.S. Census Bureau, the 2013 Waterbury Community Survey, and other sources. Technical assistance was provided to the Planning Commission by Steve Lotspeich, Community Planner, Eric Vorwald and Clare Rock with the Central Vermont Regional Planning Commission (CVRPC), and Brandy Saxton, AICP, of the firm, PlaceSense, and planning consultant for preparation of the 2013 Municipal Plan .

Sidebar:

Waterbury, Vermont is a vibrant community of approximately 5,000 people – encompassing Waterbury Village, Colbyville, and Waterbury Center – located in the northwest corner of Washington County, in the heart of Vermont's Green Mountains. The Winooski River Valley, several mountain ranges, and the gently rolling hills surrounding Waterbury offer a spectacular year-round setting. Waterbury sits just a 20-minute drive from Montpelier, 30 minutes from Burlington, and midway between the popular resort areas of Stowe and the Mad River Valley.

With a lively downtown, numerous tourist attractions, an emphasis on healthy living and family life, and a business-friendly economic climate, our community has become a regional hub. Waterbury is home to Green Mountain Coffee Roasters, Ben & Jerry's and the Vermont State Office Complex.

With its small town values, employment opportunities, and recent disaster recovery experience, Waterbury faced the challenge of rebuilding after the destruction wrought by Irene and continues to maintain its thoughtful approach to future development.

1-2 Why Plan?

Planning allows a community to look at where it is, where it came from, where it would like to be headed, and how it can get there. Planning, and the documentation thereof, helps lay ground rules for a community's future growth and development. A good municipal plan aspires to respect the needs of every citizen of a community, and attempts to reduce conflict and division among neighbors. Planning:

Can save money by recommending more efficient use of land, infrastructure, and community facilities and services.

Helps attract jobs and new businesses by anticipating infrastructure and services needed to support economic growth. Innovative programs or incentives can be developed through planning to attract new industries that are consistent with Waterbury residents' desire to maintain their quality of life.

Helps protect property values, avoid conflict between incompatible land uses, and enhance the quality of life in our community. The environment can be protected and important natural resources can be maintained, while at the same time allowing for growth consistent with Waterbury's small town, rural character.

The Vermont Planning and Development Act (24, V.S.A., Chapter 117) authorizes municipalities to plan, and provides numerous methods for plan implementation. Vermont law now requires that municipal plans be reviewed, updated, and readopted at least every eight years. This allows the community to reevaluate its goals in light of new information, constant changes, and new needs.

A municipal plan is not a regulatory document. Rather, it establishes policies and recommendations upon which bylaws, such as zoning and subdivision regulations, are to be based. These policies will also be considered in regional and state planning efforts, and for the issuance of permits from Vermont's land use and development control law (Act 250) and certificates of public good from the Public Service Commission. It also provides critical information needed for grant and funding initiatives. With a plan, Waterbury can influence the physical, social, and economic development of the community.

1-3 How the Plan was Developed

This plan is intended to reflect the common goals of Waterbury's individual, business, and government residents. This 2018 plan is an update to the 2013 Municipal Plan with a focus on the following chapters:

- 4. Local Economy: Text and recent statistics have been added reflecting the recovery from Tropical Storm Irene. Revitalizing Waterbury's role with its Economic Development Director and the creation of the Economic Development Strategic Plan is also discussed.

- 6. Natural Resources: Text has been added addressing forest fragmentation as required in the state's Act 171. The new Forest Resources and Connectivity Map 2-7 is referenced.
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- 11. Land Use: Text has been added addressing forest fragmentation and the implications for land development, especially in the Forest Area as shown on the revised Land Use Maps.

The other chapters and the majority of the statistics in the plan remain primarily as they were drafted and adopted in 2013. Much of the data that is carried over from the 2013 plan was derived from the 2010 U.S. Census and the on-going American Community Survey that is also accomplished by the U.S. Census Bureau. The American Community Survey replaced the former "long form" in the 10-year Census and is accomplished through surveying a sample of the population during the years in between the 10-year Census. This sampling technique creates useful statistical data but can lead to some inaccuracy in the data that is available for municipalities.

In 2013 the Planning Commission solicited and relied on input garnered through informal work sessions and conversations, a community survey public forums, and more formal public hearings that preceded adoption of the 2013 plan. The Waterbury Planning Commission continues to provide ongoing opportunities for Waterbury residents to actively shape our community's future by providing input for updating the plan.

2013 Community Survey and Community Profile

The Planning Commission mailed out a three-page questionnaire in early 2013 to a random sample of approximately 20% of Waterbury's registered voters. The questionnaire was also available at town meeting on March 5, 2013 and on-line through the municipal website. There were 78 responses to the random sample (a 12% response rate) and 68 additional surveys were submitted online or at town meeting for a total of 146 responses. When statistics from the survey results are referenced in this Municipal Plan they are those from the responses from the random sample. It is recognized that the number of responses from this random sample is relatively small.

The purpose of this survey was to assist the Planning Commission by providing an assessment of public opinion on a variety of issues, including but not limited to economic development, land use, natural and cultural resources, and municipal services. Survey results have helped guide the Planning Commission in defining related goals and objectives that are supported by the community. The 2013 Survey incorporated questions

from the community surveys conducted in 2001 and previously in conjunction with prior plan updates, as well as new questions provided by the Planning Commission.

Relevant survey results are highlighted in the text of the individual chapters in this plan. The complete Waterbury Survey Report, which is a compilation of all the numerical responses and narrative answers to the questions, can be found in Appendix A.

1-4 Broad Plan Goals

This iteration of Waterbury's Municipal Plan introduces a new element. In preparing the plan, the Planning Commission identified seven broad goals which it deemed of critical importance to the Waterbury community as it continues to evolve following the lessons learned after Tropical Storm Irene.

These broad goals, listed below in order of the plan's chapters, are given form more particularly throughout the Plan and are re-stated in the relevant chapters.

Cultivate a vibrant economic climate that achieves sustainable economic growth in Waterbury; encourage a diversified local economy that welcomes a plurality of business types and sizes; and supply a diversity of jobs at livable wages.

Achieve continued availability of housing for existing and new residents in a manner respectful of natural resources; in this effort, encourage and prioritize the rehabilitation of existing buildings, especially historic structures, as well as new construction.

Implement the new Energy Plan to accomplish additional small- and large-scale renewable energy projects, and energy conservation.

Pursue regulatory measures and projects that will ensure better interconnectedness of Waterbury's transportation system, while respecting the equal needs of the various modes including vehicular, transit, pedestrian, and bicycle.

Encourage and support efforts to develop a master plan for downtown and other growth centers identifying specific areas for more growth, additional parking, better vehicular and pedestrian traffic and better and more cohesive wayfinding signage.

Continue to pursue efficiencies of purpose and economies of scale throughout town government operations to ensure that they are consistent with community needs; evolving standards; and ongoing management of Waterbury's special flood hazard areas.

Improve identification and management of growth centers; thoroughly examine development and zoning regulations to ensure that they are consistent with community needs and updated standards.

1-5 Final Notes

Growth in Waterbury's business, industry, governmental, and residential communities should occur with prudence and at a rate that is reasonably accommodated by existing and planned services and facilities. Growth should not occur at the expense of the natural environment or Waterbury's historic and cultural

resources. Waterbury should continue to promote and support growth in appropriate locations that respects the community's historic and scenic character, the unique charm, and the natural resources.

The mere presentation of a thoughtful, well-reasoned Municipal Plan is no guarantee of its success. The plan must include some truly visionary objectives in order for the community to be energized and come together in thoughtful discussion about achieving a bright future. If there is one word that describes this plan, it is 'balance.' By working together, we can achieve that balance, even as we achieve sustainable growth for our community and create a framework for Waterbury upon which future generations can rely on and upon which they can be proud.

2. Historic Resources

2-1 Waterbury's Historic Development

Early Settlement. Before the arrival of the first European settlers, Native Americans passed through the Winooski River valley and settled in parts of what is now Waterbury. The area's abundant supply of water, timber and soil provided ample food and shelter, which eventually attracted other settlers as well.

In February 1704, a band of about 300 French and Indian soldiers and warriors under the leadership of Hertel de Rouville followed a route from Canada along Lake Champlain, to the frozen Winooski River, to the White River, and then down the Connecticut River to Deerfield, Massachusetts in the early morning hours. Following the raid, which left 44 Deerfield residents dead and 109 men, women and children taken captive, the French and Indian raiding party returned back to Canada by the same route. Records indicate that the raiding party and their captives camped in the vicinity of Bolton Falls on March 17, 1704 as they traveled the frozen Winooski River on their return trip to Canada.

In 1763, King George III of England granted a charter through Governor Benning Wentworth of New Hampshire for land in the Winooski River valley. The initial proprietors, mostly from Waterbury, Connecticut, named the new township after their hometown. According to the town charter, Waterbury contained 23,040 acres. Tracts of land from Middlesex and Bolton were added in 1850 and 1851 that increased the acreage to 32,768. Lots were initially laid out in 1773, and the land was surveyed nine years later by Partridge Thatcher.

James Marsh, Waterbury's first permanent settler, arrived in 1783 and claimed land north of the Winooski River in the vicinity of what is now Winooski Street. Ezra Butler, who later became a Vermont governor, built the first frame house in the northern extremity of town and in March of 1790, he called a meeting to incorporate the township. By 1791, Waterbury's population had reached 93 people, as counted in the first U.S. Census.

Also in 1790, residents built the first school. Strong believers in a good education, the townspeople voted in 1803 to build a school where the railroad now crosses Stowe Street. The tax would be two cents on a dollar and payable in wheat, rye, or corn.

Most early inhabitants lived near the Winooski River, bordering the town on the northwest, for it was here that adequate water was available and fishing and trapping could be more easily achieved. Within the decade, a growing population of settlers was attracted to newly opened Main Street as the site of residences, businesses and institutions. Farms were also established in the area that is now Park Row and Randall Street.

Waterbury's first grist mill was erected in 1793. The town's early industries, located primarily along the Little River, Thatcher Brook, and Alder Brook, included wood and leather products, baskets, children's carriages, starch, alcohol, and scythe handles. The first successful merchant in town was Amasa Pride.

Agriculture was also a major industry. In the 1800s, self-sufficient farms yielded gradually to commercial agriculture, which was characterized by the rise and fall of "sheep mania" during the period from 1830 to 1870, and the flowering of the dairy industry thereafter. Many of the town's stone walls, marking old sheep pasture boundaries, date from this period.

The Railroad Era. The Central Vermont Railroad came to Waterbury in 1849. With it came economic growth and tourism. The railroad also contributed to the relocation of the center of local activity from Waterbury Center to Waterbury Village, which soon saw a surge in industries, businesses and population growth.

After 1850, a string of small concerns sprung up in the area immediately surrounding the railroad's original depot including the Cooley Wright Foundry established in 1882. The town's budding tourism industry also was served by the construction of the Waterbury Inn in 1885, and the establishment of the Mount Mansfield Electric Railroad to Stowe in 1896.

As well as inviting a greater transient population, rail transportation brought with it new permanent settlement. By the mid-1870s the number of homes on Union Street (then Maple Street), Winooski Street, and South Main Street had doubled since 1850. By 1880, Waterbury's population was more than 2,200 – large enough to support a public high school, a local newspaper, a library association, and a number of retail establishments.

Waterbury Village, which grew as a regional transportation and commercial center, was incorporated in 1882 to provide services such as fire and police protection, and sidewalks. The village's public water system was constructed in 1898 and the sewer system was built in 1906. The first modern sewage treatment plant was constructed near the Twin Bridges in 1964 providing primary treatment and disinfection before discharge.

The economic growth of Waterbury during the late-19th and early-20th centuries is reflected in the many historic commercial and residential structures erected during this period. There are over 200 structures of varying functional types, many of which are fine examples of major 19th century architectural styles ranging from Federal to Queen Anne. Economic prosperity also brought an increase in middle-class housing as evidenced by the building of several stately homes on South Main Street. Additionally, Randall Street, which was developed with uniformity akin to urban speculation, was nearly built up in its entirety during the 1880s and 1890s.

State Facilities. In 1889, the state acquired Mr. C.C. Warren's farm and in 1891, the state constructed the Vermont State Hospital on the land. The state hospital treated individuals with mental illnesses and disabilities. Over the years, the hospital's capacity grew to approximately 1,400. Following the de-institutionalization of a large percentage of the hospital's patients in the 1970s, most of the original hospital buildings were converted to state office buildings, and the grounds are now referred to as the Waterbury State Office Complex.

Early-20th Century. The early-20th century saw further expansion of the village. The first canning factory was built off South Main Street in 1910 by the Demeritt Company. They later made clothes pins and ran a lumber mill. Also on South Main Street was the scythe handle factory of Edwards and Edwards. Later, as Derby, Ball & Edwards, they made baseball bats, which were sold nationwide as well as skis and chairs. At one time there were three granite sheds in town- Rock of Ages, Union Company and O'Clair Granite Works - that ultimately merged with larger firms out of town or simply closed down later in the century.

Civic interests also expanded in the first decades of the 1900s, with the founding of a number of service organizations, including the American Legion (1919), the Knights of Columbus (1920), and the Rotary Club (1936). In 1903, a poor farm was established on the west side of Blush Hill to support the area's indigent population. In 1905, the Waterbury Town Library in Waterbury Center was established. The Waterbury Public

Library, located in the village, was founded in 1916 when Dr. Henry F. Janes, a local doctor and son of Waterbury's first postmaster, left his house to the Waterbury Library Association.

In the early 1900s, exposure to the outside world also brought epidemics, including small pox and chicken pox outbreaks in 1915, and the influenza epidemic of 1917. Perhaps the most devastating event in Waterbury's history was the 1927 flood. Like many Vermont municipalities, Waterbury was hit hard – several residents were killed, many buildings were damaged or destroyed, and major rail lines, roads, and bridges were washed out.

The Little River Dam was built between 1935 and 1938 as a flood control project by the Civilian Conservation Corps (CCC), under the direction of the Army Corps of Engineers, creating the Waterbury Reservoir. Residents of the Little River watershed were relocated in advance of dam construction. Upland remnants of their settlement still exist in Little River State Park. The reservoir has since become an important public recreational resource.

Flood recovery in the 1930s involved the construction of improved roads and bridges, which literally paved the way for wider use of the automobile. From 1928 to 1932 the state constructed "cement" roads along Routes 2 and 100, connecting Waterbury with Montpelier and Stowe. Motor vehicles created competition for local rail lines, and soon surpassed them in importance for the transport of freight and passengers. The Mount Mansfield Electric Railroad ceased operations in 1932. The Central Vermont Railroad remained in operation, but never fully recovered financially.

Mid-20th Century. Despite the flood, stock market crash and ensuing economic depression, and two world wars, Waterbury continued to improve as a community. From the 1930s through the 1960s, the community invested in its schools, public parks, police and fire services. A new public swimming pool was dedicated in 1941. The village fire station was erected in 1956, and the first police car was purchased in 1958. In the 1960s, Waterbury High School was closed, with the opening of Harwood Union High School, and Waterbury hired its first town manager.

Communications also improved. WDEV, Waterbury's AM radio station, was founded in 1931. Its tower, erected in 1936, was then the highest structure in New England. Television was introduced in the 1940s, followed by the dial telephone in the 1950s.

The Waterbury portion of Interstate 89 (Exit 10) was opened in 1960, relieving traffic on Route 2 through Waterbury Village. I-89 significantly increased accessibility to and from Waterbury, and opened up additional areas of town – including Waterbury Center along Route 100 – for development.

Late-20th Century. As the regional economy improved so too did local tourism and economic development. Cold Hollow Cider Mill, a major tourist attraction, relocated to Waterbury in the 1970s. This was followed in the 1980s by the entry of a number of the area's major employers – including Karl Suss America, Green Mountain Coffee Roasters, Ben & Jerry's – and the initial development of Pilgrim Park. The building of Ben & Jerry's factory was helped by a federal Urban Development Action Grant (UDAG), applied for by the village. The money has been repaid and reinvested by the Village Trustees to support other businesses.

While new development was happening in and around Waterbury Village, historic sections of the downtown were beginning to languish. For most of its history, Waterbury Village had been the commercial center of the

community. The construction of I-89 dramatically changed traffic patterns through the village, resulting in part in its economic downturn. Inadequate parking for an increasingly automobile-oriented society also contributed significantly to this trend, which prompted commercial activity to shift to Route 100, toward Stowe. By the early 1990s, Waterbury's downtown was visually in disrepair – many storefronts were vacant, buildings were in poor shape, sidewalks were crumbling, and new development that did occur was often not compatible with the downtown's historic character.

The nonprofit organization, Revitalizing Waterbury, was founded in 1991 by a handful of Waterbury citizens determined to rehabilitate the historic Stimson and Graves buildings. Upon successful completion of that project, the group then turned its energy to another historical preservation project - the Central Vermont Railroad Station. From 1997 to 2006, Revitalizing Waterbury worked with the Village of Waterbury and variety of funding sources—most notably Green Mountain Coffee Roasters Foundation—on a major restoration effort. The fully renovated train station is currently owned by Revitalizing Waterbury and serves as Green Mountain Coffee Roaster's Visitor Center and Café, an attraction that draws hundreds of visitors to the heart of downtown Waterbury each year.

Various town lands have been annexed into Waterbury Village in recent decades to access sewer services, which are not available in other parts of the town. Colbyville, consisting of approximately 47 acres, was annexed by the village in 1981. In 1984, 11 acres of land along Route 100 were annexed in order to extend village water and sewer lines to the Ben & Jerry's site. In 1989, the village annexed another 32 acres off of Town Highway 15 to extend sewer to a potential residential development. In 1994, approximately 405 acres of land, including the Waterbury Land Company property (the former Guptil farm off Guptil Road), was added for the Country Club of Vermont golf course.

The last decades of the 20th century were characterized by ongoing improvements in municipal services and facilities. Two new recreation fields – Dascomb Rowe and Hope Davey – were established, and Rusty Parker Park was refurbished. A new water treatment facility was dedicated in 1992. Ongoing improvements have been made to local roads and bridges, including the construction of Bidwell Lane in the 1970s, the restoration of the historic Winooski Street Bridge in the 1990s, and the proposed upgrade of Main Street through the village.

In 1995, the towns of Waterbury and Duxbury established a union school district and approved bond funding for the construction of a new middle school to serve the residents of both communities. Crossett Brook Middle School and Thatcher Brook Elementary School were dedicated in 1997.

Tropical Storm Irene. Overnight on August 28 and 29, 2011, Waterbury's physical landscape and local economy were rocked by the second major natural disaster in less than a century - Tropical Storm Irene. Fed by nearly a foot of rainfall in less than 24 hours, the Winooski River overran its banks at the head of the village (near the juncture of Routes 100 and 2) and, with additional overruns from smaller tributaries including Thatcher Brook, flooded the majority of buildings along Waterbury's Main Street. Given the location of Waterbury's historic village alongside the Winooski River, the flooding was widespread and pervasive. With floodwaters rapidly rising to five feet over portions of Main Street, Waterbury officials enacted an evacuation order for low-lying neighborhoods in Waterbury Village. The floodwaters did not begin to recede until the early hours of August 29.

The damage sustained by Waterbury in the wake of Tropical Storm Irene on August was a devastating combination of direct destruction of municipal infrastructure, widespread flood inundation of approximately 220 residential and commercial buildings along our Main Street corridor, and significant local revenue loss associated with the displacement of the majority of the Waterbury State Complex employees.

Prior to the 2011 flooding, Waterbury hosted between 1,300 and 1,500 state agency employees at the historic State Office Complex. Following the flood in August 2011, the complex sustained flood damage and workers were re-located to other offices outside of Waterbury. The state reconstructed the State Office Complex through an extensive redevelopment plan. To date many state functions have returned to the complex after it re-opened in the spring, 2016. The economic impact of this worker displacement was conservatively estimated at $3.7 million in lost labor income and $10.7 million in lost sales per year.

Flooding from the Winooski River damaged approximately one-third of Waterbury's homes. The residential losses from this flood event were so great that ReBuild Waterbury formed in the fall of 2011 as a long-term recovery project under the umbrella of Revitalizing Waterbury.

According to a post-flood survey conducted by Revitalizing Waterbury, nearly six in ten village businesses were forced to close in the immediate aftermath of Irene. Half of those reopened within a week, 27% reopened within 2 weeks, 10% reopened within a month, while the remaining were closed more than four weeks. Seven businesses have closed since August 2011, claiming a direct link to flooding damages and post-flood revenue losses. Based on confidential, self-reported information gathered by Revitalizing Waterbury in September 2011, the cost of damages to small businesses exceeded $2.5 million (distinct from State Office Complex and flood-damaged major employer Green Mountain Coffee Roasters).

Losses to Waterbury municipal infrastructure included significant damage to the historic municipal building at 51 South Main Street, complete inundation and widespread destruction of Dac Rowe Recreational Fields and the main wastewater pump station at 26 North Main Street, and extensive emergency road and sanitary/sewer line repairs along Main Street and connecting side streets throughout the village.

With the assistance of FEMA's Long Term Community Recovery Team (LTCR), Waterbury worked diligently through a seven-month process to identify the initiatives necessary to rebuild the community at every level. The process included a Waterbury Community Recovery Fair on February 16, 2012, and a gathering of potential funding partners/LTCR Plan unveiling in May 2012. The complete plan is available at the Town of Waterbury offices.

2-2 Waterbury's Historic Resources

Evidence of Waterbury's past can be found throughout the community in the form of historic sites and structures. From a cultural perspective, these historic resources offer not only a physical link to Waterbury's past, but also visual texture to Waterbury's neighborhoods. The preservation of historic sites, structures, and architecture should not bind present and future development to replicate the past, nor prevent innovation and the expression of different styles; however, Waterbury's historic resources should be recognized as an important cultural component of the overall fabric of the community.

Historic Sites and Structures. The Vermont Division for Historic Preservation has identified three archaeological districts, five historic districts, two farm complexes, a cemetery, two bridges, and an additional 31 buildings and structures within Waterbury which are of historic and/or architectural importance to date.[1] These sites are currently listed on the State Register of Historic Sites and Structures.

Historic Districts. Of particular note is Waterbury Village's Historic Downtown District, which has also been listed on the National Register of Historic Places since 1976. It includes much of Main and Stowe Streets, and the Vermont State Hospital Complex. A number of the village's most historic structures were designed by William Deal (1833-1917), Waterbury's "premier Victorian builder." These include the former Waterbury Inn (destroyed by fire in 1953), the Methodist Parsonage, the Village Hall (Perkins-Parker Funeral Chapel), the Howard Bank Block, the Luce Block, the WDEV Block, and several private residences.

The Mill Village District, located on Stowe Street in Waterbury Village, has also been listed on the National Register since 1976. The grist mill and dam at the lower falls of Thatcher Brook form the heart of this district, which is named for the many 19th century industries once located above and below the falls.

Waterbury's other historic districts are not yet listed on the National Register; however, the Green Mountain Seminary and the Community Church in Waterbury Center have individual listings.

Waterbury currently has three historic archaeological districts. Although scant evidence remains of settlements and industries that existed prior to the damming of the Little River, these areas were an active and important piece of Waterbury's early development that has almost been forgotten. Abandoned roads, structures, cellar holes, and cemeteries are all that remain to mark their passing. These historic districts, now largely included in bounds of the Mount Mansfield State Forest and Little River State Park, should continue to be maintained and promoted in cooperation with the Division of Forests, Parks and Recreation. Such historic sites and features increase the area's recreational value, and broaden visitors' experiences in Waterbury.

Outbuildings and Structures. Also in danger of being lost through time and neglect are many historic outbuildings and structures, including barns, train sheds, carriage houses, and stone walls, that may not appear on current historic registers, but are nevertheless important features of Waterbury's past and current cultural landscape. An updated structures inventory should document such outbuildings. "Barn grants" and other funding may be available to assist private property landowners with their restoration and upkeep. Due to the potential practical infeasibility of salvaging some of these structures, documentation and cataloging efforts prior to elimination are being strongly encouraged.

Cemeteries. Waterbury has a number of cemeteries on public and private land that are often overlooked as historic resources. Cemeteries can provide a unique window into the area's past and the lives of its early settlers. The stones that mark early residents' graves often provide interesting and valuable information about their lives, deaths, family connections, and the society of their time.

Waterbury's cemeteries are also an important feature of its village landscapes. Of particular note are Hope Cemetery in Waterbury Village and the cemetery on Route 100 as they are the resting place of many of Waterbury's earliest and most prominent residents. Additionally there is a more contemporary facility in

[1] See Maps 1-1, 1-2, and 1-3.

Waterbury Center, which also contains the remains of several prominent Waterbury citizens. These are well maintained and most of the stones are in very good condition.

Many of Waterbury's old cemeteries are being restored as historic sites and made available for residents and visitors to explore and appreciate. Two historic cemeteries can be accessed off of River Road leading to the Ice Center just outside of Waterbury Village. One is a revolutionary war cemetery that is visible from I-89. The other is a small cemetery used by Vermont State Hospital in its early years for many of its patients. This wooded upland cemetery, rediscovered in 1988, is now marked by a single monument.

Archaeologically Sensitive Areas. Much of Waterbury's past, including additional evidence of prehistoric and historic settlement, remains buried and hidden from view. In addition to designated archaeological districts, the state has defined "archaeologically sensitive" areas, including but not limited to 200 foot buffers along the Winooski River and other major waterways, which are known or likely to hold evidence of past settlement. Development in these areas should be undertaken with sensitivity to the possibility of important new discoveries. Information and assistance is available from the State Archaeologist.

Waterbury Historical Society. The Waterbury Historical Society, established in 1958, has contributed much to the documentation and promotion of Waterbury's historic resources. The society maintains a museum on the second floor of the Waterbury Public Library in Waterbury Village, and holds meetings that include public presentations on a variety of topics.

The society has also produced a number of publications celebrating Waterbury's history, personalities, and sites. These include a walking and automobile tour of Waterbury Village, Mill Village, Colbyville and Waterbury Center, and the books the *History of Waterbury, Vermont, 1915 – 1991* and *Waterbury Bridges the 20th Century*, an extensive compilation of photographs and historic events spanning the last century, was published in 2000. The society's efforts are entirely dependent upon volunteers, donations, grants, and book sales.

Downtown Revitalization. As noted, a number of recent preservation efforts have become associated with larger efforts to revitalize and improve downtown Waterbury, including the restoration of the Stimson-Graves Building on Stowe Street and the restoration the Central Vermont Railroad Station. These efforts have been spearheaded by Revitalizing Waterbury, a group formed in 1991 to promote public and private investment in the downtown. Much of the work to date has been accomplished by volunteers and businesses, with support from local officials and state and federal funding.

Downtown or Village Designation. In 2006, a group of volunteers formed to seek official "downtown designation" status through the State of Vermont's Downtown Program. This group became the Waterbury Downtown Partnership and included municipal staff, Revitalizing Waterbury volunteers, and community members at large. Waterbury's downtown received designation in 2006 making the area eligible for a number of benefits to property owners, business owners and the municipality itself.[2] In May 2012, the Vermont Downtown Board unanimously approved Waterbury's renewal application. Revitalizing Waterbury and the Town of Waterbury collaborated on this successful process, and share responsibility for maintaining good standing with the Vermont Downtown Program until the next renewal period in 2016-17.

[2] See Designated Downtown Map 5-3.

National Register Nominations. National Register designation can be the initial step for many other preservation opportunities. Designation does not affect the owner's right to modify, maintain, or dispose of the property. Only projects that involve federal funds or permits must adhere to federal guidelines for structural modifications. Income-producing historic buildings on the National Register may qualify for federal and state tax credits when they undergo a substantial rehabilitation. Such rehabs have to preserve existing historic features, but may also include modern improvements. Also, nonprofit groups and municipalities may apply for matching grants from the state to restore historic buildings. The Waterbury Village Historic District has been re-surveyed including additional areas in the floodplain and upland areas in the vicinity of the Thatcher Brook Primary School.

Certified Local Government Designation. Waterbury is not currently a Certified Local Government (CLG), but should consider membership in this program. The CLG program was created under the 1980 National Historic Preservation Act (NHPA) to strengthen partnerships between municipal, state, and federal agencies interested in furthering the protection of historic resources. A local government that has been certified by the Vermont Division for Historic Preservation to carry out purposes of the NHPA may qualify for additional funding in support of its historic preservation efforts.

2-3 Goals, Objectives and Actions

Goals Objectives

1. The protection, maintenance, and continued functional use of Waterbury's historic structures, sites, and areas.
2. Improve awareness of and encourage the proliferation of Waterbury's historic and cultural identity.

Objectives

Preservation

1. Identify and maintain current records of all Waterbury's unique historic assets.
2. Ensure adequate and consistent historic preservation efforts are applied
3. Promote incentives for the repair, preservation, and maintenance of Waterbury's historic structures and areas.

Awareness

4. Increase area residents' and visitors' awareness and appreciation of Waterbury's history and architecture.
5. Improve, encourage, and support the development of cultural activities and facilities in Waterbury.
6. Salvage and protect Waterbury's historic archives and artifacts.

Actions

Preservation

1. The Planning Commission with assistance of the Community Planner to pursue Waterbury becoming a "Certified Local Government".
2. Work with interested parties (Historical Society and/or Students and/or Interns), to update our inventory of historical places and ensure, where appropriate they are included in the state and or national registries.
3. The Planning Commission to review boundaries of Downtown Overlay District and Waterbury Village Historic District and consider possible expansion, including areas on South Main Street to Healy Court not currently included in the Overlay District.
4. As new Zoning Regulations are added or existing ones amended, ensure that they apply adequate and consistent standards of review for historic structures that may be developed from appropriate state and local models.
5. Coordinate with the Waterbury Cemetery Commissioners, the Vermont Old Cemetery Association, area residents, and other interested persons to identify, maintain, and beautify Waterbury's old cemeteries
6. Ensure the preservation of the historic features and grounds of the State Office Complex, including the main horseshoe-shaped lawn, in Waterbury Village
7. Utilize Downtown Designation or Village Designation and media outlets to help educate property owners in the utilization of existing programs and tax incentives to restore Waterbury's historic structures.
8. Utilize Vermont Barn Grant program, explore, and incorporate creative, adaptive reuses of such structures.

Awareness

9. Work with the Historical Society to develop and promote strategies such as pictorials and anecdotes on the Waterbury web site, walking tours, information plaques for historic structures, or highlighting Waterbury's unique features.
10. Work with the state agencies to maintain and promote the historic areas of the Mount Mansfield State Forest, such as the early Little River, Ricker Mountain and Woodard Hill, and the CCC Camp Site.
11. Work with Across Roads Center for the Arts to support the development and promotion of new community arts resources.

Sidebars:

Waterbury has a remarkable and arguably under-appreciated historic past that includes numerous historic figures (including three governors and countless generals), devastating natural disasters, rapidly changing

industry, and unique and varied architecture. Within Waterbury, there are numerous sites and many preserved artifacts that reflect upon our community's past.

In order to preserve elements of our unique past and help encourage the proliferation of our cultural identity, Waterbury intends to:

Identify and maintain current records of all our unique historic assets.

Protect functional use of our historic resources by ensuring that adequate and consistent preservation efforts are applied.

Promote education of and access to our historic resources and cultural activities to foster civic identity.

Waterbury's Historic Districts

Waterbury Village Historic District
Mill Village Historic District
Colbyville Historic District
Waterbury Center Historic District
Waterbury Center-Village Park District
Cotton Brook Historic Archaeological District
Stevens Brook Historic Archaeological District
Woodward Hill Historic Archaeological District

80% of respondents to the Planning Commission's 2013 Community Survey agreed that Waterbury should continue or increase the preservation of its historic resources.

Dates from Waterbury's History

1700s

1763 Charter for the Town of Waterbury granted by Governor Benning Wentworth of New Hampshire; town named after Waterbury, Connecticut

1773 Lots laid out

1782 Land surveyed under the direction of Partridge Thatcher

1783 First permanent settler, James Marsh, arrives

1790 Town of Waterbury incorporated, total acreage of 23,040 acres
First town meeting held, first school built

1791 First U. S. Census – Waterbury residents number 93

1792 First grist mill erected

1800s

1840 Waterbury Center Post Office established

1841 Anti-slavery convention held

1849 Central Vermont Railroad extended to Waterbury
Waterbury's first newspaper, The Free Mountaineer, published (for a brief period)
1850 Tracts of land from Bolton, Middlesex added; total area increased to 32,768 acres
1856 Waterbury Library Association formed
1857 Henry Janes, M.D. establishes medical practice
1871 Colby Mansion erected in Colbyville
1882 Village of Waterbury incorporated
1885 Waterbury Inn dedicated, built by William Deal in 1965
1890 F.C. Luce & Company opens on Stowe Street
1891 Vermont State Hospital for the Insane opens (now the State Office Complex)
1895 Waterbury Record first published and ran through 1952
1896 Mount Mansfield Electric Railroad initiated between Waterbury & Stowe
1898 Waterbury High School established

1900s

1900 U.S. Census population numbers 2,810
Governor William P. Dillingham of Waterbury elected to the U.S Senate
1903 Poor House established on Blush Hill
1905 Waterbury Town Library founded in Waterbury Center
1906 Green Mountain Seminary closes

1910s

1912 Brisbin and Brisbin Pharmacy (later known as Vincents) opens on North Main Street
1914 Campfire Girls founded locally
1915 Small pox outbreak, chicken pox epidemic
1916 Waterbury Public Library founded in Waterbury Village (Janes House)
1917 Influenza epidemic
1919 American Legion formed

1920s

1920 Knights of Columbus formed
Opera House built on Stowe Street (Rialto), destroyed by fire in 1980s
1927 Major flood; lives lost, significant property damage, roads and bridges washed out
1928 Cement road (Route 2) laid between Waterbury and Montpelier
Cement road (Route 100) laid between Waterbury and Stowe
Winooski Street Bridge re-constructed, replacing a covered bridge lost in flood.
Small pox outbreak

1930s

1930 Village buys land for park in front of railroad station (Rusty Parker Park)
1931 WDEV AM radio station founded

1932 Cement road laid through Waterbury Village

1933 Vermont Telephone & Telegraph extended service to Waterbury

1936 WDEV tower erected, highest structure in New England

Waterbury Rotary Club founded

1937 Little River Dam built as a flood control project, creating the Waterbury Reservoir

1939 Pinnacle Park Ski-land opened on Wissell Mountain, first Winter Carnival held

1940s

1941 New pool, a WPA project, dedicated

1947 Waterbury Airport opened

1950s

1952 First dial telephone

1953 Historic Waterbury Inn destroyed by fire

1956 New village fire station built

1958 First police car purchased

1960s

1960 Waterbury segment of Interstate 89 opened

1963 Waterbury bicentennial celebrated

1964 Sewer Treatment plant was built

1966 Last class graduates from Waterbury High School, Harwood Union High School opened

Waterbury Center Elementary School closes

1968 First town manager hired

1969 State offices move to the Vermont State Hospital

1970s

1970 Ambulance service established

1972 Selectboard increases from three to five members

1976 Bidwell Lane constructed

Cold Hollow Cider Mill established at the historic Fuller-Gibbs Farm

1977 Waterbury Village listed on the National Register of Historic Places

1978 Dascomb Rowe Recreation Field dedicated

1980s

1980 Karl Suss America Inc. locates in Waterbury Center

1981 Waterbury Reservoir drained (through 1985)

1982 Rusty Parker Park dedicated

1983 Green Mountain Coffee Roasters first plant opens

1985 Ben & Jerry's Homemade Inc. factory constructed

Pilgrim Park under development on former Pilgrim Plywood Corporation land

1988 Exit 10 first published. Ran for 22 year to end of 2008.

1989 First town planner hired

1990s

1991 Revitalizing Waterbury formed to save the Stimson and Graves Building

Waterbury Area Cultural Committee (WACC) established

1992 Earl Towne Water Treatment Facility is dedicated

Sewage system upgraded to use state of the art filtration system

1993 Hope Davey Memorial Field is dedicated

1995 Waterbury and Duxbury form a union school district

1997 Thatcher Brook Primary and Crossett Brook Middle Schools dedicated

Refurbished Winooski Street Bridge reopened

1999 CV Railroad Station restoration project gets underway

Present

2000 U.S. Census population numbers 4,915

Waterbury Reservoir drained for dam repairs

2010 U.S. Census population numbers 5064

2011 Hurricane Irene causes catastrophic flooding damaging many structures in the village and emptying the State Hospital.

3. Demographics

3-1 Population Trends

Waterbury's population, as of the 2010 U.S. Census, numbered 5,064 people, 1,763 of whom lived in the village.[3] Waterbury's population, with the exception of a few notable decades, has continued to grow since the first U.S. Census was taken in 1791. As Waterbury's population continues to change over the next decade, the demand for housing, educational and health services, public facilities, and public safety will be affected.

During the 1970s, Waterbury's overall population decreased, largely due to a sharp decline in the number of patients housed at the Vermont State Hospital in Waterbury Village. As a result, the Village of Waterbury has about 40% fewer residents today than it did in 1960. It was during the 1970s that the town's population outside the village surpassed that of the village for the first time due to 45% growth in the non-village population combined with the reduction in patients at the State Hospital.

Waterbury's population has grown modestly each decade since 1980 at a rate similar to the average for Washington County. The town has added about 600 residents since 1980 and while the village has about 130 fewer residents. The village's population remained virtually unchanged at around 1,700 residents during the 1990s, but grew slightly during the 2000s. Presently, around one-third of Waterbury residents live in the village.

Waterbury's population currently represents about 8.5% of Washington County's population. In 1960, the town accounted for about 10% of the county's population. With an average annual growth rate of 0.3% per year during the 2000s, Waterbury grew faster than most of its neighboring communities except for Barre Town, which had a growth rate of 0.4%.

Group Quarters. For much of its history Waterbury was home to a large institutional population. The Vermont State Hospital, when it opened in 1889, had 207 patients. At its peak in 1968, it housed an average daily population of 1,078 patients, representing roughly one-quarter of Waterbury's total population. Changes in the treatment of mental illness, and the opening of regional care facilities around the state, have since reduced the number of people requiring hospitalization and shortened the length of hospital stays. As a result, the state hospital population has steadily declined. The intent is to continue to reduce local bed numbers, as more off-site capacity is developed elsewhere in the state.

In 1998, Dale Unit III at the state hospital was converted to the Dale Women's Correctional Facility, in part to relieve serious overcrowding in the state's prison system. This 45-bed facility, opened in 1999 and closed in 2009, was designed specifically to meet the needs of female inmates. The state has no current plans to re-open either a mental health or correctional facility at the former Vermont State Hospital site in Waterbury.

Waterbury Village also has two residential care homes – the Kirby House and the Squier House – that are licensed to accommodate up to 57 residents, including elderly residents and adult mental health patients. The Kirby House also provides limited respite and emergency housing.

[3] See Figures 1, 2 and 3.

According to the 2010 Census, there were only 54 residents living in group quarters, all in Waterbury Village.

3-2 Population Characteristics

Density. Given that Waterbury's total land area is fixed (at approximately 48.0 square miles), the overall population density varies only in relation to total population. In 2000, Waterbury had a combined population density of 102.4 persons per square mile, up from 95.6 persons per square mile in 1990.

Figure 1. Recent Population Trends

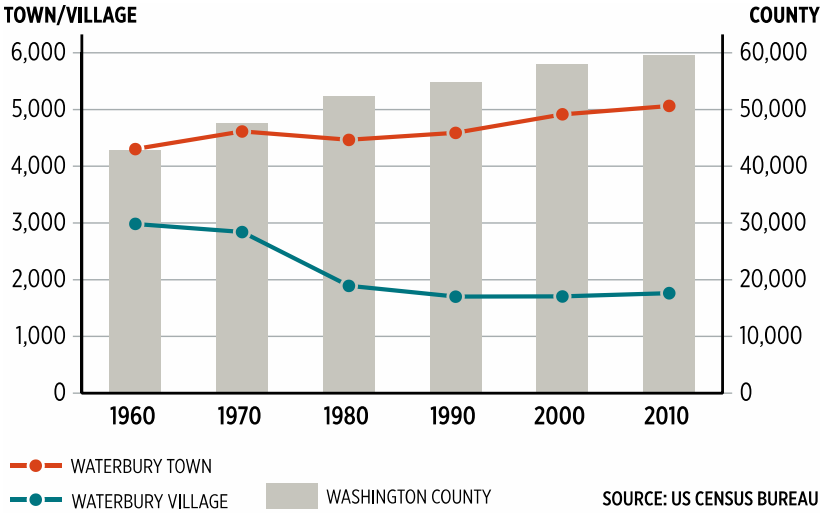


Figure 2. Total Population

	1960	1970	1980	1990	2000	2010
Waterbury Town	4,303	4,614	4,465	4,589	4,915	5,064
Waterbury Village	2,984	2,840	1,892	1,702	1,706	1,763
Washington County	42,860	47,659	52,393	54,928	58,039	59,534
Vermont						

Source: U.S. Census Bureau.

Figure 3. Population Change

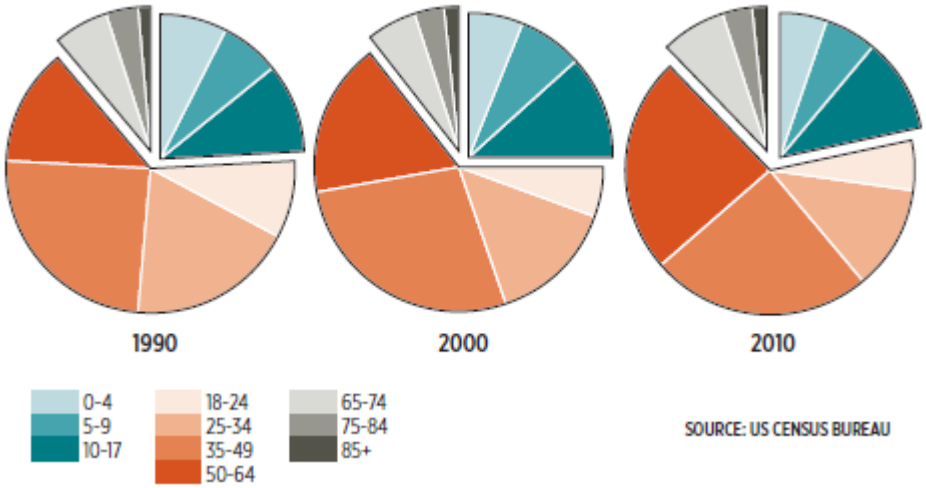
	1960s		1970s		1980s		1990s		2000s	
	#	%	#	%	#	%	#	%	#	%
Waterbury Town	311	7.2	-149	-3.2	124	2.8	326	7.1	149	3.0
Waterbury Village		-4.8	-948	-33.4		-10.0	4	0.2	57	3.3
Washington County		11.2		9.9		4.8		5.7		2.6
Vermont		14.1		15.0		10.0		8.2		2.8

Figure 4. **Median Age**

	1990	2000	2010
Waterbury Town	34.3	37.7	41.9
Waterbury Village	36.5	36.8	39.0
Washington County	34.3	38.5	42.3
Vermont	33.0	37.7	41.5

Source: U.S. Census Bureau.

Figure 5. **Waterbury's Population by Age Group, 1990-2010**



Despite continued growth in the non-village population and the addition of land to the village, our population continues to be most highly concentrated in Waterbury Village. It is estimated that in 2000, village population density averaged 898 persons per square mile, compared with an average density of 70 persons per square mile in the rest of town.

Age Profile. Figure 5 illustrates the distribution of different age groups in Waterbury, Washington County, and Vermont, based on U.S. Census data. Age distributions in Waterbury are generally similar to county and state age distributions. The median age of village residents is lower than the median age in the town as a whole. The percentage of the village population in the 25-34 age group is greater than the percentage of the entire town population in that age group.

The median age of a Waterbury resident increased from 34 to 42 between 1990 and 2010. This reflects the fact that the number of children under age 10 in Waterbury has declined as the echo baby-boom (children born to the large baby-boom generation) ended, and that the oldest of the baby-boomers have started to turn 65. These are both common demographic trends throughout the state. Waterbury's population is younger on average than residents in most of its neighboring communities.

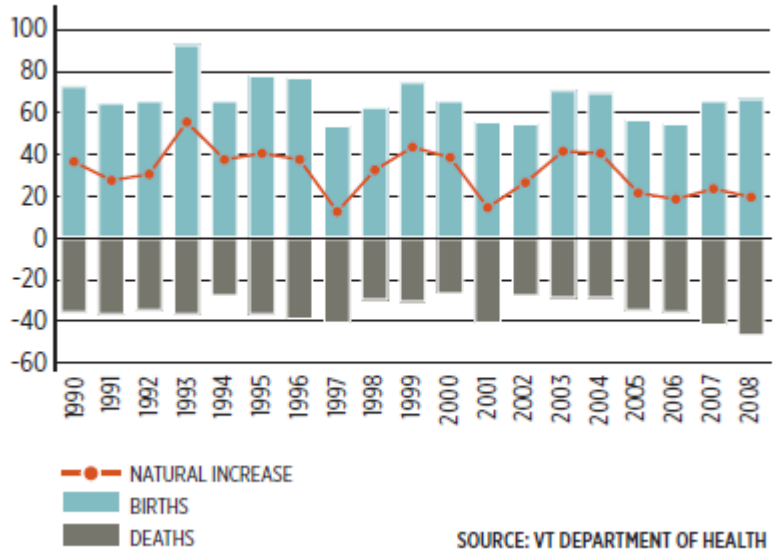
Each year, approximately 60 to 70 children are born to Waterbury residents, and the town has a higher birth rate than county or state averages. Between 30 and 40 Waterbury residents die each year. Taken together, these data result in a natural increase in the town's population of around 30 people. Natural increase has been

driving overall population growth and the town has been experiencing a net out-migration in Waterbury for decades.

The aging of the "baby boom" population reflects a nationwide trend that is expected to result in marked increases in retired and elderly populations – and the need for associated services and living arrangements – over the next two decades. The decline in younger age groups may result in fewer school enrollments over the same period, unless countered by increases from in-migration.

The median age of village residents, 39 as of 2010, is lower than the median age in the town as a whole. The percentage of the village population in the 25-34 age group is greater than the percentage of the entire town population in that age group. These age distributions reflect in part the wider variety of housing available in the village.

Figure 6. **Waterbury's Vital Statistics, 1990-2008**



Income and Poverty. Reported incomes for Waterbury– particularly outside the village– tend to be higher than regional or statewide medians; as a result, poverty rates are typically lower. According to the 2010 American Community Survey, Waterbury's per capita income was $32,800 and, after adjusting for inflation, had increased by $6,900 since 1990.

Also in 2010, the Census Bureau reported that 4% of town residents and 7.5% of village residents lived at or below the poverty line. This represented a reduction in the poverty rate from previous decades. In 2010, 3.2% of children in Waterbury lived in poverty as compared to 5.4% in 1990; and in 2010, 3.1% of seniors lived in poverty as compared with 9.7% in 1990.

The Vermont Department of Taxes estimated that the average adjusted gross income per Waterbury residents was $28,600 in 2010, which exceeded state and county averages, as well as the average in all neighboring communities except for Stowe.

Education Levels. Waterbury residents are generally better educated than county and state residents on average. Since 1990, the percentage of town residents with a bachelor's, graduate or professional degree has increased significantly, while the percentage without a high school diploma has dropped dramatically.

Figure 7. **Income and Poverty Statistics, 1990-2010**

	Per Capita Income			Household Median Income			Family Median Income			% Residents in Poverty			% Children in Poverty			% Seniors in Poverty		
	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010
Waterbury Town	25,900	32,700	32,800	56,500	56,900	60,500	65,300	76,600	71,800	5.4	6.1	4.0	5.8	7.0	3.2	9.7	4.9	3.1
Waterbury Village	21,100	23,700	24,900	40,100	38,500	46,400	52,700	54,000	57,300		9.2	7.5		18.4	2.3		1.8	2.6
Washington County	22,600	26,700	28,300	49,500	51,900	55,300	59,100	64,700	67,000	8.3	8.0	10.5	9.9	9.8	13.8	11.9	6.8	7.5
Vermont	22,600	26,100	27,500	49,700	51,700	51,800	58,100	61,600	64,100	9.9	9.4	11.1	11.5	11.4	13.7	12.4	8.5	8.0

Note: All dollar amounts adjusted for inflation to 2010$.
Source: US Census Bureau 1990 & 200 Decennial Census, American Community Survey Five-Year Estimate (2006-2010)

Figure 8. **Education Level, 1990-2010**

	% of Residents Age 18 or Older																	
	No HS Diploma			High School Diploma			Some College, No Degree			Associate's Degree			Bachelor's Degree			Graduate or Professional Degree		
	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010
Waterbury	19.7	12.6	5.2	35.4	26.0	26.9	15.5	16.0	19.9	8.6	9.0	8.5	14.5	24.4	24.9	6.2	12.0	14.7
Washington County	18.6	12.0	8.0	36.1	32.1	30.5	16.3	19.0	19.9	7.0	7.6	7.6	14.1	18.4	20.3	8.0	10.9	13.7
Vermont	18.9	14.0	9.5	34.5	32.1	32.0	17.8	19.7	20.6	7.0	7.3	7.8	14.2	17.2	18.7	7.6	9.8	11.4

Source: US Census Bureau 1990 & 200 Decennial Census, American Community Survey Five-Year Estimate (2006-2010)

3-3 Population Projections

At the current rate of growth (15 people per year), Waterbury's population will exceed 5,200 by 2020. The best available regional and local population projections should be considered in any related municipal capacity studies and growth management programs.

Sidebar:

The purpose of this chapter is to describe the characteristics of the people who collectively make up and call Waterbury "home." We can only understand the community and its needs going forward by understanding the people who make up the town and the village.

4. Local Economy

Today, the economics of place – i.e., building a holistic environment that reflects the concerns and aspirations of a town's citizens – is increasingly important to planners when considering incentives that will drive a local economy.

Waterbury has long supported an economic climate that respects our community's unique attributes as well as creating and retaining desirable jobs; providing a high standard of living; fostering increased business activity; and enabling growth of the tax base. Because of this climate, because of our strategic location along important transportation corridors and proximity to larger urban centers and resort destinations, and because of our unique spirit, Waterbury has become a regional center for commerce, government, and manufacturing. We support an increasingly hybrid economy welcoming equally Vermont's largest corporate citizens and its smallest business owners, thinkers, creators, and makers.

Today, Waterbury is well-poised to exploit our considerable advantages to maintain and grow a robust, sustainable economy that will evolve with, and for, this community.

4-1. Economic Activity

Employment. Waterbury is a regional employment center, and as of preliminary 2017 data, employs 3,834 individuals, a slight decrease from the number employed in 2000. Much of the variability in Waterbury's employment numbers can be attributed to the shifts in the locations of state employees in the aftermath of Tropical Storm Irene.

110 new private jobs were created in Waterbury between 2007 and 2017, a 4.4% increase that was above the 3.5% private sector job growth in Washington County of and 1.9% private growth statewide.

The number of businesses in Waterbury has continued to increase. . The total number of employers increased from 259 in 2000 to 309in 2017, indicating that a potentially significant portion of the job growth is attributable to new businesses. Total employment numbers are shown in Figure 9, below.

Figure 9. Waterbury Jobs

	1980	1985	1990	1995	2000	2005	2010	2015	2017
Total	1,711	1,846	2,986	3,283	3,876	4,378	4,623	3,382	3,834
Private	733	932	1,516	1,806	2,120	2,165	2,656	2,891	2,634
Gov't	978	914	1,470	1,477	1,755	2,213	1,967	491	1,200

Source: Vermont Department of Labor, Labor & Market Information

Waterbury's continued success in creating new jobs and new employers, has depended, and will depend, on a favorable economic climate – a climate that contributed substantially to attracting Waterbury's two largest corporate citizens, Ben & Jerry's and Keurig Green Mountain.

Business Sectors. Government is the largest employment sector in Waterbury, and changes to the status of the state office complex have heavily influenced Waterbury's employment numbers. Prior to Tropical Storm Irene,

government accounted for around 24% of Waterbury's total covered employment, and experienced continued job growth during the 2000s. As of 2017, with the return of 1,100 workers to the Complex, government is 30% of Waterbury's covered employment. Wages: The government and professional and business services sectors are Waterbury's two largest employment sectors, and generally offer above average wages. The large amount of employees in these industries, explains why average annual wages are higher in Waterbury than the average wage in either Washington County or statewide. Average annual wages for the town, county and state are compared in Figure 10.

Figure 10. Average Annual Wage (rounded to the nearest $100)

	1980	1985	1990	1995	2000	2005	2010	2015	2017
Waterbury	29,200	32,400	36,100	37,300	42,200	45,100	46,100	52,600	57,300
County	30,700	32,200	34,500	34,500	36,900	39,800	42,200	47,000	50,300
State	32,300	33,400	34,800	34,800	37,800	39,400	40,700	44,200	46,100

Source: Vermont Department of Labor, Labor & Market Information

While some job growth has been in sectors with relatively high average annual wages, significant job growth has also occurred in the leisure and hospitality sectors, which typically offer lower wages and fewer benefits. Focusing economic development activities on the creation of well-paying jobs and/or the balance of wages in the retail, entertainment, and creative sectors with affordable housing adequate to the needs of Waterbury's changing demographics, can better ensure that more local residents earn a livable wage.

Tax Receipts. In addition to employment and wages, another useful measure of economic activity may be found in the gross retail sales, restaurant receipts, and commercial accommodation rentals generated by Waterbury businesses. Figure 11 shows total sales receipts reported by Waterbury businesses for each fiscal year between 2000 and 2011. Total annual retail sales, adjusted for inflation, grew by about 9% during this period, and by 2011 accounted for 6.9% of total retail sales in the county.

Figure 11. **Waterbury Tax Receipts**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gross	500.3	585.4	382.2	153.2	117.0	172.5	216.7	210.2	164.7	130.0	131.5	122.8
Retail	26.9	27.8	29.9	28.9	30.4	32.6	31.4	33.3	32.0	32.0	29.4	29.4
Use	8.8	7.8	6.9	9	12.1	7.7	9.5	7.9	8.2	11.4	8.8	8.8
Meals	8.1	8.2	7.5	7.7	8.7	8.4	8.9	9.9	11.1	11.8	12.0	11.7
Rooms	4.3	4.3	4.4	4.7	4.0	4.7	4.7	4.5	4.3	4.4	4.6	4.5
Alcohol	1.4	1.4	1.4	1.4	1.6	1.7	1.8	2.0	2.2	2.4	2.4	2.4

Source: Vermont Department of Taxes adjusted to 2011$ and expressed in millions.

Figure 11 also shows total rooms, meals and alcohol receipts reported by Waterbury businesses between 2000 and 2011. Total rooms, meals and alcohol sales, adjusted for inflation, grew by about 35% during this period, and by 2011 accounted for 17% of total rooms, meals and alcohol sales in the county. Growth in rooms and

meals receipts reflects in part expansion of the tourism industry in the neighboring Stowe and Mad River Valley resort areas, as well as the strength of Waterbury's primary and secondary trade areas. Greater diversity of restaurants in Waterbury Village, which reflect the village's growing popularity

4-2. Developing Economic Sectors

Within the overall picture of the Waterbury economy, several developing sectors have emerged recently as particularly suited to continued development. Here, we profile those sectors, and point toward positive actions that can be taken to encourage their expansion.

Start-ups, Home-Based Businesses and Co-Working. Start-up and small businesses, including home occupations, home-based businesses, and shared space businesses, are an important and traditional part of the New England economy. According to the American Community Survey, around 8% of Waterbury's employed residents work from home or telecommute and 11% of households reported self-employment income. For many, working from home provides an opportunity to earn an income while saving on transportation and day care costs. Among other benefits, home businesses also can provide valuable income tax deductions to the homeowner.

A successful home-based business may, as it begins to succeed, begin to take on more of the characteristics of a thriving commercial enterprise. The business may begin to have more of a commercial impact on adjacent property owners and the area, including increased traffic, additional signage, parked cars, and overall congestion. Noises and odors can become a nuisance. Home occupations should be encouraged and protected; however, they should also be controlled to ensure they do not become a nuisance or disrupt a neighborhood.

Shared space businesses – businesses that exist within a co-working environment – are a fast-developing part of the Vermont economy. Co-working has distinct advantages for sole practitioners and start-ups. It provides a supportive business environment to those not wanting to assume all of the expenses of renting and furnishing an office while encouraging networking among young entrepreneurs. A distinct benefit of co-working is the advantage it provides to those working within this "hive" environment. As entrepreneurs from different industries mix and collaborate, they generate new ideas, new solutions to problems, and, often, new products.

Independent Service Providers and Retailers. In order to combat sprawl within a small community – the tendency toward auto-oriented, low-density development – it is necessary to ensure that there are independent service providers and retailers sufficient to provide for that community's needs. While Waterbury boasts an impressive slate of service providers, thanks largely to the long-standing need provided by the State Office Complex, and its employees, a 2013 retail market analysis revealed opportunities in the retail trade areas, including clothing and clothing accessories stores; furniture and home furnishings stores; electronics and appliance stores; sporting goods, hobby, book, and music stores; and office supplies, stationery, and gift stores.

Independent business owners reacted with enthusiasm to these findings. As of mid-2013, two businesses – both located within sight of the central intersection of Stowe and Main Streets – had expanded their offerings to reflect the demonstrated need. Encouraging more independent retailers to take advantage of the community's need for their products and services will strengthen the overall economic picture.

Agriculture and Local Food. The maintenance of working lands is a broadly shared value across Vermont. Farm and forest lands are the foundation for a substantive portion of the Vermont economy. The state's recent formation of a Working Lands Enterprise Board is further recognition of the economic development potential of working lands. Waterbury hosts a number of agriculture-based businesses that should be incorporated into a thoughtful municipal approach to the development of the local agricultural economy. Waterbury businesses that reflect Vermont's identity as an agribusiness powerhouse include: two of Waterbury's largest private employers, Ben & Jerry's and Keurig Green Mountain; highly regarded brands including Vermont Artisan Coffee and Tea and the Alchemist; notable boutique food and beverage purveyors and restaurants, which have helped define Waterbury as a localvore's paradise; and the Waterbury Farmer's Market, which weekly draws residents and visitors to a lively dialogue among farmers, small producers, and consumers.

In short, Waterbury embodies the farm-to-plate localvore movement identified as a key to encouraging cohesive communities and expanding tourism throughout Vermont. The restaurant cluster recently established in downtown Waterbury includes several dining destination locations committed to the support of the local farm-to-plate economy.

Many local organizations are working to strengthen Waterbury's developing farm-to-plate economy. For example, the Waterbury/Duxbury Food Council was established to strengthen community by supporting and building a sustainable, healthy food system throughout the region. Among the council's goals are the expansion of local food production, distribution and consumption, and the increased access to healthy food for all. Encouraging the council's efforts, as well as those of other organizations committed to the farm-to-plate economy, will greatly strengthen Waterbury's overall economic climate.

Creative Economy. Similar to many Vermont small towns, Waterbury is home to a thriving community of performers, creators, designers, and makers, who together are responsible for much of the uniquely marketable character of the town. When viewed as a tourist amenity, the arts are clearly an economic driver. Clearly, then, members of Waterbury's creative economy, whether performers, makers, artists, or other creators, should be celebrated as important to the economy overall, and provision should be made for their greater integration into the community and the economy.

A 2010 study of the State of Vermont's arts activity, commissioned by Main Street Landing and the Vermont Arts Council, found that overall, direct employment in the arts throughout the state was estimated to represent 4,342 jobs. This places the arts as an industry above a number of other well known Vermont industries, including food, machinery, fabricated metal product, and wood product manufacturing in terms of job creation. When indirect employment was added, the figure rose to 6,361 jobs and a net economic output of nearly $450 million statewide. This does not include purchases ancillary to arts consumption, such as food and beverage sales and development of production.

Recreation. While the Waterbury's natural amenities are discussed in depth in the Natural Resources chapters, the economic value of these amenities is becoming increasingly recognized. The Vermont Outdoor Recreation Economic Collaborative (VOREC) was created in 2017 as a statewide forum to acknowledge and support increased efforts to continue capitalize of the economic benefits derived from outdoor reaction. Waterbury's food, lodging and retail establishments benefit from increased traffic for residents and visitors patronizing

Waterbury's recreation amenities. Furthermore, the presence of well-regarded recreation sites increases the profile of the community as an attractive place to live, work, visit or locate a business.

4-3. Area Development

Waterbury enjoys a distinct competitive advantage of location. Just a 20 minute drive from Montpelier (Vermont's state capital), 30 minutes from Burlington (Vermont's largest city), and midway between the popular resort areas of Stowe and the Mad River Valley, Waterbury sits at the intersection of three of Vermont's most heavily traveled roads (Routes 2 and 100 and Interstate 89). Amtrak also serves the community, with direct passenger service north to St. Albans on the Canadian border and south to New York, Philadelphia, and Washington, DC. Waterbury is also a freight pass-through for various rail companies that serve communities throughout the Northeast and Canada.

With numerous tourist attractions (including the Ben & Jerry's factory, the most-visited tourist destination in Vermont) and many and varied dining experiences, Waterbury has become a thriving dining and nighttime destination for the region. As well as being a tourist destination, Waterbury is a regional employment center. Approximately 1,500 people work at Waterbury's flagship corporate partners, Keurig Green Mountain and Ben & Jerry's. The community houses approximately 1,100 State of Vermont workers, and anticipates additional State employees relocating to the town in coming years. Waterbury's primary and secondary trade data profile a community with growth potential; with its small town values, diverse employment opportunities, and disaster recovery experience, Waterbury is uniquely poised to serve as a model for economic development for communities of varying sizes across the U.S.

Business location (or relocation) decisions are influenced by a combination of factors, including access to transportation corridors, availability of water and sewer, quality of the education system, quality of the labor force, and cultural and social amenities offered by the community. In its pursuit of business growth, jobs, and tax base diversity, Waterbury should not lose sight of the quality of life in the community. The maintenance and further development of our transportation network is critical to the success of our local economy. On-going transportation planning and the implementation of the goals, objectives, and actions identified in the Transportation and Land Use chapters are key to the economic growth and success of Waterbury and the surrounding area.

Downtown Development. The term "downtown" generally refers to an area encompassing a significant concentration of commercial and employment activity unlike any other area in a given community. Downtowns are typically distinguished by mixed-use development, including retail, services, office, and residential space. Cultural and civic activities are also a strong component of a "downtown."

Waterbury Village, Waterbury's "downtown," is bounded by Route 100, Route 2, and Interstate 89 to the north, and by Route 100, Route 2, and the Winooski River to the south. A classic example of a 19th century New England village, downtown Waterbury is built to a pedestrian scale and features a diversity of buildings close to the street, many housing a mixture of uses and services. Home to a vibrant mix of residential neighborhoods, civic and cultural facilities, the community's largest concentration of commercial and manufacturing facilities, and independent large and small businesses, Waterbury Village is an attractive choice

for businesses looking to relocate to a transportation hub with public infrastructure, available workers and good quality of life.

Since the 1970s, Waterbury Village has been home to the state's largest concentration of government office workers. The number of workers peaked prior to Tropical Storm Irene, with 1,500 state employees working in Waterbury. . As of the writing of this plan, approximately 1,100 employees have returned, and additional renovations are underway for two buildings in the state office complex that will have additional capacity. Another important development after Tropical Storm Irene was the updating of Waterbury's municipal offices and facilities. A new municipal complex was opened in 2016, and houses Waterbury's municipal functions; the Waterbury Library; and the Waterbury Historical Society. The creation of this complex fulfilled an important community need, and had been identified as a goal in previous Municipal Plans.

In addition to the historic central business district and state office complex, Waterbury's downtown also encompasses a contiguous industrial area of approximately 96 acres, which includes Pilgrim Industrial Park (off Park Row) and Grenier Industrial Park (off Demeritt Place). It is adjacent to the New England Central Rail corridor and has historically been integrated into the surrounding village. The area is home to the Green Mountain Coffee Roasters facility and has benefited from community development funds to improve access to the property. Pilgrim Park offers significant development potential, and an opportunity to better integrate the industrial area with the historic business district through a mix of uses and a pedestrian-friendly development pattern.

In order to maintain a superior quality of life for a town's citizens, any reasonable municipal plan must balance civic priorities and development needs. To this end, the preservation and promotion of Waterbury's historic resources have played, and will continue to play, an important part of the revitalization and promotion of the downtown. Waterbury's downtown received state designation in 2006. This designation provides access to a variety of benefits and incentives designed by the state to encourage reinvestment in traditional community centers.

Today, downtown development efforts are widely supported by Waterbury residents and championed by numerous Waterbury organizations, including Revitalizing Waterbury and its Waterbury Area Development Committee.

The mission of Revitalizing Waterbury, Inc. (RW) is to promote, preserve and enhance the social, historic and economic vitality of Waterbury for residents, visitors and businesses alike. Revitalizing Waterbury merged with the Waterbury Tourism Council in 2016, and continues the Council's role promoting Waterbury as a tourist destination. Since its inception in 1991, Revitalizing Waterbury has accomplished several significant projects in the downtown area, which include:

» The purchase and renovation of the Stimson & Graves building, which physically anchors a key position at the intersection of Stowe and Main Streets.

» The redevelopment of Waterbury's historic train station, accomplished in partnership with Green Mountain Coffee Roasters.

» A $1 million capital campaign to rebuild houses in the village which had been damaged by the flooding of Tropical Storm Irene.

Revitalizing Waterbury collaborates with local, regional and statewide stakeholders to create and maintain a vibrant downtown that is inviting, safe, economically sound, lively and livable. One example of such collaboration is RW's partnership with the town for Waterbury's Main Street Reconstruction project, anticipated to begin in April 2019. This project will significantly improve the appearance of downtown, and includes full depth reconstruction of the street; replacement of water and sewer infrastructure, burial of utility lines in the core downtown area, as well as installation of street trees, new sidewalks, historic lampposts and wayfinding signage. RW will partner with the town to provide business support services throughout the project.

Colbyville and Waterbury Center. Colbyville, the northwestern-most part of Waterbury Village, is contiguous with Waterbury Center, which is located on the west and east sides of Route 100. Because of their immediate proximity to Route 100, Interstate 89, and Stowe, both have been the focus of substantial residential and business growth in recent years.

Colbyville is home to Ben & Jerry's first manufacturing facility, the most-visited tourist destination in Vermont. Other development includes a small retail complex that houses a mix of resident- and tourist-friendly retailers and service providers.

Waterbury Center, along Route 100, has grown over the years into a significant business community largely anchored by the Cold Hollow Cider Mill, another extremely popular tourist destination. Historically, development in the Triangle has been less significant maintaining the small village feel, as compared to the more accessible Route 100, which has seen the bulk of business development.

In order to further stimulate economic activity while increasing Waterbury Center's appeal as a residential community with a walkable downtown core, the focus on historic preservation that is so much a part of development in downtown Waterbury could profitably be applied in Colbyville and Waterbury Center. Such a focus would have the added benefit of visually unifying Waterbury Village and Waterbury Center.

Route 100 Corridor. The Route 100 corridor links Waterbury Village, Colbyville, Waterbury Center, and the communities of Stowe and Morrisville. A two-lane road, it is the only route from Interstate 89 to Ben & Jerry's, other tourist attractions, and Stowe. During times of peak tourist traffic, it is extremely congested. Several intersections are already extraordinarily difficult to navigate during traditional or visitor-imposed rush hours. Several large commercial projects, including the construction of an 80-room hotel, coffee processing facility and an office complex known as the Energy Mill, have been completed along the corridor.

When considering further development of the Route 100 corridor north of Colbyville, traffic congestion should be a primary concern. The area also lacks the infrastructure, such as public wastewater, to support major commercial growth. Any further development in this corridor should be accomplished carefully, in order to respect and protect the history, values, and resources of Waterbury.

Route 2 Corridor. Route 2 links Interstate 89, Waterbury Village, Middlesex and pointseast, and Bolton to pointswest. Along Main Street in Waterbury Village, Route 100 merges with Route 2. It is used by residents of

and visitors to Waterbury as a conduit to local destinations, and by commuters as an alternative to Interstate 89 when conditions warrant.

Route 2 has two small manufacturing, retail, and restaurant clusters, yet lacks much of the necessary infrastructure for business development. Although the area, because of its proximity to the Winooski River, is prone to flooding, it is an attractive prospect for industrial expansion – particularly light industry – and should be explored as such. The recent approval of a retail store and indoor shooting range in this area fits the profile for this type of expansion.

4-4. New Economic Development Initiatives

Economic development is the process of creating prosperity by mobilizing human, physical, natural, and capital resources to produce marketable goods and services. Waterbury's economic development efforts have met with enviable results over the past decade; as well, the highest-paying employment sectors – manufacturing and wholesale trade – have increased substantially, and additional expansion potential exists in existing industrial parks. This development has occurred at a pace that maintains Waterbury's enviable quality of life and small town atmosphere. Through a carefully thought out and judicious economic development program, the community can ensure that these trends continue.

Waterbury acknowledged the critical importance of this effort in 2013, with the formation of the Waterbury Area Development Corporation (WADC) and hiring of an Economic Development Director (EDD) to ensure the continuation of economic development efforts in Waterbury. The WADC is joined in its efforts by a coalition of local and regional government entities and nongovernmental organizations that share as their goal the continued good health of Waterbury's economy.

The group had a number of successes, including the redevelopment of the former Alchemist brewery, relocating and attraction of several new businesses, and a Vermont Digital Economy grant to provide free wifi services throughout town.

In 2015, the work of the WADC and EDD was merged into Revitalizing Waterbury as the Waterbury Area Development Committte. The WADC and EDD work to :

» Enhancing the existing business climate.

» Assisting current local corporations.

» Recruiting new businesses.

» Fostering and maintaining relationships with local and regional developers.

» Assisting land and building owners with filling commercial properties.

» Advising the Edward Farr Utility District on the administration and utilization of the Revolving Loan Fund.

» Working with local and regional service providers to promulgate Waterbury's economic development interests.

The WADC was responsible for the creation of Waterbury's Economic Development Strategic Plan, first drafted in 2014. An updated version of this plan was endorsed by the Select Board in 2017.

The Plan identifies short and long term goals to support Waterbury's economic development. Furthermore, it highlights specific areas of business sectors and locations that are ripe for development. Whenever feasible, the goals and objectives from the EDSP should be aligned and implemented in conjunction with this plan.

In order to attract and retain a balanced cross-section of all the economies already discussed while honoring the unique character of the Town and Village, it is important that current and future state and municipal regulations be thoughtfully administered in order to allow responsible expansion to occur. As well, to make the EDSP as useful as possible to the growing Waterbury community as its economy expands, locations being considered for development, whether commercial or industrial, should be thoughtfully explored as deemed suitable per location and within the parameters of existing and future regulations.

4-5. Goals, Objectives, and Actions

Goals

1. Cultivate a vibrant economic climate that supplies jobs at livable wages while maintaining harmony with the area's natural and historic resources and exploiting fully the area's human capital.

2. Encourage a diversified local economy that welcomes a variety of business types and sizes including the more traditional economic sectors and developing sectors including start-ups and home-based businesses; independent service providers and retailers; agriculture-based/locavore businesses; and the creative economy.

3. Support the local economy and its vibrant mix of businesses through traditional and not so traditional business incentives, including the provision for necessary infrastructure (parking, sewer/water, communications, electricity, transportation, etc.); the availability of clear regulatory action, including fair and efficient permitting; the establishment of enterprise zones, including, where appropriate, tax abatements and deferrals; the encouraging of workforce training; and, above all, the continued maintenance of the high quality of life Waterbury and its surrounding region are known for.

Objectives

1. Encourage the development and redevelopment of key existing and new commercial and industrial uses and the prosperity of existing uses in appropriate locations.

2. Enhance the economic resurgence and ongoing revitalization of Waterbury Village's downtown area.

3. Appreciate the arts and recreation as an economic driver with quantifiable economic advantages for towns and regions that actively situate them within a local economy.

4. Preserve Waterbury's existing natural and historic resources as a means of ensuring future economic growth.

Actions

Overall Economic Activity

1. Work with the Waterbury Area Development Committee and its partners to implement its five-year Economic Development Strategic Plan, and ensure that the Plan is a resource appropriate to guide Waterbury's economic development efforts.

2. Create, encourage and support economic development programs that directly benefit business and property owners, and best accomplish Waterbury's goals to encourage economic development that preserves our quality of life, recreational opportunities, open spaces, and scenic vistas. These programs could include carefully targeted incentives such as tax stabilization; tax increment financing (TIF) districts; enterprise zones, specifically including enterprise zones that acknowledge and celebrate the creative economy within Waterbury; and state and federal historic tax districts; programs.

3. Identify those areas of Waterbury most appropriate for development and assist owners/developers in transforming businesses and properties into financial assets and economic engines for the community, using existing and contemplated economic development tools.

4. Invest in infrastructure that allows for commercial and industrial growth in areas designated for growth throughout the Village and Town of Waterbury.

5. Continue relationships with existing partners, and develop relationships with new partners, to promote Waterbury's location as a desirable site for relocating businesses.

6. Clarify the local permitting process, wherever possible, desirable, and appropriate, while still fulfilling planning and regulatory goals.

7. Leverage and protect the area's historic and recreational resources to attract visitors and generate economic activity throughout Waterbury.

8. Create and maintain innovative promotional materials, such as the municipal website and those of WADC and RW, to attract new businesses and support existing businesses.

Developing Economic Sectors

9. Invest the appropriate and necessary resources to cultivate and support businesses within Waterbury's developing economic sectors, including start-ups and home-based businesses; independent service providers and retailers; agriculture-based businesses and the locavore movement; the creative economy and recreation.

10. Invest the appropriate and necessary resources to cultivate and support Waterbury as a viable environment for co-working.

11. Encourage businesses within Waterbury's developing economic sectors to remain in or relocate to Waterbury, in order to enhance the overall attractiveness of the town as a destination location.

Area Development

12. Take advantage of the Edward Farrar Utility District's revolving loan funds as described in the Local Government Chapter to nurture start-up businesses and encourage existing businesses in the downtown area; encourage retail businesses within identified leakage areas to locate in the village.

13. Foster cultural, historic and entrepreneurial activities in the downtown area to draw attention to the downtown's potential for both commercial and residential growth.

15. Focus on historic preservation as a part of economic development in Colbyville and Waterbury Center, in addition to the Village of Waterbury.

16. Accomplish any further development along the Route 100 corridor within a forward-thinking context that respects the history, values, and resources of the Town and Village of Waterbury.

17. Explore Route 2 outside the boundaries of the village for industrial expansion.

18. Encourage and support efforts to develop a master plan for downtown and other growth centers identifying specific areas for more growth, additional parking, better vehicular and pedestrian traffic.

5. Housing

5.1 Household Demographics

The number of households in Waterbury continues to increase at a faster rate than the population growth. As of 2010, there were 2,207 households in Waterbury, 842 of which are located in the village. Nearly 200 new households were created in Waterbury during the 2000s. The rate of household growth in Waterbury, an annual average of 0.9% during the 2000s, remains higher than state and county averages, and higher than growth rates in most neighboring communities.

While the total number of households is growing, following national trends, Waterbury's household sizes have been decreasing for a number of decades. The 2010 Census found that the average household size in Waterbury was 2.27 people (down from 2.93 in 1980), while in the village it was 2.03 people (down from 2.78 in 1980). While the average family size was relatively consistent in the town and village (2.83 and 2.87 respectively), the household composition varied between the two. The most notable difference is the greater percentage of single-person households in the village and a higher percentage of both married couples with and without children in the town. The percentage of single parents with children, other family households, and non-family households were relatively similar in the town and village.

The number of single-person households and married couples without children living at home has been increasing in Waterbury, while the number of married couples with children at home has declined during the past 20 years. Smaller household sizes suggest that additional, more diverse types of housing will be needed to accommodate changing living arrangements.

Also in 2010, the Census Bureau reported that 4% of town residents and 7.5% of village residents lived at or below the poverty line. This represented a reduction in the poverty rate from previous decades. In 2010 3.2% of children in Waterbury lived in poverty as compared to 5.4% in 1990; and in 2010, 3.1% of seniors lived in poverty as compared with 9.7% in 1990

Figure 12. **Total Households**

	1980	1990	2000	2010
Waterbury Town	1,504	1,754	2,011	2,207
Waterbury Village	647	717	793	842
Washington County	18,626	20,948	23,659	25,027
Vermont	178,394	210,650	240,634	256,442

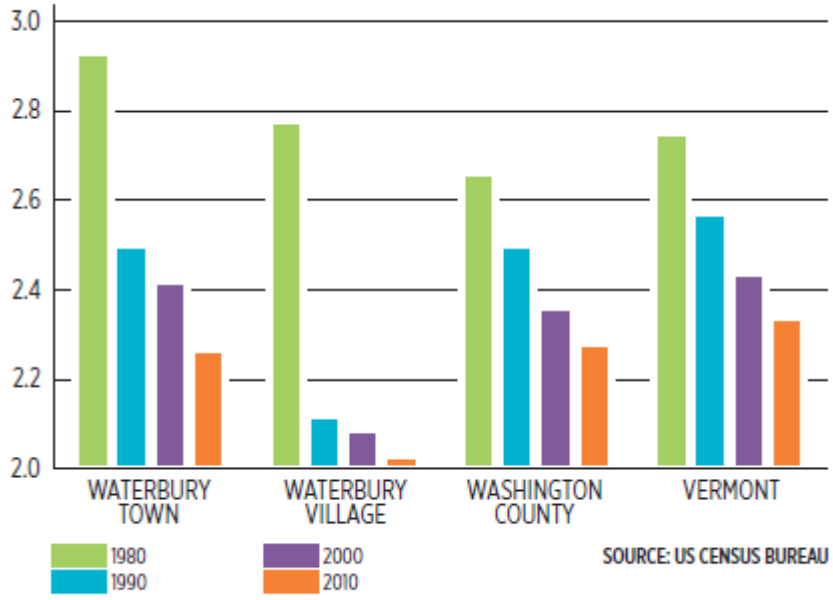
Source: U.S. Census Bureau.

Figure 13. **Household Change**

	1980s		1990s		2000s	
	#	%	#	%	#	%
Waterbury Town	250	16.6	257	14.7	196	9.7
Waterbury Village	70	10.8	76	10.6	49	6.2
Washington County		12.5		12.9		5.8
Vermont		18.1		14.2		6.6

Source: U.S. Census Bureau.

Figure 14. **Average Household Size**



Source: U.S. Census Bureau.

5.2 Housing Type, Condition and Cost

According to the 2010 Census, there were 2,385 housing units in Waterbury, 900 of which were in the village. The rate of housing growth, which had slowed during the 1990s, rebounded during the 2000s when nearly 280 new homes were built in Waterbury. The town's rate of housing growth during the 2000s was greater than state or county averages, and greater than the rate in most neighboring communities. In the 2000s, more than 75 units were permitted. The majority of these units are built (they are part of the Blush Hill Meadows apartments project).

The types of residential units in Waterbury have been changing. In the town, the majority of housing units are detached single-family homes (60.3%) with a lesser amount of multi-family housing (23.9%) and duplexes (10.4%). In the village, there has been a slight increase in the number of detached single units (which in 2010 represented 42.6%of the housing stock) and an increase in multi-family units (up to 42.2% in 2010).

The number of mobile homes has dramatically decreased over the past 3 decades; in 1990 they represented 11.4% of the housing stock in the town and now in 2010 only represent 4.1% of the housing stock. Likewise there has been a decline in the number of mobile homes in the village from 3.3% in 2000 down to 1.7% in 2010. While existing mobile home parks have been maintained, the decrease in mobile homes may be attributed to the replacement of a mobile home on separate lots with convention/traditionally built homes and the impact of Tropical Storm Irene that destroyed the Whalley Mobile Home Park.

Local mobile home parks provide relatively affordable housing for many Waterbury residents who own homes on leased lots. The town's four parks are all privately owned. No new parks have been developed in Waterbury since 1984. There are currently 148 mobile homes in Waterbury; 125 are in the mobile home parks, representing 19.6% of the county total.

The one mobile home park within the village is located within the floodplain and was devastated by the 2011 flooding. The new neighborhood is designed to be a "cottage neighborhood" with 11 two-story manufactured homes raised a foot above the base flood elevation.

The occupancy characteristics of Waterbury's housing stock have remained fairly consistent in recent decades. According to the 2010 Census, 63.7% of housing stock in the town was owner-occupied and 28.8% renter occupied. Seasonal housing made up only 3.7%. These figures are similar to the past 3 decades. In the village, the majority of the housing stock is renter occupied (51.2%), with 42.3 % owner-occupied and an even lesser amount classified as seasonal (1.6%)

Older homes comprise a significant portion of Waterbury's housing stock, particularly in the village. The Census Bureau reported in 2011 that 42% of homes town-wide and 68% in the village were built before 1960. Nearly three-quarters of rental housing in the village is within a structure that is more than 50 years old. Older housing units may contain asbestos and/or lead paint and, unless the building has undergone extensive renovation, may not be very energy efficient. Due to the age of the units, ongoing maintenance and rehabilitation is a necessity. It is desirable for the community to be proactive in promoting housing rehabilitation rather than replacement in order to retain affordable units, promote energy efficiency, and retain the historic character of residential neighborhoods.

The price of housing in Waterbury increased between 2000 and 2010. Based upon Census data the median home sales price in Waterbury in 2000 was $107,000 (adjusted for 2011$); this increased up to $255,400 in 2010. The median home sales price in Waterbury is greater than both the Washington County median sales price ($180,600) and the Vermont State median sales price ($200,200) for the same period. Based upon 21 primary residences sold January-June 2013, the median sales price declined slightly to $235,000. Separate median sales figures for the village were unavailable.

According to the Vermont Housing Data for Waterbury and Washington County,[4] Waterbury's median monthly ownership costs from 2007-2011 were $1487, higher than those reported for the county ($1147). This median monthly mortgage figure includes mortgage loan payment, property taxes, insurance and utilities (including

[4] The Vermont Housing Data site is created and maintained by Vermont Housing Finance Agency (VHFA) and the Center for Rural Studies (CRS) at the University of Vermont with input and guidance from Vermont's housing community.

heat) Renters in Waterbury for the period of 2007-2011 were paying a median housing cost of $918, which was greater than the county's median gross rent of $802. Calculations are based upon gross rent for all units, which is the contract rent plus the estimated average monthly cost of utilities and fuels.

Based upon recent information from the National Flood Insurance Program, residents living within the floodplain who are required to carry flood insurance will experience an increase in flood insurance costs within the next year. An analysis performed by the Vermont League of Cities and Towns showed that the average flood insurance for a house insured at $170,000 was about $1,600; this cost is anticipated to increase up to $4,000 with the rate changes. This increase will increase future homeownership costs, especially within the village where there is a high percentage of residential units within the floodplain.

5.3 Demand

Over the decade the number of housing units in Waterbury increased by an average of approximately 20 per year. If this is any indication of housing demand over the next ten years, 200 or more housing units will be needed by the year 2023. Since 2000, the vacancy rate in the town has increased from 1.7% up to 3.8%. The vacancy rate in Waterbury Village has also increased; in 2000 it was 2.4%, in and in 2010 it was up to 4.9%. In general terms a housing vacancy rate is considered "healthy" at about 5%. When vacancy rates fall below 5% it indicates that availability is limited and costs increase.

Figure 15. **Total Housing Units**

	1980	1990	2000	2010
Waterbury Town	1,658	1,956	2,106	2,385
Waterbury Village	695	803	823	900
Washington County	22,113	25,328	27,644	29,941
Vermont	223,198	271,214	294,382	322,539

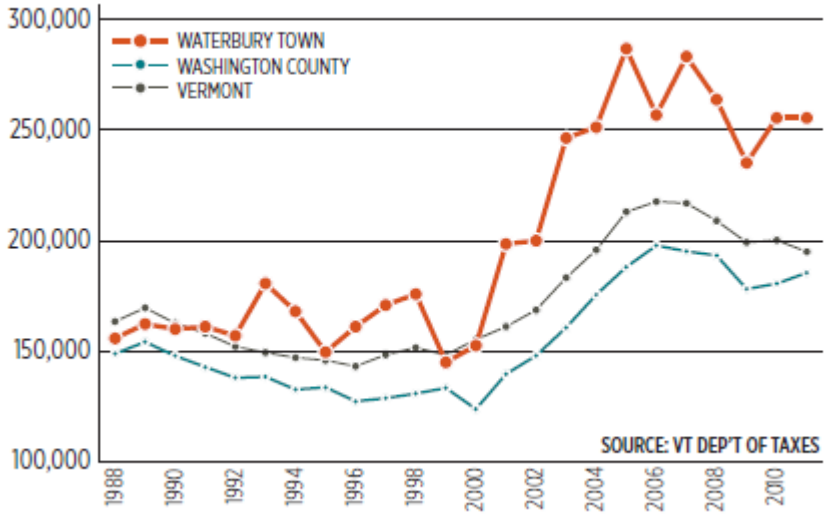
Source: U.S. Census Bureau.

Figure 16. **Housing Unit Change**

	1980s		1990s		2000s	
	#	%	#	%	#	%
Waterbury Town	298	18.0	150	7.7	279	13.2
Waterbury Village	108	15.5	20	2.5	77	9.4
Washington County		14.5		9.1		8.3
Vermont		21.5		8.5		9.6

Source: U.S. Census Bureau.

Figure 17. **Average Sale Price of Primary Homes**



The Central Vermont Regional Planning Commission adopted a Regional Housing Distribution Plan in 2008, which called for the construction of approximately 8,800 new housing units in the region between 2000 and 2020. The distribution plan established the number of housing units for which each municipality should be planning to ensure that the region's housing needs and planning goals would be met.

Waterbury's targets were set as follows: 247 units between 2000 and 2009 (279 were constructed) and 417 units between 2010 and 2020. Even with plans for new multi-unit housing in the village, it is unlikely that Waterbury will be able to meet regional expectations. However, the housing targets set by the Regional Housing Distribution Plan were determined at the peak of the housing boom and now are unrealistically high region-wide.

5.4 Affordability

A common measure of housing affordability is that a household should not spend more than 30% of its gross income on housing costs. 'Housing costs' are typically defined differently for renters and homeowners: For renters, they include rent and utilities (heat, hot water, electricity, water and sewer charges, and trash removal for homeowners, they usually include principal and interest on mortgage payments, property taxes, and property insurance, but not utilities.

Under federal and state law, 'affordable' housing is defined based on what a household earning up to 80% of the area median income (AMI) could purchase or rent without spending more than 30% of its income on housing costs. In Waterbury, the AMI is based on an average for all of Washington County. The U.S. Department of Housing and Urban Development (HUD) defines annual income limits for federal and state housing programs based on its estimate of AMI and household size. For FY2013, the area median income (AMI) for households in Washington County was set at $49,900 for a one-person household and $64,100 for a three-person household. This would mean that the maximum expense allowable for 'affordable' housing in Washington County in FY2013 would be $998 per month for a one-person household and $1,282 for a three-person household.

As is the trend throughout much of the U.S., an increasing number of Waterbury residents pay more than 30% of their income toward housing costs. The Census Bureau reported that for the period 2007-2011, 40% of Waterbury's households spent more than 30% of their income on housing each month. Additional factors that affect affordability but which are not reflected within Census housing data are transportation costs and availability of public transportation. While much of village housing is located in proximity to the commuter bus, which provides mass transit between Burlington and Montpelier, the greater majority of housing within the town is served neither by public transit nor by bicycle or pedestrian facilities.

While State and Federal programs clearly define the parameters of 'affordable' housing, more communities are responding to changing demographics by considering the meaning of affordability for a variety of income levels. Some use the term 'workforce' housing to highlight the need to offer more middle-income housing, i.e., housing that is affordable to the majority of employees within an area and/or critical workers who serve the community, such as teachers, police officers, and service industry workers.

Home ownership is a goal of many middle-income families, but often a goal not easily attainable in Waterbury. During the early 2000s, Waterbury's home prices shot well above the county median sale price. In 2000, the median sale price of a home in the Town of Waterbury (adjusted for 2011 dollars) was just over $107,000; by 2010, it had risen to nearly $255,400. By contrast, the median sale price of a home in Washington County was $180,000 in 2010. A household would need to be earning about $68,000 per year and have $20,000 for a down payment to make a $250,000 home affordable. For the period 2001-2011, the median household income for owners in Waterbury was $69,800 and for renters was $37,500.

In a market where more traditional housing stock is out of reach, buyers often turn to mobile homes for affordable housing. In 2012, 43 private residences were sold in the town. Thirty-eight of these were single-family dwellings, with an average price of $281,000; three were condominiums, with an average price of $262,000; and two were mobile homes with land, with an average price of $90,500. In addition, four mobile homes without land were sold, with an average price of $23,000; this further demonstrates the affordability of mobile homes when contrasted with other homes on the market. Based upon the redevelopment plan for the flood-devastated Whalley Mobile Home Park the replacement of affordable mobile homes will be with manufactured cottages marketed at approximately $105,000 per unit.

Responding to the challenge of finding affordable housing in our region, in 2012 Downstreet Housing and Community Development, formerly the Central Vermont Community Land Trust, prepared a Housing Needs Assessment for Waterbury and Washington County. This analysis provided a more detailed look at demographic, economic and housing data, and highlighted for decision-makers those elements of the regional population particularly challenged in finding safe, decent, affordable housing. The study concluded that Downstreet's resources would best be used to address affordable housing issues in Waterbury to support:

- Development of mixed-income Low Income Housing Tax Credit (LIHTC) Family Rental Housing, particularly near Exit 10, where Burlington-Montpelier commuters would have convenient access to transit and to the highway
- Expansion of the Homeland tax relief program for homeowners, especially with higher grant limits (higher grant limits are needed because Waterbury is a higher-cost community)

- Greater access to HARP (Home Affordable Refinance Program) funding for owner-occupier multi-family purchase and rehabilitation (VHFA does not currently permit HARP funding for these types of projects)
- Development of senior-designed ownership housing designed for the accessibility needs of a household wishing to age in place
- Development of more robust and affordable financing for mobile home ownership
- Rehabilitation of rental housing throughout the town
- Development of deep-subsidy rental housing
- Development of additional special needs housing to serve Waterbury and Washington County residents, including assisted living facilities or service-enriched rental housing for frail elders

Combined with a strong capacity to serve a more regional market need, Waterbury was identified by the study as being a good candidate for a Low Income Housing Tax Credit development project, especially for a mixed income development.

The Main St. Apartments affordable housing project has been developed by the Downstreet Housing Community Development on the Ladd Hall site on S. Main St. that was formerly part of the State Office Complex and was sold to Downsteeet by the state. The original 1890's part of the building was converted into three apartments. The rear portion of the building that had less historic significance was demolished and reconstructed into an additional 24 apartments. All the units are made available to low and moderate income households of varying age including families and senior citizens. The entire building is ADA accessible. The new building addition also meets the VHFA Multi Family Energy Design Standards.

5.5 Special Needs Housing

Special Needs Housing is a broad term used to describe housing which is accessible to people who face complex challenges and may require in-house services for support. This may include men, woman, youth and families with children who earn less than 30% of median income, who are homeless, or who may suffer from chronic disabilities. Elderly people who require full time care may also require special housing needs.

There are currently 62 subsidized housing units in Waterbury, including both Section 8 units and equity subsidized units. Most units are designated for low-income seniors, and all units are currently located in Waterbury Village. Over the last two decades, subsidized housing for the elderly increased by 14 units with the rehabilitation of the Stimson-Graves Building.

Downstreet Housing and Community Development, in partnership with Housing Vermont and the town, completed a reconstruction of the Green Mountain Seminary Building in Waterbury Center in 2002. This $2.7 million reconstruction addressed both the need for affordable housing and the renovation of one of the town's most historic properties. The Green Mountain Seminary, located on Hollow Road in Waterbury Center, offers 14 apartments for low and moderate income residents and two market rate units.

According to the 2012 Housing Needs Assessment prepared for Downstreet, design or service needs housing consists of assisted living facilities or service-enriched rental housing for frail elders as well as ownership housing designed for the accessibility needs of an aging household. The assessment identified Waterbury as one of several communities in Washington County having the greatest need and market capacity for

ownership housing across the range of senior incomes to meet the needs of a household that wishes to age in place.

As previous stated in Chapter 3 of this plan, for much of its history Waterbury supported a large institutional population. The Vermont State Hospital, when it opened in 1889, had 207 patients. At its peak in 1968 it housed an average daily population of 1,078 patients, representing roughly one quarter of Waterbury's total population. Changes in the treatment of mental illness, and the opening of regional care facilities around the state, have since reduced the number of people requiring hospitalization and shortened the length of hospital stays. As a result, the state hospital population steadily declined. Due to the flooding from Tropical Storm Irene, the State Hospital in Waterbury closed in 2011 and the State's mental health hospitalization needs are being accommodated elsewhere in the state.

There are currently two residential care homes in Waterbury (down from three in 1990). The Kirby House and the Squire House have the combined capacity to house 57 residents, including elders and adult mental health patients. According to the 2010 Census, there were only 54 residents living in group quarters, all of which were in Waterbury Village. The Kirby House also provides limited respite and emergency housing. Subsidized apartment units experience very short vacancy between renters, and waiting lists are common. Waterbury was identified in the assessment as well suited to meet the demands for this aspect of special needs housing because of access to public transportation.

5.6 Housing Density and Distribution

During the 19th century and the first half of the 20th century, the housing density in Waterbury was characterized by the two dense villages: Waterbury Village and Waterbury Center, both surrounded by rural countryside with farms and forest lands. After the 2nd World War, Waterbury experienced the start of significant suburban scattered single-family housing development in many areas of the town outside of these villages.

What has followed is an increase in low density scattered development in outlying areas. This trend continued through the year 2000 with a pace of residential development of approximately 25-30 dwelling units being permitted annually from the year 1990 to 2000. From the year 2000 to 2010, this pace slowed with one 16-unit multi-family affordable housing development constructed in Waterbury Center (the Green Mountain Seminary building) and a 60-unit multi-family market rate development constructed in the Colbyville (Blush Hill Meadows). Based upon permitting information compiled in the town and village reports, from 2010 to 2012 the pace continued to slow down to approximately 10 dwelling units permitted each year, predominantly single-family housing units in the village and in the town.

In 2007, the Central Vermont Regional Planning Commission undertook a build-out study, the purpose of which was to provide a broad-brush look at current trends, existing controls and future land use scenarios and options. The study found that the majority of developable land is located within the low-density residential growth areas and that "very low-density growth in these areas is likely to continue absent of any policy change." These low-density areas have historically been farm or forest land and still contain rural-like qualities which contribute to the natural resource base and aesthetic qualities of the area. The map titled "Distribution of Recent Residential Development, 1999 – 2013" further illustrates that a majority of residential development is occurring in the outlying rural areas.

The majority of Waterbury's single-family housing is located outside the village and the majority of multi-family housing is located within the village. In 2010, 69% of single-family homes were located outside the village and 71% of multi-family units were located within the village. Multi-family and attached housing units represented 56% of all housing in Waterbury Village in 2010.

Under the current zoning regulations multi-family housing is allowable in a portion of the Village of Waterbury, predominantly along South Main Street and in the vicinity of the Primary School. Higher residential densities are encouraged in the some of the zoning districts within the Waterbury village where public wastewater is available. Multi-family development is also allowed in some areas outside the village, but it is not allowed in the Medium Density, Low Density, or Conservation zoning districts.

Residential Planned Unit (cluster) Developments (PUDs) are allowed in all zoning districts, with the exception of the Industrial District where residential use is not allowed. There are a total of six PUDs in all of Waterbury. Up to a 25% density bonus is allowed in PUDs in exchange for the inclusion of low- and moderate-income housing units, preservation of agricultural land, or the provision of publicly accessible park or recreation land.

Changes to Title 24 Chapter 117 now allow for "mandatory clustering" which can be utilized to help protect natural resources and the previous limits on density bonuses have now been removed which can help provide incentives for developers to cluster development. As identified in the CVRPC Study this provides "an interesting option for the town's residential zones" and "a sliding scale for density bonuses which awards greater density to development which are closer in proximity to existing settlements/neighborhoods could be considered as a means of reinforcing traditional settlement patterns." Respondents to the 2013 Waterbury Survey also supported the ideas of encouraging clustered or planned unit development outside designated growth center.

The map titled "Distribution of Existing Residential Structures" illustrates the general density and distribution of current residential structures. It should also be noted that the 2007 build out study included a GIS sampling of densities and minimum lot sizes. The study found that "prevailing existing densities in both village zones (Waterbury Village and Waterbury Center) appear to be higher than that allowed under current zoning." Implications of this suggest that current density requirement may be inhibiting future residential growth within the village areas.

When asked on the 2013 Waterbury Survey what would be the most effective steps Waterbury could take to manage future residential growth, citizens ranked allowing high-density housing at the state office complex property first followed by allowing multi-family housing in a larger portion of the village. Also when asked where should Waterbury encourage more residential development the majority of respondents supported housing to be located within the village.

The Future Housing Distribution Maps 1-6 and 1-7 show the anticipated location of 60% - 80% of the demand for the period of 2010 to 2020 (334 housing units) identified in the Regional Housing Distribution Plan that is part of the 2008 Central Vermont Regional Plan. Even though this number of units may be unrealistic, considering the current rate of residential permitting, this map identifies where new housing could be distributed. Based on existing densities, available public infrastructure, and the land use policies of this plan, approximately 50% of the new units will be located in the growth centers of Waterbury Village and Waterbury Center and 50% of the new units will be located outside of these growth centers.

One strategy for accommodating a higher percentage of the future housing distribution in the two growth centers to help achieve the land use goal to "Guide future growth and development by reinforcing Waterbury's traditional pattern of concentrated settlements surrounded by rural countryside", is to examine where higher densities of housing can be achieved in the growth centers and how they might be expanded in the future to add areas where higher density housing could be achieved.

The chart below shows the anticipated number of units by the areas that are also identified on the Future Land Use Maps. The anticipated future units range from 60% (250 units) to 80% (334 units) of the targeted demand (417 units) over the 10 year period. This planning exercise is intended to show the desired distribution of this estimated number of dwelling units based on the goals and objectives set out in this Municipal Plan. It is expected that a much higher percentage of the new units in the Growth Centers will be multi-family units than outside the Growth Centers where the housing type will be predominantly single-family units, single family units with accessory dwellings, and duplexes. The Future Housing Distribution Maps 1-6 and 1-7 show the range of 250 to 334 future housing units distributed as follows:

Lastly, consideration of the number of residential properties located in the floodplain and the impacts of recent flooding highlight the need for careful consideration of how to retain current housing units in the floodplain, and where to locate future housing units, especially within Waterbury Village and along Route 2. The floodplain is a valuable natural resource which when free from development allows for the storage of flood waters when rivers overtop their banks during flood events.

Currently, the Waterbury Zoning regulations allow for new development in the floodplain. New residential development must be built at least 1 foot above the base flood elevation. Properties which sustain substantial damages or which undergo substantial improvements must come into compliance with the elevation requirement, yet historic buildings are exempt.

Based upon 2013 Survey results an overwhelming majority of respondents supported restricting development in areas with important natural resources and a majority of respondents also felt that floodplains should be regulated more to protect the floodplain resource.

Figure 18. **Housing Distribution Plan**

	Housing Units
Village of Waterbury Growth Center	90-125
Mixed Use: Commercial/Industrial	25-35
Village Residential	40-55
Rural Residential/Agricultural	25-35
Waterbury Center Growth Center	30-42
Mixed Use: Commercial/Industrial	10-14
Village Residential	20-28
Outside the Growth Centers	125-167
Route 100 Corridor	20-27
Rural Residential/Agricultural	90-120
Agricultural/Forestry/Conservation	15-30
TOTAL	**250-334**

5.7 Goals, Objectives and Actions

Specific goals and objectives were determined based on the Housing Needs Assessment completed by the Downstreet Housing and Community Development in 2012 as well as consideration of Waterbury's Housing Data Profile, information compiled from the 2010 and 2013 US Censuses and other Vermont housing data resources as well as input received from residents from the 2013 Community Survey.

Goals

1. Ensure the availability of safe, decent and affordable housing for all current and future Waterbury residents.
2. Create new housing in locations that maintain the integrity of neighborhoods while increasing density, respecting the natural environment, and minimizing the need for infrastructure improvements.

Objectives

1. Encourage development of affordable housing near employment, public transportation, and the area of available services to meet needs of Waterbury's elderly, recently retired, physically disabled, young families and professionals, and low and moderate income households.
2. Encourage the creation of more diverse types of housing that takes advantage of existing housing stock and accommodates smaller household sizes and other changes in household type.
3. Ensure that all new housing is of quality construction and is consistent with the character of the community.

4. Encourage the development of a program to assist with the renovation of rental housing in order to bring buildings into compliance with building and safety codes, increase energy efficiency and improve the quality for renters of all income groups.
5. Encourage the development of a housing renovation program in Waterbury to enable homeowners to make needed updates to older homes, meet building and safety codes, comply with energy efficient guidelines and offer quality environments for homeowners of all income groups.
6. Support housing that employs creative site designs maximizing development potential, minimizing environmental impact, preserving open space, and ensuring greater efficiency in infrastructure.
7. Encourage public/private partnerships to develop housing options in Waterbury to meet changing demographics.

Actions

1. Utilize the village's Urban Development Action Grant (UDAG) and Community Development Block Grant (CDBG), and the town's CDBG revolving loan funds for renovating affordable housing stock, for both homeowners and landlords, and to assist with the construction of new affordable housing.
2. Ensure that Waterbury's bylaws allow for residential development in locations of employment and service areas to serve people with special needs and seniors who wish to age in place.
3. When public funds are being used to assist affordable housing projects and single family homes, give highest priority to projects which will be permanently affordable (99 or more years).
4. Promote the utilization of the Central Vermont Community Land Trust's Home Ownership Center to assist with the purchase of homes for people of diverse income levels.
5. Ensure that current and future zoning practices support and encourage the development of safe, decent and affordable housing.
6. Explore participation in the FEMA sponsored Community Rating System in order to reduce anticipated increases in flood insurance premiums.
7. Explore the expansion and infill of the village growth centers, allowing higher density residential and mixed uses that include housing.
8. Encourage partnerships with non-profit agencies such as Habitat for Humanity, Central Vermont Community Land Trust, and Housing Vermont to provide assistance with financing affordable housing projects.
9. Consider formation of a Housing Task Force with local and regional partners, including those identified in Action 8, to facilitate the implementation of the actions in this chapter to include exploring areas, sites, and specific projects that will create a diversity of housing options in Waterbury.
10. Explore increasing density for Planned Residential and Planned Unit Developments to encourage residential development that reduces infrastructure and housing costs while respecting the natural environment.

Sidebars:

Housing is an integral part of the fabric of our lives. The size, location and cost of housing shapes our communities, the local economy, school enrollment, energy use, land use and transportation patterns. Providing a range of housing options for a variety of income levels and lifestyles in locations that make sense contributes to the vitality and diversity of the community.

The damage sustained by households as a result of Tropical Storm Irene brought into sharp focus the need for safe, decent, and affordable housing for Waterbury residents. In the immediate aftermath, 211 private properties sustained significant damage as rising floodwaters carried spilled oil, sewage, chemicals, and sediment. Many residents were displaced from their homes and sought accommodation with neighbors, friends and family. Others temporarily located to housing located in other communities outside of Waterbury.

While the crisis from the storm of 2011 has passed, the need for additional housing for low- and moderate-income people in Waterbury remains as an ongoing challenge for the town.

> 62% of respondents to the 2013 Community Survey felt that the quality of housing in Waterbury was “good.”

> 53% of respondents to the 2013 Community Survey felt that the availability of housing in Waterbury was “fair.”

> 59% of respondents to the 2013 Community Survey felt that the affordability of housing in Waterbury was “fair.”

6. Natural Resources

Located between the Worcester Range and Mt. Mansfield State Forest in the Green Mountains, Waterbury's landscape is a patchwork of farm fields, rural neighborhoods, village centers and highly visible and scenic ridgelines. Working farm and forest lands sustained generations of Waterbury residents and remain an essential component of our landscape.

The Winooski River and Waterbury Reservoir are also significant natural resources that have shaped this community. The 1927 flood and, more recently, Tropical Storm Irene remind us of the need to plan and prepare for flood resiliency, mitigation and restoration.

Waterbury serves as a gateway community for popular recreational destinations like Camel's Hump State Park, Little River State Park and the Perry Hill Bike Trails. Our natural setting offers a range of cultural, environmental, recreational and economic opportunities, while at the same time posing a significant number of challenges. The right balance of cultural and natural resources creates a distinct sense of place that is unique to Waterbury.

This chapter describes the natural features that contribute to the town's unique sense of place, and options for balancing future development with the conservation and protection of these resources for existing and future generations.

6-1. Topography

Waterbury's landscape is characterized by prominent peaks, rolling hills, and broad river valleys. The Green Mountain and Worcester Ranges, extending north and south respectively, define the town's western and eastern boundaries. Waterbury's settled areas are more gently rolling, except within Waterbury Village, which lies largely in the level floodplain of the Winooski River Valley. Elevations in town vary from around 400 feet near the Winooski River, to over 2,000 feet in the Worcester Range and approximately 3,400 feet atop Ricker Mountain.

Waterbury's mountain brooks and streams drain into the Winooski River, which flows northwest along the base of the Green Mountains, forming the southern boundary between Waterbury and Duxbury. The Winooski watershed is part of the larger Champlain basin, eventually draining into Lake Champlain.

Steep Slopes and Ridgelines. It is no accident that much of the town's historic development occurred on generally level terrain. Development on steep slopes traditionally has been challenging. More recently, areas like Waterbury Center, which extend up the Worcester Range, have seen an increasing amount of residential development. Such development, however, poses a number of environmental risks, including increased stormwater runoff, erosion, and stream sedimentation.

Development constraints associated with different slope categories, and associated management strategies, as identified by the U.S. Natural Resource Conservation Service (NRCS), are included in Figure 19.

A primary development constraint associated with steep slopes is correspondingly poor soils. Slope information should be used in conjunction with soil information to evaluate the erosion potential and development difficulty of individual sites. Slopes of 15-25 percent, for example, may not be as severe a constraint depending on the soil types present.

In addition to the potential for sedimentation and erosion, development on steep slopes and hillsides is likely to be more visible from a greater number of locations throughout Waterbury. Because higher elevation land often serves as the background to the community's most scenic views, development in such areas can stand in stark contrast to its surroundings.

To address these concerns, it is important that development on steep slopes and ridgelines are reviewed for potential environmental and visual impacts. In 2006, Waterbury adopted the Ridgeline, Hillside, Steep Slope Overlay Zoning District which applies to land above 1,200 feet in elevation. Land development in this area, including subdivisions, are subject to conditional use review. In addition, the overlay district regulations requires applicants to present habitat studies, erosion control plans and visual analysis's to help protect natural resources for development in the areas that are above 1,500 feet in elevation.

Retaining contiguous forested cover in these hillside areas has many additional benefits including the protection of wildlife habitat. For example, most of the higher elevation forested area in the Worcester Range is mapped habitat for bears that rely on large un-fragmented blocks of forest for food sources and species health.

Figure 19. **Development Suitability by Slope**

Slope	Recommended Management
<3%	Suitable for development, may require drainage improvements.
3-8%	Most desirable for development, having the least restrictions.
8-15%	Suitable for low density development with consideration given to erosion control, runoff and septic design.
15-25%	Unsuitable for most development and septic systems, construction costly, erosion and runoff problems likely.
>25%	All construction should be avoided, careful land management is required.

Source: U.S. Natural Resource Conservation Service

Figure 20. **Vermont Water Quality Standards**

Class	Description
Class A	Uniformly excellent, high quality waters of significant ecological value, and suitable as public water supplies, with disinfection. Includes all surface waters above 2,500 feet in elevation, and other waters as designated by the Water Resources Board.
Class B	Managed to maintain consistently good water quality for wildlife habitat, recreation, and potable water supplies, with disinfection and filtration. Includes most surface waters.
WMZs	Includes stretches of river specifically designated to receive and assimilate the outflow from wastewater treatment facilities.

Source: Vermont Agency of Natural Resources

Figure 21. **Local Water Quality Classifications**

Water Body	Management Class
Thatcher Brook	Class A (headwaters, water supply source)
Winooski River	Waste Management Zone (downstream of treatment plant)
Waterbury Reservoir	Impaired lake and watershed

Source: ANR Natural Resources Atlas

6-2. Water Resources

We rely on clean cheap water supplies not only for sustenance, but also for business and industrial operations, for public health and safety, and for recreation. The loss or diminution of water supplies and water quality cannot be taken lightly. The cumulative loss of clean and reliable water can have devastating effects on the health, safety and well being of our community and the natural systems in our vicinity.

Surface Waters. Major surface waters in Waterbury include Thatcher Brook, Little River and its tributaries (Cotton and Stevenson Brooks to the west, and Bryant and Alder Brooks to the north and east), the Winooski River, and the Waterbury Reservoir. Streams, including those that are blue-lined mapped by the State of Vermont, those that have a measurable flow of water during any time of year and those that include a definable stream bank or streambed, are numerous. These streams, as small as some may be, contribute greatly to the health and viability of waters within Waterbury.

Most of these surface waters have associated forested riparian areas that provide continuous habitat for many animal species and often serve as connecting wildlife corridors between interior forest blocks as shown on the Forest Resources and Wildlife Connectivity Map.

The Winooski River, which stretches 7.7 miles through Waterbury and defines the town's southern border, is its largest river, and is also an important aesthetic and recreational resource. The headwaters of Thatcher Brook, located just over the town line in Stowe, are Waterbury's main water supply. The tributaries of the

Little River, which was dammed in 1938 for flood control, now drain into the Waterbury Reservoir. Major watersheds within Waterbury include the Little River, Thatcher Brook, and the Winooski River.

The Waterbury Reservoir normally covers 840 acres, has a maximum depth of 100 feet and a watershed area of nearly 60,000 acres, It is one of the area's most important scenic and recreational resources. Since 1953 the dam has also supported a hydroelectric facility, currently operated by Green Mountain Power. There is concern that fluctuating water levels under past management have resulted in shoreline erosion and fish habitat degradation. This should be addressed under future relicensing agreements.

Other bodies of water found in Waterbury include ponds that result from beaver activity, typically related to wetlands, as well as man-made ponds constructed either for fire protection or private enjoyment. In the past Waterbury occasionally required the construction of fire ponds in development reviews, but this raised questions of municipal liability so they are no longer required in the reviews.

Surface waters such as rivers, streams, and lakes strongly influence the pattern of growth and settlements, often becoming the focus of development. As Waterbury grows and develops, and the demand for water increases, management becomes increasingly important to prevent water quality degradation and to maintain adequate water supplies.

Under current Vermont Water Quality Standards, all surface waters in the state are classified by the Water Resources Board as either Class A or B waters, or waste management zones (formerly Class C waters), based on related water quality management goals. These classifications represent minimum water quality standards to be achieved and maintained.

Privately constructed ponds involving streams, whether for fire protection or pleasure, may require a state permit for construction, but are otherwise not usually subject to state water quality standards. Such ponds, however, can result in undesirable impairments to fish habitats (increases in temperature, disruption of spawning areas), water quality (sedimentation, contamination), and the introduction of non-native fish species into the watershed. The construction of ponds that will have the potential to degrade stream resources should be discouraged.

The Winooski watershed is one of 17 watersheds in the state that will be evaluated under the Agency of Natural Resources' ongoing Vermont Basin Planning Process. This watershed initiative requires that a basin assessment be conducted by the state every five years, resulting in the preparation of a basin plan. Plans are specifically intended to address water quality problems, including impaired waters, identified in the assessment report. Management strategies and tools will be recommended as appropriate to meet Vermont Water Quality standards. Plan preparation is guided by a watershed advisory committee, and is required to include extensive public participation.

The state's stormwater management program is necessitated in part to meet the requirements of the federal Clean Water Act. The primary program that governs and monitors water quality is the discharge permit program (National Pollution Discharge Elimination System or NPDES). The Agency's Department of Environmental Conservation evaluates applications for discharge permits to determine whether the proposed runoff from a project (non-point source), or discharge from a municipal waste water treatment facility (point

source), will comply with water quality standards. This permitting process requires higher water quality standards and treatment for development located in impaired watersheds that do not meet water state quality standards. The Waterbury Reservoir and its watershed are listed by the state as impaired due to sedimentation and turbidity in the reservoir.

Shorelands and Streambanks. Naturally vegetated shorelines and streambanks enhance water quality, shoreland protection, and the overall health of a stream or lake by:

» Providing bank support and stabilization.

» Helping to prevent lakeshore erosion, bank undercutting and collapse, and in-stream scour and sedimentation.

» Providing food and shelter for fish and wildlife.

» Providing breeding habitat and dispersal corridors for wildlife.

» Intercepting and filtering out pollutants such as silt, fertilizers, toxic chemicals, and livestock waste.

» Keeping water temperatures cool during hot summer months when fish are susceptible to heat stress.

» Moderating harsh winter temperatures.

» Inhibiting algal growth.

» Slowing surface water runoff, and thereby maintaining base flow in streams.

» Helping to prevent the establishment of invasive species.

» Increasing wildlife diversity.

» Reducing flood and ice damage to the stream channel and adjacent lands and structures.

Activities that can or are likely to harm bank vegetation should be avoided. Buffer areas along a body of water, known as “riparian buffers”, can minimize or prevent many of the negative effects that encroaching development and other land uses may have on water quality, natural resources, recreation, and scenic beauty.

The Agency of Natural Resources has recently updated its “Riparian Buffer Procedures” which apply only to development subject to state review (e.g., under Act 250). Under these procedures, minimum recommended undisturbed buffer zones are typically 100 feet around lakes and larger ponds and either 50 feet or 100 feet along streams. These minimum widths may, however, may be increased as needed for sites with steep slopes, unstable stream channels, sensitive ecological areas, or projects posing greater risk to water resources, or rare, threatened, endangered, or sensitive species.

Since these procedures do not apply to smaller developments, municipalities are also encouraged to adopt buffer requirements under local regulations to protect shoreland and streambank areas, and local water

quality. Figure 22 offers suggested minimum buffer widths with respect to the slope of adjacent streambank and shore lands. Generally, 20 feet of buffer should be added for every 10% increase in slope.

A number of studies suggest that buffers of 100 feet or more offer the most water quality protection. Buffers necessary for wildlife habitat protection may extend from 200 feet for smaller animals to up to 600 feet for larger animals and local bird communities. Reductions in buffer widths, in association with increased buffer management requirements, may be necessary for projects within already developed riparian and shoreland areas, or on pre-existing small lots, where it would be difficult to meet desired buffer widths.

Figure 22. **Recommended Minimum Buffer Widths**

Adjacent Slope	Minor Streams	Major Streams & Rivers	Lakes & Ponds
0-10%	25 feet	50 feet	50 feet
11-20%	45 feet	70 feet	70 feet
21–30%	65 feet	90 feet	90 feet
31–40%	85 feet	110 feet	110 feet
>40%	Additional 20 feet for each 10%		

Source: *How to Include Fish and Wildlife Resources in Town and Regional Planning*, Vermont Department of Fish & Wildlife

Flood Plains. A significant proportion of the area adjacent to downtown Waterbury and some areas of the town lie in the Winooski River and Thatcher Brook floodplains. Major floods occurred in the Winooski River valley in November 1927, March 1936, September 1938, and August 2011. The 1927 flood was caused by a combination of heavy rain and saturated soils and resulted in loss of life and property.

During Tropical Storm Irene in 2011, the Winooski River overran its banks at the head of the village (near the junction of Routes 100 and 2) and, with additional overruns from smaller tributaries including Thatcher Brook, flooded the majority of buildings along Waterbury's Main Street. Floodwaters overran Main Street and nearly all its local arteries in the heart of the village, only bypassing the elevated Stowe Street. Flooding was pervasive: over one-third of village residences and businesses were impacted by flooding. Forty-nine buildings at the Waterbury State Complex were completely inundated. 211 private properties sustained significant damage as floodwaters carried spilled oil, sewage, chemicals, and river mud.

Flood control reservoirs on three tributaries to the Winooski River control the 100-year storm runoff from 214 square miles of the drainage area: Jail Branch at East Barre, North Branch at Wrightsville, and the Little River in Waterbury.

The Winooski River continues to flood its banks frequently with heavy rains, and with the exception of 2011 flooding, little damage has been reported since the completion of these flood control projects.

Waterbury's unique basin geography amplifies flooding symptoms because of its location downstream of the Worcester and Green Mountain Ranges. Weather patterns are also becoming unpredictable and storm intensities are greater because of the increasing volume of water in the atmosphere. Forested headwater areas and the wetlands associated with these surface waters serve an important function of helping to buffer the impacts of severe storms and the associated flooding. Because of these factors, land uses and public investments in Waterbury's floodplain areas should be carefully planned and regulated in an effort to minimize property loss, loss of life, and water contamination in the event of flooding while building greater resilience to future flood damage through restoration and maintenance of floodplain function.

Both the town and village have adopted flood hazard regulations that restrict future development in the floodplain to prevent loss of property and life in the event of a 100-year flood. It is important to remember that these regulations are important not only to reduce local hazards, but also to reduce downstream impacts. Waterbury was accepted into the FEMA Community Rating System (CRS) in October, 2016. This membership provides a 5% discount for the flood insurance premiums that the owners of property in the floodplain are often required to pay. Membership in the CRS also requires ongoing management and conservation of floodplain areas, public education and outreach on responsible floodplain management, and on-going regulation of development in floodplain areas.

In the wake of Irene, the Federal Emergency Management Agency (FEMA) assisted Waterbury in a Long-term Community Recovery process that identified 22 projects, including a flood study, that would examine ways to reduce flooding levels in the Village of Waterbury. Waterbury also enacted a Flood Hazard Mitigation Plan with the assistance of the Central Vermont Regional Planning Commission. That plan identified a variety of disaster mitigation projects that could be accomplished, including flood mitigation. A flood action and response plan was also created by two volunteer organizations: ReBuild Waterbury, and Vermont Campus Compact which includes college students from the University of Vermont. Collaborations between such groups and nearby towns will help communities communicate across town lines and share safety responsibilities and clean up efforts.

The Waterbury Hazard Mitigation Plan was updated and re-approved in 2018. The Plan identifies a variety of hazards including flooding and outlines a variety of projects that will help mitigate the impacts of hazard events.

A number of other methods are available to communities and landowners to reduce the threat of flooding, particularly in upland areas outside regulated floodplains. These are discussed in detail in Community Planning for Flood Hazards, issued by the Vermont Department of Housing and Community Affairs in 1998 for municipal use.

Wetlands. The term wetland generally refers to marshes, swamps, bogs, fens, and similar areas where water is a significant factor in the presence of plant and animal communities. Wetlands serve a wide variety of functions beneficial to the health, safety, and welfare of the general public. They:

» Intercept stormwater runoff and reduce flooding.

» Supply and protect ground water.

» Filter pollutants from stormwater runoff.

» Stabilize soils and minimize erosion.

» Provide spawning, feeding and general fish habitat.

» Provide habitat for fish, wildlife, migratory birds, and endangered and threatened species.

» Serve as educational and scientific resources.

» Provide recreational and economic benefits.

» Contribute to open space and scenic beauty.

Statewide, it is estimated that Vermont has lost nearly 50% of its wetland resources due to draining, dredging, filling, excavation, pollution, and other activities. Although technology exists to create new wetlands, the process is expensive and usually results in a poorer quality wetland than that created by natural forces.

In 1990 the Water Resources Board adopted the Vermont Wetland Rules (most recently amended in January 2002) to regulate development within and adjacent to wetland areas. Three classes of wetlands have been established to determine levels of protection under these rules.

» Class I wetlands are considered to be exceptional or irreplaceable in their contribution to Vermont's natural heritage and merit the highest level of protection. To date, no Class I wetlands have been identified in Waterbury.

» Class II wetlands are those that are also found to be so significant, either alone or in conjunction with other wetlands, that they merit protection under the rules. They include most wetlands shown on the National Wetlands Inventory Maps (1978), as updated annually and depicted on the Vermont Significant Wetland Inventory Maps.

» Class III wetlands are those which have not been determined to be so significant as to merit protection, either because they have not been evaluated or because, when last evaluated, they were not determined to be significant.

The wetland rules establish a 100-foot buffer zone around all Class I wetlands, and a 50-foot buffer zone around all Class II wetlands. The rules also establish conditional uses allowed within regulated wetlands and associated buffer zones. Activities such as hunting and fishing, hiking and boating, bird watching, scientific research, educational activities, and wildlife, fisheries and silvicultural management do not require state of federal review, provided they do not influence water levels in a wetland and do not involve any draining, filling, or grading.

Waterbury's recently adopted subdivision regulations consider the impacts of subdivision of land on Class I and II wetlands.

Ground Water. Many Waterbury residents rely on private or community wells, supplied by underground aquifers, as their primary source of potable water. Groundwater supplies are replenished through aquifer recharge areas that have not yet been extensively mapped, but generally include upland areas of steep slope, fractured rock and shallow soils, sand and gravel deposits, and wetlands. Depths to seasonal and permanent high water tables, and well yields, vary throughout town. The state maintains well log data.

Since 1985, the state has required the delineation of Source Protection Areas (SPAs) for all existing and proposed public or community water systems. These are surface and subsurface areas surrounding a spring or well that serve as natural recharge, collection, transmission, and storage zones for public water supply systems. Waterbury has three source protection areas identified in Figure 23 and on accompanying maps. In addition, a small portion of the Bolton Valley's source protection area (WSID# 20611) extends into western Waterbury, along the drainage divide.

As development increases, so too does the potential for ground water contamination. Major sources of ground water contamination include underground storage tanks, waste disposal sites (legal and illegal), septic tanks, agricultural activities, and the use and storage of road salt, which has resulted in groundwater contamination in the village. In terms of public investment, the prevention of ground water contamination is a more cost-effective approach to maintaining water supplies than its cleanup and the subsequent development of new water sources.

Source Protection Plans (SPPs) are now required for all public community SPAs in order to receive operating permits. These plans, developed locally, identify potential sources of contamination within the SPA, assess related risks, and define strategies to manage potential contamination risks and emergencies. An SPP is currently in place for each of the three SPAs identified above. Land use regulations can define uses and standards within delineated SPAs to ensure that development does not pose a threat to public water supplies.

Figure 23. **Source Protection Areas**

WSID#	Name	Type	Source #s	SPP Approved
5284	Waterbury Village	Community	006,007,008	3/18/99
5286	Kneeland Flats MHP	Community	001	6/10/97
5287	East Wind	Community	001	2/26/98

Source: Vermont Department of Environmental Conservation, February 2002

Vermont's groundwater protection law (10 VSA Chapter 48) sets forth general policies for SPAs, and the Agency of Natural Resources (ANR) has published recommended land use guidelines for SPAs. In addition, in 2008 the Vermont Legislature passed Act 199 that enhanced groundwater protection in Vermont by declaring groundwater to be a public trust resource that must be managed by the state for the benefit of all Vermonters.

Act 199 also established a large groundwater withdrawal-permitting program that requires any commercial groundwater withdrawal of more than 57,600 gallons per day to obtain a permit from ANR. One of the criteria that a large groundwater withdrawal must meet is that the withdrawal must conform to any municipal or

regional plan. As such, Vermont municipalities have the authority to control where and to what extent large groundwater withdrawals occur through their municipal plan, as well as the ability to regulate commercial extraction through zoning.

6-3. Air Quality and Climate Change

Waterbury is like most of Vermont in that the air quality is excellent. Waterbury lies within a Class II "attainment" or "clean air" region as defined by Vermont's Air Quality Implementation Plan, Moderate changes in existing air quality are permissible, allowing for additional industrial, commercial and residential growth. New development cannot exceed maximum levels of pollution emissions as defined by Vermont's Air Pollution Control Regulations. Larger development projects must obtain air quality permits through the Vermont Department of Environmental Conservation, Air Quality and Climate Division.

Local air quality is also affected by vehicle emissions due to increases in traffic and the associated congestion. This is a regional issue since Waterbury is a transportation hub that includes many vehicles passing through our road network to reach other parts of the region. Heating sources can also have a negative impact on local air quality.

An additional concern is the impact on air quality from out-of-state industrial activity such as pollution from coal-fired power plants in the Midwest. These pollutants contribute to conditions such as acid rain that impact the fragile ecosystems of our higher elevation forests and the alpine areas of the mountaintops.

The relationship between air pollution, greenhouse gases such as CO2, and climate change is now well documented. Climate change and global warming appear to be having a dramatic impact on severe weather events such as Tropical Storm Irene and periodic flash flooding that have a direct impact on many aspects of our local community life. It is anticipated that adaptation to the need to slow down climate change will be a major planning issue moving into the future.

6-4. Geology

Mineral, Sand & Gravel Resources. Bedrock materials most frequently found in Waterbury are schist, gneiss, quartzite, phyllite, greenstone, amphibolite, serpentinite, talccarbonate, and steatite. There are currently no operating mines or rock quarries in town.

Several sand and gravel deposits are located within Waterbury, although most are found on state land or in relatively heavily settled areas (e.g., Waterbury Center). The locations of mapped sand and gravel deposits are shown on Map 2-5. One active gravel pit, located on the Sweet Road near Loomis Hill, is currently in operation.

Gravel is an important local and regional resource for the maintenance of public highways and the construction of new homes and businesses. There are advantages in securing access to local sources of sand and gravel. However, extraction in or near populated areas may have adverse impacts, such as truck traffic, noise, and visual degradation. Although the quantity of the resource in any particular area is limited, operations can go on for 20 years or more. Extraction practices should be carefully controlled – particularly where such resources are located in built-up areas, to minimize adverse impacts on residential neighborhoods.

Lands subject to earth and mineral extraction should be reclaimed to minimize adverse impacts on adjoining areas, and to allow for redevelopment.

Soil Suitability. Waterbury's soils are largely derived from glacial till. Details regarding the distribution of soil types, their characteristics and their suitability for a variety of land uses are provided in the Soil Survey of Washington County, published by the U.S. Natural Resource Conservation Service (NRCS).

Historically, most development outside of Waterbury Village has relied upon on-site septic systems for waste disposal. Thus soil conditions are a critical factor in determining the location and intensity of development outside of areas served by central wastewater treatment facilities. The NRCS has evaluated predominant soil types in Vermont and placed them into six categories corresponding to their suitability for on-site disposal. Over half of Waterbury's land area (17,900 acres) is classified as marginally suitable or unsuitable for on-site systems. These lands are generally located at high elevations, on steep slopes and in wetlands and floodplains.

The greatest concentrations of suitable soils for septic systems are located in Waterbury Village, the Kneeland Flats area, land in and to the south of Waterbury Center, and land accessed by the Sweet Road and in the north-east portion of town. However recent and proposed changes to state rules governing on-site systems – which allow for the siting of systems on slopes up to and potentially in excess of 20%, and alternate systems such as peat filters – may open up additional upland areas to development.

Agricultural Soils. The economic viability of agriculture is dependent upon the availability of suitable farmland. The best farmland is characterized by "prime" and "statewide" agricultural soils. Prime soils possess the highest potential productivity and the fewest limitations for agriculture. Statewide soils have good potential for growing crops, but also one or more limitations that will restrict the choice of crops and/or require more intensive management. An estimated 577 acres of prime and 5,199 acres of statewide agriculture soils have been identified in Waterbury. Both prime and statewide agricultural soils are finite and have been designated a state resource (defined as "primary" agricultural soils by the Vermont Environmental Board).

These prime agricultural lands, which are usually well-drained and level to moderately sloped are found along flood-plains, or historic lake beds or historic lake shores. These areas also tend to be ideal for residential and commercial development. While it is important to ensure that development occurs where the land and economy can support it, it is likewise important to protect Waterbury's agricultural resources and the potential for local food production.

Efforts to maintain Waterbury's agricultural land base should focus, in part, on protecting prime agricultural soils to ensure their availability for future agricultural enterprises. The Town of Waterbury adopted subdivision regulations which seek to prevent undue adverse impacts to prime agricultural soils when considering the subdivision of land. For more information about agricultural land use in Waterbury, refer to Chapter 11, Land Use.

6-5. Forest Resources

Waterbury's forest resources contribute to Waterbury's ecological, economic and social well-being. Forest land, in this context, can simply include areas with the immediate potential to grow or currently grows trees,

shrubs, herbs and others forest species. A healthy forest includes these attributes and retains the ability for self-renewal of all forest species, species interactions and functions overtime. This requires the ability for productive growth of forest species, found in large intact areas, un-fragmented by development and connected to or in close proximity to other forests as shown on the Forest Resources and Wildlife Connectivity Map.

Healthy forest resources protect water and soil quality by filtering, cooling, slowing and absorbing waters. Forest lands provide habitat for virtually all birds, mammals, amphibians and reptiles expected to be found within the town. In addition to ecological health, forest land contributes to Waterbury's tourism economy through forest-based tourism like recreation, hunting, scenic and wildlife viewing. Forests are an integral part of the ecological, economical and social health of upland communities like Waterbury. Protecting forest resources is important to Waterbury's community.

Ownership Patterns. The total acreage of Waterbury's forestland is estimated to exceed 25,000 acres (nearly 80% of the town). Of these, roughly 13,000 acres are held by the state as State Forest or State Park land.

In 2012, just fewer than 2,000 private landowners owned a total of 17,000 acres. Of these, roughly 130 private landowners owned 12,000 acres (forest and non-forestland) in parcels 25 acres or more. Roughly 70% of the private land is owned by 6% of the landowners. These ownership patterns are important to recognize for planning purposes.

In 2012, 66 private landowners owning 5,674 acres were enrolled in Vermont's Current Use Program. The Current Use Program, or Use Value Appraisal program (UVA) enables owners of productive forest or agricultural land to be taxed at the land's use value, rather than market value. In return, landowners agree to follow an approved forest management plan, and to not subdivide their forestland below 25 acres. The roughly 6,000 privately owned acres not enrolled in Vermont's Current Use Program are either ineligible for the program or the landowners are unaware of, or have made a conscious decision to not enroll in the program.

Over time, it is expected that a greater percentage of landowners will own land in Waterbury as parcels become subdivided and smaller. The smaller the parcel size, the more fragmented forests become. Fragmented forests are considered less resilient to disturbances, less diverse, support less wildlife and recreational opportunities, and reduce the viability of local forest products economy. Waterbury should encourage development patterns that reduce the likelihood of these outcomes.

Forest Industry and Management. Waterbury is home to loggers, firewood producers, log truck drivers, arborists, maple syrup producers, timberland owners, foresters, portable sawmill owners and operators. No permanent sawmills are present in Waterbury.

Many of the forest landowners in Waterbury choose to harvest their own wood, or engage in the forest products economy by hiring loggers to cut and sell timber, firewood, biomass or other wood products. Forest landowners enrolled in Vermont's Current Use Program prepare and follow a state-approved Forest Management Plan.

Forestry is regulated in Vermont to protect waters, soils, and ecosystem health. This is accomplished through a variety of laws and rules including the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont which is administered by the Vermont Dept. of Forest Parks and Recreation.

A healthy local forest product industry is important and in addition to providing economic resources to help cover the costs of owning land, supports local businesses and the responsible use of natural resources. These economic resources can also help cover the costs of ecological restoration and responsible land stewardship. The success of the local forest products industry is related to the amount of available productive forest land and landowners and residents willing to engage in or be accepting of forestry. Waterbury's planning efforts encourage appreciation for owning forestland, promoting responsible uses and management of forest land and the retention of un-fragmented forest.

Recreation. Most Waterbury landowners do not own enough forest land to engage in the forest products economy. However, most engage in forest-based recreation. Most recreation occurs in forestland and requires relatively healthy and intact forests for appreciation. Bike, ski or hiking trails require many acres of intact, non-developed land for optimal use. Recreationists appreciate the costs of owning land and managing land. In addition to the residents of Waterbury that engage in forest-based recreation, much of Waterbury's tourist economy requires forest land for recreation. Tourists engaging in forest-based recreation will also patronize our shops, restaurants, and hotels.

Conclusion. Waterbury's planning to protects forest resources in order to preserve scenic resources, recreational opportunities, wildlife habitat, water and soil quality, and timber and non-timber forest products and producers. Planning identifies important forest areas and carefully consider development in these areas. Consolidating development in areas that do not impact productive forest landscapes, forest soils, keeping forests intact and unfragmented, and plan for the access to forest lands during subdivision are all important tools in the protection of forest resources.

6-6. Wildlife Resources

Wildlife resources can be described as wildlife species, populations, individuals, and their respective habitats. Wildlife popularly refers to mammals, reptiles, amphibians, birds, and fish but can refer to all animals. Habitats are those areas that are required by wildlife for their needs. Wildlife resources are important for ecological functions, but also a source of food, income and enjoyment.

Core Habitats. The size of the habitat is relative to the size of the animal and can occur over large areas. Species like the American black bear, white-tailed deer, moose, or bobcat require large areas whose habitats will overlap with multiple parcels and town boundaries. When the protection of these core habitats are considered in planning, numerous other species that also use portions of these core habitats are also protected. The highest priority forest blocks, connectivity blocks, and surface water and riparian areas identified on the Forest Resources and Wildlife Connectivity Map are examples of these core habitat areas. Certain grassland areas is suitable nesting and feeding habitat for important bird species such as the Bobolink. Voluntary management of these habitat areas should be explored with interested landowners.

Increasingly suburban patterns of development usually result in landscapes characterized by small, remnant patches of habitats. These fragments typically produce less desirable wildlife habitat than contiguous woodlands, and gradually result in a shift in predominant wildlife species, from deer, moose, game birds and songbirds to often undesirable "habitat generalists," such as pigeons, sparrows, skunks, and raccoons. The following are some of the habitat needs of specific species.

Deeryards. Deeryards or deer wintering areas are characterized by coniferous forest on predominately south or west facing slopes, typically below elevations of 2,000 feet. In addition to providing winter shelter critical to the survival of white tail deer, nearly half (169 species) of Vermont's vertebrate species rely on coniferous forests for at least part of their life need.

Approximately 5,480 acres of deeryard have been identified in Waterbury. Large proportions of these areas are located within or near state forestlands. Barnes Hill is also considered to host significant deer habitat.

These deer winter areas are identified on a coarse scale and are not updated regularly. While without disturbance, wintering areas do not change significantly between years, it is important to determine the accuracy of any softwood areas or areas mapped as winter areas. These areas can be utilized by generations of deer over many decades, if appropriate habitat conditions are maintained.

Development within or adjacent to deer wintering areas decreases the amount of land available for deer survival and may contribute to a decline in Waterbury's deer population. It may also increase the incidence of human-deer conflicts. Encroachments can be managed to a certain extent through the appropriate siting and management of new development to minimize habitat fragmentation and provide adequate buffering.

Bear Habitat. The mountainous, forested landscape we appreciate in Waterbury for recreation and beauty is also a stronghold for the black bear. Waterbury's portion of Mount Mansfield State Forest has been identified as bear production habitat. The area reportedly supports a relatively high density of cub-producing females. Generally, contiguous and remote forestlands contain critical habitat necessary for bear survival and are considered essential for the long-term stability of Vermont's bear population. Forest types characterized by heavy mast production (beech and oak stands) are especially important.

The upland portions of the Worcester Range in Waterbury as referenced in the Wildlife Resources Map have been identified as seasonal bear habitat, a region frequently used by bears, including cub-producing females. These areas contain critical seasonal feeding areas and travel corridors.

A result of human encroachment into bear habitat is bear-vehicle collisions, which rarely turn out well for either the bear or the automobile. According to the Vermont Department of Fish and Wildlife, Waterbury has had an unusually high number of such collisions in recent years. This is likely due to a combination of factors including the presence of a large bear population, significant travel corridors and forest fragmentation for residential development.

To ensure the survival of the black bear (and other species with similar habitat needs), Waterbury's forest lands should be carefully managed with appropriate siting and management of new development to minimize habitat fragmentation and provide adequate buffering. Forestry, agriculture, and recreation are generally

compatible uses; however, low density housing, even if scattered proportionately across the land, can diminish bear habitat if located inappropriately.

Forest Birds. Waterbury's forests are part of Bird Conservation Region (BCR) 14 – the Atlantic Northern Forest, as delineated by North American Bird Conservation Initiative. This region provides seasonal breeding habitat for some of the greatest diversity of bird species found anywhere in the continental United States. With elevations up to 3,000 feet and a mix of forest types (hardwood, softwood, and mixed forest), Waterbury offers outstanding opportunities for bird conservation. The National Audubon Society (Audubon Vermont) has identified a 290,936 acre area, which includes the entirety of the Town of Waterbury, as the Mansfield/Worcester Priority Block, denoting its significance to bird conservation within the state.

Among the forest birds that have been documented and known to utilize forestland in Waterbury as nesting or migratory stopover habitat are those that have been identified by the state as being Species of Greatest Conservation Need. Bicknell's Thrush and Canada Warbler are listed as high priority. Cooper's Hawk, Northern Goshawk, Red-shouldered Hawk, American Kestrel, Ruffed Grouse, American Woodcock, Black-billed Cuckoo, Chimney Swift, Olive-sided Flycatcher, Veery, Wood Thrush, Chestnut-sided Warbler, Black-throated Blue Warbler, Bay-breasted Warbler, and Blackpoll Warbler are listed as medium priority.

Thoughtful and intentional stewardship of public and private forestland can be designed to integrate forest bird habitat management with other forest uses, including timber production, maple sugaring, and recreation. Overall habitat quality can be enhanced through management activities that maintain a diversity of native tree species, control non-native invasive species and insect pests, create forest stands made up of a variety of tree size classes (seedling/sapling, pole timber, saw timber, large saw timber), and provide for input and recruitment of dead woody material on the ground and standing dead trees (snags) and cavity trees. Town planning and zoning that minimizes forest fragmentation and conversion of forestland to non-forest cover is also a critical component of the long-term conservation effort to protect habitat for birds and other wildlife in Waterbury.

Rare, Threatened and Endangered Species. Species can be listed as state threatened or endangered and protected by Vermont's Endangered Species Law. Those with federal status are protected by the Federal Endangered Species Act. In terms of state listing, often local municipalities can assist in the information sharing and oversight of protection, though not required. A statewide rare species is defined by the State of Vermont as those species with: a state rank of S1, which are very at risk of extinction or extirpation due to extreme rarity (often 5 or fewer populations or occurrences), very steep declines, or other factors; or S2, which are at high risk of extinction due to very restricted range, very few populations, steep declines, or other factors.

Observed occurrences of rare, threatened and endangered species (RTE) are recorded by the State of Vermont. However, due to the fact that most discoveries of RTE species occur in conjunction with development projects, little is known about the presence and quantity of these species in our community. A resource inventory of municipal lands should take place in addition to working with willing private landowners to conduct resource inventories. Waterbury recently adopted subdivision regulations that consider the impact of RTE species in the subdivision of land.

Significant Natural Communities. The Vermont Fish and Wildlife Department defines a natural community as "…an interacting assemblage of plants and animals, their physical environment, and the natural processes that affect them". These are predictable and based on characteristics like soils, topography, climate, and temperature, among others. Where conditions are rare, communities can be rare. Where development has been concentrated around specific soils or conditions, these communities may also be rare.

Vermont Fish and Wildlife recognizes 80 natural communities. These communities are ranked based on their rarity using S1-S5 system with S1 being extremely rare and S5 common. They are further classified by Element Occurrence (EO) with a condition from A (excellent) to D (poor) on a local and statewide basis. A natural community in an excellent (A) condition is typically one without recent logging, natural disturbances, or other factors that would have altered its condition.

Significant natural communities are defined as those communities with: a state rank of S1 or S2, and an EO condition of either A, B or C; a state rank of S3 or S4, and EO condition of A or B; or a state rank of S5 and an EO condition of A.

In addition to statewide frequency, it would be of value to identify the occurrence and frequency of natural communities within the town to determine rarity on a local scale. This will require a natural community inventory that identifies these communities and their condition. Communities along cliffs, ridges, or rivers are likely have some local significance.

Wildlife Corridors. A wildlife corridor is an area of land used by wildlife to travel between core habitats. The size (width and length) and condition of a corridor varies based upon the individual wildlife species in question. Whether the wildlife is spotted salamanders or moose, the movement of individual animals across the landscape is critical for healthy wildlife populations. Corridors between core habitats supply plenty of land area for animals to find food, shelter, and mates; provide animal's free movement between summer and winter ranges; and allows genetic flow between populations to prevent inbreeding. The Forest Resources and Wildlife Connectivity Map depicts the highest priority and priority wildlife corridor areas, as well as highest priority wildlife crossings along roads.

Although our understanding and identification of all the wildlife corridors in Waterbury is not complete, one of the most critical documented wildlife corridors is found near the Waterbury/Stowe town line, in the area known as Shutesville Hill. This area is depicted as a Highest Priority Connectivity Block on the Forest Resources and Wildlife Connectivity Map. This is one of the few areas in Waterbury and Stowe where wide-ranging large mammals such as moose, black bear, and bobcat can find sufficient contiguous forest cover linking the large core habitats of the Worcester Range and CC Putnam State Forest to the east and Mount Mansfield State Forest to the west. Route 100 bisects this corridor and although it does not eliminate the function of the corridor it does present an added challenge to animal movements.

Maintaining the function of the Shutesville Hill and other wildlife corridors can be achieved in part through zoning, compatible land management activities, public outreach and education, and conservation easements set in place by willing private landowners.

6-7. Invasive Species

Non-native, invasive species deteriorate native habitats and ecosystems. To help ensure the natural diversity of plant and animal growth, as well as the recreational and tourism resources, Waterbury must be cognizant of spreading non-native species that pose a risk to native habitats. These non-native organisms can aggressively out-compete native flora and fauna and in the case of insects that are without native predators, cause high mortality in their hosts. Invasive species aren't inherently threatening; however, they do directly compete with many of our natural resources.

Examples of terrestrial vegetation invasive species common to the Waterbury area include but are not limited to Japanese Knotweed, Winged Euonymus or "Burning bush," Garlic mustard, Japanese Barberry, poison parsnip, wild chervil, and multi-flora rose, and bush honeysuckles.

A number of terrestrial insects have been having a large impact of forests in New England that have either not been introduced to Vermont or have been introduced to a limited extent. These include Asian Longhorn Beetle, Hemlock Wooly Adelgid and, most notably, the Emerald Ash Borer. These organisms are most successful in recently or frequently disturbed sites or stressed environments.

In addition, it is likely that the Emerald Ash Borer will soon be present in Waterbury. Very few ash trees exist within the village; however, many forest landowners have ash present in their woods. It will be important for organizations, including the Waterbury Conservation Commission, to be prepared for the Emerald Ash Borer response.

Trained individuals can support local efforts to limiting the spread of invasive species in Waterbury. By receiving training to identify invasive species, volunteers can help slow or prevent the spread of invasive species. The Waterbury Conservation Commission, Vermont Fish and Wildlife, Vermont Forests, Parks and Recreation, the Nature Conservancy and NRCS are available resources.

Waterbury should put in place mechanisms and policies to prevent the introduction and spread of invasive species through transportation and infrastructure projects and maintenance. Specifically, the sand pile at Moran Lane, Guptil Road in Waterbury Center, and Dump Road all contain sand, gravel or debris with invasive species. This road material is intended for community projects and the movement of these earthen road materials could introduce invasive species to areas not currently infested with invasive species.

6-8. Open Lands and Scenic Resources

Open land – whether it is farmland, forestland, wetland, ledge, hillside, slope, or public land – is an environmental, economic, and cultural resource. These open spaces are typically undeveloped and provide livelihood, recreation, wildlife habitat, and water supply protection. Many of these areas are available for public access for activities such as hunting and fishing, contribute to the desirability of the area for tourism, help define Waterbury's rural and scenic character, and contribute to our quality of life.

Waterbury has numerous scenic vistas of surrounding mountains and valleys, which contribute to its visual character. Both the Green and Worcester Mountain Ranges are prominent features when traveling east or west on the highways adjacent to the Winooski River in the southwest part of town. From hills to the west and east of Route 100, the mountains, the Winooski River Valley, and the Waterbury Reservoir create a magnificent view. Travelers along Route 100 can see broad expanses of mountains and rolling hills and the snowy peak of Mount Mansfield in Stowe.

It is for these reasons and others that Waterbury and Stowe joined together to nominate Route 100 to the Vermont Byways Program in 2008. The nomination was enthusiastically accepted into the program and is officially designated as the "Green Mountain Byway". It should be noted that the that the Byway Corridor encompasses both towns in their entirety and is not limited to Route 100 or its right-of-way.

The nomination cited the following intrinsic resources: historic and archaeological qualities, cultural qualities, natural qualities, recreational qualities, and scenic qualities. The "Green Mountain Byway Vermont Byway Corridor Management Plan" dated October 30, 2008 fully details each intrinsic quality. The Natural Qualities and Scenic Qualities sections speak directly to the open lands and scenic resources this plan strives to protect.

The management plan summarizes that sustaining activities such as agriculture, forestry and recreation depend on and have thrived on the rich abundance of natural resources of the land. Protecting and increasing public awareness of these resources within the corridor will be an essential part of sustaining harmony between humans and the environment. The plan goes on to rank the corridor's scenic quality high (+3 on a scale of +3 to -3) for its long distance views of high ridges, alternating patterns of undeveloped meadows and historic farmsteads and their associated cultivated lands, historic buildings and settlement patterns, and the variety and extent of classic Vermont scenes and landscape patterns which contribute to this area's unique sense of place.

Waterbury adopted regulations in 2006 to ensure residential development in high elevations and steep slopes would not have a detrimental impact on scenic and natural resources. As Waterbury continues to accommodate and direct new growth, and the pressure to develop its open land increases, difficult decisions will need to be made regarding the value of such open lands to the community and perhaps the region. Some resources may be more critical to Waterbury's environmental, economic, and cultural wellbeing than others. Such lands should be identified and adequate measures developed to ensure their protection for future generations.

6-9. Impact of Development on Natural Resources

The role of planners is to be well informed and make conscience decisions over the future of our community. We depend on these natural resources like water and air to be safe, available, predictable and have an ability to renew. Others resources provide more intangible benefits like recreation or scenic vistas. It is also understood that development, transportation, and recreation, for example are all important aspects of our community. However, each will have certain impacts on one or many natural resources.

The goal of land use regulations should be to make sure that the impacts of development are not unduly adverse. The cumulative impact of development, including forest fragmentation should be taken into consideration in the review of individual development projects. Furthermore, our planning should promote natural resources by protecting significant and rare resources and also prevent natural resources from becoming rare.

6-10. Goals, Objectives and Actions

Goals

1. The responsible stewardship and sustainable use of Waterbury's natural resources in a manner that protects and enhances the town's and the broader region's environmental wellbeing for the benefit of present and future generations.

2. The conservation of natural features that contribute to Waterbury's ecological health and biological diversity.

3. Flood resiliency, mitigation and restoration following flood events such as Tropical Storm Irene.

Objectives

1. Identify and protect significant natural resources, including streams, Class I & II wetlands, prime agricultural soils, wildlife resources, significant natural communities, and rare, threatened or endangered species.

2. Accomplish the protection of identified natural resources through measures and programs that support where appropriate, the sustainable use of those resources, including management of productive forests including the highest priority forest blocks, agricultural use of prime agricultural soils, recreational use of land and water, and the generation of renewable energy in appropriate locations.

3. Support planning efforts that encourage appreciation for owning forestland, promote the responsible use and management of forest land, and the retention of un-fragmented forest blocks.

4. Support the continuation and expansion of the state's current use program to tax farm and forest properties at their productive value rather than their development potential. Encourage the participation of Waterbury landowners in this program.

5. Support the efforts of private landowners, and local, regional and statewide conservation organizations to protect open space in Waterbury through voluntary programs.

6. Control the extraction of groundwater for commercial purposes carefully to ensure that water is extracted at sustainable rates and to prevent the depletion of water supplies in the community.

7. Work in partnership with neighboring communities to protect the ecological integrity of shared natural resources such as the Mount Mansfield State Forest, the Worcester Mountain Range, and the Winooski River.

8. Complete forest, wildlife, wetland, waterway and natural community inventories with the help of landowners to expand understanding and inform decision making processes.

9. Prevent and control the spread of invasive exotic species in Waterbury through town actions, public engagement with landowners and other residents, and collaborative efforts with other towns and partners.

10. Protect and enhance the quality of Waterbury's surface waters through the maintenance of riparian buffers along river corridors and streams.

11. Mitigate damage sustained from flooding through land use regulations, flood proofing of critical facilities in the floodplain, engaging landowners in proactive measures to flood proof, and participate in the FEMA sponsored Community Rating System (CRS) to help further these efforts and reduce flood insurance premiums.

Actions

1. Prohibit road salt storage areas in the special flood hazard area or regulatory floodplain, Class I or II ground water zones, well head protection areas, and any other areas designated as an important ground or surface water protection area.

2. Identify and apply for grants to develop enclosed structures for salt and sand storage.

3. Determine best practices to reuse waste or materials collected from the spring gathering of winter sand on the roadsides.

4. Discourage the spread of non-native invasive plants caused by infestation of municipal sand and gravel storage areas. Regularly check for and remove invasive species within town owned and managed dirt, sand, gravel piles or other materials intended for community projects.

5. Work in partnership with the VT Department of Environmental Conservation to expand chloride sampling and to examine chloride data from Waterbury waterways.

6. Work in partnership with Better Backroads to implement best management practices for maintaining roads.

7. Work with public and private landowners to establish riparian buffers where needed and maintain existing adequate riparian buffers.

8. Conduct a more detailed geomorphological assessment of Waterbury's significant waterways to determine site-specific vegetated buffer and setback requirements. Consider developing a more accurate fluvial erosion zone map of these waterways and the associated fluvial erosion zone regulations.

9. Incorporate adequate setback distances and riparian buffer standards for streambanks into development review regulations. Include best practices for stream crossings, such as bridges and culverts, in order to minimize streambank disturbance.

10. Preserve and enhance public access to Waterbury's waterways.

11. Limit development on lands with a slope greater than 25%, on lands above 1500 (plus or minus) feet in elevation, and on all prominent ridgelines and hilltops.

12. Support the continuation and development of agricultural and sustainable forestry operations in Waterbury to maintain economic viability of open spaces and ensure food security.

13. Pursue completing a Land Evaluation and Site Assessment (LESA) program for Waterbury's agricultural and forest lands to rank land based on respective values.

14. Consider mechanisms for funding Waterbury's Conservation Fund.

15. Design land subdivisions and land development outside of designated growth areas, to minimize development on and fragmentation of significant natural resources.

16. Enact, incentivize and support measures to preserve prime agricultural soils for continued agricultural use and prevent the fragmentation and development of these resources through the town's land use regulations.

17. Support the work of the Waterbury Duxbury Food Council.

18. Work with VT Fish & Wildlife Department to conduct community mapping project to identify wildlife corridors in order to focus conservation efforts or locate areas appropriate for wildlife crossing structures.

19. Promote habitat incentive programs to private landowners in order to better manage wildlife habitat in Waterbury.

20. Monitor the expansion or relocation of utilities (e.g. electrical facilities) for their effect on natural and scenic resources.

21. Minimize conflicts between current land uses and the extraction of mineral resources. Continue to update standards regulating the extraction of mineral resources, impacts on adjacent uses, and the reclamation of the site.

Sidebars:

Located between the Worcester Range and Mt. Mansfield State Forest in the Green Mountains, Waterbury's landscape is a patchwork of farm fields, rural neighborhoods, village centers and highly visible and scenic ridgelines. Working farm and forest lands sustained generations of Waterbury residents and remain an essential component of our landscape.

The Winooski River and Waterbury Reservoir are also significant natural resources that have shaped this community. The 1927 flood and, more recently, Tropical Storm Irene remind us of the need to plan and prepare for flood resiliency, mitigation and restoration.

Waterbury serves as a gateway community for popular recreational destinations like Camel's Hump State Park, Little River State Park and the Perry Hill Bike Trails. Our natural setting offers a range of cultural, environmental, recreational and economic opportunities, while at the same time posing a significant number of challenges. The right balance of cultural and natural resources creates a distinct sense of place that is unique to Waterbury.

This chapter describes the natural features that contribute to the town's unique sense of place, and options for balancing future development with the conservation and protection of these resources for existing and future generations.

> According to the community survey, nearly 85% of residents rate their ability to enjoy scenic views in Waterbury as good to excellent. When asked about the most important resources to protect in Waterbury, scenic views ranked second behind historic buildings.

7. Energy

7.1 Overview & Statutory Requirements

Title 24, Chapter 117, section §4382(a)(9) of Vermont Statutes outlines the information needed to be included in a municipal plan related to energy. Specifically it states:

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

During the 2016 legislative session, the State of Vermont passed Act 174 which is an act related to improving the siting of energy projects. Act 174 outlines a path whereby regions and municipalities could receive "substantial deference"[5] before the Public Utility Commission (formerly the Public Service Board) if certain considerations were incorporated into a regional or municipal development plan. The standards outlined in Act 174 align with the primary goal of State of Vermont's Comprehensive Energy Plan which is to have 90% of the state's energy needs being generated from renewable sources by 2050 (90 by 50).

7.2 Relationship to the Waterbury Energy Plan

The energy chapter of this plan consists of the information contained herein, as well as the complete Waterbury Energy Plan that is hereby adopted by reference and included as Appendix B. This energy chapter is intended to provide an overview and highlights from the Waterbury Energy Plan without duplicating that information. The Energy Plan includes information on:

- Estimates of current energy use across transportation, heating, and electric sectors
- Targets for thermal and electric efficiency improvements, and use of renewable energy for transportation, heating, and electricity
- Evaluation of thermal-sector conservation, efficiency, and conversion to alternate heating fuels to achieve these targets

[5] According to Act 174 of 2016, "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. The term shall not include consideration of whether the determination of energy compliance should or should not have been affirmative under 24 V.S.A. § 4352.

- Evaluation of transportation system changes and land use strategies needed to achieve these targets
- Resource maps to identify potential locations for renewable energy generation

The Energy Plan was developed by first examining the current Waterbury Town Plan to identify existing information to satisfy the requirements of Act 174, but also to ensure consistency between the two documents. The Energy Plan is intended to meet the standards outlined in Act 174, while also meeting the complete statutory requirements as noted above.

7.3 Act 174 Information

In general, the requirements of Act 174 work in conjunction with the existing statutory information required to be included in a municipal plan's energy chapter. Act 174 requires a more comprehensive analysis of existing conditions and requires the identification of targets for thermal, transportation, and electric sectors related to conversion or conservation of energy. Act 174 also identifies three distinct sections to identify this information including:

- Analysis & Targets
- Pathways & Implementation Actions
- Mapping

The Analysis & Targets section provides a baseline of information for where a region or municipality currently stands in terms of energy use and identifies the trajectories and pace of change needed to meet targeted reductions and conservation of energy. It includes information on current electricity use for residential and non-residential uses; existing and potential renewable resource generation; and current transportation energy use information. Additionally, targets are established to provide milestones for thermal efficiency; renewable energy use; and conversion of thermal and transportation energy from fossil fuel based to renewable resources. These milestones are intended to help the region measure progress towards the overall goals and not identified as requirements. Targets are established for the years 2025, 2035, and 2050 which coincide with the State Comprehensive Energy Plan.

The Pathways & Implementation Actions section provides the basis for how Waterbury will meet its target year goals as noted in the Analysis & Targets. The implementation actions are categorized by:

1. Conservation & efficient use of energy

2. Reducing transportation demand and single occupancy vehicles trips, and encouraging the use of renewable sources for transportation
3. Patterns and densities of land use likely to result in conservation of energy
4. The siting of renewable energy generation

The implementation actions identified in this section focus primarily in areas where Waterbury or local partners such as Waterbury LEAP are working to support the community through local land use, transportation, and environmental planning activities.

Finally, the Mapping section allows the Town to visually identify where renewable energy generation is most suitable. This section combines resource information with specific known and possible constraints to the development of renewable energy generation. The mapping section also allows the opportunity to identify preferred locations for renewable energy development and areas that are unsuitable for development of any kind. In addition, the maps identify existing infrastructure to support renewable energy development.

In general, the mapping information looks at state-level data and breaks it down to a municipal perspective. From there, an analysis was done (as noted in Section I) regarding the potential renewable energy generation that might be possible based on resource areas and constraints. This information is useful to visualize what geographies throughout Waterbury are most ideally suited or best to avoid regarding renewable energy siting based on available resources or identified constraints. This is intended to be a starting point and not the only basis for siting.

This section also contains specific objectives regarding the development and siting of renewable energy resources that are reflected on the maps. One area was specifically recognized where development of any kind, including renewable energy development should be restricted. The Shutesville Hill Wildlife Corridor is identified and specifically mapped on the Forest Resources and Wildlife Connectivity Map 2-7 referenced in Chapter 6. Currently, Waterbury only includes preferred locations consistent with the Public Utility Commission's Net Metering Rules including but not limited to gravel pits, brownfield sites, or parking lots. Additional sites may be evaluated or considered in the future.

In order to address the requirements of Act 174, the Vermont Department of Public Service provided a guidance document that identifies how a municipality can meet the requirements including model language to be considered. When possible, this guidance was used to ensure consistency with statute and its intent for energy planning.

7.4 Waterbury Energy Planning

The Town of Waterbury developed its energy plan with three guiding principles in mind. These included renewable energy use, energy efficiency, and transportation efficiency. These three areas were explored in relation to the standards of Act 174 and local needs. The following is a summary of these guiding principles and outlines how Waterbury will work to help the State meet the specific energy targets established in the state's CEP[6].

Renewable energy use:
Waterbury will support increased use of renewable energy by conducting land assessments to identify the most attractive sites for solar orchards and other renewable projects; establishing site review criteria for evaluating potential large scale renewable energy projects; encouraging greater use of renewables among municipal buildings; and facilitating small scale wind and solar use by local residents and businesses. Waterbury will strive to generate 10% of its total business, municipal and residential energy needs (about 58,000 kilowatt hours) through locally produced renewable energy by 2020.

Energy efficiency:

Waterbury will encourage greater energy efficiency among its residents, businesses, and municipalities. Waterbury will work with local groups to encourage greater use of energy audits and to utilize LEED certification as appropriate. Waterbury hopes that at least 25% of houses (or about 720 homes) and 25% of businesses will have undertaken energy audits, and taken substantial steps to improve their energy efficiency by 2020.

Transportation efficiency:

Waterbury will encourage greater transportation efficiency by supporting the expansion of public transportation, carpooling, and bike/ pedestrian access and to encourage greater use of electric and more fuel efficient vehicles. By 2020, Waterbury aims to reduce the use of fossil fuels for transportation by 20%.

In addition, the Town of Waterbury supports the work of the Waterbury Local Energy Action Partnership (LEAP) to achieve the following energy targets:

- Generating 10% of our total business, municipal and residential energy needs (about 58,000 kilowatt hours) through locally produced renewable energy by 2020.

[6] Vermont Department of Public Service. 2011. Comprehensive Energy Plan: Vermont's Energy Future – Volume 1. Available at: www.vtenergyplan.vermont.gov

- Completing energy audits and taking substantial steps to improve energy efficiency in at least 25% of houses (or about 720 homes) and 25% of businesses by 2020.
- Reducing the use of fossil fuels for transportation by 20% by 2020.

In addition, the Town of Waterbury utilized information provided by the Central Vermont Regional Planning Commission to address the Analysis & Targets, and Mapping requirements of Act 174. All of this information is included in the Energy Plan. A summary of specific data related to current energy use for transportation, thermal, and electricity. Complete information on these sectors is included in the Energy Plan.

Table 1. Current Transportation Energy Use

Data Category	Information
Total Number of Vehicles	3,945
Average Miles Traveled per Vehicle	12,500
Total Annual Miles Traveled	49,312,500
Average Gallons of Fuel Used per Vehicle per Year	576 (21.7 miles per gallon)
Total Gallons of Fuel Used per Year	2,651,209
Transportation Energy Used per year (in Billions)	319 BTUs
Average Cost per Gallon of Gasoline	$2.95
Gasoline Cost per Year	$7,821,067

Source: 2011-2015 U.S. Census Bureau - American Community Survey; Vermont Agency of Transportation

Table 2. Current Residential Heating Energy Use by Fuel Source

Fuel Source	Number of Households	Percent of Households	Heated Square Footage	BTUs (in Billions)
Natural Gas & Propane	814	35.8%	1,281,076	76.86
Electricity	26	1.14%	25,046	1.5
Fuel Oil	1,170	51.45%	1,914,031	114.8
Coal	0	0.0%	0	0
Wood	246	10.82%	478,224	28.7
Other (Includes renewable sources)	18	0.79%	14,130	0.8
No Fuel	0	0.0%	0	0
Total	**2,274**	**100%**	**3,712,507**	**222.8**

Source: 2011-2015 U.S. Census Bureau - American Community Survey

Table 3. Current Electricity Use

Use Sector	Current Regional Electricity Use
Residential	14,648 megawatt hours
Commercial and Industrial	27,962 megawatt hours
Total	42,610 megawatt hours

Source: Efficiency Vermont

7.5 Future Considerations

In order to better understand how Waterbury can provide its share of renewable energy generation to meet the state goal of 90% renewable energy by 2050, the current potential for renewable energy generation needs to be quantified. Table 4 provides an overview of the current potential renewable energy generation for the Town of Waterbury on the prime and secondary resource areas that have been identified. Renewable generation potential is calculated from mapping completed by the Central Vermont Regional Planning Commission and is based on the Determination Standards and associated guidance documents developed by the Department of Public Service. The renewable generation potential is expressed in megawatts (MW) and megawatt hours (MWh). It should be noted that not all areas will be available for development due to private ownership or interest in renewable energy development therefore the information in Table 4 may need to be further analyzed.

Table 4. Potential New Renewable Electric Energy Generation

Renewable Type	MW	MWh
Rooftop Solar	3.71	4,555
Ground-mounted Solar	725.06	889,210
Wind	302.95	928,837
Hydroelectric	.01	28
Biomass and Methane	Unknown	Unknown
Other	0	0
Total Renewable Generation Potential	1,031.73	1,822,630

Source: Central Vermont Regional Planning Commission & Department of Public Service

Finally, Table 5 identifies the total amount of new renewable energy that would need to be generated in Waterbury by 2050 to meet its share of the 90 by 50 goals. In addition to the total renewable energy target for 2050, Table 5 includes targets for intermediate years to help track progress towards the 2050 goal.

Table 5. Targets for New Renewable Electric Energy Generation

	2025	2035	2050
Total Renewable Generation Target (in MWh)	8,148	13,036	32,590

Source: Central Vermont Regional Planning Commission & Department of Public Service

7.6 Key Challenges and Trends

Based on the information included in the Energy Plan and noted above, Waterbury has more than enough resource area available to meet its share of renewable energy generation by 2050. With that in mind, the more specific challenges that will be faced relate to the guiding theme of the state comprehensive energy plan which assumes electricity is the primary power source to address the state's energy needs. As such, the following challenges and trends are noted for Waterbury.

Grid Capacity/Infrastructure Needs

In order to effectively and efficiently transmit electricity throughout Waterbury, the electric grid and other infrastructure, specifically three phase power, need to be adequate to support renewable energy development for the foreseeable future. It will be important to have accurate and up-to-date inventories of existing facilities to ensure upgrades or improvements are targeted to most effectively support additional electric loads on the grid. For example, some areas of Waterbury do not currently have three phase power, however they do have prime resource areas to support renewable energy development. If three phase power is not in place, large scale renewable energy generation cannot currently be supported.

Livability Preferences

A major component of energy use is related to transportation. The majority of residents in Waterbury use personal vehicles for their daily travel needs. Only a fraction of those vehicles utilize alternative fuels. According to Drive Electric Vermont[7], as of July 2017 there were a total of 1,768 passenger electric vehicles in the State of Vermont Department of Motor Vehicles registration database. This includes 1,387 plug in hybrid and 381 all electric passenger vehicles. Replacement of vehicles that utilize fossil fuels with those that use alternative fuels is a component of the transportation objectives noted in Waterbury's strategy to help achieve the state's goal of 90 by 50.

Related to vehicle use is personal choice for where to live. During the eighties and nineties, the trend was to build larger houses on large lots further out from the center of the community. Trends are indicating a desire

[7] http://www.driveelectricvt.com/buying-guide/why-go-electric

to live closer to amenities which are associated with cities and village centers. The ability to walk or use transit is becoming more popular. There is less interest in maintaining a large house and large property.

As residents begin to age and younger individuals and families look to set down roots, large lot housing choices may no longer be the desired scenario. However, large lot developments still need to be accommodated and planned for as a rural lifestyle is still preferred by many Vermont residents. These factors will all contribute to changes in land use patterns that can support more energy efficient choices.

Alternative Transportation Options

As noted previously, changes in lifestyle choices for residents of Waterbury will impact their choices for transportation methods. As trends towards more downtown style living continue, public transit, walking, and bicycling are becoming more widely seen as the primary means of transportation. This trend will influence the need for families to have multiple personal vehicles in exchange for alternative transportation options.

As the primary public transit provider in Waterbury, Green Mountain Transit (GMT) is consistently evaluating their service routes and making changes based on needs and demands for ridership. This includes extending routes, changing times, or adding more buses in certain locations to meet the demand. More specific information regarding transportation options, trends, and choices can be found in the transportation chapter of this plan as well as the Regional Transportation Plan maintained by the Central Vermont Regional Planning Commission.

To help increase transportation options, Waterbury need to continually evaluate its land use regulations. This will help ensure density of development and mixing of uses will support alternative transportation options to maintain continuity and consistency into the future. These evaluations will also help Waterbury evolve as personal choices and trends change.

Development of Renewable Energy Generation

Development of renewable energy generation will be a key component to achieve 90 by 50. The Waterbury Energy Plan identifies specific areas where resource areas exist for renewable energy generation. These areas focus on wind, solar, and hydroelectric as they are locationally constrained. Other renewable energy generation such as woody biomass, biogas, and other renewable technologies do not require specific conditions for the location of the generation facility, however they do require resources such as wood or other organics to provide the needed fuel.

Siting of all renewable energy generation facilities will take careful planning to ensure infrastructure (including three phase power), land use regulations (including zoning if applicable), and community support exists before

the development can occur. In this regard the Waterbury Energy Plan does not specify locations beyond what has been identified by the Public Utility Commission in their Net Metering Rules as preferred locations[8] for renewable energy generation.

Changes in Technology

As noted previously, the state's comprehensive energy plan and subsequently Waterbury Energy Plan are both written with electricity as the primary power source. This direction includes renewable energy technology that exists today such as wind, solar, hydroelectric, biomass, and biogas. As technologies change and advancements are made in both efficiency and sources of renewable energy generation, the region's municipalities will need to be flexible and adaptable to these changes.

With this in mind, the Waterbury Regional Energy Plan acknowledges and recommends consideration for changes in technology that do not limit renewable energy development to known sources. This concept will need to be continually revisited to ensure current technologies are considered and outdated technologies are not recommended.

Weatherization

Weatherization of buildings is a pathway that will work towards the energy goals related to conservation of energy. A portion of Waterbury's housing stock is older and was constructed at a time when no specific codes existed for energy efficiency. Now, with the passage of the Residential Building Energy Standards (RBES) and the Commercial Building Energy Standards (CBES), new construction is required to meet minimum thresholds for energy efficiency. This will ensure new construction addresses energy efficiency, however weatherization of existing construction will need to be addressed.

Incentives may be required to assist property owners upgrade their current homes and buildings to include more efficient windows, doors, insulation, or mechanical systems. These upgrades can be costly which is often identified as the primary barrier to completing the needed changes. If incentives are available to assist property owners with weatherization projects, this may increase the efficiency of buildings while decreasing the consumption of energy. This could prove a viable alternative to new construction thereby extending the lifecycle of existing buildings throughout the region.

[8] Preferred locations are identified in the net metering rules include but are not limited to parking lots, expired gravel pits, landfills, brownfield sites, and municipally designated lands.

System Conversions

Similar to weatherization, older existing buildings will commonly have outdated and inefficient mechanical systems. These often include oil based heating systems or wood-fired units. With advances in technology, cold weather heat pumps, high efficiency wood stoves, and other mechanical systems can provide efficiency improvements for existing buildings that will result in conservation of energy. As noted previously, new construction will generally include these high efficiency systems which will help address energy conservation. Like issues related to weatherization, however, the conversion to high efficiency systems will be a challenge as the costs for equipment and building modifications needed to install these systems may be cost prohibitive to many residents and business owners in the region. In this regard, identifying potential incentives will be beneficial to support conversions.

7.7 Goals and Objectives

The following section outlines the general goals that will help shape the energy future of Waterbury. Detailed goals and objectives are included in the Energy Plan, however the themes are included herein to provide an overall sense of the direction being provided. As noted previously, energy touches multiple sectors and elements of the Waterbury Town Plan therefore these tenants are woven throughout the various plan sections for consistency and integration across multiple elements.

Conservation and Efficiency

Goal

1. Conservation and efficiency is practiced by individuals and organizations regarding building construction, heating systems, and daily choices.

Objectives

1. Increase conservation of energy by individuals and organizations.

2. Promote energy efficiency in the design, construction, renovation, operation, location and retrofitting of systems for buildings and structures.

3. Identify ways to decrease the use of fossil fuels for heating.

4. Demonstrated municipal leadership regarding efficiency of municipal buildings.

Reducing Transportation Energy Demand, Single-Occupancy Vehicle Use, And Encouraging Renewable Or Lower-Emission Energy Sources For Transportation

Goal

2. Support alternative transportation options and alternative fuel vehicles throughout Waterbury.

Objectives

5. Encourage increased use of transit as a primary method to complete daily trips and reduce demands on existing infrastructure such as roads and parking.

6. Promote the shift away from single-occupancy vehicle trips to reduce congestion, impacts to local facilities, and support alternative options for transportation needs.

7. Promote the shift away from gas/diesel vehicles to electric or non-fossil fuel transportation options to reduce dependency on non-renewable fuel sources for transportation.

8. Facilitate the development of walking and biking infrastructure to provide alternative transportation options for the community.

9. Demonstrated municipal leadership with respect to efficiency of municipal transportation to show an on-going commitment on behalf of the Town of Waterbury.

Patterns and Densities of Land Use Likely to Result in Conservation of Energy

Goal

3. Land use objectives support compact development in mixed-use centers

Objectives

10. The Town of Waterbury is committed to reducing sprawl and minimizing low-density development by encouraging density in areas where infrastructure exists or is planned to support growth.

11. Strongly prioritize development in compact, mixed-use centers when feasible and appropriate and identify ways to make compact development more feasible throughout the Town of Waterbury.

Development and Siting of Renewable Resources

Goal

4. Renewable energy generation is sited to maximize potential while minimizing locally identified impacts

Objectives

12. Evaluate generation from existing renewable energy generation including the identification of constraints, resource areas, and existing infrastructure by energy type.

13. Evaluate generation from potential renewable energy generation including the identification of constraints, resource areas, and existing infrastructure by energy type.

8. Transportation

8-1 Road and Highway Network

The road and highway network forms the backbone for Waterbury's transportation system. Like most other parts of the state and country, automobiles and trucks are the primary means used for moving people and products to their destinations. This has had far-reaching implications on the growth and development in Waterbury, and continues to shape local settlement patterns and development activity. Waterbury has over 73 miles of local, state, and federal highways, over 15% of which are located within Waterbury Village. A breakdown of roads and highways, by classification, is presented in Figure 26.

State Highways. Interstate 89 (I-89) runs along the Winooski River valley and extends between the eastern portion of Waterbury Village to the western portion of the town. It is a limited access, divided highway and it provides an express route to Burlington and Montreal to the north and west and to Montpelier and southern New England to the south and east. Exit 10 of I-89, is located in the village at VT Route 100, and provides access to major tourist destinations, including Stowe to the north and the Mad River Valley to the south, both via VT I00, and to Bolton Valley to the west via U.S. Route 2.

Approximately 25,000 vehicles per day travel on I-89 through Waterbury. Traffic on I-89 increased only modestly during the 2000s (4%), as compared to a 32% increase between 1990 and 2000. There were 6,000 more vehicles traveling on I-89 through Waterbury in 2000 than there were in 1990, which reflects both growth in Central Vermont and a shift in employment patterns as more of the region's residents commuted to work in Chittenden County. The slowing of the region's growth rate in the 2000s and the availability of transit between Central Vermont and Chittenden County have both contributed to slowing the increase in traffic on I-89.

Figure 26. **State and Local Road Mileage, 2001**

Classification	Mileage
I-89	8.3
State/U.S. Highways	10.3
Class 1 Town Road	1.4
Class 2 Town Road	7.9
Class 3 Town Road	38.6
Class 4 Town Road	6.9

U.S. Route 2 and VT Route 100 are important regionally for moving traffic through Waterbury to other destinations, and providing linkages and access to I-89 for motorists traveling greater distances. U.S. Route 2 runs parallel to the Winooski River in the southwest part of town, and provides access to rapidly growing Chittenden County to the west and Montpelier to the east. VT Route 100 generally runs north-south through the town and village, linking Waterbury to Stowe to the north and the Mad River Valley to the south. In addition to providing important regional Routes, U.S. Route 2 and VT Route 100 are essential to the town's

local transportation needs. Many of Waterbury's neighborhoods can only be reached from other parts of the community by utilizing either or both of these two state highways.

As with I-89, the significant growth in traffic on U.S. Route 2 and VT Route 100 through Waterbury also leveled off during the 2000s. As of 2010, 12,000 to 13,000 vehicles per day traveled Route 100 between Waterbury Village and Exit 10, 15,000 to 16,000 went between Exit 10 and Waterbury Center, and 9,000 to 11,000 traveled on the section north of Waterbury Center. While traffic growth has stabilized in recent years, the highways through Waterbury are heavily used and carry significant traffic volumes. The heavy traffic causes ongoing wear and tear on the highway. Significant rehabilitation efforts have been completed for much of I-89 in Waterbury, including rehabilitation to two bridges in Waterbury north of Exit 10.

According to the VT Route 100 Access Management Plan, prepared for VTrans in 2004, the section of Route 100 between Waterbury Village and Route 15 in Morrisville is "one of the busiest non-interstate two-lane highways in the state." That study found that the Route 100 roadway alignment is generally adequate, although some physical deficiencies were identified. These include:

Narrow shoulders along the length of the highway;

Numerous locations with restricted sight distance;

Horizontal alignment problems, especially at locations with limited sight distance; and

The lack of pedestrian facilities in villages, including Waterbury Center and Colbyville.

The study predicted that traffic volumes would increase at an annual rate of 1.9% over the ensuing 20-year period. The actual rate of increase from 1990 to 2000, however, exceeded an annual average of 3.0% along some segments in Waterbury. To address deficiencies identified as part of the corridor study planning process, several physical improvements to the segment of the highway in Waterbury were recommended, including:

Curbs and sidewalks in Colbyville and Waterbury Center;

Specific improvements to several intersections, including Guptil Road, Hollow Road, Howard Avenue, and Laurel Lane;

The creation of a town road connecting Stowe Street with Guptil Road;

Installation of climbing Janes on Shutesville Hill;

Access management and traffic calming along the corridor; and

Improvements to the state park & ride facility.

Some of the recommendations of the 2004 study have been implemented (e.g., signalization of the Stowe Street/Blush Hill and Route 100 intersection, access management improvements, and reconstruction of the Waterbury Park and Ride) even though the study was not officially endorsed by the municipality's elected officials or voters. Other study recommendations are in the planning stages or may occur in the future. The recommended roundabout at the intersection of Guptil Road has not been implemented, and this intersection continues to be problematic for local traffic using Guptil Road competing with through-traffic traveling between Waterbury and Stowe on VT Route 100. In addition to the recommended improvements, the junction of Route 100 and North Main Street (Routes 2 and 100) will be reconstructed as a roundabout to better manage traffic flow through this busy intersection.

Traffic on U.S. Route 2, which serves as Main Street through Waterbury Village, remains heavy at 11,000 to 13,000 vehicles each day, but drops off considerably outside the village. Traffic through Waterbury Village increased 12% during the 1990s, but that growth did not continue in the 2000s and downtown traffic levels remained essentially unchanged during the decade. The most significant improvement planned for this highway is the reconstruction of Main Street in the village. That project, scheduled for construction in 2015, includes the burial of power lines and improvements to village sidewalks and streetscape. It should be noted, however, that the portion of U.S. Rt. 2 and VT Route 100 that travels through Waterbury Village is a Class I road maintained by the municipality. U.S. Route 2

Municipal Roads. Waterbury maintains nearly 55 miles of local roads. They include heavily used regional collectors, lightly used small roads primarily serving a few local residents, and Class IV roads that no longer serve automobile traffic and are not maintained by the municipality.

In Vermont, municipal roads are designated as Class 1, 2, 3, 4, or legal trail. Class 1 roads include all state highways under the jurisdiction of municipalities-typically state routes through village centers. Class 2 and 3 roads are defined for the purposes of state aid and must be negotiable, under normal conditions, year-round by a standard passenger car. Class 2 roads, as designated by the state, typically provide access to neighboring towns. Class 4 roads are not generally maintained on a year-round basis. Class 3 and 4 roads are designated by the local Selectboard. A breakdown of road mileage, by class, is included in Figure 26. Roads are shown by surface type on Maps 3-1 and 3-2.

Until 1997, VTrans applied the American Association of Surface and Highway Transportation Organizations (AASI-ITO) highway design standards to roads in the state (as did transportation agencies for each of the other 49 states). In response to growing concern that AASHTO standards were inappropriate for Vermont's small villages and rural settings, the state prepared and adopted Vermont State Standards for the Design of Transportation Construction, Reconstruction and Rehabilitation of Freeways, Roads & Streets. These include standards for roads serving urban, village and rural contexts that are designed specifically for Vermont than national standards. These standards should govern future upgrade and construction of state, town and private roads in Waterbury.

Several improvement projects are planned, however, to address current deficiencies. Projects which are included on the VTrans "Transportation Improvements Projects" (TIP) list are summarized in Figure 27.

Figure 27. **Transportation Improvement Projects**

Type	Location	Descriptions
Bridge	US Route 2	Over Little River
Bridge	Farr Road	Relocate Farr Road
Bridge	Stowe Steet	Reconstruction of BR 36
Bridge	I-89	Rehabilitate BR46 North and South, and 46 A
Paving	US Route 2	Waterbury Village to Bolton
Paving	VT Route 100	Waterbury Village to Stowe
Roadway Project	US Route 2	Reconstruct Main Street
Roadway Project	Route 2/ Route 100	Construct Roundabout
Enhancement	Stowe Street	Install Sidewalk

Source: Vermont Agency of Transportation, Transportation Improvement Program

In addition to scheduled improvement projects, which generally address normal deterioration of existing facilities, other improvements have been identified to provide new or expanded development opportunities in Waterbury Village. These projects, which are described in detail in the Village of Waterbury Transportation Infrastructure, Parking and Circulation Study, prepared by Community Planning & Design and dated April 1999, include the following:

The upgrade of Railroad Street to provide an alternative access to Pilgrim Park recently completed;

The construction of a new road connecting Pilgrim Industrial Park with Grenier Industrial Park and Demeritt Pl also completed.; and,

The extension of Bidwell Lane to connect Foundry Lane with Park Row (through the Village Shopping Center).

Each of these connections provides additional development opportunities and reinforces vehicular and pedestrian connections within the downtown.

The community has not identified other pressing issues related to roads and traffic. According to the community survey, most respondents rated such issues as the need to protect open space, revitalize the downtown, protect natural resources and maintain the community's rural character as more important than improving traffic and transportation. Increasing traffic volumes, and corresponding congestion, could result in a shift in attitudes in the future. The town should be in a position to maintain a safe and efficient road network for the foreseeable future through:

An ongoing program of road maintenance.

Strategic improvements to the road network, including access management and traffic calming (see below).

Regulatory standards to ensure that new development does not overburden the capacity of existing or planned roads.

Road Maintenance. Maintaining and enhancing the local road network in a safe and cost effective manner is an important community responsibility. The town and village merged their respective highway and street departments in 1995, at which time the town assumed all responsibility for road maintenance, including village sidewalks and streetlights. The cost of road maintenance is second to education in terms of annual cost to the community. In 2012, the town expended over $1,223,000 on the highway department. Respondents to the 2011 Community Survey rated the condition of local roads as fair and winter maintenance as good.

Upon consolidation of the two highway departments, the town constructed a new 7,500 square feet maintenance facility on Guptil Road in Waterbury Center. The town garage, finished in 1998, has improved the highway department's ability to serve its maintenance functions and maintain the department's equipment. The capital improvement program (CIP), adopted by the Selectboard on an annual basis, provides a detailed budget for highway and recreation infrastructure and equipment and fire department equipment needs in Waterbury. The CIP budget that was approved in 2012 includes funding for paving town roads, bridge and culvert improvements, downtown infrastructure improvements including sidewalk replacement, the replacement of existing highway maintenance and fire department equipment, and recreation field improvements.

Access Management. The frequency, location and design of points of highway accesses, also known as curb cuts, have a direct bearing on the safety and efficiency of both town roads and state highways. The design of curb cuts also is important with regard to stormwater management and road maintenance. Managing access can improve safety and better maintain highway capacity over time.

The Vermont Route 100 Access Management Plan prepared by RSG consultants in 2004 identified a number of locations where access to the highway might be better managed through design changes and modifications. Several techniques may be applied through Waterbury's zoning regulations, road policies and ordinances, and additional land use regulations (e.g., subdivision regulations). These include requirements for:

- Minimum sight distance at a driveway or street intersection;
- Maximum number of driveways per lot;
- Mandatory shared driveways;
- Maximum width of curb cuts;
- Minimum and maximum driveway lengths;
- Minimum or maximum on-site parking, shared parking, and parking design;
- Minimum area for loading and unloading; and
- Landscaping and buffers to visually define and enhance access points.

The Waterbury Planning Commission has successfully applied several of these tools through the site plan review process in recent years, especially along Route 100. Continued attention to access management will enable local boards to balance the needs of motorists, pedestrians, and bicyclists, as well as improving safety and highway efficiency.

Access permits on Route 100 are approved by VTrans. However, these points of access shall be subject to the town's development standards shall require a minimum number of points of access on this highway.

Traffic Calming. Techniques to maintain relatively slow traffic speeds in settled areas, enhance pedestrian safety, and improve the overall environment are often referred to as traffic calming. Such techniques include narrow vehicle traffic lanes, sidewalks, medians, on-street parking, roundabouts, raised and/or textured crosswalks, bulb-outs, street-tree plantings and street furniture. Traffic calming is especially important along state highways and town roads in Waterbury Village, Colbyville, and Waterbury Center.

Complete Streets. Act 34 of 2011 calls for state and local governments to ensure that Vermont's transportation system provide for the needs of all users of that system including motorists, pedestrians, bicyclists, public transportation users are considered in all state and municipally managed transportation projects. These types of transportation facilities are often referred to as "complete streets" and speak to the need for all modes of travel to be incorporated into the design and construction of transportation improvement projects.

8.5 Parking

Providing a sufficient amount of parking in Waterbury Village, primarily in the immediate vicinity of the Stowe Street and Main Street intersection, has been identified as an issue of concern for many years. The town and village have cooperated toward the development of a municipal parking lot on Elm Street. This new lot, in combination with on-street parking, the existing municipal public lot on Bidwell Lane, and other private off-street parking, does not provide adequate parking opportunities in this area. The continued economic vitality of the village depends in large measure on developing and maintaining an adequate supply of conveniently located parking, both on and off-street.

Outside the village, off-street parking does not appear to be a significant problem. New developments have been required to provide sufficient parking. Of greater concern than the availability of parking is the location and design of parking lots. To the extent feasible, parking areas should be located to the side and rear of buildings, and be adequately screened, to maintain the historic character of Waterbury Village, Waterbury Center, and Colbyville and to maintain scenic views along state highways in other commercial areas.

Park and Ride. A park and ride lot on Lincoln Street near Route 100 and Stowe Street was reconstructed by VTrans in June 2010. This facility has a capacity of 70 vehicles and provides a convenient location for commuters to car share or utilize the Link Express bus that provides daily service between Montpelier and Burlington. GMTA buses also stop at the park and ride lot.

The existing park and ride lot has been at capacity for the past two years according to a CVRPC survey (including recent counts from July 2013). Feasibility analysis of sites for an additional park and ride has been done in the past and a renewed effort to develop an additional site is now warranted. A new feasibility study of possible sites should be carried out with possible funding from CVRPC and the Vermont Agency of Transportation (VTrans). The VTrans Park and Ride program is also a possible source of funding to develop an additional park and ride lot.

8.3 Pedestrian and Bicycle Circulation

In Waterbury Village, where historic settlement patterns reflect a pedestrian scale and orientation, an extensive sidewalk network exists. Many existing sidewalks, however, are in a state of disrepair. Fractured and uneven sidewalks can not only be a potential safety hazard, but can also discourage additional pedestrian

activity in the downtown. Several crosswalks are provided along Main Street and signs are posted for vehicles to yield the right-of-way to pedestrians. Opportunities to enhance the village sidewalk system include better defining and strengthening pedestrian crosswalks, extending a sidewalk/bike path to the Crossett Brook Middle School in neighboring Duxbury, and expanding pedestrian links to and within Pilgrim Park and the reconstructed state office complex.

There are no sidewalks outside of the village, or in the area of the village west of Route 100. Most of Waterbury's rural roads, both paved and unpaved, have little or no shoulder and many residents have expressed concern for pedestrian safety along them. This appears to be a particular concern in Waterbury Center and Colbyville, where the 1993 Route 100 corridor study and the 1999 Transportation Infastructure, Parking and Circulation Study recommended the installation of curbs and sidewalks.

In addition to the important transportation function of sidewalks, many Waterbury area residents and non-resident workers walk in and around Waterbury for pleasure and fitness. There is a "loop" path/Route through Waterbury Village between the State Complex and the river, down Winooski Street, along River Road in Duxbury, over to Route 2/100, and back into Waterbury, which is often used by State police trainees, residents, and area employees for jogging and walking. This path includes a section of the Cross VT Trail.

Respondents to the 2012 Community Survey commented frequently about the need for sidewalks and other improvements to make Waterbury safer for pedestrians and bicyclists. Improving bicycle and pedestrian facilities was ranked as the most effective action Waterbury could take to promote recreation and recreation-based economic development.

Despite the limited availability of off-road paths, bicycle traffic is relatively heavy in Waterbury, especially during the spring, summer, and fall months. This is especially the case on the two major state highways running through Waterbury - U.S. Route 2 and VT Route 100. Waterbury's rural roads are being increasingly enjoyed by resident bicyclists, as well as by bicycle touring groups and other visitors. Narrow shoulders, increasing traffic volumes, and congested intersections are hazardous to both bicyclists and motorists. Conflicts between bicyclists and motorists have been reported. Currently, only VT Route 100 north out of the village has shoulders that might be considered suitable for bicycling, although many sections are narrow and in a poor state of repair. Future state re-paving projects, including guard rail replacement, should provide adequate shoulders for safe bicycle riding on both VT Route 100 and U.S. Route 2. There are no bicycle paths or marked bicycle lanes on town and village highways and streets. The creation of these facilities and "share the road" marking and signage should be considered in the future. Bicycle and pedestrian safety programs are promoted in the local primary and middle schools, including the Safe Routes to School program that is promoted by VTrans.

8.4 Transit and Public Transportation

Local Transit. There is no local public transportation system in Waterbury. Local public transportation is limited to taxi services, chartered buses, vans, and car rental services provided by area businesses.

Regional Transit. Green Mountain Transit Association (GMTA), that is part of the Chittenden County Transportation Authority (CCTA), provides daily transit service linking Waterbury and Waterbury Village with Montpelier, Burlington, Stowe, and Morrisville. The Link Express, which offers daily commuter bus service

connecting Montpelier and Burlington, makes stops at the Waterbury park and ride where service is coordinated with the smaller GMTA commuter bus services.

All told there are currently four routes that serve Waterbury operated by GMTA and CCTA. These are:

CCTA/GMTA Montpelier Link Express. Commuter service connecting Montpelier, Waterbury, Richmond, and Burlington.

GMTA Waterbury Commuter. Commuter service connecting Montpelier, Middlesex, and Waterbury.

GMTA Route 100 Commuter. Commuter service connecting Morrisville, Stowe, and Waterbury.

Health Center Community Shuttle. On Wednesdays and Thursdays, this demand response shuttle connects Washington County residents to the Health Center in Plainfield.

In addition, GMTA provides individual medical and daily needs transportation service to those who qualify for Medicaid, Elderly and Disabled funds or both.

Interstate Bus Service. Vermont Transit provides bus service to major cities primarily north and south of Waterbury and to smaller towns and cities along the way. The closest bus stop is in Montpelier.

Rail Service. The New England Central (formerly "Central Vermont") Railway, Inc. owns and maintains the railroad network through Waterbury. The railroad has the potential to provide important freight service to industries in the area and to influence the location of future industries.

Passenger train service is provided by Amtrak. The Vermonter provides daily service to and from New York and Washington, DC, departing the train station in Waterbury Village mid-morning, with the return train arriving in the evening. This service formerly provided direct service north to Montreal. Despite the discontinuance of the Montreal run, rail passenger service to Essex Junction and St. Albans is coordinated with bus connections that continue to provide service to Canada.

To enhance the experience of Amtrak riders, and to aid with village revitalization efforts, members of Revitalizing Waterbury, Inc., other local citizens, and village officials spearheaded an effort to restore the Waterbury Train Station. Funded through a combination of and a Vermont Agency of Transportation "Enhancements Grant" of nearly $370,000 matched with private donations and grants, work on the rehabilitation of the station was completed in 2006. The Railroad station includes the Amtrak waiting room that is combined with a community room with information on local history, and the Green Mountain Coffee Roasters café and visitor's center.

Air Transport. The Burlington International Airport, approximately 25 miles west of Waterbury, provides major international airline service, and the Knapp Airport in Berlin, approximately 15 miles east of Waterbury, provides smaller plane services.

8.5 Goals, Objectives and Actions

Goals

Overall

1. Provide and maintain safe, efficient, and integrated transportation facilities and circulation.
2. Encourage a high standard of aesthetics and functional quality for the transportation system.
3. The transportation system should be planned and designed to encourage development in designated growth areas.

Multi-Modal

1. Improve and expand alternative, non-automotive means of transport.
2. Promote multi-modal transportation systems that will integrate (and facilitate transfer among) rail, bus, taxi, pedestrian, and bicycle traffic.

Objectives

Overall

With guidance from the Transportation Infrastructure, Parking, and Circulation Study and the VT Route 100 Access Management Plan (Central Vermont Regional Planning Commission, April 1999 and November 2004), take steps to:

1. Improve safety along roads, streets, and bridges, at intersections and pedestrian crossings, and for bicycles on roadways; and
2. Identify and address parking deficiencies.

Multi-Modal

1. Improve pedestrian and bicycle circulation.
2. Support completion and implementation of the Waterbury in Motion master plan for pedestrian and bicycle facilities in the Waterbury area.

Actions

Overall

1. Identify and take appropriate steps to correct congestion points such as the Guptil Road-Route 100 intersection, the Route 100-North Main Street intersection, and the Laurel Lane-Route 100 intersection.

2. Develop a comprehensive way-finding signage system for the Village of Waterbury to orient visitors and residents and provide, where appropriate, directional and informational signage for pedestrian crossings, parking, schools, etc.
3. Where possible, widen shoulders to facilitate pedestrian and bicycle traffic along higher-speed roadways.
4. Consider changes to zoning regulations to address issues with parking requirements.
5. Create traffic-calming measures, such as "green" strips, curbs, sidewalks for pedestrians, and shorter turning radii, where appropriate, for example, along VT Route 100 in Waterbury Center and major village residential streets.
6. Improve the use and management of parking resources by clearly identifying public parking, maintaining on-street parking lines, enforcing short-term parking regulations, and developing additional public parking in the downtown area.
7. Consider developing and proposing standards for the construction of private rural roads and the associated stormwater management and erosion control, for incorporation in subdivision or zoning regulations.
8. Encourage tree plantings, green strips, and sidewalks, particularly in designated growth areas (the Village of Waterbury, Colbyville, and Waterbury Center).
9. Complete the Main Street Reconstruction Project, which includes the undergrounding of utilities from the Congregational Church to Park St., replacement of the public water and sewer mains under the street, and the construction of a complete streetscape including installation of new curbs, sidewalks, period street lighting, etc.
10. Minimize the number of curb cuts and encourage shared curb cuts. Evaluate whether changes to the by-laws are needed in this regard.
11. Accept municipal ownership of private roads only if doing so will be of demonstrable net public benefit and that construction meets the standards required in the Town Highway Ordinance.
12. Where appropriate, retain Class 4 roads for use as future recreational paths.

Multi-Modal

1. Urge the state to improve pedestrian access at and around the State Office Complex.
2. Require a minimum width of five feet, and wider where appropriate, for downtown sidewalks.
3. Extend sidewalks and other type of bicycle and pedestrian facilities to under-served areas and areas of new development within and adjacent to the Waterbury Village.

4. Take steps to improve and expand the municipality's system of alternative and recreational pedestrian/bike paths, including the provision of signage to facilitate its use. In addition, encourage "pedestrian-friendly" new development. Evaluate and propose changes to the by-laws that will give greater effect to this policy.
5. Encourage businesses and other destinations to install permanent bicycle racks. Evaluate and propose changes to the by-laws needed to facilitate the installation of bike racks.
6. Identify and support actions that will increase utilization of Green Mountain Transit Association, Vermont Transit, Amtrak rail service, and taxis, thereby reducing reliance on automobiles.
7. Use and encourage businesses to use, rail freight transport (particularly for bulk commodities such as gravel, salt, and fuels) when cost-effective, thereby reducing reliance on trucks.

Sidebars:

The confluence of important state highways - U.S. Route 2 and VT Route 100 near Exit 10 of I-89 - in Waterbury provides important linkages between our community, the surrounding region and many of the major population centers in the northeastern United States and southeastern Canada. Waterbury Village is situated at the confluence of these three state and federal highways, and along the route of Vermont's principal interstate passenger rail service.

The presence of these transportation facilities has had, and continues to have, a profound impact on Waterbury's land use patterns, economic development, and the use and protection of natural resources. The community's strategic location adjacent to several important transportation corridors and its proximity to major resorts and recreation areas make Waterbury an important gateway.

Our transportation system should provide for the needs of all users of that system including motorists, pedestrians, bicyclists, public transportation users are considered in all state and municipally managed transportation projects.

> Pursue regulatory measures and projects that will ensure better interconnectedness of Waterbury's transportation system, while respecting the equal needs of the various modes including vehicular, pedestrian, and bicycle.
>
> Improve Waterbury's streetscape, and make it more attractive to residents, business owners, and tourists, including a coherent and cohesive wayfinding signage plan.

9. Facilities and Services

Community facilities and services are essential to the function and enjoyment of our community. There are a variety of these facilities and services that are integral to Waterbury's diverse cultural and community life that are described in this chapter.

The chapter includes our schools and other educational facilities, cultural facilities such as our library, community organizations including the arts, health and social services, recreation facilities and services, public safety, and all types of utilities.

The plan identifies a set of actions that can be taken to support and expand these resources. The over-arching goal is for these facilities to be adequate to ensure the health and safety of our residents, employees, and visitors, and to improve the quality of life for everyone in the Waterbury community.

9-1. Education

A number of changes to Waterbury's educational system have occurred in recent years, including the creation of the Waterbury-Duxbury Union School District in 1995 and the passage of Act 60 in 1997, which dramatically changed state funding for education.

The Waterbury-Duxbury School District has achieved its primary goal of giving students from both towns safe, nurturing educational settings, with a strong emphasis on academics and achievement. The district, run by a five-person board, has implemented a building-based administrative structure.

Waterbury students currently attend three public schools: the Thatcher Brook Primary School (PK-4), the Crossett Brook Middle School (5-8), and Harwood Union High School (9-12). All are members of the Washington West Supervisory Union.

Thatcher Brook Primary School (PK-4). Thatcher Brook Primary School is located on Stowe Street in Waterbury Village. This 60,000 square foot, three-building complex was built in three stages – in 1898, 1912, and 1936 – and sits on approximately 12 acres. Thatcher Brook facilities support a variety of educational programs and community activities.

The complex provided elementary and secondary education to town and village residents until 1966, when secondary school services were developed at Harwood. With the creation of the Waterbury-Duxbury Union School District, and the subsequent construction of the Crossett Brook Middle School in 1996, grades 5 and 6 and related programs were moved from Thatcher Brook to Crossett Brook. Primary school enrollment at Thatcher Brook expanded to include Duxbury students, with the subsequent closure of the Duxbury Elementary School.

School enrollment at Thatcher Brook has been fairly stable during the past decade, averaging 427 students. School enrollment for the 2012-13 school year was 447 pre-kindergarten - 4th grade. The capacity of the school is approximately 500 students. Needed renovations at the Thatcher Brook Primary School were documented initially in a 2000 structural engineering report prepared by McFarland & Johnson. The historic

buildings remain structurally sound, and the entire school was completely renovated in 2006 including a new main entrance and foyer that provides ADA compliant access to all floors of the building. The renovation included the basement, exterior and interior walls, floors and roof areas, mechanical, safety and heating systems, and the school's recreation, parking, and drop-off areas.

Crossett Brook Middle School. In 1996, following the creation of the school union, Crossett Brook Middle School was built in the Town of Duxbury to serve Waterbury and Duxbury students in grades 5 through 8. The new school occupies 15 acres of land that were formerly part of the Vermont State Hospital Farm. Except for issues related to school sidewalks and pedestrian access, few improvements have been needed since its construction. The Crossett Brook facilities support a variety of educational services and programs and are also used for community events. Some Crossett Brook students continue to participate in athletic programs available through Harwood

School enrollment declined during the first half of the 2000s, but has stabilized between 270 and 290 students in recent years. Enrollment for the 2012-13 school year was 281.

Harwood Union Middle/High School. Waterbury students in grades 9 through 12 attend the regional secondary school, Harwood Union Middle/High School, located in South Duxbury. Waterbury is one of six member communities in the Washington West Supervisory Union. The other communities are Duxbury, Fayston, Moretown, Waitsfield, and Warren. Waterbury contributed 28% of the student body for 2012-13.

Harwood was opened in 1967 to serve 620 students in grades 7 through 12. As a result of a subsequent expansion in the mid-1990s, the school currently has a maximum capacity of approximately 900 students. Enrollment at Harwood has been declining and the school has been operating well below design capacity in recent years. Enrollment for grades 7-12 at HUHS in 2011-12 was 734. There is concern that rapid population change in one or more member communities could place a burden on the Harwood facilities.

There is also concern over the adequacy of Harwood's athletic fields. The school's fields were originally designed to serve four teams. Apart from the construction of a track and hockey field in 1982, no additional field space has been created since 1967. Today the school fields 21 teams. The lack of field space at the school has limited program expansion, and requires that a number of teams be bussed off-campus in order to practice and play games.

Financing Education. Act 68, Vermont's education financing law adopted in 2003, pays for all of a district's education spending. Education is funded by the state lottery, one-third of the purchase and use tax, one-third of the sales and use tax, the general fund, the nonresidential education property tax, and the homestead property tax. While the nonresidential education property tax is the same statewide, the homestead property tax varies by school district based on a district's per pupil spending. Districts that spend more than a specified amount per pupil are subject to an additional tax rate. Homestead taxpayers may be eligible for an income-based adjustment.

Tax Stabilization Fund. In 1997, Waterbury voters established a tax stabilization fund using the equity payment made by the Town of Duxbury when it bought into the Thatcher Brook Primary School when the Waterbury-

Duxbury School District was created. The principal payment of $644,000 was invested perpetually in order to generate interest, dividends, and capital gains.

Adult Education. Adult education opportunities for Waterbury residents are available locally through the Community College of Vermont's Waterbury campus and at nearby schools, including the University of Vermont, several other private colleges in Burlington, and the Vermont Technical College in Randolph. Waterbury's distance learning opportunities through the Vermont Interactive Television (VIT) site, which had been at Stanley Hall, were eliminated after the flooding from Tropical Storm Irene.

A variety of adult basic educational programs are also available through Central Vermont Adult Basic Education, which has offices in Waterbury. These include individualized and group educational services to adults in their homes, at the learning center, and in community settings. Basic education programs serve those who wish to improve their reading, writing, and math skills for use on the job or in daily life, those who are studying for their high school equivalency degree (GED) or adult diploma, and those who want to learn English as a second language. Computer training is also available.

The Adult Basic Education Center also offers a family literacy program, an out-of-school youth program, a teen parenting education program, and a "getting ready to work" program for welfare recipients who are seeking academic and job skills to improve their occupational prospects.

9-2. Cultural Facilities & Services

Library. The Waterbury Public Library is located on North Main Street in the village, in the municipal complex, which also houses Waterbury's municipal offices and the Waterbury Historical Society. The complex includes the historic former residence of Dr. Henry Janes, which is part of the municipal offices. It has served town and village residents since 1916, and importantly, lies within walking distance of the Thatcher Brook Primary School and two senior citizen housing developments. The library is governed by an elected Board of Library Commissioners, and funded from municipal appropriations as well as an endowment. The library is staffed by a full-time director, five permanent employees, and scheduled volunteers. The library also is supported by the "Friends of the Library," a local volunteer group.

The library's holdings include more than 21,000 physical books, audio books, videos, and magazines, as well as a growing collection of digital resources. By the end of 2013, the library will offer residents access to nearly a quarter of a million items, through its founding membership in the Catamount Library Network. In recent years the library also added e-books and downloadable audio books to its collection. The library provides free Internet access, weekly story times for children ages 0-6, summer literacy programs for children, general interest programs for all ages, monthly book discussions for adults and home deliveries to day-care centers and housebound residents..

The town-owned library building has had recent improvements to the heating system, insulation added to the attic and basement, and repairs made to the rood and foundation.

An average of 600 people a week visited the library in 2012 and borrowed more than 40,000 items, despite the fact that the library facilities are severely overcrowded. The usable area of the library building is approximately

1,800 square feet, compared to an estimated need of 9,100 square feet, according to nationally recognized library planning guidelines.

The building does not meet state and federal accessibility standards. It has no accessible meeting space: to hold its diverse program offerings, the library often rents space from other community organizations. The building is not able to accommodate the expansion of public computer facilities, children's and teen services, meeting and program space, and staff workspace needed to provide 21st century library service to a growing community.

Previous planning studies identified the need for expansion and accessibility improvements. Proposals put forth in 1993 and 1999 to expand the historic structure were rejected, as was a 2013 proposal for a new library as part of a municipal civic complex. The need to resolve the library's space crisis is critical.

Community Organizations. Waterbury hosts a variety of cultural and community service organizations – including traditional groups such as the Grange, the Rotary Club, and the Historical Society, and relatively newer organizations that include Revitalizing Waterbury, the Waterbury Activities and Cultural Center, and A River Runs Through It Garden Club. All make significant contributions to the life and culture of the community by organizing and sponsoring local projects, activities, celebrations, and civic events. Collectively they provide invaluable (and cost-effective) services to the community.

The Arts. The practice of and appreciation of the arts: contributes to a stronger sense of community and economic growth; builds bridges between diverse ideals and cultures; creates dialogue and understanding; and educates and stimulates citizens of all ages. Furthermore, a vibrant arts and culture industry is a magnet for tourists, and tourism research repeatedly shows that cultural travelers stay longer and spend more.

Vermont as a state is known for the quality and diversity of its creative practitioners. Waterbury, with its mix of makers, performers, inventors, and innovators bears out that assertion. The community boasts a thriving creative nexus of people engaged with and in the arts who, together, make an essential contribution to: the town's economy; its status as a tourism draw; and its individualistic spirit. The Waterbury creative community is also strongly allied with other economic innovators in the town, including the specialty food and beverage sector; the restaurant sector; and the service economy sector. Continued investment in the creative industries for Waterbury is an investment in our innovative potential and in our future.

For a small community, Waterbury boasts an enviable slate of arts opportunities within its borders. From performing arts organizations for all ages, to galleries showing the work of local practitioners, to makers and retailers in all media, to web designers and creators, Waterbury has a large and distinct arts presence within Central Vermont.

The arts community lacks a common nexus, however, and bringing the arts together in an identifiable, discrete location within the town has long been a goal of the Waterbury Activities & Cultural Committee (WACC). This goal has been given greater form within the Long Term Community Recovery planning process initiated by the Waterbury Select Board and Village Trustees in November 2011, following the devastation of Tropical Storm Irene.

As of the date of this document, the Across Roads Center for the Arts (Across Roads), a community-based successor organization to WACC and one of the 21 projects that comprise Waterbury's Long Term Community Recovery Plan, is in development. Upon the creation of the Across Roads Center for the Arts, the Waterbury Activities and Cultural Center's mission and priorities were taken on by the newly created group.

The champions of Across Roads intend for the center to offer Waterbury and Central Vermont a centrally located base for arts presentation, professional development and growth of an already-established arts industry; collaboration between the local economy's arts and business sectors; cultural exchange within the community; and opportunities for multi-generational activities. Across Roads, which will contain a performance space; a gallery; teaching space; flexible workspace for artists and other creative individuals; and other amenities, is intended to increase Waterbury's economic diversity and add to its appeal as a destination for local, regional, and national consumers.

9-3. Health & Social Services

Early Childhood Care and Education Services. Providing children with a sound start now will give them the skills they need to contribute to society later. Quality and affordable early childhood care and education benefits families by preparing children for school while enabling parents to work and provide income. It benefits businesses financial bottom line by attracting, expanding and retaining a quality workforce and creating more reliable, productive employees. Furthermore, early childhood care and education facilities are businesses themselves and their existence expands local and Regional economies directly through the hiring of workers and purchase of goods and services. Research has shown that economic investment in early childhood development programs brings a real (adjusted for inflation) public return of 12% and a real total return, public and private, of 16%.

In 2013, there were 11 registered family childcare providers operating in Waterbury with a total of 27 vacancies. There are also three childcare centers and a pre-school program through the Thatcher Brook Primary School. Only one center currently takes infants less than a year old; another program is limited to after-school services for ages 5 to 13 years.

Licensed and registered day care facilities are available in and around Waterbury; however, the local demand for day care is difficult to measure. According to 2010 U.S. Census data, there were 276 children under age 5 living in Waterbury and each year 55 to 70 children are being born to Waterbury residents. Because Waterbury is also home to several larger Central VT employers, it is likely the demand for childcare in our community is greater than only those services and programs needed by our residents.

With the number of families in which both adults work outside of the home increasing, the demand for child day care has also increased. While the financial challenges of childcare are certainly daunting, the State of Vermont Child Care Subsidy Program, operated by the Agency of Human Services, does provide some financial assistance to low income families. The amount of the subsidy available is based on a formula (tied to the poverty rate) which takes into account both income and family size.

While quality childcare "slots" are extremely scarce, resources do exist for parents, providers and would-be providers. They include:

» The Family Center of Washington County/Child Support Services offers referral services and operates care programs.

» Bright Futures Child Care Information System is a web based resource providing comprehensive information on child care in Vermont, as well as municipal level data on regulated care providers.

» The Step Ahead Recognition System (STARS) is Vermont's rating system for quality improvement efforts in child care, preschool and after-school programs. Through their website, parents can do a provider search to find programs recognized through this system for their quality improvement efforts.

» Vermont Child Care Consumer Line provides counseling regarding child care concerns and access to records of violations.

» The National Association for the Education of Young Children also provides help for families searching for childcare. An Accredited Center search can be done at:
http://www.rightchoiceforkids.org/htm/contactus.asp

The Early Education Resource Center of Waterbury, better known as The Children's Room, was established in 1984 in response to a need for a community-based education and support center for families in a rural area. The Children's Room is located in the Thatcher Brook Primary School and is open during school hours. The parent-child resource center offers parenting information, programs for parents and caregivers and provides a place for parents and caregivers of young children to come together and make connections. The Children's Room offers numerous activities including playgroups, organized arts and crafts, music time, gym time, and literary workshops in conjunction with the local public library. Programs and services are funded through fundraising, room users, foundations, state and federal government programs, private donations, and municipal appropriations.

Health Care Services. Waterbury residents have access to a variety of public and private health care resources. There is an 8,700 square-foot medical facility located at 130 South Main Street, newly renovated after Tropical Storm Irene. Waterbury Medical Associates is a primary care practice with special interests in pediatrics and adult medicine as well as dermatology, gynecology, orthopedics and infectious diseases. They offer a diverse variety of services including preventative care for all ages, management of acute and chronic conditions, immunizations, diabetic education, family planning, sports and camp physicals, minor office surgery, radiologic services, and osteopathic manipulation.

In addition, a branch of Vermont Women's Health with an OB/GYN physician and a midwife is housed at the facility, and rehabilitation and nutrition services from the Central Vermont Medical Center are available by appointment.

Waterbury is home to several other private practices that provide dentistry, physical therapy, chiropractic treatments, therapeutic massage, counseling and therapy, optometry, and prosthetics. A new orthopedic clinic is scheduled to open later in 2013.

Washington County Mental Health Services provides services for adults with mental illnesses, children and adolescents with serious emotional disturbances, and people with developmental disabilities.

Hospitals. The Central Vermont Hospital in Berlin, approximately 16 miles from Waterbury, is the closest full-service hospital, with 24-hour emergency care and a weekend health clinic. Additional, specialized services are available at Fletcher Allen Health Care in Burlington, approximately 25 miles away, and Dartmouth-Hitchcock Medical Center in Hanover, New Hampshire.

Home Health and Hospice. Waterbury is served by the VNA (Visiting Nurse Association), Bayada Home Health Care, Bayada Hospice and Central Vermont Home Health and Hospice (CVHHH), one of the largest home health agencies in Vermont. These agencies provide comprehensive home health care to people in Central Vermont, including nursing, occupational therapy, physical therapy and speech services for individuals recovering from surgery, strokes, accidents, as well as long term care for age and disability related health needs.

In addition, the VNA provides adult day services, CVHHH provides health promotion, prevention services and clinics for children and seniors and both provide services regardless of an individual's ability to pay. Hospice services are provided by all three agencies to meet the needs of individuals for emotional, physical and spiritual end of life care. Hospice volunteer trainings are available on both a periodic and on-going basis.

Social Services. Central Vermont Community Action Council (CVCAC). A variety of social service programs available to low-income Waterbury residents are coordinated through CVCAC, based in Barre. These include child care meals, micro-business development, weatherization and emergency fuel assistance, family support service, farmworker, Head Start, Welfare-to-Work, and Working Wheels programs. The focus of these programs is to offer long-term support to families trying to get out of poverty, while providing short-term assistant to those facing poverty's most immediate effects. CVCAC is supported in part through municipal funding, using a formula based on population, numbers of residents served, and dollars spent in each community.

Washington County Youth Service Bureau (Boys & Girls Club). The WCYSB is a non-profit social service agency that provides programs for troubled youths and their families, including crisis intervention and family counseling, runaway, substance abuse, teen parent, teen center, and transitional living programs. The agency also runs a 24-hour crisis response service. Programs and services are funded through fundraising, foundations, state and federal government programs, private donations, and municipal appropriations.

Vermont Center for Independent Living (VCIL). An estimated one in five Vermonters has a disability. The Vermont Center for Independent Living, with offices in Montpelier, assists people with significant disabilities to gain more control over their lives and live more independently.

Waterbury Area Food Shelf. The Waterbury Area Food Shelf, located on South Main Street, provides groceries for free, by appointment, to local residents in need.

Senior Services. The demand for services for the elderly, and for family caregivers, has been growing – the result of an aging population. In 2010, 12% of Waterbury's population (more than 600 residents) was 65 years and older. A variety of in-home, transportation, health and respite services are now available, coordinated

through the Central Vermont Council on Aging, Central Vermont Home and Hospice, and the Waterbury Area Senior Center.

The Waterbury Senior Citizens' Association (WASCA), founded in 1964, was reorganized in 1990 under a Board of Directors, with the support of community members and local businesses. In 1994 it moved to its present home on Stowe Street, developed as part of the renovation of the Stimson-Graves Building. WASCA supports a variety of programs for local residents, including social events, wellness clinics, advocacy, and tax assistance services. It also serves as a senior congregate meal site, providing lunches on site five days a week, and home deliveries (Meals on Wheels) seven days a week. The center is supported through local fundraisers, hall rentals, volunteer services, private donations and an annual municipal appropriation.

As identified in previous chapters, the senior and elderly population in Waterbury is not only growing, but the demographics and needs are changing. As baby boomers age, they typically remain active and engaged in a variety of activities and tend to seek out opportunities to participate in civic events, learning opportunities and social activities that are multi-age/multi-generational. It will be important for the community as a whole and agencies serving the target population to identify needs and interests of this new demographic. A viable and healthy community remains flexible enough to provide opportunities and services that meet the needs of its seniors.

9-4. Recreation Facilities & Services

A variety of municipal and state recreation facilities - including playing fields, recreation paths, a swimming pool, an ice hockey rink, state parks, and the Waterbury Reservoir - are available to Waterbury residents. Funds for municipal recreation services and facilities generally come from municipal taxes. User fees also contribute to the maintenance of facilities, including the pool and playing fields.

Recreation facilities and programs are managed by municipal staff, including a part time recreation director, hired in DATE, with the advice of the Waterbury Recreation Committee, a nine-member advisory board comprised of town and village residents appointed by the Selectboard. The committee advises municipal officials and staff on the maintenance of bathroom facilities, parking lots, lights, and fields, and the development and maintenance of a recreation program for the town and village. This includes summer swimming, camp, and outdoor recreation programs. There are also baseball, softball, and soccer organizations that are independently managed and funded by residents committed to these programs.

A $2.2 million indoor ice center is located on four acres of village-owned farmland along the Winooski River, at the southern end of the village. The facility offers time for public skating, and a home for local figure and hockey skaters. It is used extensively by residents of Waterbury and surrounding communities. The Ice Center development has been supported largely through the fund-raising efforts of Ice Center of Washington West, Inc. The Town of Waterbury has contributed substantially to the Ice Center since its inception through abatements of local property taxes. The larger 40-acre site also includes ball fields, a walking path, and parking areas.

Recreation Paths. The concept of a recreation path in Waterbury had been discussed for many years by various groups and citizens, and has been recommended in municipal and community development plans

dating from the 1980s. In the summer of 1990, a broad-based citizen group formed to build support and begin planning for a multi-purpose recreation path and trail system in Waterbury. Citizens envisioned a path network, comprised of segments or loops, which would connect key areas and points of interest throughout Waterbury. Residential areas would be linked to other residential areas, commercial areas, schools, or recreation areas. A path meandering along the Winooski River and Thatcher Brook would be an exceptional recreational facility and alternative route to get from the village to Colbyville.

Since that time, a major section of the Waterbury Recreation Path along the Winooski River has been put in place, which links land behind the state complex to the Winooski Street Bridge. This path, with the Duxbury Road, forms a much-used recreational loop that extends into the neighboring countryside. The Waterbury Recreation Path has also been designated as a section of the Cross Vermont Trail, which is currently under development statewide. Other trail networks exist on state-owned lands, in and around Waterbury Center, and up into the Worcester Range. A bike path has also been established extending along Lincoln Street to Laurel Lane, paralleling Route 100 (see Maps 3-1, 3-2).

Undeveloped corridors of land and open spaces between the village and town still remain, and they could provide locations for path segments and connections among key areas. Path easements could be acquired through voluntary donations, site plan and subdivision common land provisions, and the use of existing public lands and rights-of-way. In addition to local taxes, possible funding sources include, but are not limited to, Land and Water Conservation Fund (LWCF) grants, Trail and Greenway grants through the Agency of Natural Resources, and Agency of Transportation enhancement funds, as well as private fundraising, donations, and volunteer efforts.

State Recreation Facilities. The Little River State Park, located within the Mount Mansfield State Forest, 3.5 miles north on Little River Road off of Route 2 in Waterbury, offers 12,000 acres of hiking, camping, boating, fishing, hunting, cross-country skiing, snowmobiling, and swimming. Little River, opened in 1962, is Central Vermont's largest campground. There are campsites, lean-tos, cabins, toilets and hot showers, sewage disposal, firewood, a ball field and play areas, boat rentals, access to the Waterbury Reservoir, and miles of hiking trails. There is also an interpretive "Little River History Hike" which identifies historic sites associated with past settlement in Ricker Basin and Cotton Brook.

Waterbury Center State Park, a quarter of a mile off Route 100 just south of Waterbury Center, is another public recreation area on the shore of the Waterbury Reservoir. The park is located on a 90-acre peninsula on the eastern shores of the reservoir. Facilities include a picnic area, a handicap accessible nature trail, swimming beach, boat ramp, and rest rooms.

The Waterbury Reservoir includes areas for power boating and water skiing, and also a "quiet water" section for paddlers. Park trails are open during the off-season, in winter months when state camping facilities are closed; however, gates at the dam prevent vehicular access into the camping area. While this is an important measure to regulate access and reduce vandalism to the park facilities, it also limits residents' access to interior trails for cross-country skiing and snow shoeing.

A trail system from Loomis Hill into the Hunger Mountain Range is maintained by the Department of Forest Parks and Recreation. Limited, unmaintained trail networks also exist in other state holdings associated with the Putnam State Forest, including that section accessed off the Old Dump Road.

9-5. Cemeteries

The Waterbury Cemetery Commissioners oversee the management and maintenance of Waterbury's cemeteries. Although a formal study has not be conducted, it appears that Hope Cemetery in Waterbury Village and the Waterbury Center Cemetery in Waterbury Center are not in danger of running out of space in the near future.

9-6. Public Safety

Police Protection. Full time police protection in Waterbury is provided by the Vermont State Police, based out of Middlesex, and the Washington County Sheriff's Department. There is currently a shortage of state police officers, which limits third shift (nighttime) coverage. The sheriff's department is made up of seven full-time officers.

Waterbury has contracted coverage from two dedicated police offers for 80 hours per week. This arrangement is a pilot program that was implemented after community discussions following the disbandment of the Village Police Department in December 2017. Local crime rates vary from year to year, but recently have been declining in the village, and increasing slightly in the town – possibly in association with growth in the town's commercial sector which often results in an increase in retail crime. Village crime rates have historically exceeded town, county, and state rates per 1,000 of population. Recently, however, village crime rates have dropped below state and county rates, possibly as the result of the increased effectiveness of local police coverage and community policing.

Fire Protection. Fire protection in Waterbury is provided by the town. Both the Main Street and Maple Street Fire Stations were reconstructed with bond funding in 2011, and were completed just prior to Tropical Storm Irene.

The Fire Department also provides mutual aid assistance to surrounding communities as part of the Capital Fire Mutual Aid System. The department had a roster of 50 members in 2012 and responded to 238 incidents.

Emergency Medical Services. The Waterbury area is served by the Waterbury Ambulance Service, Inc. (WASI), a nonprofit corporation formed in 1971 and staffed by local volunteers. WASI is certified by the State of Vermont to provide emergency care services on a 24-hour basis to the residents of Waterbury, Waterbury Center, and surrounding communities.

WASI owns two ambulances, which are housed at the Ambulance Station in Waterbury Center. Both are stocked with the latest emergency care equipment and have radio capabilities to contact all local hospitals, fire, police, and municipal offices and their vehicles.

WASI is funded through three sources: an annual family subscription drive; donations and memorials; and insurance receipts for services rendered. An elected, volunteer board of trustees oversees all collections, expenditures, and the operation of the corporation.

Enhanced 911. A state board supervises the operation of Vermont's enhanced 911 system, instituted in the 1990s. This includes monitoring and auditing E-911 databases for street addresses, contact information and responders, the E-911 network, and four public safety answering points (PSAPs) which take calls, and forward them to local dispatchers. The system depends on regular information updates from municipalities to ensure complete coverage. The state has consolidated the PSAPs, and Waterbury is currently served by the PSAP in Williston.

9-7. Sewer & Water Facilities

The public sewer and wastewater systems are operated by the Edward Farrar Utility District. The bounds of the district are fixed, but the Utility may sell services beyond these limits. The extension of lines to presently non-sewered areas will have a significant impact on land use patterns, and so should be considered very carefully. Future sewer needs will be strongly influenced by the land use policies developed in this plan.

The wastewater treatment plant is located northwest of the village on Route 2 and opened in 1980. The plant has a permitted design capacity of 510,000 gallons per day (gpd) and a Biochemical Oxygen Demand (BOD) capacity of 726 pounds per day. As of December 2012, the facility had an average monthly flow of 214,500 gpd. The uncommitted hydraulic reserve capacity is 295,500 gpd. The plant is operating at 42% of its total hydraulic design capacity. With the proposed upgrade for phosphorus removal, there still remains BOD capacity in the plant.

System expansion is usually recommended when a facility reaches 80% of its design capacity. A permit required 20-year evaluation of the wastewater treatment facilities was conducted in 2002 and 2003. The higher than normal BOD loading was considered during the evaluation to plan for necessary facility upgrades or expansion.

Investments in the Waterbury Wastewater Treatment Facility have been made in the recent past to improve its operational efficiency. Operation of the treatment plant was contracted out annually to a private firm. It is now being operated by municipal employees, under a current plan to consolidate the village water and sewer departments. In 2002 voters approved the development of charter amendments to bring authority for water and sewer operations under one board. Responsibility for the wastewater system transferred to the newly approved Board of Water & Sewer Commissioners in May, 2003.

An upgrade to the wastewater plant constructed to reduce the phosphorus content of the effluent leaving the plant. The technology being utilized is called ballasted flocculation and uses an iron based material that enhances settling and removal of the solids in the waste that contain the phosphorus.

Sewer charges are based upon metered water use, which is noted on customers' water bills. Sewer use and rates are regulated in accordance with an adopted village sewer ordinance. The ordinance currently requires

all buildings intended for human occupation within the village that abut a street or right-of-way where there is an existing or proposed sewer line to connect to the public system.

There is not now any allocation of reserve capacity by use type, by zoning district, or for such things as affordable housing or pollution abatement. Any future allocation ordinance adopted by the municipality should be consistent with the goals and policies of the municipal plan.

Outside the Utility District, Waterbury residents rely upon on-site waste disposal facilities, subject to regulation by the state. Soil conditions and topography in some areas of the town are not favorable for individual on-site septic tanks and leach fields; however new state rules for on-site systems allow for the placement of systems on slopes up to 20%, and, under proposed rules, on slopes up to 30%. This could have the effect of opening up Waterbury's upland areas to development, unless regulated through other means such as zoning and subdivision.

Community sewage systems allow for clustered or multiple unit developments. Systems of this type, which handle 6,500 or more gallons per day, are regulated by the Vermont Department of Environmental Conservation. Community systems allow a developer to take greater advantage of natural features on the site rather than base a site plan predominantly on septic suitability. Buildings can be sighted closer together, infrastructure costs can be reduced, and important open spaces or natural features can be protected.

Ownership and maintenance responsibilities of a community system reside with the property owners of the development it serves. The town currently accepts no responsibility for system maintenance, repair, or replacement, and does not anticipate accepting any responsibility in the future. In the event of a system failure, the owners/users are required to pay for any needed repairs or replacement.

Water Supply Facilities. Waterbury Village is served by a municipally owned and operated water system with a total capacity of 503,000 gpd, and a reserve capacity (as of September 2013) of 265,000 gpd.

The system has a number of water supply sources, including three drilled wells in Waterbury on Loomis Hill near the Stowe town line, and three sources over the town line in Stowe. The Stowe sources include two stream intakes from the Tyler Brook and Merriam Brook dams, and a drilled well. The village owns and manages the watershed area supplying its surface water sources. Source protection plans have been developed to prevent water supply contamination. There is concern, however, regarding long-term source, plant, and system security. Security improvements are anticipated to reduce the threat of water supply and system contamination.

Source water is transmitted to a filtration plant, built in 1992 at the old town gravel pit site on Barnes Hill. This 13-acre site was deeded by the town to the village for $1.00, in return for which the village agreed to provide water to town customers formerly served by the Waterbury Center Water Works system (formerly known as the Luce System). The water is filtered, chlorinated, fluoridated, and transmitted to a 1.4 million gallon storage reservoir, constructed in 1977 on Blush Hill, just outside village limits.

The Edward Farr Utility District has extended its municipal water service area to include residents of Waterbury Center, who were formerly served by the privately owned and operated Waterbury Center Water

Works (Luce System). Improvements involved connecting users on Maple Street and Guptil Road to a new 12-inch main installed by the Village Water Department, and the installation of new 8-inch and 4-inch water mains to replace Water Works distribution lines in all service areas. Lines were sized to meet current demands and to allow for future expansions.

The rest of the distribution system consists of approximately 25,300 linear feet of 4- to 10-inch ductile iron pipe. Most of these pipes are less than 25 years old. The water main along Main Street is scheduled for replacement in association with the Main Street reconstruction project. Fire hydrants are incorporated within the system. Where pipe diameters supply sufficient flow, there is adequate water supply for fire protection.

The municipal water system is overseen by a Board of Utility Commissioners for the Edward Farr Utility District, elected by the membership of the District. The current rate structure includes a minimum charge for each dwelling unit and commercial unit in any building. A family pays the same minimum rate whether it lives in a detached dwelling or an apartment unit. The water rate increases with increased water use to encourage water conservation and to require large users to contribute a larger share of revenue – as needed to offset the costs of additional storage and larger pipes needed to meet higher peak demands. A base charge was also added to assist in repayment of the bond for the water filtration plant and other improvements.

It is the policy of the Board that present users should not pay for the development costs of new water sources; new users to the system should pay their share of the cost of developing these new water sources through an allocation or connection fee. This is consistent with notions of both economic efficiency and fairness.

In 2002 voters approved a proposal, as supported by the Board of Water Commissioners, to combining the responsibilities for municipal water and sewer systems under one board. The systems are both critical utilities that are interrelated in many ways. The merger of water and sewer system staff under the direction of the Public Works Director is intended to increase efficiencies in the operation and maintenance of both systems.

There is one private community water systems in town, serving East Wind mobile home park. The system has an approved source protection plan. The remainder of town residents and businesses are served by individually owned wells and springs. The installation of private residential wells is required to meet state isolation distances to prevent contamination. The siting of wells may also affect the subsequent siting of nearby septic systems, which are regulated. Driller well logs are kept on file with the state. Water testing for individual water supplies is available, for a fee, through the Vermont Department of Health and private testing firms.

9-8. Solid Waste Management

Waterbury is one of six members of the Mad River Resource Management Alliance (MRRMA), formed in 1994 through an interlocal agreement. MRRMA is governed by board that consists of an appointed representative from each member municipality. An annual per capita assessment is charged to cover administrative and program costs ($1.75 for each of the past three years).

MRRMA has an adopted solid waste implementation plan, approved by the state. In June 2009, MRRMA updated this 5-year plan, with public input, to conform to the newly revised state solid waste plan.

Hauling, recycling, and landfill services are provided under agreement with Moretown Landfill, Inc., which is owned by Advanced Disposal. Trash collection services are also provided by other private haulers.

MRRMA is the "host district" for the Moretown Landfill. As a result, local residents have been able to bring their recyclables to the facility at no charge. The Moretown Landfill is currently closed based on state permitting issues with a condition that a complete application be submitted no later than December 3, 2013. If the state permit is obtained for the next cell, then the landfill will re-open along with the associated solid waste services.

Free disposal of appliances, tires, and collected roadside trash is also provided in association with annual MRRMA-sponsored events such as Green Up Day, Household Hazardous Waste Collection Days, and tire collections. MRRMA works with the Association of Vermont Recyclers, and is a member of the Northeast Resource Recovery Association, which helps market some recyclable commodities. MRRMA also sells composting bins.

The Waterbury RTR Center on River Road is a transfer station for solid waste. The Waterbury RTR Center takes trash, recyclables, appliances, tires and construction debris, and also operates a bottle redemption center.

9-9. Electric Utilities

As noted under the Energy Chapter (Chapter 7) Green Mountain Power Corporation provides electrical power to both Waterbury Town and Waterbury Village. GMPC operates three power substations (Winooski Street, Stowe Road, and Little River) and two hydroelectric facilities in or partly in Waterbury (Little River #22 and the Deforge Hydroelectric Station #1 at Bolton Falls). Half of the dam that serves the Bolton Falls Station is located in Waterbury; the remainder, including the power station and substation, is located in Duxbury.

Little River Dam. Little River #22 is located at the site of the Waterbury Flood Control Dam. With a drainage of 110 square miles, the reservoir normally extends upstream six miles and has a surface area of 885 acres at a pool elevation of 592 feet. Usable capacity for storage of water for power is 1.58 billion cubic feet, at water levels between 500 feet and 592 feet. The reservoir capacity above 592 feet is reserved for flood control purposes only. The drawdown of the reservoir for dam repairs, to 520 feet during the construction phase, will significantly reduce the plant's generating capacity (and associated tax revenues) through 2004.

Initially installed in 1953, the hydro facility has a generating capacity of 5,520 kW, and consists of a submerged concrete intake, two 205-foot long, 54inch diameter steel penstocks, a powerhouse with one generating unit, a tailrace, and a 33kV transmission line. When fully operational, the facility runs seven days a week, 24 hours a day, except during low flows when it only operates on weekday mornings with an average drawdown of 0.2 feet per day. Generation during the summer usually ceases when necessary to preserve pool level at the 590-foot elevation level for recreation purposes.

In 2000 GMP filed a hyrdroelectric application with the Federal Energy Regulatory Commission for the relicensing of the Little River facility. At that time, the application was accepted for filing, but has not been through an environmental assessment (EA). No modifications to the facility or operation are proposed; the project has an average annual generation of 16,223 MWh.

Bolton Falls. The Bolton Falls dam (the Deforge Hydroelectric Station) was built in 1898. It was severely damaged in the 1927 flood, but continued to operate until 1938. In February 1979, the U.S. Dept. of Energy awarded GMP a Low-Head Hydroelectric Power Demonstration Grant and the Federal Energy Regulatory Commission issued a forty-year license to redevelop and operate the site. GMP constructed a device on the dam to improve oxygenation of the plunge pool and to increase the minimum flow of the Winooski River below the Middlesex Dam, which are intended to improve the Winooski River as a fishery. The Deforge Hydroelectric Station currently has a generating capacity of 8,820 kW.

Transmission & Distribution Lines. There are two major transmission lines in Waterbury, one skirting the southwest corner of town that feeds into the Winooski Street substation, and another running from the Deforge Station to a substation just off Route 100 southwest of Waterbury Center. There are also two principle distribution lines, running north-south through the western half of the town – one paralleling Route 100 from Waterbury Village to the Stowe town line that is a VELCO transmission line, and a second roughly paralleling that to the west. Three-phase power is available for industrial uses. The undergrounding of distribution lines along Main Street through Waterbury Village will be undertaken in association with the Main Street reconstruction project.

9-10. Communications Facilities & Services

Waterbury officials, businesses, and residents communicate with each other through a variety of means, ranging from traditional venues such as newsletters, newspapers, reports, and public meetings to increasingly advanced telecommunications networks that provide worldwide information access.

Newspapers. The Waterbury Record is Waterbury's weekly newspaper. The major daily paper serving the Waterbury area is the Times Argus, based out of Montpelier. The Burlington Free Press is also available locally, but includes little local reporting. VT Digger, a state-wide new organization run by the Vermont Journalism Trust, reports on some Waterbury events.

Telecommunications. Telecommunications facilities and services, until very recently, were limited to local and long distance telephone networks and wireless radio and television networks. Waterbury's radio station, WDEV, dates from 1931. At the time WDEV's towers were built on Blush Hill in 1936 they were purportedly the tallest structures in New England. Television was introduced in the 1940s, and dial telephones finally reached Waterbury in 1952.

Telecommunications technologies, and associated services available to Waterbury residents and businesses, are now multiplying at an unprecedented rate. Technology and deregulation have blurred the lines between what were formerly distinct, separately regulated services – phone and cable systems are now used as much for data transfer as for more traditional forms of communication. Wired and wireless networks are being developed that allow for high speed Internet access, voice and data integration, video conferencing, and telecommuting.

However, unlike traditional phone and broadcast services, available for a nominal fee, or the cost of purchasing a radio or television, many of the new technologies and services require a substantial initial capital investment (e.g., for computers, dishes, or wiring), and subsequent monthly payments. There is also a learning

curve in the use and application of new technologies. As a result there is a growing information or "digital divide," which affects mostly lower income households and the elderly who are less familiar with new technologies.

The extent of local coverage for wireless, cellular services is also improving – at the cost of siting new telecommunications towers that can mar the landscape if not sited appropriately in relation to their context. Providers are currently actively acquiring sites for towers along I-89 and other major routes to expand available coverage. Municipalities, under the federal Telecommunications Act of 1996, cannot altogether prohibit such facilities, but can regulate their siting and appearance under local land use regulations. Emissions, including related interference and health considerations, are regulated separately by the Federal Communications Commission (FCC). The Town amended zoning regulations in 1999 to regulate the siting, installation, and removal of telecommunications facilities. The current regulations promote collocation where feasible to limit tower proliferation. These should be reviewed and amended regularly to address the potential impacts of new technologies.

Telephone. Consolidated Communications is the area's incumbent local exchange phone company, although local consumers have the option of selecting from other local – and a variety of long distance – telephone service providers. Traditional telephone companies now offer a variety of calling services (e.g., voice mail, caller ID, call forwarding, call screening, and conference calling) and new line services (e.g., ISDN and DSL services) that support high-speed data transfer, internet access, and voice and data integration.

Internet Services. Waterbury residents and businesses with a computer and modem, or a direct line connection have access to a growing number of local and national internet service providers (ISPs) and to a variety of associated services, including e-mail and file transfer services, web sites, and access to the world wide web. For residents without a computer, the Waterbury library offer public on-line access. Waterbury's municipal web site (www.waterburyvt.com)was established in 2000. The web site currently includes an introduction to Waterbury, a historical tour, and a variety of information about municipal functions including meeting agendas and minutes.

9-11. Goals, Objectives and Actions

Goals

1. Provide public utilities, facilities, and services to ensure the public's health and safety, and to improve the quality of life in the Waterbury community.

2. Provide utility services and municipal facilities that support orderly growth and controlled development at a rate and in locations that Waterbury can accommodate.

3. Make new investments in schools, libraries, and recreational, and other cultural facilities, in a manner that will serve the broadest spectrum of community needs and aspirations.

4. Ensure the availability of quality and affordable early childhood care and education.

Objectives

1. Use the capital planning process to identify and prioritize investments in facilities and infrastructure to ensure that Waterbury's rate of growth does not exceed the capacity of its infrastructure and facilities.

2. Where new development requires major new investment in public infrastructure and facilities, allocate the incremental investment costs to that new development rather than to existing residents and businesses.

3. Locate utilities, particularly water and sewer lines, and other facilities in a manner that will encourage clustered development and avoid strip development and sprawl.

4. Provide clean, safe, and sufficient water to areas currently served by public water systems.

5. Provide high quality educational facilities and opportunities for Waterbury residents of all ages.

6. Encourage the location of child care facilities in existing settlements, near residential clusters, schools, and along public transportation routes.

7. Provide effective fire protection, police protection, and emergency medical services for Waterbury residents and businesses.

8. Expand and improve Waterbury's public library facilities to better accommodate the increased demands for library services by Waterbury area residents of all ages.

9. Continue to manage Waterbury's solid waste in an efficient, affordable, and environmentally sound manner.

10. Provide a variety of recreational opportunities to Waterbury residents and visitors of all ages.

11. Preserve, enhance, and build recreational facilities and resources that support growing local demand.

12. Develop an integrated network of community trails and pedestrian ways that support both recreation and pedestrian access throughout the entire town and village.

13. Planning for, and use of, cultural facilities (in particular, schools, libraries, historical societies, and arts centers) should, at all times, be driven by an understanding of the central and multiple uses that these institutions serve in the life of the community. These functions include, among others:

» Educational programs for children and adults

» Provision of access to resources for learning such as books, the internet, etc.

» Child care

» Artistic activities, performances, readings, recitals, etc.

» After-school and summer programs (recreational, historical, naturalist, etc.)

Actions

Capital Planning

1. The municipality should continue the annual capital planning process in which future infrastructure and facility needs are identified and a fiscally responsible means for acquiring them is set out.

2. The Planning Commission, Development Review Board and other municipal officials will participate in appropriate state and local development reviews to enhance the municipality's ability to manage development in way that minimize impacts on public infrastructure and facilities.

3. The municipality should review the current system of assessing fees on new development and determine whether it is desirable and feasible to impose other special assessments or development impact fees.

4. The Planning Commission should explore possible amendments to Waterbury's land use and development regulations that would require new development to reduce or mitigate any additional burdens it places on municipal facilities, including roads, schools, recreation facilities, sewer, and water systems.

Utilities

5. Construction and operation costs for Waterbury's water system, sewer system, and solid waste costs should continue to be recovered with user fees.

6. Focus growth in designated growth centers by limiting municipal sanitary sewer service to these areas.

7. Adopt a sewer system reserve capacity allocation ordinance which reserves an appropriate amount of capacity for all types of desired future development, including industrial, commercial, and residential development.

8. Prior to any major extension of the sanitary sewer system, the municipality should conduct a study of the costs, impacts, and benefits of the extension.

9. Limit the use of private community sewer systems to those cases where it would further the goals and objectives in this Plan and support a pattern of development that conserves agricultural lands, open space and other natural resources, and fragile environments such as wetlands and steep slopes.10. Pursue making Waterbury Village a free WiFi zone.

10. Pursue activation of fiber optic cable and the associated telecommunication service in the village to support the economic viability of the downtown area.

Facilities and Services

11. Create a "master plan" for the development and maintenance of community and cultural facilities.

12. Support the Across Roads Center for the Arts (ARCA) efforts to create a cultural arts center for the Waterbury region and to facilitate its integration into the master plan identified in Action #12.

13. Evaluate whether Waterbury's land use and development regulations adequately address fire prevention and protection needs through the encouragement of fire ponds, hydrants, and adequate accessibility of roads and driveways.

14. Continue to expand recreation paths and pedestrian linkages.

15. Design and develop a master plan detailing an integrated pedestrian plan connecting all of Waterbury via safe routes for peoples of all ages.

16. Support efforts to conserve land and obtain rights of way to secure pedestrian ways on private lands.

17. Where appropriate, the municipality should work with the State of Vermont to improve recreational opportunities on state-owned land, especially with the improvement of the trail network.

18. Continue to participate in the Mad River Solid Waste Alliance as long as this is the most cost effective solid waste disposal option.

19. Continue to support community-wide recycling, explore programs for composting food and agricultural wastes, and use recycled products when possible.

20. Support a needs assessment by advocacy organizations, supported by local businesses, to evaluate quality early childhood care and education services, the economic impact on the Region, and how employers, public education and providers can work together to reduce the financial burdens on families and improve the salaries of teachers to a livable wage as a minimum.

21. Support the provision of health care services to Waterbury citizens through private and public dental care, medical services (including physical therapy, mental health care, and visiting nurses), and Waterbury Ambulance Service, Inc.

Sidebars:

Community facilities and services are essential to the function and enjoyment of our community. There are a variety of these facilities and services that are integral to Waterbury's diverse cultural and community life that are described in this chapter.

The chapter includes our schools and other educational facilities, cultural facilities such as our library, community organizations including the arts, health and social services, recreation facilities and services, public safety, and all types of utilities.

The plan identifies a set of actions that can be taken to support and expand these resources. The over-arching goal is for these facilities to be adequate to ensure the health and safety of our residents, employees, and visitors, and to improve the quality of life for everyone in the Waterbury community.

10. Local Government

10-1. Government Structure

The Town of Waterbury is a municipal corporation existing by and under the laws of the State of Vermont. The Town is governed by a five-member Select Board which typically meets twice a month. All meetings are open to the public and are televised on local cable.

Since 1968 Waterbury has had a municipal manager who is responsible for the daily operations of the town and the village. The town governs services and facilities that serve all community residents, including highway, fire, library, recreation, police, and planning programs. The Edward Farrar Utility District now owns all the assets formerly owned by the Village of Waterbury. The Utility District is under the direction of a Board of Utility Commissioners and is responsible for overseeing the public water and sewer systems and the two revolving loan funds, as well as the other physical and financial assets of the former village.

A Charter was approved by the voters of the former Village of Waterbury, creating the Utility District that received all property, assets and debts of the Village. The five-person Board of Utility Commissioners was composed of the former three Water and Sewer Commissioners joined by two former Village Trustee positions. The Utility District created by the Charter was named the Edward Farrar Utility District. Edward Farrar was a Village President and a Water Commissioner when he was killed in a sewer line construction cave-in at the head of Elm Street on Oct 4, 1904. Edward Farrar was chosen as the name of the Utility District to recognize his service and ultimate sacrifice in service to the residents of Waterbury.

The new charter that eliminated the Village of Waterbury and created the Utility District was approved by the state Legislature and signed by the governor during the 2018 legislative session. The changes took effect on July 1, 2018.

Waterbury has a planning commission, formed in 1988, and a municipal plan and zoning regulations that cover the entire town. The zoning regulations are administered by a Zoning Administrator, nominated by the Planning Commission, and a separate Development Review Board appointed by the Select Board.

After the Village of Waterbury voted to amend its charter with the resulting elimination of its police department, the town's select board appointed a committee to research options for the provision police services to the entire town. While the committee recommended a three-year contract with the Vermont State Police to allow for a full transition to a town-wide, six officer, local police force, the select board opted simply to enter into a three year contract with the Vermont State Police without making a commitment to move forward with its own local police department. The contract was approved by the town and the state and takes effect on July 1, 2018. According to the contract, the town will pay $92,000 per quarter to the Vermont Department of Public Safety. In return, the Vermont State Police will provide two troopers whose duties and normal work shifts will be dedicated solely to the Town of Waterbury. That will result in approximately 80 hours of police service to the town each week. The term of the contract is three years, running through June 30, 2021, but is subject to voter approval of the town's annual budget which is presented at Annual Meeting each March.

Municipal Civic Building. The town and village had shared municipal offices at 51 South Main Street in a house owned by the village, since 1983. The building was flooded and severely damaged by Tropical Storm Irene on August 28, 2011. Municipal services were then relocated to temporary space in the village fire station.

of Waterbury constructed a new municipal center to house the new municipal offices, municipal public library, and the history center. The new facility opened in January, 2016 and provides the town government with permanent, accessible, energy-efficient office space. It offers much-needed library space for books, computers, meeting/study space, and programs and an opportunity to ~~preserve and showcase~~ showcase and preserve Waterbury's historical treasures. One of the primary criteria for siting the new municipal civic building was that it be located in the downtown area of the Village of Waterbury.

The design and construction budget for the municipal center was approximately $5.7 million. Looking at the entire revenue stream of $5,703,230 that supported the building project, including furnishings and equipment. Municipal tax dollars and bonded indebtedness totaled $3,420,230. In addition, $1,050,000 was raised and contributed from the capital campaign of the Library and Waterbury Historical Society or from library reserves. Giving consideration to the $3,420,230 of municipal funds contributed to the project, $2,950,000 was the amount of bonded indebtedness approved by town voters. Over the 20-year life of the bond, Waterbury tax payers will pay $4,170,979 for the construction and debt service of this building, an average of $208,550 per year.

In addition to the $1,050,000 of funds deposited to the building fund from the capital campaigns and library reserves, additional amounts from the library and from the Friends of the Library totaling to more than the $233,000 were donated to the Municipal Building Operating Fund over a few years. The donations purchased equipment and furnishings for the facility and enhanced the landscaping of the grounds, which costs are all included in the $5.7 million cost for planning and construction of the building.

10-2. Financing Government

Tax Base. Waterbury depends largely on property taxes to fund local government. The grand list for the town now includes taxable real estate only, with no taxable personal property. Waterbury's 2018 Grand List totaled $767,253,900, an increase in value of 6% since 2008 or an average of a .06% increase per year over that 10-year time period.

Capital Improvement Program. Municipal budgets have varied significantly from year-to-year, largely as a result of bonding to cover capital improvements. A capital improvement program was established in 1996, funded initially through the issuance of a $600,000 debt, and $0.04 on the tax rate to generate revenues. The intent was to better schedule needed facility improvements, equipment and rolling stock replacements, and paving projects and reduce the need to issue debt for capital purchases and improvements,. As a result there have been fewer dramatic increases in budgets and associated tax rates in subsequent years.

Tax Stabilization Fund. In 1997, Waterbury voters approved the establishment of a tax stabilization fund using the $644,000 equity payment made by the Town of Duxbury when it bought into the Waterbury Elementary School when the Waterbury-Duxbury Union 45 was formed (see Chapter 9). Since the inception of the fund in 1997, $541,700 or about $25,800 per year, generated by interest, dividends, and capital gains have been

transferred to the general fund to reduce (current year) property taxes. At the end of 2017, the value of the fund was $934,930

As noted previously, the village The Utility District manages an Urban Development Action Grant (UDAG) revolving loan fund that was created by the repayment of the loan of a UDAG grant to Ben & Jerry's when its plant was built in 1984. The Utility District also has a Community Development Block Grant (CDBG) revolving loan fund that was created from the repayment of the loan of a CDBG grant to Pilgrim Partnership for Green Mountain Coffee Roaster's expansion in 1998.

Town Revolving Loan Fund. The town has a CDBG revolving loan fund that was created from the repayment of the same loan to Pilgrim Partnership for Green Mountain Coffee Roaster's expansion in 1998. This revolving loan fund has been used to help finance affordable housing and economic development planning and implementation projects.

10-3. Resident Satisfaction

The 2013 Community Survey asked Waterbury residents to review and rate their satisfaction with municipal government:

» 62% of residents surveyed rated their satisfaction with the overall quality of municipal government "good" or "excellent."

» 59% gave a "good" or "excellent" rating to being able to obtain access to information about community issues.

» 68% felt they were afforded ample opportunity to participate in community affairs.

Nevertheless, many felt there was room for improvement in the ways our municipal government provides for citizen's needs:

» Only 49% rated the value of services they received for their tax dollars "good" or "excellent,"and 21% were "unsure" whether they received adequate value.

» 48% gave a "good" or "excellent" rating to government's responsiveness to citizen concerns, but a full 25% of respondents said that they were "unsure" about the response of municipal government to citizen concerns.

» 20% of residents surveyed responded that they were "unsure" about governmental quality, suggesting that there are broader issues with municipal government that need to be addressed.

Some of these issues were outlined in individual comments submitted by survey respondents. Chief among these were recommendations for a merger of the town and village, including the merger of their separate government entities. Respondents also:

» Proposed specific changes to the ways that our municipal government interacts with its citizens.

» Commented on the ways municipal tax revenue was allocated.

» Praised town employees and volunteers.

Addressing the entirety of this section of the survey, one respondent wrote, “Our local government does a superb job with scarce resources. My only fears are that the town will take on more responsibilities than it has now and that we will allow Waterbury to become the provider of services to other communities without asking them to pay their share….”

In sum, then, the 2013 Community Survey revealed taxpayer satisfaction with municipal government proportionate to an evolving community undergoing a great deal of change as it struggled to recover from a natural disaster, implement its Long Term Recovery Plan, and envision the future. Comments may be read in their entirety in Appendix A.

10-4. Goals, Objectives and Actions

Goals

1. Increase cooperation and efficiency in the municipal government.
2. Sustain the services provided by the municipal center including the municipal offices, library and history center.

Objectives

Efficiency

1. Continue the consolidation of municipal boards and/or committees to increase cooperation, communication, and efficiency.

2. Continue to reduce the level of tax delinquency.

3. Consolidate and modernize municipal facilities and services.

Actions

Efficiency

1. Continue to develop an effective town-wide police force..

2. Continue to develop a comprehensive information management system to improve the availability and utility of municipal information.

3. Continue to develop other revenue sources as alternatives to the property tax.

4. Continue efforts to increase state payment-in-lieu-of-taxes to offset impacts of the state facilities in Waterbury.

5. Continue efforts to add new users to the public water and sewer system to help share the cost of operating and maintaining those systems.

Sidebars:

The over-arching goal of the local government for the Town and Village of Waterbury is to provide efficient, reliable, and cost effective service to our residents and businesses.

Over the past two decades many municipal departments, boards, commissions, and committees have been merged in order to provide more efficient service and oversight. The long-term goal of completely merging the town and village into one municipality is still desirable and would provide many benefits to the community.

As a result of Tropical Storm Irene there is an opportunity to develop a municipal civic building that will serve the community for many decades to come and will facilitate the provision of valuable government services.

Continue to pursue efficiencies of purpose and economies of scale throughout town and village government operations.

11. Land Use

The residents of Waterbury have consistently supported the over-arching planning goal to have development maintain the historic settlement pattern of compact village centers surrounded by rural countryside. Intensive development is encouraged primarily within the village areas and strip development along Route 100 and Route 2 is generally discouraged. Economic growth and higher density residential development is encouraged primarily in the Village of Waterbury and Waterbury Center village.

Development within the more rural areas of Waterbury needs to be appropriate and respect the natural, agricultural, and forest resources of these areas. Continued development of the land is inevitable, however it can be arranged on the land and designed in a way that respects the qualities that landowners and the community at large appreciate and value. A significant portion of Waterbury is conserved in state and municipal ownership and additional private parcels have been voluntarily conserved. As our community continues to develop and change over time it will be important to seek the conservation and protection of significant natural and scenic resources where possible.

11-1. Overview

Given the breadth and depth of this chapter, an overview of its organization is important. The chapter starts by outlining land use trends. Then existing settlement patterns are discussed with separate narratives for the areas of the Village of Waterbury and the portion of the Town of Waterbury that is located outside of the village. This is due in part because the Village of Waterbury is technically a separate municipality lying within the town that provides additional services. The most important village service that related to land use is the municipal wastewater system that facilitates higher density residential, and intensive commercial and industrial development.

The chapter continues with a discussion of the adjacent towns that are “over the line”. Existing land use regulations and the permitting process is outlined. This is followed by a discussion of desired patterns of development and the narrative for the required future land use plan. The goals, objectives, and strategies are organized by the geographic land use categories that correspond to those identified in the Future Land Use Plan.

11-2. Land Use Trends

Waterbury is becoming an increasingly desirable place to live, with its spectacular scenery, accessible recreation areas, excellent educational institutions, and growing village vitality. At the crossroads of Interstate 89 and Route 100, Waterbury is a gateway to Central Vermont tourist destinations such as Stowe to the north and the Mad River Valley to the south. The location also provides residents and visitors easy access to Burlington, the state’s largest city and Montpelier, the state capital.

Waterbury has an area of approximately 49.6 square miles (31,788 acres) of land, as calculated from current geographic information system (GIS) coverages Nearly 80% of Waterbury is forested. Less than 15% of the land remains as farmland, shrub land, or other undeveloped open space. Only 5.7% of Waterbury’s total land area

has been physically developed. Waterbury's pattern of development is generally typical of compact settlements surrounded by rural, less densely populated countryside with some areas of lower density suburban residential development (see Map 5-1). The Land Use / Land Classification Map 5-1 was created using interpretation of aerial photography, specifically the "orthophotos" done by the State of Vermont. This data is very useful but the acreages and corresponding percentages are approximate.

Figure 28. **Land Use / Land Cover**

	Acreage	% Total
Agriculture/ Open Land	2,855	9.0%
Cemetery	25	0.1%
Commercial	130	0.4%
Forest Land	25,065	78.9%
Government	65	0.2%
Industrial	54	0.2%
Institutional	13	0.0%
Mixed (Res & Comm)	14	0.0%
Outdoor Recreation	154	0.5%
Residential	1,156	3.6%
Roads & Parking Lots	179	0.6%
Schools	13	0.0%
Scrub/Shrub	663	2.1%
Surface Waters	979	3.1%
Wetlands	423	1.3%
Total	31,788	100%

Source: CVRPC GIS LULC Data, 2001.

There are two distinct settlement areas – Waterbury Village (including Colbyville) and Waterbury Center – which are characterized by concentrated residential development and mixed neighborhood commercial establishments and services. There is also, however, increasing development activity in outlying areas and along Waterbury's major transportation corridors. Residences are both scattered and concentrated in areas along Blush Hill, Gregg Hill, North Hill, Barnes Hill, Loomis Hill, Perry Hill, and Kneeland Flats. Meanwhile, businesses continue to seek locations along Route 100 toward Stowe and to a lesser degree along Route 2 toward Bolton.

Figure 29. **Number of Parcels by Use Category, 1991-2001**

	1991	2001	% Change
Residential 1 (< 6 acres)	983	1,207	22.8%
Residential 2 (6+ acres)	129	189	46.5%
Mobile Homes	146	135	-7.5%
Mobile Homes w/Land	54	51	-5.5%
Vacation 1 (< 6 acres)	58	42	-27.6%
Vacation 2 (6+ acres)	34	34	0.0%
Commercial	136	143	5.1%
Commercial Apartments	18	33	83.3%
Industrial	8	7	-12.5%
Utility/Electric	5	4	-20.0%
Utility/Other	2	0	-100.0%
Farm	4	3	-25.0%
Woodland	18	14	-22.2%
Other	48	2	-95.8%
Miscellaneous	227	175	-22.9%
Total	1,870	2,039	9.0%

Source: Waterbury Grand List Summaries

Parcel Trends. Residential properties are by far the predominant category of listed uses in Waterbury. Between 2001 and 2013, 137 new parcels were added to the grand list through the subdivision of land, an increase of 6.7%. (Table 11.2). The number of residences on both less than and more than 6 acres of land has continued to increase over the past 12 years. This appears to be due in part to the continued conversion of Seasonal 1 and 2 dwellings to year-round use. The increase in the number of single-family dwellings on large lots (6 acres or more) increased predominantly from the subdivision of farm and forestland outside the village for residential use. The increase in the number of commercial apartments may be attributed in part to the creation of affordable housing units in the Seminary Building in Waterbury Center and Ladd Hall / Main St. Apartments in downtown Waterbury, and market rate apartments in the Blush Hill Meadows development in Colbyville. The number of commercial and industrial parcels and the proportion remains largely unchanged since 2001.

11-3. Existing Settlement Patterns - Village

Waterbury Village currently occupies approximately 1,200 acres, or 1.9 square miles, is an incorporated municipality, which has annexed land from the town over time. The Winooski River, steep slopes and Interstate 89 bound the village to the east, south and west. To the north, the village extends under the

interstate overpass, along the Thatcher Brook and along Route 100 to Ben & Jerry's Ice Cream Factory and the golf course, the Country Club of Vermont, located off Guptil Road. All properties within the village are served by municipal water and sewer.

Many of Waterbury's historic, civic, institutional and employment resources are located within the village, including municipal offices, the elementary school, the post office, several churches, the village police station, a public library and museum, a fire station, public parks, the State Office Complex, Ben & Jerry's Ice Cream and Green Mountain Coffee Roasters. It is also home to just over 1,750 Waterbury residents living in 900 housing units.

Primarily located at the confluence of the Thatcher Brook and the Winooski River, early European settlers found the flat floodplain areas conducive to development yet major flood events throughout history have caused significant property damage. Today a large portion of the village that includes 109 structures is located with the 2013 FEMA NFIP special flood hazard area with a 1% chance of experiencing an annual flood (This area is more commonly referred to as the 100-year floodplain.).

The majority of the village's historic resources are also located in or near the floodplain. There are three distinct historic districts listed on the National Register of Historic Places within the village: Waterbury Village Historic District, Mill Village Historic District and Colbyville Historic District. Each contains an impressive collection of historically and architecturally distinctive structures. These areas are discussed further in the subsequent sections.

Historic Downtown. Primarily located at the intersection of Main Street (Route 2) and Stowe Street (former Route 100), Waterbury's historic downtown is characterized by several brick commercial blocks which date back to the late 1800s. The intersection is considered the traditional core of the village and town as a whole, with further retail, commercial and residential uses radiating outward along primary and secondary roads. It contains a high concentration of mixed commercial activity and contributes significantly to the village's historic and architectural character. Historic structures house a mix of uses, and are built up to the sidewalk to create a clearly defined pedestrian streetscape.

The historic downtown is located within the Waterbury Village Historic District, a primarily linear district located on two major axes, Main Street (Route 2) and Stowe Street, and on several secondary streets including Winooski Street, Randall Street, and Union Street. In a recent communication from the US Department of the Interior which oversees the National Register of Historic Places "a review of the conditions on the ground demonstrates that the buildings further along [South] Main Street do not differ in character, age, integrity from those within the listed district. It appears that a more appropriate boundary would continue south on South Main Street to Healy Court."

Prior to the construction of Interstate 89, Waterbury Village was Waterbury's core business district. The interstate and the opening of the interchange (Exit 10) in 1967, drastically changed traffic patterns and contributed to the economic decline of Main Street and Stowe Street businesses. As traffic volumes increased, attention–and new businesses–shifted northward along Route 100 toward Stowe.

During the 1990s the interest in Waterbury's Village led to the creation of the nonprofit corporation, Revitalizing Waterbury, Inc., and a number of ongoing downtown revitalization efforts. One accomplishment of downtown revitalization to date was the restoration of the Stimson-Graves Building on Stowe Street in 1993. In 2000, Waterbury began looking at options for state downtown designation under the Vermont Downtown Program. The purpose of the Vermont Designated Downtown Program is to bring resources to preserve and revitalize historic downtowns and create strong communities. This is realized through technical and financial assistance for the promotion of businesses and building repair and restoration.

In 2006, Waterbury's downtown district was approved as a Designated Downtown and shortly thereafter the Village Trustees approved the creation of the Downtown Design Review (DDR) Overlay Zoning District which follows the same boundary. The DDR District encompasses the properties along both sides of North and South Main Street from the train trestle to the northwest to almost Batchelder Street to the southeast, and into a portion of Pilgrim Industrial Park to the north. The Designated Downtown and the DDR does not include any properties currently within the State Office Complex.

The purpose of the DDR is "to protect and enhance architectural and historic resources within the district, to maintain and enhance property values, encourage a consistently high standard of design in new construction and renovations to support a pleasant, pedestrian-oriented village center, and strengthen the community's economic vitality and the downtown district's historic function as a center for commerce, industry, government, and housing." The DDR is made up of 2 sub districts: the Historic / Commercial Sub-district and the Mixed Use Sub-district. Under the current regulations residential uses are prohibited in the Mixed Use District.

In 2006, Revitalizing Waterbury (RW) purchased and rehabilitated the Victorian Italianate Central Vermont Railway Train Station. Located on Rusty Parker Park the historic train station underwent extensive renovations and today serves not only as an Amtrak Train Station but also the Green Mountain Coffee Roasters Café and Visitors' Center. RW has also been integral to the overall beautification of the downtown area, promoting downtown businesses, and planning for future economic development and infrastructure in the downtown area. One recent loss of an historic structure in the village was the removal of the Freight House/Station Lumber, an 1850s railroad warehousing and shipping depot, more recently used as a lumber yard. The property is under private ownership and the local permit processes required the applicant meet one of three criteria for the demolition approval.

Following the widespread flooding from Tropical Storm Irene in August 2011, the downtown business community suffered significantly. While many of the brick commercial blocks did not sustain direct flood damage a percentage of their patron base was and still is displaced. The State Office Complex sustained flood damage and as a result re-located over 1,300 employees to other offices around the state. The majority of those employees have re-populated the reconstructed State Office Complex.

Residential Neighborhoods. Waterbury Village includes a number of residential neighborhoods; these include historic Randall Street, Winooski Street, Union Street, Hill Street & High Street and Butler-Intervale-Prospect Streets. The Anderson Fields recreation area is located within the later neighborhood and the Thatcher Brook Primary School is located within the Stowe Street - High Street area of the village. The Hillcrest-

Grandview-Elmwood neighborhood (locally known as Wissel Mountain) is one of the more contemporary neighborhoods built in the mid-to late-1900s. It is located behind the Thatcher Brook Primary School. These neighborhoods are primarily single-family homes with some two-family homes and accessory apartments. This may be attributed to the fact the underlying zoning for most of these neighborhoods do not allow for multi-family housing.

There are a number of historic residences lining Main Street, many of which have been converted to multi-family, office or other commercial uses. Upper story apartments above commercial storefronts and a group home are also located within the downtown area. Additional residential neighborhoods within the village are located within the Mill Village area and several residential subdivisions are located on or off of lower Blush Hill.

Other Commercial Hubs. Other commercial areas located in the village include:

» Waterbury Square, the shopping plaza at the corner of South Main Street and Park Row.

» The area along North Main Street northwest of the I-89 interchange.

» The area along South Main Street at the corner of Demeritt Place.

» The area at the end of Foundry Street and Bidwell Lane.

The first three have developed in a more auto-oriented fashion with single story buildings set back from the road and prominent parking areas. These areas provide a range of products and services to both the traveling public and neighborhood residents. Under the current zoning these areas allow for a variety of residential and commercial uses.

The latter area, Foundry Street and Bidwell Lane, is an historic commercial/industrial cluster and incorporated into the fabric of the downtown area, is located next to the New England Central (formerly Central Vermont) rail line. It is comprised of several buildings, most of which are currently occupied with a mix of commercial uses including retail and business offices. One exception is the currently unoccupied Stone Shed, a 1901 granite shed that according to the National Register of Historic Places is a 'valuable vestige of the granite cutting industry'. Based upon results from the VHB Pioneer, 2009 Waterbury Downtown Study, the Stone Shed "has excellent potential for re-use" with very limited potential for residential use. Study participants expressed interest in converting the building into a community theater space. This area is currently within the Industrial Zoning District and within the Mixed Use Sub-District of the Downtown Design Review where limited public and semi-public uses are allowed.

Industrial. Originally historical industrial uses were located close to, or even integrated within existing settled areas yet in more recent history industrial uses have been segregated into specific zones. Over the past few decades a large area within the village on the other side of the railroad tracks south of Hill Street has become home to two industrial parks, Pilgrim Park and Grenier Industrial Park.

Pilgrim Park, currently comprised of four buildings, houses Green Mountain Coffee Roasters' large manufacturing facility and several other industrial and commercial entities. One of the largest undeveloped parcel (16.5 acres) within the village which is not is the floodplain is located within this industrial zoned area.

A design workshop was held in April, 2002, with professional planners, architects, business leaders, community leaders and land owners to develop potential development schemes for the undeveloped area. The conceptual scheme illustrated a high density, mixed-use development scenario for one of the key remaining parcels within the village. This area has been highlighted in a project of the Vermont Forum on Sprawl and the Vermont Business Roundtable to exemplify potential "smart growth" approaches to industrial lands in proximity to downtowns.

Similarly, based upon the analysis of the CVRPC Northwest Growth Study which the Town and Village of Waterbury conducted in 2006: "Waterbury has a somewhat of a dearth of developable commercial and residential sites within the village (in part due to floodplain issues) but a fair amount of viable land left in the Industrial zone. At some point, the town may want to consider switching some Industrial District land to a Downtown Mixed Use type of zone."

During the Downtown Designation process, these recommendations were realized in part. A portion of Pilgrim Industrial Park and other smaller industrially zoned parcels are located within the Mixed Use Sub-District of the Downtown Design Review Overlay District where some additional commercial uses are allowable. Yet, the majority of the undeveloped Pilgrim Park tract is not within the mixed used sub-district, but is solely within the Industrial Zoning District where residential uses are prohibited.

In 2010, a connector road from Pilgrim Park to the other industrial park, Grenier Industrial Park, was constructed as recommended in the VHB 2009 Waterbury Downtown Study. The Study "recognized the need to create a secondary access road from Main Street to Pilgrim Park" and that "with expansions at Green Mountain Coffee Roasters, the volume and intensity of truck traffic in Downtown Waterbury has increased …"

The other industrial park is Grenier Industrial Park where several commercial and industrial businesses are located. Future industrial expansion is fairly limited at this location due to existing development and geographic site constraints. Both of these areas are potentially served by the New England Central rail line.

State Office Complex. In addition to public buildings located along Main and Stowe Street, Waterbury Village is home to the Waterbury State Office Complex, which is located on the grounds formerly occupied entirely by the Waterbury State Hospital. Encompassing 47 acres, this historic complex incorporated a variety of government facilities, including the state mental hospital, a women's prison, the community college, the state emergency response center, laboratories, and offices for a number of state agencies and departments, including the Vermont Agency of Natural Resources. The complex served as Waterbury's primary employment center, and housed the largest concentration of workers (approximately 1,500) and parking, in the downtown.

Following the flood in August 2011, the complex sustained flood damage and workers were re-located to other offices outside of Waterbury. The majority of the campus is located within the floodplain. The state has since reconstructed the State Office Complex through an extensive redevelopment plan. To date many state functions have returned to the complex after it re-opened in the spring, 2016.

The reconstruction plan involved demolishing approximately 20 buildings, renovating and flood-proofing the historic core building and building a new 86,000 square foot office building in the rear of the historic structure. While some of the original state departments did not return, the Agency of Human Services has consolidated its state-wide staff on the campus and approximate 70% of the previous work force returned in 2016 and 2017.

The State Office Complex also divested some of the campus buildings by subdivision. A day-care center and a housing non-profit have acquired these available properties. At least two other existing buildings on the campus currently do not have any occupancy or use plans but are being retained for possible renovation or replacement and future state office use.

Currently, the majority of the State Office Complex property is located within the Village Mixed Residential Zoning District and to assist in the revival of the State Office Complex an Interim Campus Overlay District was created to facilitate the divestment process and the construction of the new office building. While the underlying districts allows for some commercial uses, there is significant interest among residents to allow for a variety of commercial uses of the State Office Complex as an effective step to manage future commercial development (Waterbury Survey Results, dated February 24, 2013). Tropical Storm Irene and its impacts on the State Office Complex highlights the need to anticipate changes of use for the historic campus.

Parks, Recreation, Open Space and Farmland. Many recreation opportunities are available within the village along with a couple of formal parks. Rusty Parker Park is the village's historic green and serves the community as a popular gathering place, including weekly farmers markets in the summer months.

The park, which is bounded by the train station building to the north and South Main Street to the south, has a rectilinear design which displays the characteristics of a traditional New England town green with diagonal paths and central gazebo. In addition to the gazebo, the park boasts an amphitheater, a Veterans Memorial, and a patio and memorial clock constructed in recent years by the Rotary Club.

The lawn in front of the historic State Office Complex on South Main Street also has the characteristics of a formal park. Lined with mature trees around the perimeter, the open lawn is a valuable historical element of the old State Hospital building and on occasion it hosts community events. Currently, these parks are located within the Village Mixed Residential Zoning District.

In 2012, the Pomegranate Center (a community-building organization), in collaboration with Tully's (a subsidiary of Green Mountain Coffee Roasters), offered assistance to construct a new community park and engagement center within the village. Through a public engagement process, a site in Pilgrim Industrial Park was chosen to build an outdoor gathering space.

Dacscomb Rowe Recreation Fields and Anderson Fields are both within walking distance of downtown. Dac Rowe is located within the floodplain at the confluence of the Winooski River and Thatcher Brook and provides the community with baseball, softball, and soccer fields. The fields also serve floodplain functions, allowing the river access to its floodplain in flood events. Anderson Fields hosts tennis courts, a Little League field, and an outdoor swimming pool and is located behind the post office within the Bulter-Intervale neighborhood. Currently these are within the Village Residential Zoning District. The Ice Center of Washington West is also a

popular recreation destination. The facility offers competitive ice hockey, figure skating, and public skating. The 40-acre property is owned by the village and majority of the site is within the floodplain. This site also provides access to the increasingly popular Perry Hill mountain bike trails to the north. This site is currently zoned for industrial uses.

The 60+/- acre cornfield behind the State Office Complex and Randall Street, and next to the Winooski River serves multiple functions: agriculture, recreation, open space and floodplain. The Cross Vermont Trail (a multi-purpose recreation trail which crosses the width of Vermont) follows the edge of the field and connects Winooski Street to the complex. This field is currently zoned as Conservation. The floodplain functions of this area will be improved upon as part of the complex's redevelopment proposal. Historic fill at the south end of the field will be removed allowing for increased floodplain connectivity. An additional area used for agricultural-like activities is the land currently dedicated to community gardens behind the library.

A five-acre parcel at the top of Hill Street Extension and Armory Avenue is an additional parcel owned by the town. That includes the Old Armory building that is used for equipment storage, and overflow parking for Thatcher Brook Primary School.

Mill Village. Located within Waterbury Village, Mill Village is a historic residential and commercial neighborhood or hamlet at the north end of Stowe Street on the north side of the interstate overpass. This historic district is listed on the National Register of Historic Places. The interstate overpass presents a physical boundary between downtown and this neighborhood; the village's municipal boundary further contributes to this areas defined location. Historically a few manufacturing mills were operational along the banks of the Thatcher Brook in this area, yet today only one mill building remains. This serves as the neighborhood's one commercial property, both in practice and allowable under the zoning regulations.

Residential development in this area is a mix of historic homes, which line Stowe Street and Lincoln Street and more contemporary residential development on East Street and Clover Lane. One of the last remaining large undeveloped parcels in the village is located in this neighborhood at the foot of Perry Hill Road and was recently permitted for a 26-lot Planned Unit Development Subdivision. Sidewalks along Stowe Street provide pedestrian access to downtown. The neighborhood also hosts the local Park and Ride lot, located on Lincoln Street where commuters may catch the Link Express bus which runs between Burlington and Montpelier.

Colbyville. This historic settlement north of Mill Village, on Route 100, is primarily centered around the Crossroad and Laurel Lane Intersection. Colbyville was first settled in 1788 and has historically supported commercial and industrial activity. Two falls (the upper and the lower) in the Thatcher Brook provided power for several mills and manufacturing operations through the 1800's. Historical records suggest that the Colby mills were probably the first large mills in Waterbury. At the current site of the Mobil Station stood a schoolhouse. In the late forties, the Colby Mansion was the Colby Private Hospital for the elderly; it is now renovated and used an office building.

While a collection of historic buildings define this historic district, as listed on the State and National Register of Historic Places, in recent years the area has evolved into more auto-oriented development in part to serve the traveling public as they exit the interstate and head northward along Route 100. Current uses within this

area include gas stations, two hotels (one of which is about to under go a major renovation and expansion), a 35,000 square foot grocery store, a microbrewery and the Ben & Jerry's Ice Cream Factory. A collection of retail and commercial uses are also located within this area. Most of Colbyville lies within the expanded village, and is served by municipal water and sewer.

Based upon results from the CVRPC Northwest Growth Study: The Town and Village of Waterbury, buildout results indicated that "somewhere between 70,000 and 400,000 square feet of commercial/industrial development could occur" in the Colbyville area. Residents have expressed concern about increased traffic congestion in this area, especially at the VT Route 100/Crossroad/Laurel Ln. intersection, and also cite the lack of pedestrian amenities. In 2006 a Bike and Pedestrian Master Plan was completed for the Colbyville area yet to date few recommendations have been implemented.

11-4. Existing Settlement Patterns - Town

The Town of Waterbury, like the village is an incorporated municipality and comprises 49.6 square miles, including the 1.9 square mile area of the Village of Waterbury . The majority of the town is located to the north and the west of the village. Waterbury Center is an unincorporated village within the town and many town residents reside in Waterbury Center. Limited parts of the town are served by the village water system but are not served by village wastewater that is only currently available within the limits of the Village of Waterbury.

Route 2. Along Route 2 northwest of the village is a mix of commercial and residential uses sandwiched between I-89 on one side and the Winooski River on the other. The entrance to the Mount Mansfield State Forest and Little River State Park is accessed off of Route 2 in this vicinity. Once open farmland, residential development in this area increased in the past four to five decades. Many homes in this area sustained significant flood damages following the 2011 flooding, and with the 2013 FEMA flood rate insurance rate maps now in effect, more properties are now within the regulated floodplain.

Limited commercial and industrial uses are also located along Route 2, as well as Waterbury's sewage treatment plant. The only other industrial zoned land outside the village is located here where there is some development potential. This area has a limited amount of service by municipal water. When asking residents where more commercial and industrial development should occur, Route 2 ranked highly. (2013 Survey)

Route 100. The Route 100 corridor is a 5.6-mile stretch along the state highway from Route 2 (Main Street) in Waterbury Village to the Stowe town line. Route 100 is a major feature of Waterbury as it is the primary access to the Stowe resort area and for many visitors it is their only experience of Waterbury. Many historically significant and architecturally distinctive structures are located along Route 100, particularly in Colbyville and Waterbury Center village. Several scenic views, including distant mountain peaks and broad expanses of open space, can be experienced while traveling along Route 100. The Shutesville Hill area in northern Waterbury has been identified as a significant wildlife crossing between habitat blocks to the east and west as shown on the Forest Resources and Wildlife Connectivity Map..

The Route 100 corridor in both Waterbury and Stowe has state and federal designation as the Green Mountain Byway. This designation recognizes the area's intrinsic values of scenic quality, and resources in the areas of culture, history, recreation, and wildlife.

Yet, Route 100 is being transformed from a rural, residential transportation route to a growing commercial strip. In 1996 Waterbury revised the zoning regulations for the Route 100 area to help promote better access management and protection of open space with commercial development. Yet, the CVRPC analysis indicates that the "current zoning may be reinforcing low density commercial sprawl." When asking residents where more commercial development should occur, Route 100 ranked as the lowest. (2013 Survey)

Several residential areas are accessed from various points along Route 100, and residents frequently find making left-hand turns onto Route 100 to be difficult and frustrating. As traffic volumes on Route 100 increase, so too will the pressure and degree of hazard of these intersections.

Waterbury Center Village. Waterbury Center is an unincorporated village within the town and is primary defined at the area along Route 100 clustered around the Waterbury Center Community Church, which is listed on the National Register for Historic Places. Waterbury Center is also listed as an historic district. Located approximately three miles north of downtown, Waterbury Center is characterized by a concentration of mixed uses dominated by Cold Hollow Cider Mill, one of Vermont's major tourist attractions. Businesses are primary located on Route 100 and two medium-density residential neighborhoods (Sunset Drive and Lakeview Terrace) are located on cul-de-sacs and are primary composed of single family homes.

Adjacent to the Route 100 area of Waterbury Center, is the area that surrounds the triangular park or green; it is one of Waterbury's earliest settlements. Defined by the traditional triangular green, at the intersection of Guptil Road, Maple Street and Howard Avenue, the village area includes the Waterbury Grange, post office, Maple Street Fire Station, and the Hope Davey Park recreation fields. Residential development is clustered at higher densities directly around the triangular common and radiate out at lowering densities.

Up until recently a general store located on the green served this neighborhood, yet it was recently converted to an apartment. Nearby is the Green Mountain Seminary, listed on the National Register of Historic Places, which once served as one of the town's graded school. In 2002, the seminary building was redeveloped into 14 units of affordable housing and two market rate apartments by the Central Vermont Community Land Trust and Housing Vermont. The restored Seminary Building also houses the Seminary Arts Center, and includes a reconstructed town Little League field on the site.

This area has potential for further residential and commercial development and is served by the village water system. Limitations on development include the following: the area is not served by the village wastewater system, and there are no pedestrian accommodations such as sidewalks or crosswalks. Obtaining village center designation through the State of Vermont would assist in accomplishing appropriate and dense residential and commercial development in Waterbury Center. This designation could assist in obtaining funding for needed infrastructure that would support future development in the village.

Based upon 2013 survey results residents would prefer to encourage more commercial development in this area versus along Route 100. Under the current zoning the area around the triangular green is split between three different zoning districts, which allow some minimal commercial uses. The zoning for this area should continue to be examined.

Rural Land and Residential Development. Historically, the outlying areas of town were farm and forest land. These areas also host a great percentage of natural resources including wildlife habitat and wildlife corridors, streams and wetlands. Today much of this area is characterized by moderate to low density residential development along town roads, interspersed by agricultural land, open fields and woodlands.

The working landscape is a very important aspect of the rural areas of Waterbury. This area contains nearly all of the town's active farmland, including two active dairy farms, sugaring operations, fruit orchards, Christmas tree plantations, and vegetable and flower farms. In addition to contributing to the economic prosperity of the town and village, these areas also provide scenic and cultural quality to the environment. There are actively managed woodlots and forested parcels that provide forest products such as saw logs, pulpwood, and firewood. Many parcels are in the state's Current Use Taxation program that requires active management for agricultural and forestry uses in exchange for a reduced value for property tax purposes.

Based upon past trends and anecdotal information, the subdivision of open land for large lot (2+ acre) residential development is, and will continue to be, increasingly common. The majority of new residential development is accessed from existing town highways or off private dead end roads. The Central Vermont Regional Planning Commission (CVRPC) analysis indicated that this outlying area holds the greatest development potential yet when surveyed, Waterbury residents had the least support for encouraging more residential development in areas outside village areas (2013 Survey).

Upland Forests and Ridgelines. By the end of the 19th century much of Waterbury had been cleared for timber and farms, yet by the end of the 20th century, much has been reforested. Currently, Approximately 79% of the town is currently forested land and only about 10% remains open. The majority of the forests are located at or above 1,200 feet in elevation as the land slopes upward toward the Worcester Range to the east or within the state's Mount Mansfield State Forest to the west. The majority of the forested area located above 1,200 feet in elevation is identified as Highest Priority Forest Blocks or Highest Priority Connectivity Blocks. These areas should be protected from development that will fragment the blocks and diminish their value for wildlife habitat. Waterbury's forests support a variety of ecological functions and recreational activities. The undeveloped forested mountainsides and ridgelines also contribute to the natural beauty of Waterbury.

Much of this land is currently within the Conservation Zoning District (minimum lot size, 10 acres) or Low Density Zoning District (minimum lot size 5 acres). These areas are desirable locations for homeowners as they provide house sites with stunning views and a rural atmosphere. In 2006, the town adopted the Ridgeline, Hillside, Steep Slope Overlay Zoning District which applies to land above 1,200 feet in elevation. The Overlay District requires applicants to present habitat studies, erosion control plans and visual analysis's to help protect natural resources for the areas that are above 1,500 feet in elevation.

As stated in the CVRPC study "a high percentage of existing and potential growth lies in the town's lowest density zones" and in recent years increased development such as land subdivisions and the construction of single family homes has contributed to forest fragmentation. The study goes on to state "very low density growth in these areas is likely to continue, absent any policy change. The town's considerable developable

acreage remote from public roads will no doubt receive some of this growth as the cost of private road construction becomes less of an obstacle to an increasingly affluent population."

Conservation and Recreation Land. A large portion of land within Waterbury is conserved by the State of Vermont and is open to the public for recreation. Additional conserved land is within private ownership and the town holds a small portion of conserved land in park and open space use.

The State of Vermont owns and manages 13,024 acres of forestland in Waterbury, which amounts to about 43% of Waterbury's total acreage. The portion of the Mount Mansfield State Forest that is in Waterbury totals about 12,435 acres. The forest surrounds Waterbury's largest body of water, the Waterbury Reservoir. Two state parks are located on the shores of the reservoir within Mount Mansfield State Forest: Little River State Park and Waterbury Center State Park. Little River State Park, accessed from Route 2 via Little River Road, hosts a camp ground and a network of multi-purpose recreations trails. Waterbury Center State Park is accessed off Route 100 in Waterbury Center and serves primarily as a day-use park with swimming and boating. A boat launch at the end of Blush Hill provides an additional public access to the reservoir.

The Waterbury portion of Putnam State Forest is in two parcels and totals 589 acres (reference Maps 2-1 and 4-1). The larger block is located adjacent to the Ice Center and includes an increasingly popular mountain bike trail network. The town and representatives from area bike clubs are in the process of a planning study to explore connecting this trail system with another large trail system to the north in Little River State Park and the mountain bike ride centers in Stowe.

The Department of Forests, Parks and Recreation has developed a forest management plan to manage its resources in Waterbury. The Department divides the forest into blocks that follow major geographic boundaries, defined by watershed areas and drainage divides, and a management plan has been written for each. Mount Mansfield State Forest is divided into four blocks: Blush Hill, Cotton Brook, Ricker, and Woodward Hill. Putnam State Forest is divided into the Burt Hollow and Perry Hill blocks. The plan for each block includes an inventory, goals, and implementation strategies. There are generally four aspects to state forestland management that the Department evaluates on an ongoing basis, including: promotion of recreation, protection of wildlife habitat, sound forest management and protection of natural and cultural features. The state makes a payment in lieu of taxes to the town for its holdings.

The town and village own three large parcels that are located outside the Village of Waterbury and are held for conservation, water supply protection, and recreation purposes. They include the Waterworks property just over the town line into Stowe, the Sweet Rd. well field, and Hope Davy Park.

Private conserved land is located in the northern area of Waterbury near the town line bordering with Stowe. Typically the conservation easements are held by either the Vermont Land Trust or the Stowe Land Trust. An additional 71 parcels with a total value of $22,061,400 are enrolled in the state's Current Use Program.

11-5. Over the Line

The impacts of development are not confined by municipal boundaries. Waterbury should be aware of how its land use and development policies may affect areas in neighboring communities over town and village lines.

Conversely, Waterbury should also pay close attention to the land use and development policies of adjacent communities to ensure that Waterbury is not subjected to unforeseen, adverse impacts from incompatible policies. Joint meetings with representatives from the adjacent towns may be beneficial to coordinate planning efforts, public infrastructure projects, such as transportation and utilities, and conservation projects.

Bolton. Just over the Waterbury line, Bolton, which is bordered by the Winooski River to the south and the Mount Mansfield State Forest to the north, is zoned Agricultural/Rural I and Rural II. The purpose of these districts is to maintain Bolton's rural character by providing for agricultural activities and low density residential development. Mobile home parks and limited commercial development, including garden centers or nurseries, day care centers, bed and breakfasts, convenience stores, and commercial golf courses, are allowed along Route 2. Bolton Valley's water supply source protection area lies partially in Waterbury, within the Mount Mansfield State Forest. The Bolton Town Plan also recommends an agricultural overlay district that has yet to be implemented in its zoning.

Stowe. As Route 100 leaves Waterbury's Route 100 District, it crosses into Stowe's RR2 District (Rural Residential-2 acres). The purpose of Stowe's RR2 District is to allow higher density residential development closer to available municipal services while maintaining the quality of the neighborhoods. In addition to a variety of residential uses, it allows for municipal and public facilities, commercial kennels or veterinary hospitals, public and private recreation facilities, resort and ski PUDs, gravel pits, and commercial research library and/or computer software service facilities. The zoning regulations for Route 100 in Waterbury should be reviewed and coordinated to the extent possible with the Stowe regulations to provide a reasonable level of consistency for development along Route 100 in the Shutesville Hill area near the town line.

Waterbury and Stowe are experiencing similar patterns of low-density residential development along other roads that cross the town line. Across from northeast section of Waterbury, where the village's water supply is located in Stowe, the area is comprised of a 5-acre residential district and public lands. The Stowe Town Plan is currently being updated, which may result in zoning changes in these areas.

Duxbury. Duxbury lies across the Winooski River from Waterbury, connected by Route 100/Route 2 and the Winooski River bridge. Most of Duxbury's border to Waterbury, on the western side of the Winooski River, is zoned Rural Agricultural District II. Currently, this area is primarily residential, although a large proportion is either in agriculture or undeveloped, and it provides a very scenic view from Waterbury's side of the Winooski. The towns share school facilities, including the Crossett Brook Middle School located in Duxbury, and similar interests in protecting the Winooski River corridor and sensitive upland areas of the Worcester Range. Duxbury has zoned the former State Farm parcel for high-density, mixed-use development, which could affect development and traffic patterns on Routes 100 and 2 leading into Waterbury.

Moretown. The area across the Winooski, south from the Smith Store Bridge, is one of two Moretown commercial districts. This district, if fully developed, could result in additional traffic along Routes 2 and 100. Development in this area should also be sensitive to the fact that it serves as a gateway into downtown Waterbury.

Middlesex. Middlesex meets Waterbury's eastern boundary high in the Worcester Mountain Range. This area is entirely forested; however, residential development and logging activity appears to be increasing on both sides of the range. The Middlesex side of the range is zoned for conservation, which allows for limited, low-density residential (10 acres/dwelling) development.

Figure 30. **Existing Zoning Districts**

Zoning District	Acreage	% Total
Village		
Downtown Commercial	23	0.07%
Village Commercial	69	0.22%
Village Neighborhood Commercial	7	0.02%
Village Mixed Residential	115	0.36%
Village Medium Residential	47	0.15%
Village Residential	337	1.05%
Mill	0.6	0.00%
Industrial	123	0.38%
Route 100	29	0.09%
Recreation	358	1.12%
Conservation	86	0.27%
Town		
Town Commercial	111	0.35%
Town Neighborhood Commercial	67	0.21%
Town Mixed Residential	280	0.87%
Medium Density Residential	3120	9.73%
Low Density Residential	4425	13.8%
Route 100	1041	3.25%
Industrial	137	0.43%
Conservation	8376	26.12%
State Forest	13312	41.52%

Source: Waterbury Zoning Coverage, CVRPC 2001

11-6. Land Use Regulations and Permitting Process

Zoning regulations for the town and village were first enacted in Waterbury at town/village meeting in March 1980, and were combined into one set of bylaws in 1994. They have since been updated on a regular basis, with the most recent changes and additions:

» 1993 – Planned Unit Development Regulations

» 1996 - Revised Route 100 Zoning District Regulations

» 2000 - Telecommunications Facility Regulations

» 2006 – Ridgeline, Hillside, Steep Slope Regulations and Overlay District

» 2006 - Downtown Design Review Regulations and Overlay District

» March 2011 - Updated Flood Hazard Regulations

» May 2012 - Interim Flood Hazard Regulations and Overlay District (expiration December 2013) – flood hazard regulations are a requirement of the National Flood Insurance Program.

» February 2013 - Interim Campus Regulations and Overlay District (expiration February 2015)

» April 2013 - Subdivision Regulations (and Waiver Provision) – at the time of adoption the town passed an accompanying ordinance to assert the determination to remain a one-acre town for the purposes of Act 250 Review for commercial and industrial development.

The zoning regulations include nine town zoning districts with 2 overlay districts and eleven village zoning districts with 4 overlay districts (Table 11.5?).

Village zoning districts reflect the pattern of more concentrated, mixed-use development that exists within the village. Town zoning districts, on the other hand, generally provide for much lower densities of development, with minimum lot sizes that range from one to 10 acres. Single family dwellings are a permitted use in all but the Industrial zoning district. The Route 100 district currently extends along both sides of Route 100 from Waterbury Village to the Stowe town line, interrupted only by the Town Commercial district, located in Waterbury Center. A variety of commercial uses, as well as single and multi-family dwellings, are allowed in this district.

A full-time Community Planner and a part-time Zoning Administrator serve the village and town in planning and permitting functions. In 2012, the municipality created a Development Review Board to replace the review functions once split between the Planning Commission and the Zoning Boards of Adjustment. The zoning regulations include provisions for several types of reviews, including site plan and conditional use reviews by the Development Review Board.

11-7. Desired Patterns of Development

One of the overarching goals of Vermont's Municipal and Regional Planning and Development law is "to plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside." [VSA24 §4302(c)(1)]. State policy developed by both the Agency of Natural Resources and the Agency of Commerce and Community Development encourages future growth within existing or new "growth centers". A "growth center" as defined by the state, is designed for and characterized by:

» A mixture of uses.

» A density that is higher than that found in other parts of the community.

» A circulation system that is conducive to pedestrian and other non-vehicular travel and that supports public transit.

» A design that includes public spaces which promote social interaction.

» A distinct organization around central places or focal points.

» A pattern and scale of development that reflects traditional patterns of compact villages and urban areas separated by open countryside and appropriate to the growth center's purpose."

The state has identified four types of growth centers: downtowns and the residential neighborhoods that serve them, traditional town centers, new or emerging growth centers, and existing and proposed industrial parks.

In November, 2000 the Waterbury Planning Commission completed a community assessment tool developed by the Vermont Forum on Sprawl (VFOS) called the Vermont Smart Growth Scorecard. This assessment evaluates the impact of sprawl within communities. As defined by the VFOS, sprawl is characterized by low density development outside compact urban and village centers, along highways and in rural countryside.

Results of the Smart Growth Scorecard demonstrated that the assets of Waterbury Village, with a mix of uses (commercial, residential, industrial and institutional) contribute to the town's "smart growth" development patterns. However, the town's current growth pattern, which is dominated by low density, scattered development, suggests that sprawl is becoming a problem in Waterbury, particularly along the Route 100 corridor.

In 2013 this planning assessment tool was updated by the Vermont Natural Resources Council. The Resilient Communities Scorecard can be used to help communities address topic such as scattered development and energy usage.

The Vermont Natural Resources Council website describes Smart Growth as "a pattern of land development that uses land efficiently, reinforces community vitality and protects natural resources. Smart Growth is about promoting development that is good for the economy, community and the environment. Key benefits of smart growth include the creation of diverse housing options; protection of farm and forest land; diverse transportation options and less dependence on the automobile; greater social interaction with neighbors; lower cost for public services resulting in reduced taxes; and a higher quality of life."

In 2009, in partnership with Revitalizing Waterbury and the Village and Town of Waterbury, Vanasse Hangen Brustlin Consultants prepared the 2009 Waterbury Downtown Study. The Study involved two public workshops and culminated in a final report which presented information on the following topics: Transportation Enhancements (for the Demeritt Place connector road), Adaptive Reuse Evaluation (for the Stone Shed), Tax Increment Financing District Assessment and a Downtown Master Plan. The most relevant recommendations from this study which influences land use include:

» Zoning strategies to prohibit or seriously limit non-retail uses on the ground floor within the core retail district of Stowe Street and Main Street.

» Continued work to develop recreation paths and connections including river access, especially on the State Office Complex property and extending to and connecting areas outside the village to the village core.

In the fall and winter of 2011, following the devastating impacts of Tropical Storm Irene in August 2011 FEMA helped coordinate an extensive public input process under the Long-term Community Recovery (LTCR) program to identify projects and initiatives to promote the rebuilding and revitalization of the community. The need for funding an Assistant Municipal Planner to increase the capacity of the municipality's Planning Department was identified as one of the LTCR projects.

In early 2013 the Planning Commission solicited assistance from the consulting firm, Place Sense, in preparing a community survey to gather input on the municipal plan update process. The survey asked a variety of questions regarding development, natural resources and services. What follows is an overview of survey results relative to desires patterns of development in Waterbury.

» Residential. The majority of respondents supported the development of high-density housing at the State Office Complex property as an effective step to manage future residential development. Respondents also supported allowing more multifamily family housing in a larger portion of the village.

» Commercial. The priorities that were identified for the most effective steps Waterbury could take to manage future commercial development are to allow a variety of commercial uses of the State Office Complex property, and attract new small businesses to Waterbury. In order to encourage more commercial development, the majority of respondents support promoting this type of development in Waterbury Village and along U.S. Route 2 west of the village.

» Industrial. The priority identified for managing future industrial development is to accommodate growth in existing industrial areas. The majority of respondents support encouraging more industrial development along Route 2 west of the village.

» Natural and Historic Resources. Respondents identified the following three most important resources to protect: wildlife travel corridors, historic buildings and scenic views. While floodplains did not rank in the top three, the majority of respondents believe that development in the floodplain should be regulated more strictly.

11-8. Future Land Use Plan

The over-arching goal of the Land Use Plan is to guide growth and development by reinforcing Waterbury's traditional pattern of concentrated settlement surrounded by rural countryside. This can be achieved by directing growth into areas most appropriate for development. The objective is not to prevent growth but rather to encourage "infill" development within currently developed areas and to support additional development in areas identified as "Growth Centers." This will allow the outlying areas to retain their general rural quality and functions while accommodating an appropriate quantity, quality and lower density of

residential development. The overall approach of the Land Use Plan is to concentrate the higher density, intense uses – commercial, industrial, and high density residential - in two growth centers.

Land Use Areas. Five land use areas are identified on the Land Use Maps (see Maps 5-2A, 5-2B). Growth and development in the future can be healthy for our community as long as it is appropriate for the given land use area. Future development should be limited to densities and uses that are in keeping with the identity of these areas and should be of a scale that is consistent with community goals. The land use areas as shown on the Land Use Maps are described below.

Mixed Use Commercial/Industrial Growth Centers. The current land uses in the mixed-use area reflect the fact that Waterbury is a regional employment center with a wide variety of uses ranging from industrial, commercial, retail and residential uses. The Mixed Use Growth Centers include portions of Waterbury Village, Waterbury Center and a section of Route 2. In the Mixed Use Growth Centers new development should be compatible with existing uses, adhere to smart growth planning principles and respect the integrity of historic structures. Sub areas within the growth centers include:

» Commercial and Industrial. Allowable uses are more flexible, including limited residential, and new proposals are reviewed based upon performance/impact standards rather than strict definitions. Large scale development contributes to the implementation of pedestrian facilities or other community facilities.

» Commercial and Residential. The true mixed-use zone allows for a variety of uses to accommodate for the changing ways entrepreneurs and craftspeople are managing small business.

The recommended strategies for the Growth Centers are included in the Goals, Objectives, and Actions at the end of this chapter.

Village Residential. These areas are located within Waterbury Village and Waterbury Center. They are characterized as almost exclusively residential areas with a combination of one-, two, and multi-family dwellings in Waterbury Village, and primarily one-family dwellings in Waterbury Center. In Waterbury Village lot sizes are typically small, generally ranging from one-quarter to one acre in size, while in Waterbury Center lots range from one-quarter to five acre and larger. These areas are supported by public sewer in Waterbury Village and on-site systems in Waterbury Center.

These Village Residential Areas are in the Growth Centers Overlays and higher density and in-fill residential development is desirable. Recommended strategy:

» Consider amending the Zoning Regulations to allow multi-family housing units in this entire area and greater density for single and duplex units.

Route 100 Corridor. The land uses in the Route 100 Corridor are currently a mix of scattered commercial and residential uses punctuated by Waterbury Center Village. Future land uses and the associated development should be clustered to preserve and enhance views and vistas, protect open space, and encourage land-based and agricultural businesses. Recommended strategies:

» Review and amend the current zoning regulations to encourage the appropriate clustering of development and the preservation of open space in conjunction with the development.

» Work with landowners and citizen groups to voluntarily conserve scenic and sensitive natural areas along Route 100.

» Work closely with the Vermont Agency of Transportation to limit and combine access points on Route 100 for proposed and existing development.

» Create a "master plan" of the Route 100 area with landowner involvement that would include an inventory of the existing natural and scenic lands, designation of expanded and proposed development nodes, and preferred development scenarios for growth nodes.

Rural Residential/Agriculture. The current land uses within the area are predominantly scattered low density residential development, with some viable agricultural uses. Future land uses should protect natural resources, preserve and promote land based agricultural and horticultural businesses, and encourage cluster and conservation planning principles for new residential development. Recommended strategies:

» Provide incentives and education to promote site-sensitive lot configurations including clustering through planned unit developments.

» Identify important agricultural/forestry/natural resource lands through the LESA/FLESA program or creation of a town open space plan, to help set priorities for non-regulatory action such as promoting land use taxation where appropriate, active management of the working landscape for forestry and agriculture, and land conservation through the voluntary purchase or donation of development rights and conservation easements.

» Consider instituting a town policy limiting curb cuts on town roads and encouraging curb cuts that serve multiple lots.

Forest. The current character of this area is upland forests and ridgelines, conservation and recreation land.There is a very limited amount of agricultural lands at the moderate to lower elevations. While some residential development is located within this area, the majority of the land is in large private parcels with significant areas of forest land in state ownership. Future land uses of private land should promote land conservation, sound forestry and wildlife management, and appropriate recreation activities with limited residential development that respects all of the above. Recommended strategies:

» Class 4 roads serving these areas should either be continued as Class 4 or downgraded to legal trails where feasible, and should generally not be upgraded to Class 3 standards.

sites with the least amount of natural resource and topographic constraints including those that have a minimal amount of clearing within forest and connectivity blocks and minimize the impact to the values of the area listed above.

» Appropriate uses such as forestry, hunting, other passive recreation activities, and wildlife habitat conservation should be encouraged through incentive programs, land conservation as part of planned unit developments, purchase of development rights and conservation easements, and education.

» Utilize zoning and subdivision regulations to continue limiting development on slopes exceeding 25%, all highest priority forest and connectivity blocks above 1,200 feet in elevation, all other lands above 1,200 feet in elevation, and all prominent ridgelines and hilltops.

» Reduce the impact of development in upland areas and steep slopes by developing siting standards and permissible uses for ridgeline areas and hillsides.

» Explore conservation and regulatory techniques, such as the transfer of development rights (TDR), and work with conservation entities, such as land trusts, in order to keep important lands open while providing the land owner with fair and equitable compensation.

11-9. Goals, Objectives and Actions

Also see recommended strategies listed in text under Future Land Use Plan.

Goals

General

1. Guide future growth and development by reinforcing Waterbury's traditional pattern of concentrated settlements surrounded by rural countryside.

Growth Centers

2. Continue to examine and consider further revisions to the boundaries of the currently mapped Growth Centers to determine areas for new higher-density residential, commercial, and industrial development, including infill.

3. Ensure that new development and re-development is compatible with existing uses, adheres to smart growth planning principles, respects the integrity of historic structures, and enhances existing development.

Route 100 Corridor

4. In the Route 100 corridor, future land uses should accommodate clusters of development while preserving and enhancing views and vistas, protecting open space, and encouraging land-based and agricultural and horticultural businesses.

Agricultural and Rural Residential Areas

5. In the Agricultural and Rural Residential area, uses and any associated development should protect natural resources, preserve and promote land based and agricultural/horticultural/forestry businesses and uses, and encourage cluster and conservation planning principles for new residential development.

Forest Areas

6. The forest area should primarily be devoted to forestry and passive recreation, and other land conserving uses. Most of this area should remain undeveloped, or developed for compatible residential use.

Objectives

General

1. Ensure that new development is compatible with and does have an undue adverse impact on Waterbury's public services and infrastructure, transportation safety and mobility, and natural and scenic resources.

2. Ensure that planning and permitting processes are applied fairly, consistently and in a timely manner.

3. Ensure that the Zoning and Subdivision Regulations promote the goals and all other aspects of this plan.

Growth Centers

4. Promote a variety of mixed uses and higher density development.

5. Retain and develop civic buildings and uses within the Growth Centers.

6. Encourage new development in specified growth centers in a manner that retains Waterbury's unique culture and image.

7. Maintain and develop a public water and sewer system consistent with the goals, objectives, and actions identified in Chapter 9.

8. Ensure that financial incentives are available for development within the Growth Centers.

9. Encourage and facilitate multi-modal transportation in the Growth Centers, including the provision and maintenance of adequate pedestrian and bike facilities.

10. Explore and encourage the use of shared and innovative on-site septic systems in the area of Waterbury Center as a way to facilitate higher density is encouraged.

11. Maintain and enhance all existing Historic Districts.

Route 100 Corridor

12. Pursue access management strategies for reducing turning movements along Route 100, improving overall circulation patterns, and reducing traffic congestion.

13. Pursue funding for improvements to Route 100 in Waterbury Center, in order to improve vehicular and pedestrian safety and mobility and to enhance commerce and tourism.

14. Evaluate whether development regulations in the Route 100 District are addressing the goals of the Plan and amend as necessary.

Agricultural and Rural Residential Areas

15. Cluster development to the extent possible to minimize the impact on significant natural resources and scenic lands.

16. Curb-cuts and strip development along town roads will be effectively controlled by encouraging single curb cuts serving multiple residences wherever possible.

17. The overall density of new development will be limited in order not to overburden the capacity of the existing road network or place undue burden on the town's ability to provide road maintenance and other public services.

18. The regulatory framework should be conducive to thriving yet compatible home occupations in this area.

Forest Areas

19. Development in areas with prominent landscape features such as ridgelines, hilltops, and steep slopes should be minimally visible as viewed from public roads.

Actions

General

1. Review and amend as necessary the zoning and subdivision regulations to implement the goals and objectives of this plan.

2. Identify areas that are suitable for public uses, including public buildings, park and recreation areas, green paths, streets, and other facilities.

3. Develop administrative and board procedures that ensure that development review and all other zoning and planning processes are transparent and open to the public.

4. Investigate and consider developing an Official Map.

5. Develop and adopt official Rules of Procedure for the Planning Commission.

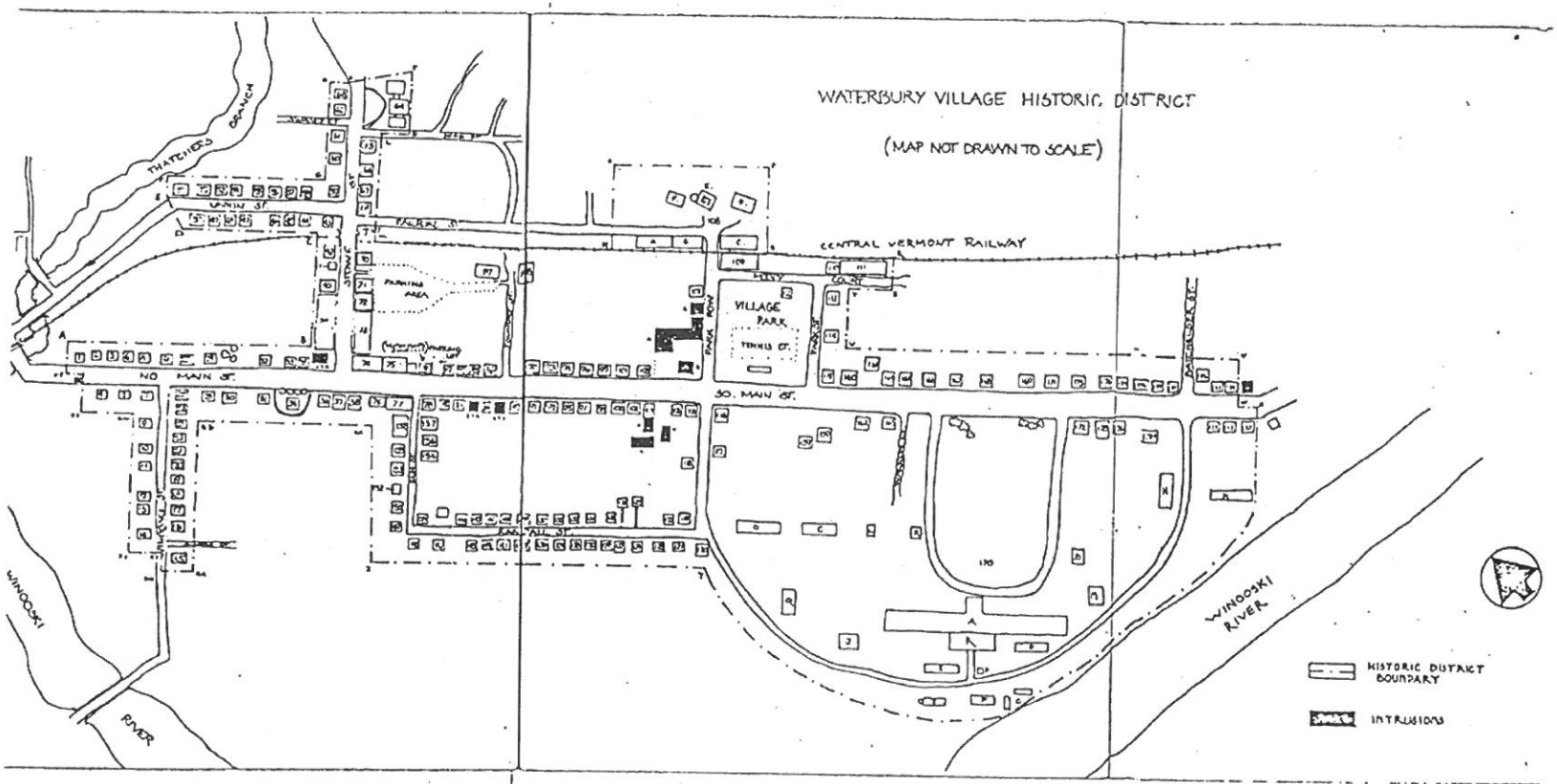
6. Review and update the Special Flood Hazard Area regulations utilizing the most recent data and consider the impacts of climate change in making land use decisions.

Growth Centers

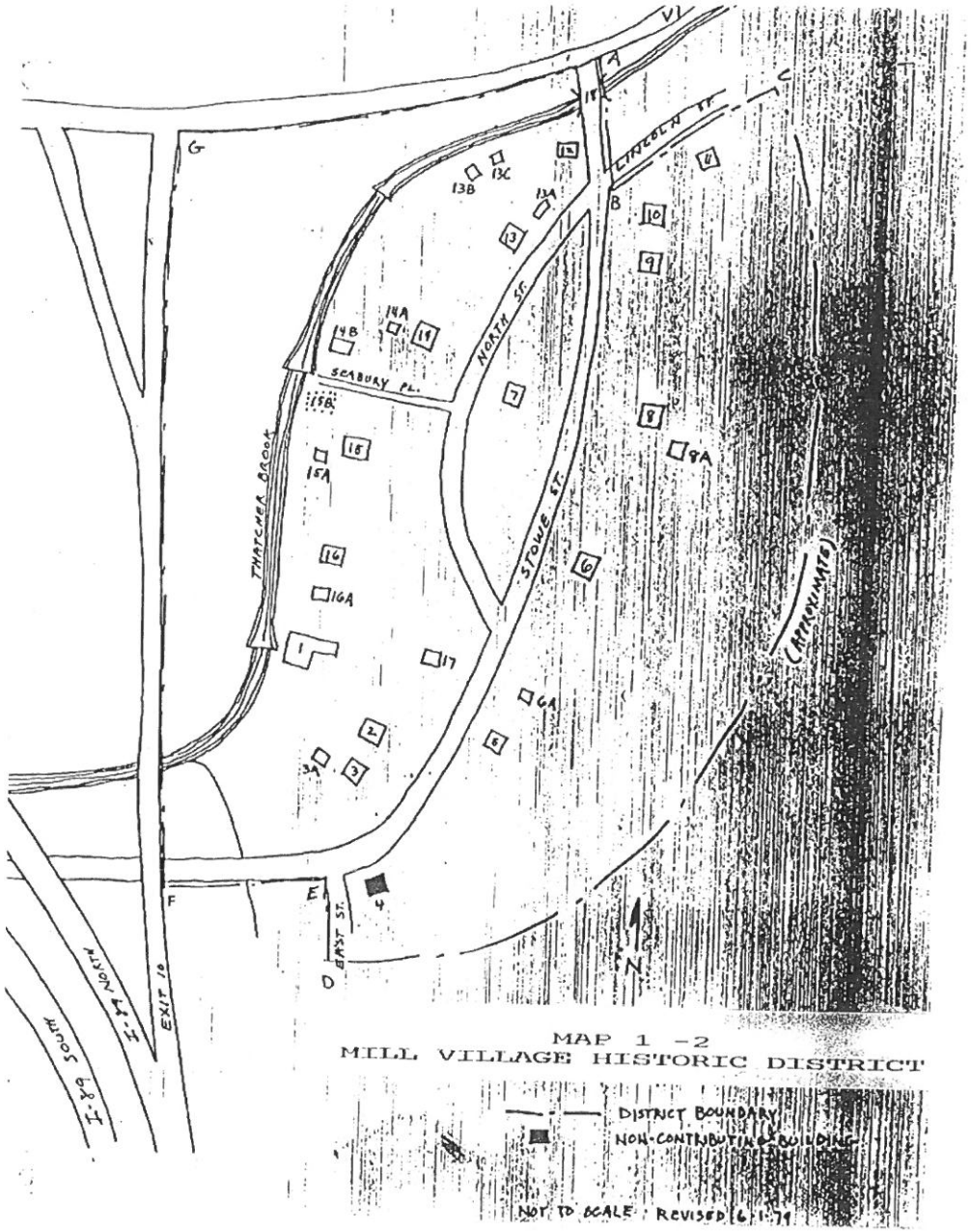
7. Expand the Waterbury Village Historic District to include additional significant contributing structures.

8. Enroll the area of Waterbury Center village along route 100 in the State of Vermont's Designated Village Center Program in order to access planning and financial incentives.

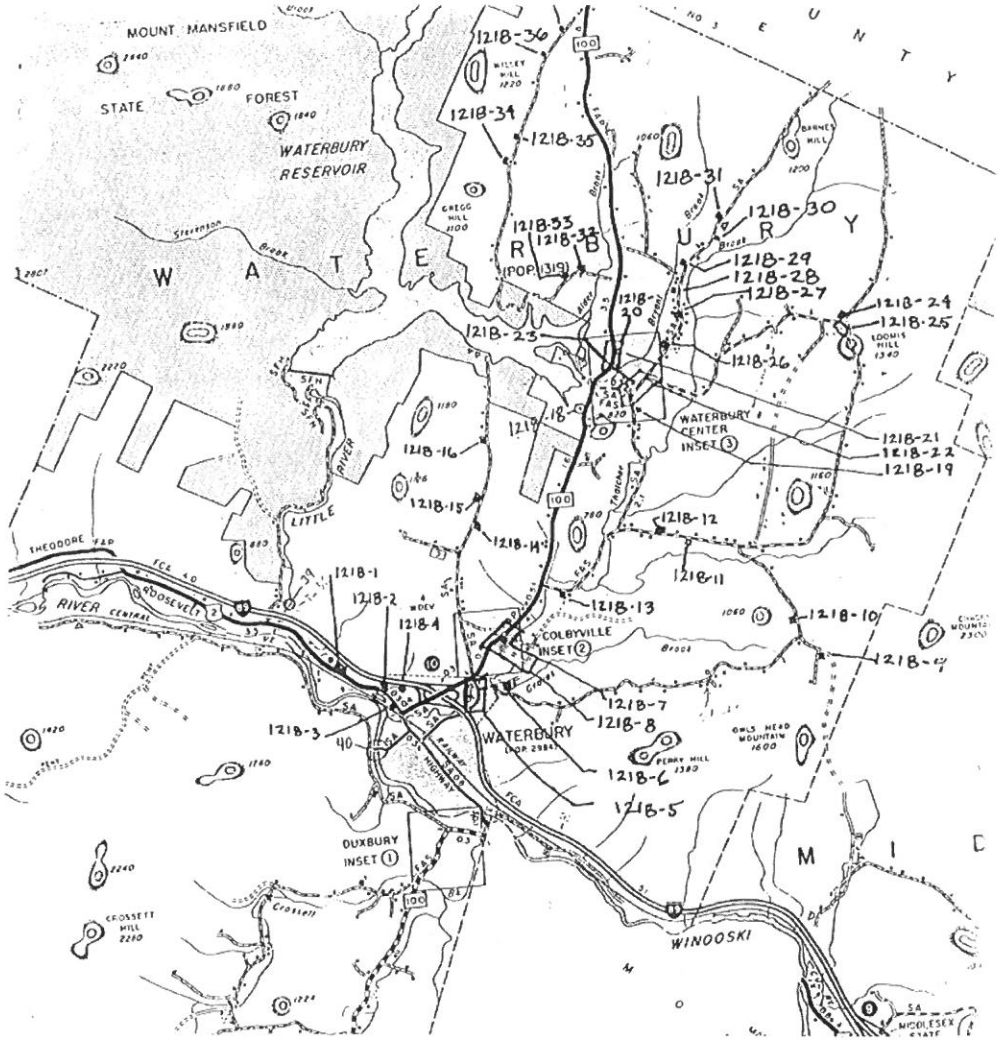
9. Consider requiring large commercial or industrial development to contribute to an infrastructure fund or require developers to build pedestrian (or other) community facilities and amenities.



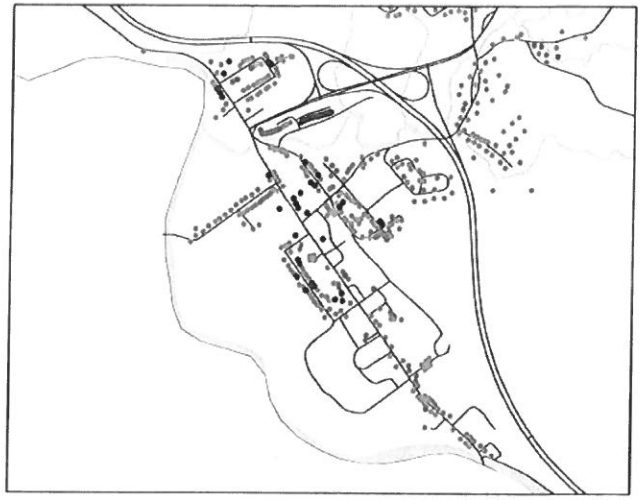
MAP 1 -1
WATERBURY VILLAGE HISTORIC DISTRICT



MAP 1 -2
MILL VILLAGE HISTORIC DISTRICT



MAP 1-3
HISTORIC SITES and STRUCTURES



Distribution of Existing Residential Buildings

Legend

Housing Points
By E911 Type and Number

- COMMERCIAL W/RESIDENCE
- CAMP
- MULTI-FAMILY DWELLING
- MOBILE HOME
- SINGLE FAMILY DWELLING

Roads
Rivers, Lakes, and Ponds
Streams

Map 1-4

0 0.5 1 2 3 4 Miles

Source:
Housing Units: E911 Esites 2013
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
N:\Towns\Waterb\TownPlan\Existing Housing Units 2013.mxd

Data is only as accurate as the original source materials.
This map is for planning purpoes only.
This map may contain errors and omissions.

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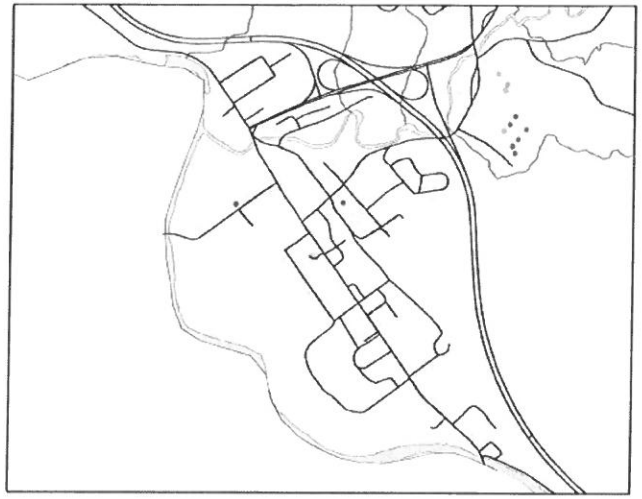

Distribution of Recent Residential Development

Legend

Housing Growth

- 2010-2013
- 2004-2009
- 1999-2003
- Prior to 1999

Roads

Rivers, Lakes, and Ponds

Streams

Map 1-5

0 0.5 1 2 3 4 Miles

Source:
Housing Units: E911 Esites 2013
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
N:\Towns\Waterb\TownPlan\Existing Housing Units 2013.mxd

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Future Housing Distribution Maps - Growth Centers, Map 1-6

VILLAGE OF WATERBURY GROWTH CENTER:	
Mixed Use: Commercial/Industrial	(25-35)
Village Residential	(40-55)
Rural Residential/Agricultural	(25-35)
SUBTOTAL:	(90-125 units)
WATERBURY CENTER GROWTH CENTER:	
Mixed Use: Commercial/Industrial	(10-14)
Village Residential	(20-28)
SUBTOTAL:	(30-42 units)
AREAS OUTSIDE GROWTH CENTERS:	
Route 100 Corridor	(20-27)
Rural Residential/Agricultural	(90-120)
Agricultural/Forestry/Conservation	(15-30)
SUBTOTAL:	(125-167 units)
TOTAL IN ALL AREAS:	(250-334 units)

Legend

Zone
- Agricultural/Forestry/Conservation
- Route 100 Corridor
- Rural Residential/Agricultural
- Village Resident
- Mixed Use
- Growth Center Village Area
- Waterbury Parcels

Roads
- Paved Public Roads
- Unpaved Public Roads
- State Forest Highway
- Paved Private Roads
- Unpaved Private Roads
- Interstate
- Rivers, Lakes, and Ponds
- Streams

0 0.2 0.4 0.8 1.2 1.6 Miles

N

Source:
Parcels: Waterbury, CVRPC 2011
Waterbury Future Land Use: 2002
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
Path: N:\Towns\Waterb\TownPlan\Future Land Use- village-table.mxd

Data is only as accurate as the original source materials.
This map is for planning purpoes only.
This map may contain errors and omissions.

CVRPC

Future Housing Distribution Maps - Town Map, Map 1-7

VILLAGE OF WATERBURY GROWTH CENTER:	
Mixed Use: Commercial/Industrial	(25-35)
Village Residential	(40-55)
Rural Residential/Agricultural	(25-35)
SUBTOTAL:	(90-125 units)
WATERBURY CENTER GROWTH CENTER:	
Mixed Use: Commercial/Industrial	(10-14)
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Rural Residential/Agricultural	(90-120)
Agricultural/Forestry/Conservation	(15-30)
SUBTOTAL:	(125-167 units)
TOTAL IN ALL AREAS:	(250-334 units)

Legend

Zone	Roads
Agricultural/Forestry/ Conservation	Paved Public Roads
Growth Center	Unpaved Public Roads
Route 100 Corridor	State Forest Highway
Rural Residential/Agricultural	Paved Private Roads
Growth Center	Unpaved Private Roads
WaterburyParcels2011	Interstate
	Rivers, Lakes, and Ponds
	Streams

0 0.5 1 2 3 4 Miles

Source:
Waterbury Town Land Use: 2002
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
Path: N:\Towns\Waterb\TownPlan\Future Land Use Town- table.mxd

Data is only as accurate as the original source materials.
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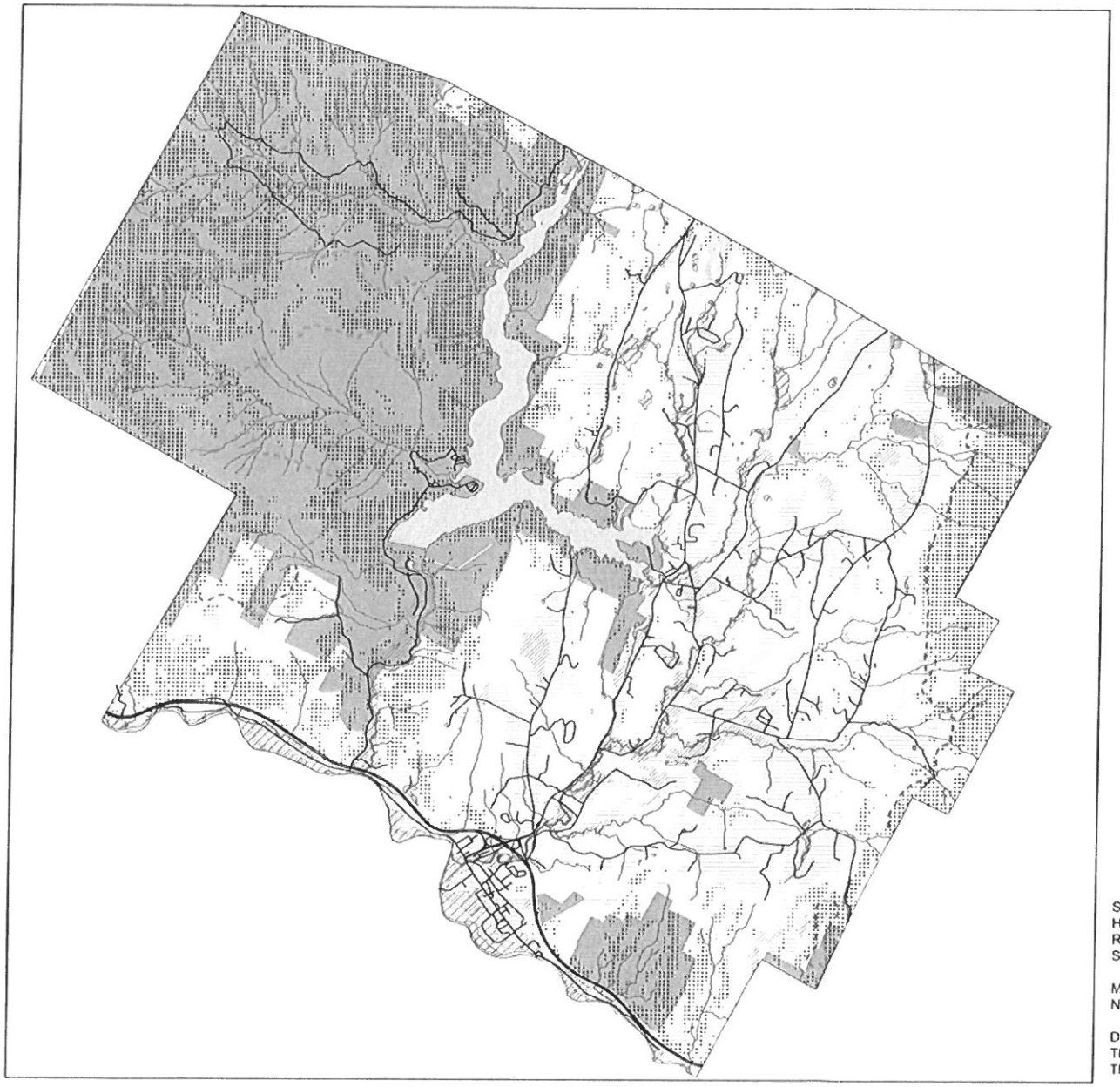

Natural Features

Legend

- Roads
- 1500 Foot Contour
- 2500 Foot Contour
- Rivers, Lakes, and Ponds
- Streams
- Class 2 Wetlands
- Special Flood Hazard Area (100 Year Flood Zone)
- Slopes Greater Than 25%
- Prime Agricultural Soils
- Statewide Agricultural Soils
- Public Lands
- Vermont Land Trust

Map 2-1/2

0 0.5 1 2 3 4 Miles

Source:
Housing Units: E911 Esites 2013
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
N:\Towns\Waterb\TownPlan\Existing Housing Units 2013.mxd

Data is only as accurate as the original source materials.
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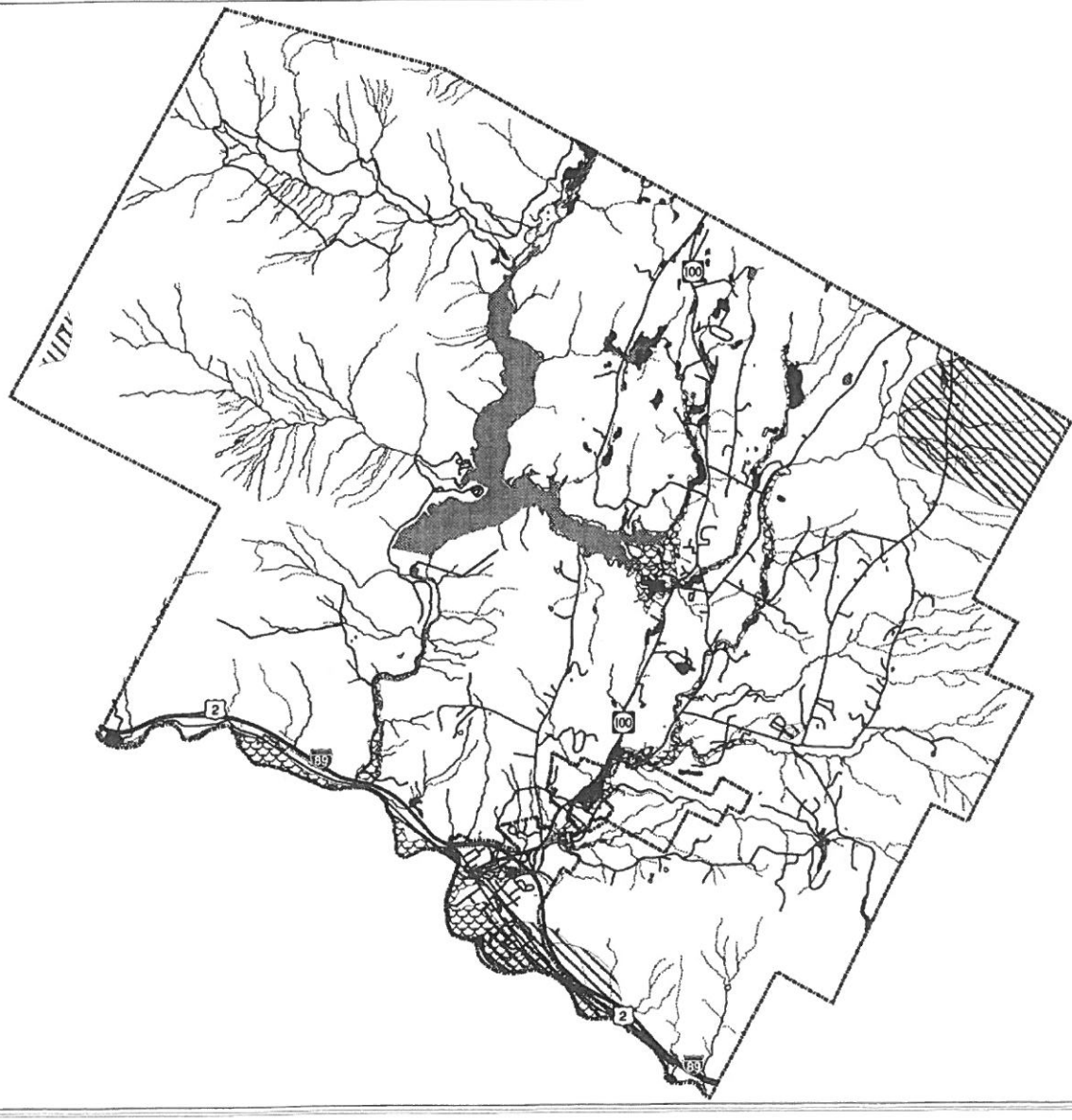

WATERBURY
WATER RESOURCES

- Intermittent Stream
- Perennial Stream
- Lake/River
- Wetlands
- 100 Year Floodplain
- Well-Head Protection Area
- Village Boundary
- Town Boundary
- Roads
- Railroads

1 0 1 2 Miles

N

SOURCE:
Wetlands: USFWS NWI Data, 1:24000, 1992.
Well-Head Protections Areas: SPAs for groundwater sources, 1:24000 USGS Quadrangles, VANR-DEC-Water Supply Division and VT Dept. of Health, 1998.
Flood Plain: FEMA Q3 Data, 1996.
Surface Waters: CVRPC Surface Waters Data, 1:5,000, 1995-96.
Town Boundary: USGS Topographic Map, 1:24,000.

Map Created 10-3-2002 by W.R.Toussaint, CVRPC

Data is only as accurate as the original source materials.
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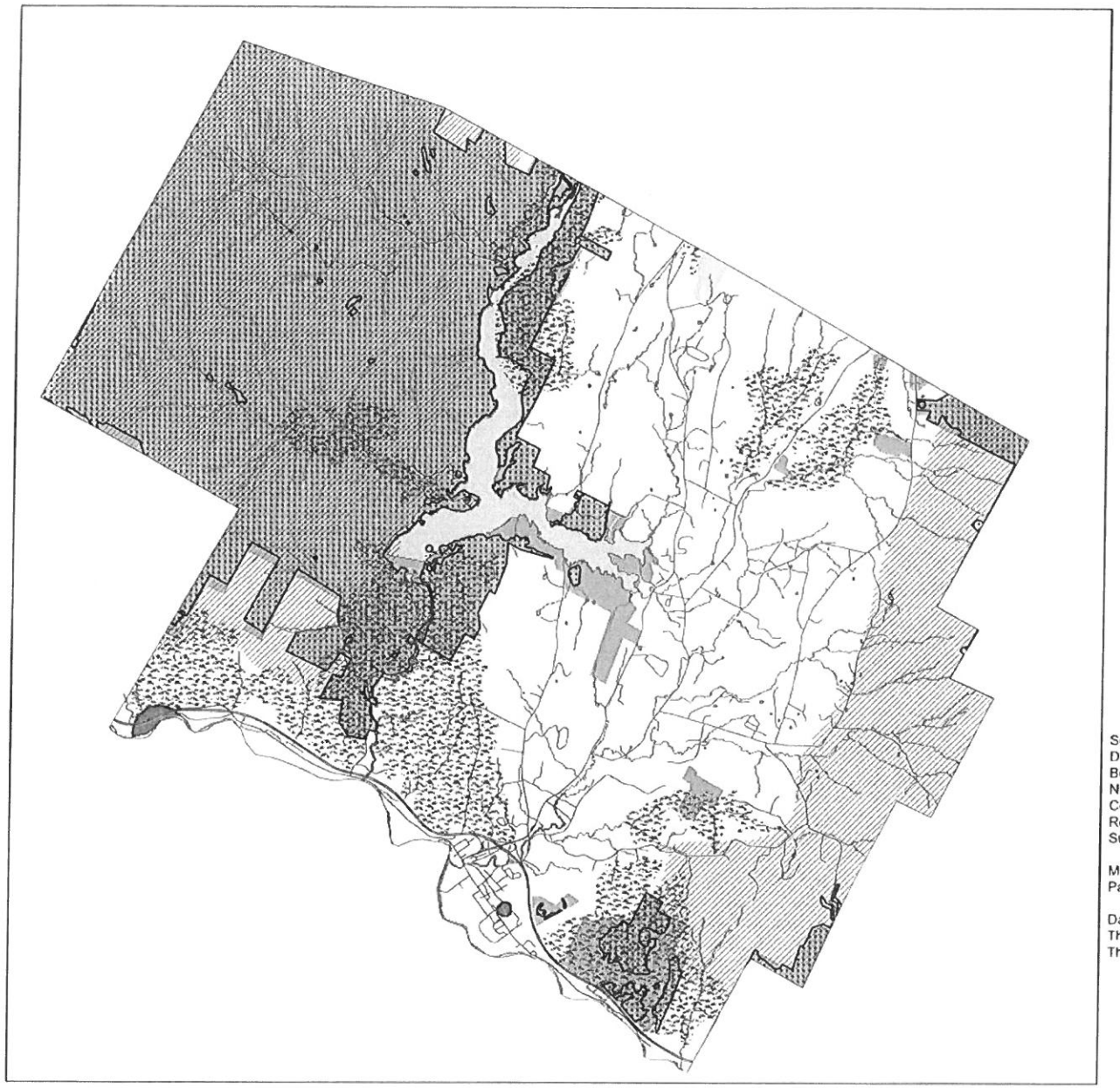
GIS

Map 2-3



WATERBURY
WILDLIFE RESOURCES

Legend

- Deer Wintering Yards
- Bear Habitat
- Roads
- Rivers, Lakes, and Ponds
- Streams
- Public Lands
- Vermont Land Trust

Natural Heritage Sites (Significant Natural Communities, Rare, Threatened, and Endangered Species)

- Animal Species
- Plant Species
- Significant Natural Community

0 0.5 1 2 3 4 Miles

Source:
Dear Wintering Yards: VT ANR 2010.
Bear Habitat: VT ANR 1989.
Natural Heritage Sites: Vermont Nongame and Natural Heritage Program and VT ANR 2013.
Conserved Lands: Vermont Conserved Land Database
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
Path: N:\Towns\Waterb\TownPlan\Wildlifee Resources.mxd

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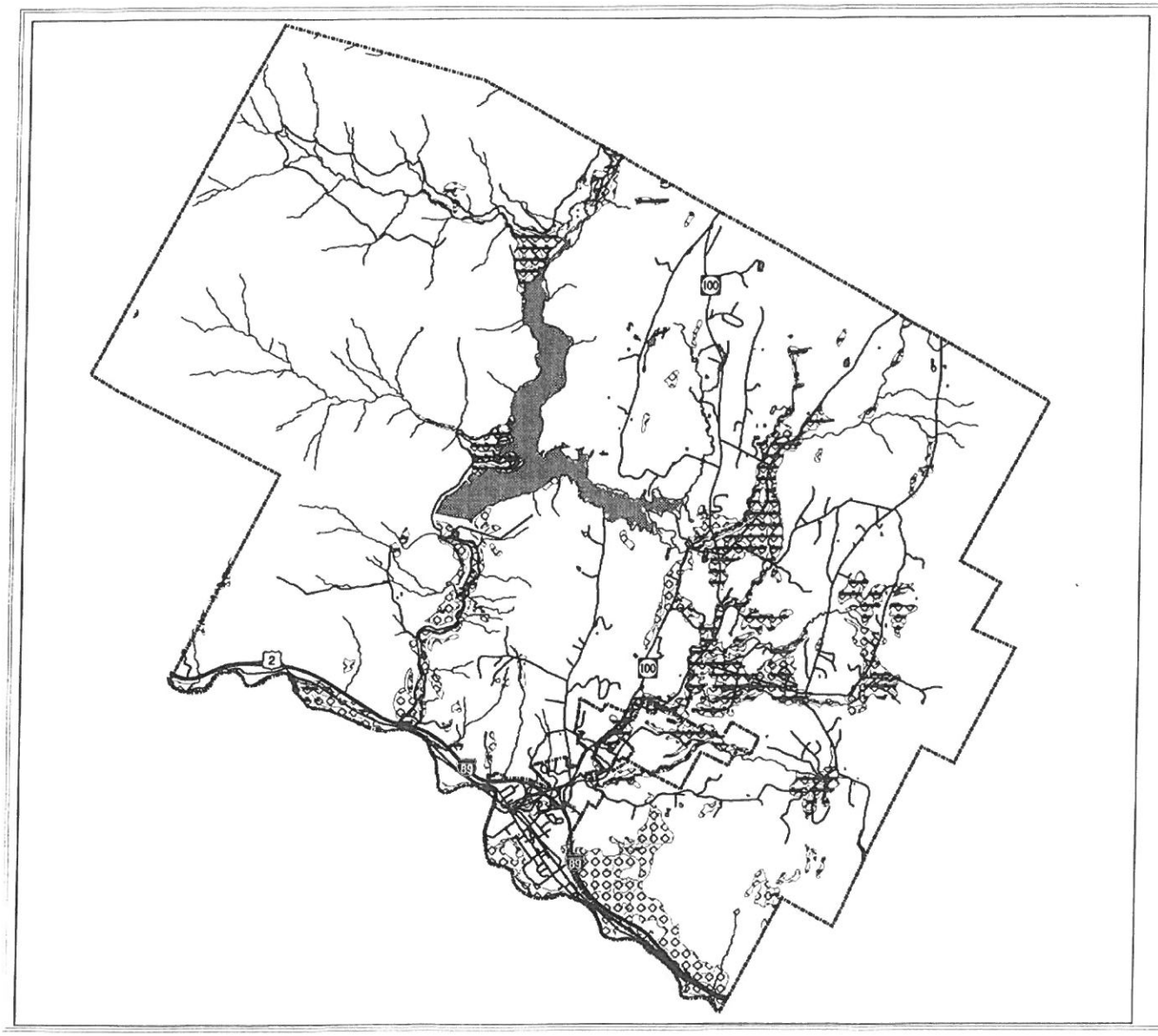
CENTRAL VERMONT REGIONAL PLANNING COMMISSION

Map2-4



WATERBURY
MINERAL RESOURCES MAP

Potential Source
- Sand
- Gravel
- Lake/River
- Perennial Stream
- Town/Village Boundary
- Roads
- Railroads

1 0 1 2 Miles

N

SOURCE:
Soils Data: Optically Scanned from 1:20000
USDA-NRCS soil's maps, 1992.
Surface Waters: CVRPC Surface Waters Data,
1:5,000, 1995-98.
Town Boundary: USGS Topographic Map, 1:24,000.

Map Created 10-31-02 by W.R. Toussaint, CVRPC

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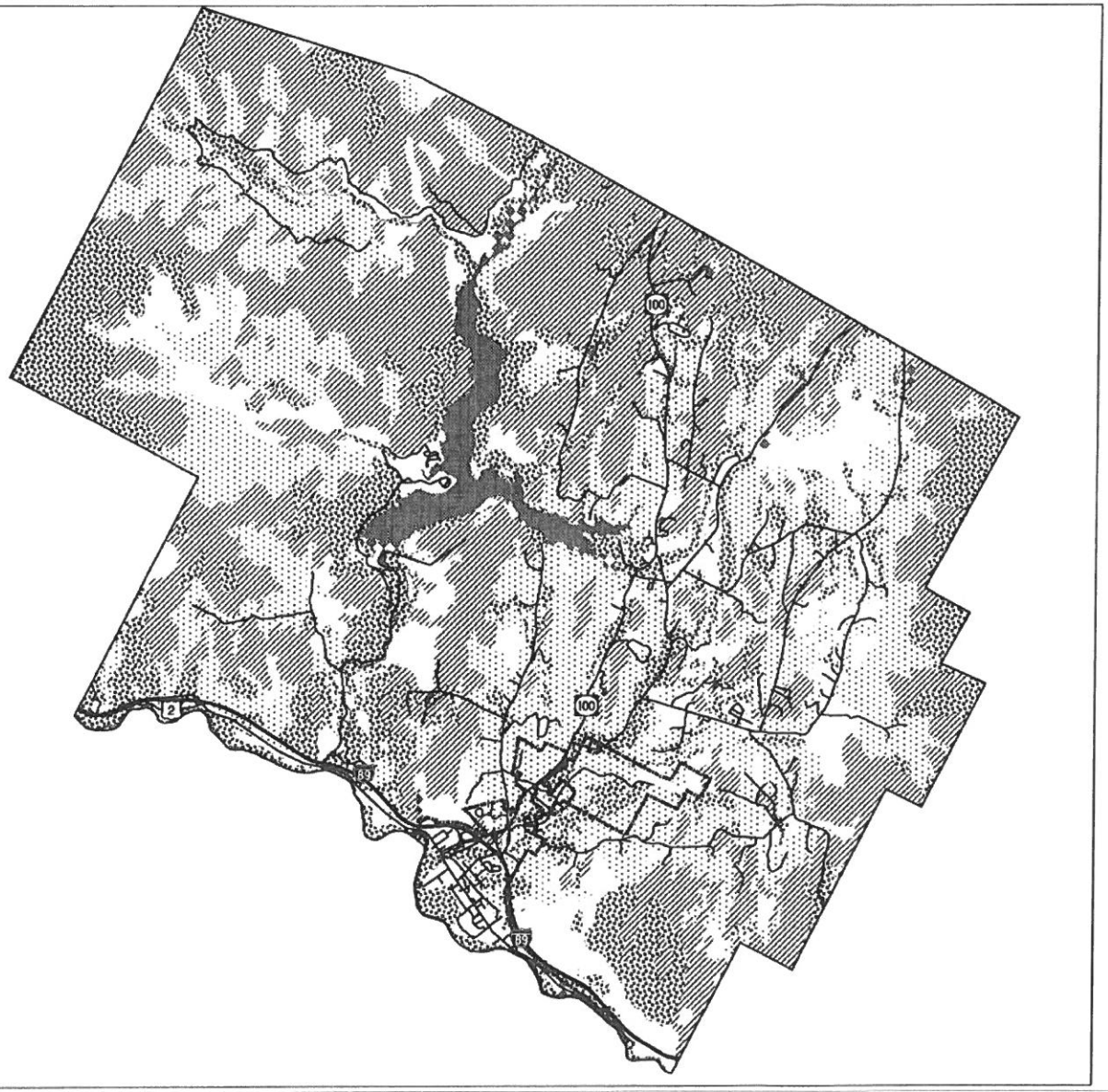
GIS

Map 2-5



WATERBURY
SOIL SUITABILITY MAP

Septic System Suitability Classes

- Conventional
- Non-Conventional
- Marginally Suitable
- Unsuitable
- Not Rated
- Lake/River

1 0 1 2 Miles

N

SOURCE:
Soils Data: Optically Scanned from 1:20000
USDA-NRCS soils maps, 1992.
Surface Waters: CVRPC Surface Waters Data,
1:5,000, 1995-96.
Town Boundary: USGS Topographic Map, 1:24,000.

Map updated 9-10-2003 by WR Toussaint, CVRPC.
N:\towns\waterb\soilsuit_sept03.apr

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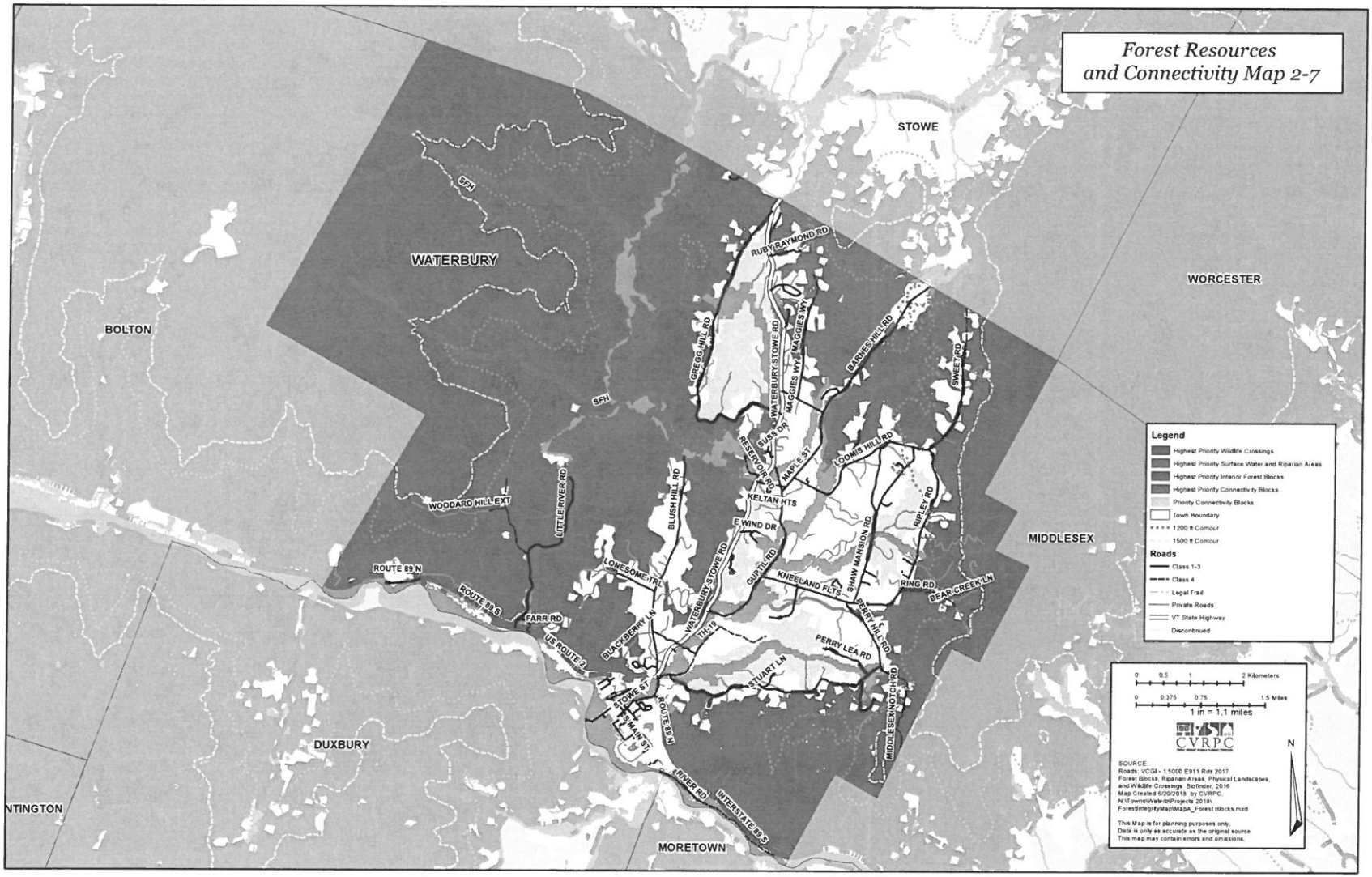
Map 2-6


Forest Resources
and Connectivity Map 2-7
STOWE
WATERBURY
WORCESTER
BOLTON
MIDDLESEX
DUXBURY
MORETOWN
SFH
RUBY RAYMOND RD
GREGG HILL RD
WATERBURY STOWE RD
MAGGIES WY
BARNES HILL RD
SWEET RD
SUSS DR
RESERVOIR RD
MAPLE ST
LOOMIS HILL RD
KELTAN HTS
E WIND DR
RIPLEY RD
SHAW MANSION RD
WOODARD HILL EXT
LITTLE RIVER RD
BLUSH HILL RD
LONESOME TR
GUPTIL RD
KNEELAND FLTS
RING RD
BEAR CREEK LN
ROUTE 89 N
ROUTE 89 S
FARR RD
US ROUTE 2
BLACKBERRY LN
TH 19
PERRY HILL RD
PERRY LEA RD
STUART LN
STOWE ST
MAIN ST
ROUTE 89 N
MIDDLESEX NOTCH RD
RIVER RD
INTERSTATE 89 S
NTINGTON
Legend
Highest Priority Wildlife Crossings
Highest Priority Surface Water and Riparian Areas
Highest Priority Interior Forest Blocks
Highest Priority Connectivity Blocks
Priority Connectivity Blocks
Town Boundary
1200 ft Contour
1500 ft Contour
Roads
Class 1-3
Class 4
Legal Trail
Private Roads
VT State Highway
Discontinued
0 0.5 1 2 Kilometers
0 0.375 0.75 1.5 Miles
1 in = 1.1 miles
CVRPC
N
SOURCE:
Roads: VCGI - 1:5000 E911 Rds 2017
Forest Blocks, Riparian Areas, Physical Landscapes, and Wildlife Crossings: Biofinder, 2016
Map Created 6/20/2018 by CVRPC
N:\Towns\Waterbt\Projects 2018\ForestIntegrityMap\MapA_Forest Blocks.mxd
This Map is for planning purposes only.
Data is only as accurate as the original source.
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WATERBURY TRANSPORTATION: Town Map

Id	Project Type	Road	Description
1	Bridge	US 2	Over Little River
2	Bridge	Farr Rd	Relocate Farr Rd
5	Paving	US 2	Waterbury Village to Bolton
6	Paving	VT 100	Waterbury Village to Stowe

Legend

- Cross Vermont Trail
- Community Path
- Waterbury Commuter
- Route 100 Commuter
- Commuter Stops
- Town Garage
- Transportation Projects
- Rail Road
- Waterbury Park and Ride
- Rivers, Lakes, and Ponds
- Streams

Roads

- Paved Public Roads
- Unpaved Public Roads
- State Forest Highway
- Paved Private Roads
- Unpaved Private Roads
- Interstate

0 0.5 1 2 3 4 Miles

Source:
Cross Vermont Trail: CVTA 2010
Waterbury Community Path: CVRPC 2011
Commuter Routes: CVRPC, GMTA 2013
Commuter Stops: CVRPC, GMTA 2013
Rail Rds and Station: VCGI, VTrans.
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
Path: N:\Towns\Waterb\TownPlan\Transportation.mxd

Data is only as accurate as the original source materials.
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Map 3-1

N

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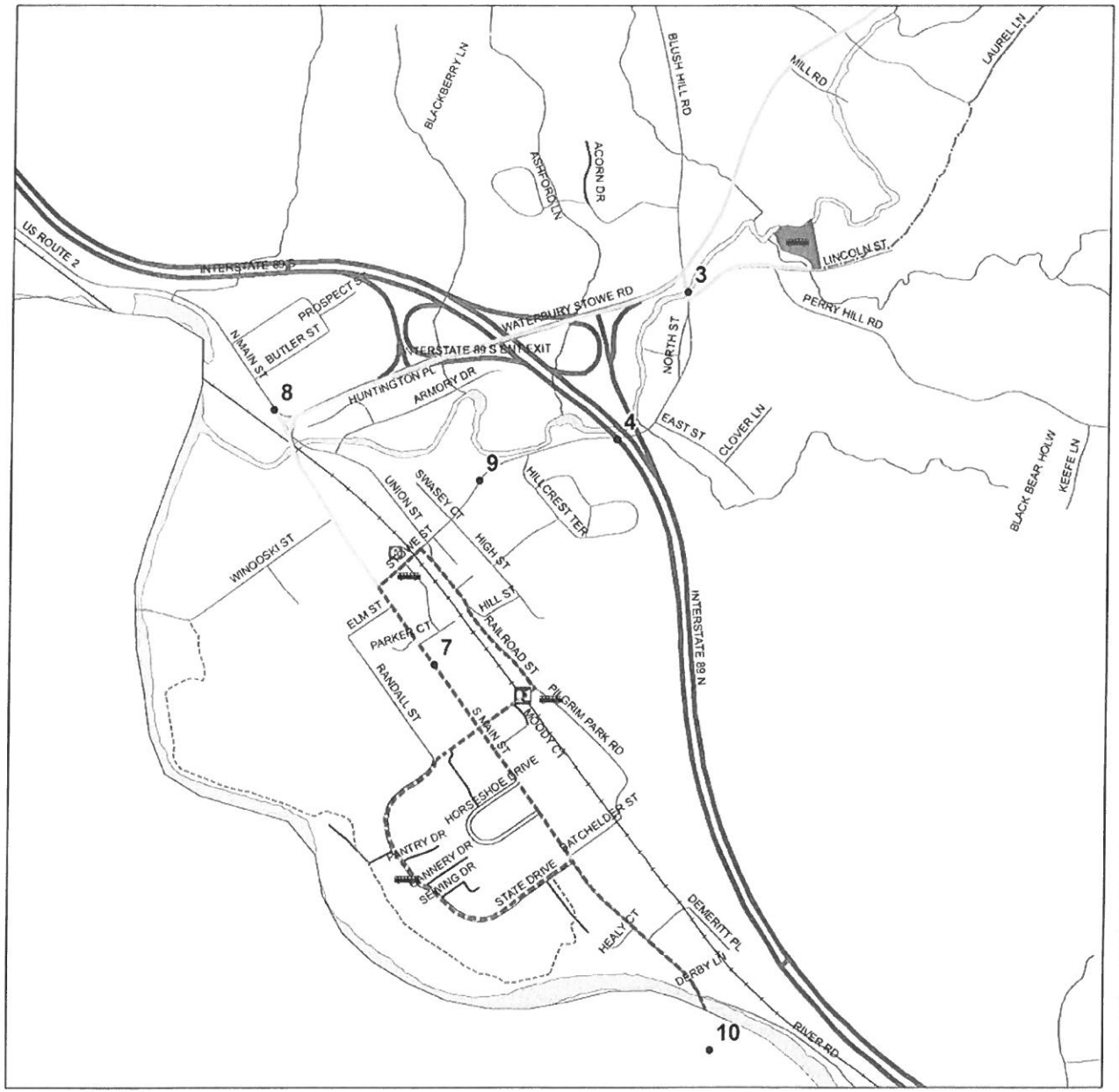

WATERBURY TRANSPORTATION: Village Map

Id	Project Type	Road	Description
3	Bridge	Stowe ST	Reconstruction of BR 36
4	Bridge	I-89	Rehabilitate BR46 North and South, and BR 46 A
7	Roadway Project	US 2	Reconstruct Main ST
8	Roadway Project	US 2/ VT 100	Construct Roundabout
9	Enhancement	Stowe ST	Install Sidewalk
10	Bike and Pedestrian Project	VT 100	Crossett Brook School Area

Legend

- Cross Vermont Trail
- Community Path
- Waterbury Commuter
- Route 100 Commuter
- Commuter Stops
- Rail Rd Station
- Town Garage
- Senior Meal Site
- Transportation Projects
- Rail Road
- Waterbury Park and Ride
- Rivers, Lakes, and Ponds
- Streams

Roads

- Paved Public Roads
- Unpaved Public Roads
- State Forest Highway
- Paved Private Roads
- Unpaved Private Roads
- Interstate

0 0.075 0.15 0.3 0.45 0.6 Miles

Source:
Cross Vermont Trail: CVTA 2010
Waterbury Community Path: CVRPC 2011
Commuter Routes: CVRPC, GMTA 2013
Commuter Stops: CVRPC, GMTA 2013
Rail Rds and Station: VCGI, VTrans.
Roads: VTrans 2012
Surface Water: VHD 2008

Map created 2013 by CVRPC
Path: N:\Towns\Waterb\TownPlan\Transportation- village.mxd

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Map 3-2

N

CVRPC
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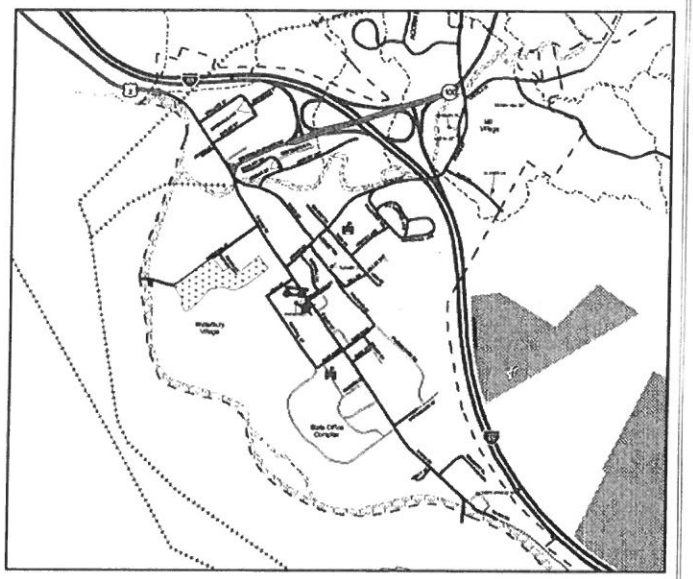

WATERBURY UTILITIES AND FACILITIES MAP

- Schools
- Fire Station
- Police Station and Municipal Office
- Towers
- Electric Transmission Lines
- Sub-Station
- Cemetery
- Parcel Lines
- Area Served by Sewer
- Village Boundary
- Public Lands

1 0 1 2 Miles

SOURCE:
Utilities/Facilities: Esite Data from E-911 Board, 2000
Roads: VGIS/E911, 1:5,000, 1999
Surface Waters: CVRPC Surface Waters Data, 1:5,000, 1995-98
Town Boundary: USGS Topographic Map, 1:24,000

Map updated 9-12-2003 by WR Toussaint, CVRPC.
N:\towns\waterb\ut_fac_sept03.apr

Data is only as accurate as the original source materials.
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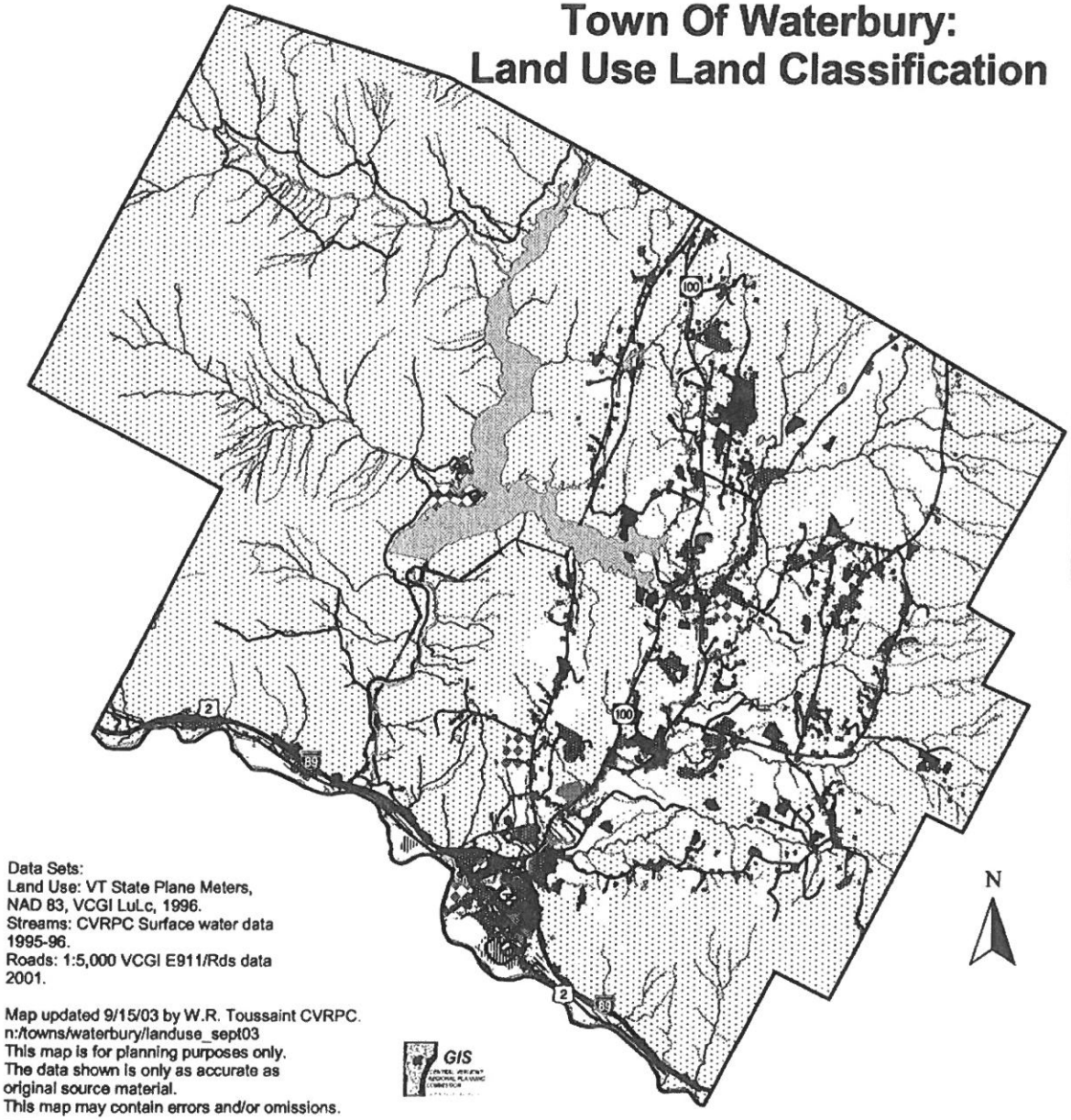
N

GIS

Map 4-1

Town Of Waterbury:
Land Use Land Classification



AGRICULTURE & OPEN LAND
AIRPORTS
BROADLEAF FOREST
CEMETERY
COMMERCIAL\SERVICE
CONIFEROUS FOREST
FOREST LAND
GOVERNMENT
INDUSTRIAL
INSTITUTIONAL
MIXED FOREST
MIXED RESI. & COMM
OUTDOOR RECREATION
QUARRIES
RESIDENTIAL
SAND & GRAVEL PITS
SCHOOLS
SCRUB\SHRUB
SURFACE WATERS
WETLANDS

Streams
Intermittent
Perennial

Lake
River

Roads

N

0.5 0 0.5 1 1.5 2 2.5 Miles

Data Sets:
Land Use: VT State Plane Meters, NAD 83, VCGI LuLc, 1996.
Streams: CVRPC Surface water data 1995-96.
Roads: 1:5,000 VCGI E911/Rds data 2001.

Map updated 9/15/03 by W.R. Toussaint CVRPC.
n:/towns/waterbury/landuse_sept03
This map is for planning purposes only.
The data shown is only as accurate as original source material.
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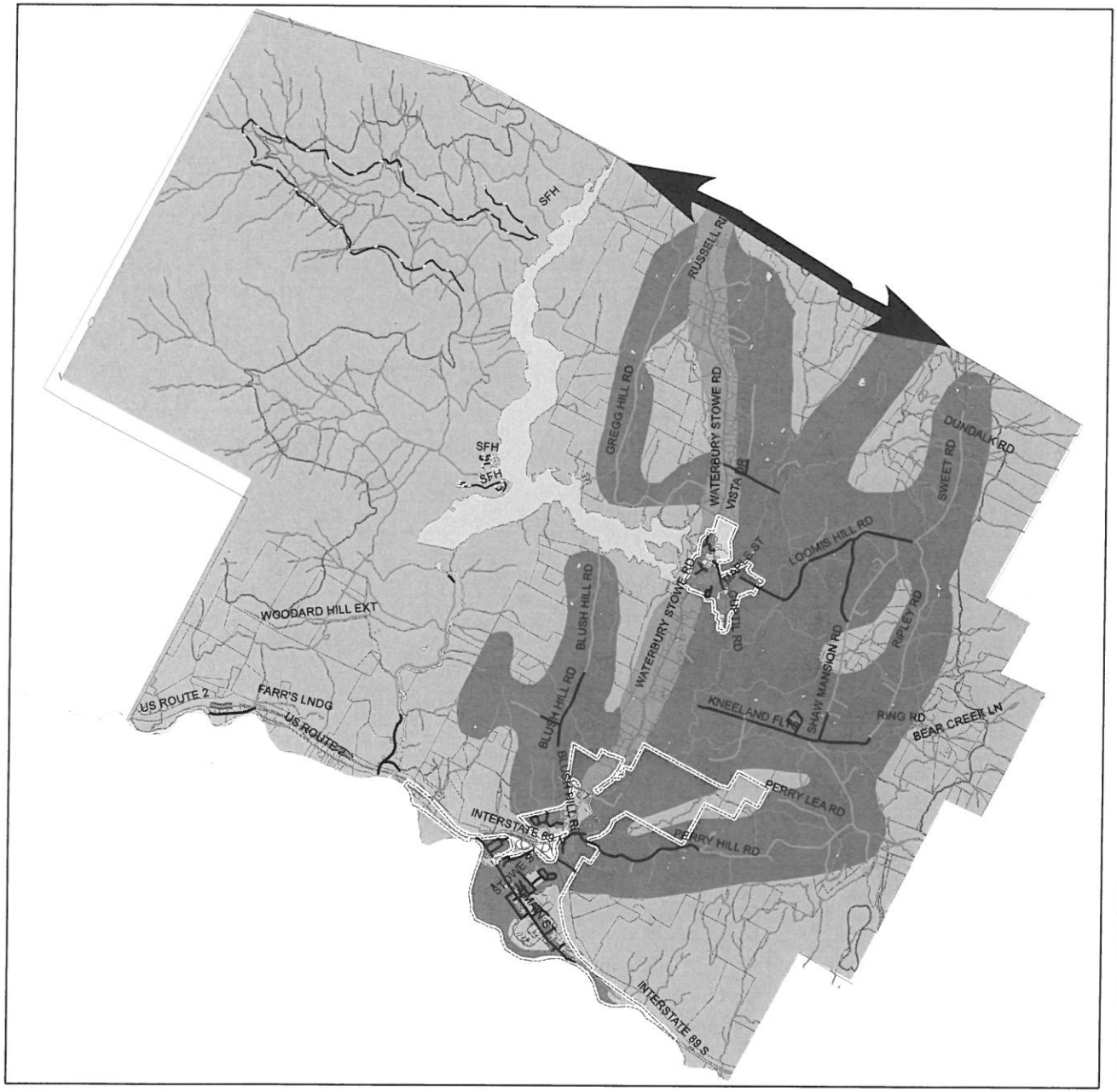
GIS

Map 5-1



WATERBURY
Future Land Use
Town Map

Legend

Future Land Use

- Forest
- Route 100 Corrid
- Rural Res/Ag
- Village Resident
- Mixed Use
- Growth Centers

Roads

- Paved Public Roads
- Unpaved Public Roads
- State Forest Highway
- Paved Private Roads
- Unpaved Private Roads
- Interstate
- Rivers, Lakes, and Ponds
- Streams
- Waterbury Parcels

Contours

- 1200 Feet
- 1500 Feet

← Significant Wildlife Crossing →

0 0.5 1 2 3 4 Miles

Map 5-2A

N

Source:
Parcels: 2015
Waterbury Town Land Use: 2002
Roads: VTrans 2017
Surface Water: VHD 2008

Map created 2013 by CVRPC Update 6/27/18
Path: N:\Towns\Waterb\TownPlan\Future Land Use.mxd

Data is only as accurate as the original source materials.
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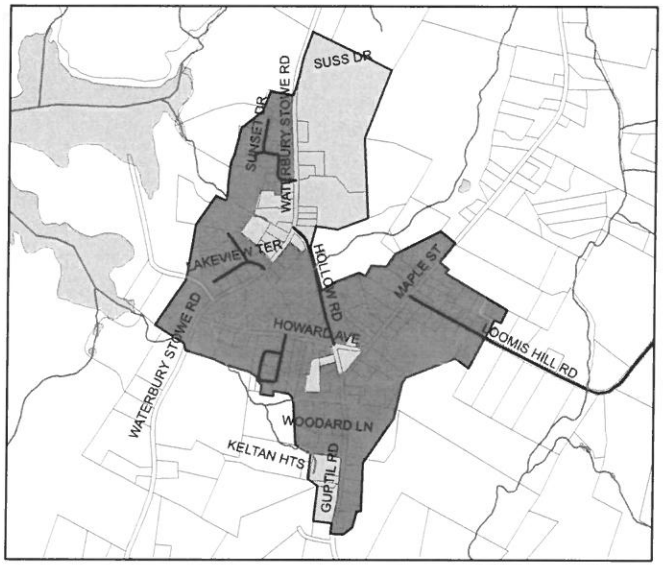
WATERBURY
Future Land Use
Town Map



Waterbury Center

Waterbury Village

Legend

Future Land Use	Contours	Roads
Forest	1200 Feet	Paved Public Roads
Route 100 Corrid	1500 Feet	Unpaved Public Roads
Rural Res/Ag		State Forest Highway
Village Resident		Paved Private Roads
Mixed Use		Unpaved Private Roads
Growth Center Village Area		Interstate
Waterbury Parcels		Rivers, Lakes, and Ponds
		Streams

0 0.175 0.35 0.7 1.05 1.4 Miles

Source:
Parcels: Waterbury, CVRPC 2015
Waterbury Village Future Land Use: 2002
Roads: VTrans 2017
Surface Water: VHD 2008

Map created 2013 by CVRPC Update 6/27/18
Path: N:\Towns\Waterb\TownPlan\Future Land Use- village.mxd

Data is only as accurate as the original source materials.
This map is for planning purpoes only.
This map may contain errors and omissions.

Map 5-2B

N

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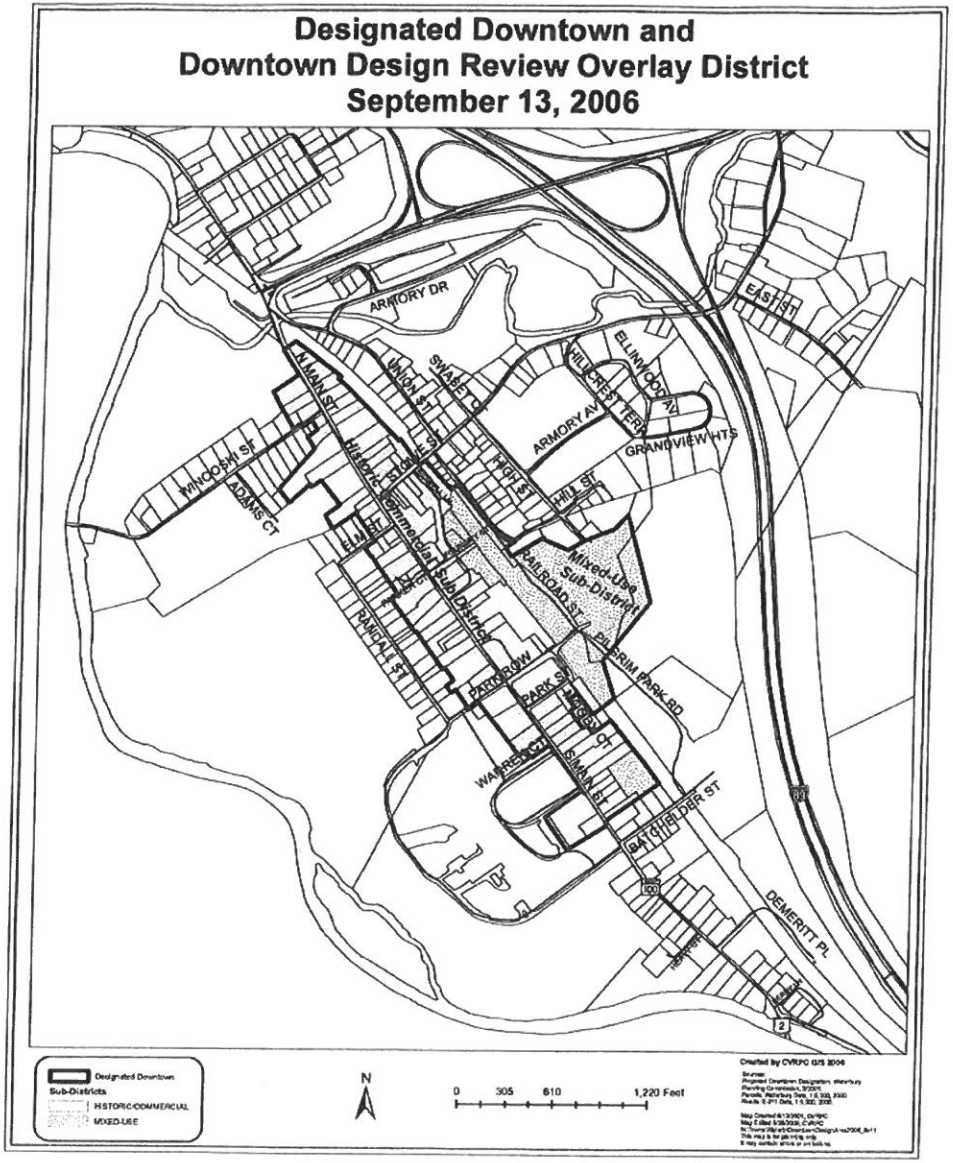
CENTRAL VERMONT REGIONAL PLANNING COMMISSION

Designated Downtown and Downtown Design Review Overlay District September 13, 2006



Map 5-3

Appendix A. 2012 Community Survey Report

1. Please rate the following:

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Overall quality of life in Waterbury.	56	38%	76	52%	9	6%	0	0%	5	3%
random sample	22	34%	34	53%	7	11%	0	0%	1	2%
general response	34	42%	42	51%	2	2%	0	0%	4	5%
Overall economic health of Waterbury.	4	3%	66	45%	58	40%	8	5%	10	7%
random sample	0	0%	23	36%	33	52%	3	5%	5	8%
general response	4	5%	43	52%	25	31%	5	6%	5	6%
Overall direction that Waterbury is taking.	20	14%	68	47%	25	17%	10	7%	23	16%
random sample	5	8%	25	39%	12	19%	8	13%	14	22%
general response	15	18%	43	53%	13	16%	2	2%	9	11%

2. Please rate the following:

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Condition of town roads.	7	5%	44	30%	61	42%	29	20%	5	3%
random sample	3	5%	15	23%	29	45%	16	25%	1	2%
general response	4	5%	29	35%	32	39%	13	16%	4	5%
Winter maintenance of town roads.	42	29%	76	52%	14	10%	4	3%	10	7%
random sample	21	33%	31	48%	7	11%	3	5%	2	3%
general response	21	25%	45	55%	7	9%	1	1%	8	10%
Safety of driving on roads in Waterbury.	13	9%	78	53%	42	29%	6	4%	7	5%
random sample	5	8%	29	45%	25	39%	3	5%	2	3%
general response	8	10%	49	60%	17	20%	3	4%	5	6%
Availability of sidewalks, paths & trails in town.	7	5%	52	36%	55	38%	21	14%	11	8%
random sample	5	8%	21	33%	24	38%	10	16%	4	6%
general response	2	2%	31	38%	31	38%	11	13%	7	9%
Safety of walking in Waterbury.	11	8%	63	43%	47	32%	16	11%	9	6%
random sample	5	8%	22	34%	24	38%	10	17%	4	3%
general response	6	7%	41	50%	23	28%	6	7%	5	6%
Safety of biking in Waterbury.	6	4%	35	24%	52	36%	24	16%	29	20%
random sample	2	3%	11	17%	26	41%	13	20%	12	19%
general response	4	5%	24	29%	26	32%	11	13%	17	21%

3. Please rate the following:

	EXCELLENT	GOOD	FAIR	POOR	UNSURE/NA
Availability of housing in Waterbury.	2 1%	37 25%	53 36%	17 12%	37 25%
random sample	2 3%	14 22%	25 39%	7 11%	16 25%
general response	0 0%	23 28%	28 34%	10 12%	21 26%
Affordability of housing in Waterbury.	1 1%	19 13%	59 40%	39 27%	28 19%
random sample	1 2%	5 8%	29 45%	18 28%	11 17%
general response	0 0%	14 17%	30 37%	21 26%	17 20%
Quality of housing in Waterbury.	4 3%	62 42%	38 26%	6 4%	36 25%
random sample	3 5%	21 33%	21 33%	3 5%	16 25%
general response	1 1%	41 50%	17 20%	3 4%	20 24%

4. Please rate the following:

	EXCELLENT	GOOD	FAIR	POOR	UNSURE/NA
Job opportunities in Waterbury.	1 1%	43 29%	48 33%	23 16%	31 21%
random sample	1 6%	18 44%	21 33%	13 11%	11 6%
general response	0 0%	25 30%	27 33%	10 12%	20 24%
Opportunities for new/expanding businesses.	6 4%	42 29%	43 29%	12 8%	43 29%
random sample	5 8%	13 20%	22 34%	5 8%	19 30%
general response	1 1%	29 35%	21 26%	7 9%	24 29%
Availability of goods & services in Waterbury.	6 4%	59 40%	54 37%	13 9%	14 10%
random sample	4 6%	28 44%	21 33%	7 11%	4 6%
general response	2 2%	31 38%	33 40%	6 7%	10 12%

5. Please rate the following:

	EXCELLENT	GOOD	FAIR	POOR	UNSURE/NA
Overall town response to emergencies or disasters.	60 41%	60 41%	10 7%	1 1%	15 10%
random sample	24 38%	29 45%	6 9%	0 0%	5 8%
general response	36 44%	31 38%	4 5%	1 1%	10 12%
Safety from crime in Waterbury.	19 13%	82 56%	24 16%	5 3%	16 11%
random sample	6 9%	35 55%	14 22%	3 5%	6 9%
general response	13 16%	47 57%	10 12%	2 2%	10 12%
Quality of response by Village Police.	13 9%	35 24%	20 14%	14 10%	64 44%
random sample	6 9%	14 22%	11 17%	6 9%	27 42%
general response	7 9%	21 26%	9 11%	8 10%	37 45%

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Quality of response by State Police.	12	8%	31	21%	26	18%	7	5%	70	48%
random sample	6	9%	10	16%	12	19%	7	11%	29	45%
general response	6	7%	21	26%	14	17%	0	0%	41	50%
Quality of response by Waterbury Fire Department.	66	45%	37	25%	3	2%	0	0%	40	27%
random sample	31	48%	14	22%	2	3%	0	0%	17	27%
general response	35	43%	23	28%	1	1%	0	0%	23	28%
Quality of response by Waterbury Ambulance Service.	71	49%	34	23%	1	1%	0	0%	40	27%
random sample	35	55%	15	23%	1	2%	0	0%	13	20%
general response	36	44%	19	23%	0	0%	0	0%	27	33%

6. Please rate the following:

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Overall environmental quality in Waterbury.	29	20%	86	59%	16	11%	2	1%	13	9%
random sample	10	16%	41	64%	10	16%	1	2%	2	3%
general response	19	23%	45	54%	6	7%	1	1%	11	13%
Water quality in the town's rivers and streams.	22	15%	71	49%	24	16%	4	3%	25	17%
random sample	12	19%	28	44%	15	23%	2	3%	7	11%
general response	10	12%	43	52%	9	11%	2	2%	18	22%
Ability to enjoy nature in Waterbury.	66	45%	58	40%	12	8%	0	0%	10	7%
random sample	35	55%	18	28%	10	16%	0	0%	1	2%
general response	31	38%	40	49%	2	2%	0	0%	9	11%
Ability to enjoy quiet in Waterbury.	42	29%	62	42%	24	16%	7	5%	11	8%
random sample	19	30%	23	36%	14	22%	7	11%	1	2%
general response	23	28%	39	48%	10	12%	0	0%	10	12%
Ability to enjoy scenic views in Waterbury.	66	45%	57	39%	11	8%	1	1%	11	8%
random sample	34	53%	20	31%	7	11%	1	2%	2	3%
general response	32	39%	37	45%	4	5%	0	0%	9	11%
Adequacy of town parks.	35	24%	65	45%	23	16%	9	6%	14	10%
random sample	18	28%	27	42%	11	17%	5	8%	3	5%
general response	17	21%	38	46%	12	15%	4	5%	11	13%

7. Please rate the following:

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Availability of activities for youth in Waterbury.	28	19%	49	34%	14	10%	6	4%	49	34%
random sample	16	25%	18	28%	4	6%	3	5%	23	36%
general response	12	15%	31	38%	10	12%	3	3%	26	32%
Availability of activities for seniors in town.	7	5%	37	25%	28	19%	6	4%	68	47%
random sample	5	8%	20	31%	11	17%	2	3%	26	41%
general response	2	2%	17	21%	17	21%	4	5%	42	51%
Availability of cultural activities in Waterbury.	16	11%	62	42%	35	24%	7	5%	26	18%
random sample	9	14%	25	39%	17	27%	3	5%	10	16%
general response	7	8%	37	45%	18	22%	4	5%	16	20%
Access to childcare providers in Waterbury.	10	7%	31	21%	20	14%	8	5%	77	53 %
random sample	7	11%	16	25%	9	14%	0	0%	32	50%
general response	3	4%	15	18%	11	13%	8	10%	45	55%
Quality of the school in Waterbury.	28	19%	66	45%	8	5%	7	5%	37	25%
random sample	12	19%	33	52%	2	3%	5	8%	12	19%
general response	16	20%	33	40%	6	7%	2	2%	25	30%
Quality of the library in Waterbury.	18	12%	50	34%	44	30%	12	8%	22	15%
random sample	12	19%	23	36%	16	25%	7	11%	6	9%
general response	6	7%	27	33%	28	34%	5	6%	16	20%
Access to healthcare providers in Waterbury.	27	18%	68	47%	17	12%	7	5%	27	18%
random sample	16	25%	24	38%	10	16%	4	6%	10	16%
general response	11	13%	44	54%	7	9%	3	4%	17	21%

8. Please rate the following:

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Access to high-speed internet in Waterbury.	32	22%	65	45%	12	8%	10	7%	27	18%
random sample	13	20%	30	47%	5	8%	5	8%	11	17%
general response	19	23%	35	43%	7	9%	5	6%	16	20%
Access to cell phone service in Waterbury.	23	16%	68	47%	23	16%	13	9%	19	13%
random sample	13	20%	30	47%	11	17%	5	8%	5	8%
general response	10	12%	38	46%	12	15%	8	10%	14	17%

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Access to public water and sewer in Waterbury.	26	18%	54	37%	9	6%	7	5%	50	34%
random sample	15	23%	24	38%	5	8%	3	5%	17	27%
general response	11	13%	30	37%	4	5%	4	5%	33	40%
Management of stormwater in Waterbury.	10	7%	37	25%	28	19%	10	7%	61	42%
random sample	6	9%	17	27%	13	20%	6	9%	22	34%
general response	4	5%	20	24%	15	18%	4	5%	39	48%
Energy efficiency of town facilities & operations.	4	3%	29	20%	27	18%	12	8%	74	51%
random sample	2	3%	14	22%	8	13%	6	9%	34	53%
general response	2	2%	15	18%	19	23%	6	7%	40	49%
Availability of parking in commercial districts.	7	5%	37	25%	52	36%	32	22%	18	12%
random sample	4	6%	11	17%	30	47%	14	22%	5	8%
general response	3	4%	26	32%	22	27%	18	22%	13	16%

9. Please rate the following:

	EXCELLENT		GOOD		FAIR		POOR		UNSURE/NA	
Overall quality of municipal government.	25	17%	63	43%	22	15%	7	5%	29	20%
random sample	7	11%	31	48%	15	23%	3	5%	8	13%
general response	18	22%	32	39%	7	9%	4	5%	21	26%
Access to information about community issues.	24	16%	63	43%	25	17%	10	7%	24	16%
random sample	6	9%	30	47%	15	23%	4	6%	9	14%
general response	18	22%	33	40%	10	12%	6	7%	15	18%
Opportunities to participate in community affairs.	38	26%	62	42%	18	12%	4	3%	24	16%
random sample	12	19%	32	50%	8	13%	2	3%	10	16%
general response	26	32%	30	37%	10	12%	2	2%	14	17%
Response of municipal gov't to citizen concerns.	17	12%	52	36%	27	18%	16	11%	34	23%
random sample	5	8%	26	41%	13	20%	11	17%	9	14%
general response	12	15%	26	32%	14	17%	5	6%	25	30%
Value of services for municipal taxes paid.	18	12%	54	37%	26	18%	17	12%	31	21%
random sample	5	8%	28	44%	13	20%	9	14%	9	14%
general response	13	16%	26	32%	13	16%	8	10%	22	27%

10. What are the 3 most important resources to protect? Should Waterbury regulate development more than, less than or the same as we do now to protect the following resources?

	TOP 3	MORE	SAME	LESS	UNSURE/NA
Historic buildings	43 29%	36 25%	70 48%	13 9%	27 18%
random sample	19 30%	16 25%	35 55%	7 11%	6 9%
general response	24 29%	20 24%	35 43%	6 7%	21 26%
Scenic views	42 29%	54 37%	56 38%	6 4%	30 21%
random sample	22 34%	22 34%	28 44%	4 6%	10 16%
general response	20 24%	32 39%	28 34%	2 2%	20 24%
Wildlife habitat	41 28%	53 36%	57 39%	6 4%	30 21%
random sample	22 34%	22 34%	29 45%	5 8%	8 13%
general response	19 23%	31 38%	28 34%	1 1%	22 27%
Wildlife travel corridors	46 32%	53 36%	52 36%	6 4%	35 24%
random sample	31 48%	22 34%	27 42%	5 8%	10 16%
general response	15 18%	31 38%	25 30%	1 1%	25 30%
Streambanks	31 21%	66 45%	38 26%	7 5%	35 24%
random sample	11 17%	31 48%	18 28%	5 8%	10 16%
general response	20 24%	35 43%	20 24%	2 2%	25 30%
Wetlands	21 14%	55 38%	51 35%	6 4%	34 23%
random sample	16 25%	23 36%	29 45%	5 8%	7 11%
general response	5 6%	32 39%	22 27%	1 1%	27 33%
Floodplains	21 14%	72 49%	34 23%	4 3%	36 25%
random sample	3 5%	34 53%	13 20%	3 5%	14 22%
general response	18 22%	38 46%	21 26%	1 1%	22 27%
Farmland	35 24%	60 41%	44 30%	8 5%	34 23%
random sample	14 22%	29 45%	19 30%	4 6%	12 19%
general response	21 26%	31 38%	25 30%	4 5%	22 27%
Forestland	36 25%	54 37%	51 35%	8 5%	33 23%
random sample	17 27%	21 33%	24 38%	6 9%	13 20%
general response	19 23%	33 40%	27 33%	2 2%	20 24%

	TOP 3		MORE		SAME		LESS		UNSURE/NA	
Ridgeline	31	21%	54	37%	38	26%	17	12%	37	25%
random sample	16	25%	24	38%	11	17%	15	23%	14	22%
general response	15	18%	30	37%	27	33%	2	2%	23	28%
Hillsides	11	8%	43	29%	44	30%	19	13%	40	27%
random sample	6	9%	21	33%	12	19%	17	27%	14	22%
general response	5	6%	22	27%	32	39%	2	2%	26	32%

11. What approaches should Waterbury take to protecting natural resources?

	SUPPORT		OPPOSE		UNSURE/NA	
Requiring DRB approval for new buildings or uses.	72	49%	15	10%	59	40%
random sample	31	48%	9	14%	24	38%
general response	41	50%	6	7%	35	43%
Encouraging clustered or planned unit development outside of designated growth centers.	55	38%	37	25%	54	37%
random sample	26	41%	20	31%	18	28%
general response	29	35%	17	21%	36	44%
Decreasing maximum density (homes per acre) outside of designated growth centers.	45	31%	36	25%	65	45%
random sample	20	31%	21	33%	23	36%
general response	25	30%	15	18%	42	51%
Increasing minimum lot size outside designated growth centers.	49	34%	39	27%	58	40%
random sample	20	31%	25	39%	19	30%
general response	29	35%	14	17%	39	48%
Encouraging additional multi-family development in designated growth centers.	81	55%	21	14%	44	30%
random sample	39	61%	11	17%	14	22%
general response	42	51%	10	12%	30	37%
Inventorying and assessing important natural resources.	97	66%	9	6%	40	27%
random sample	44	69%	5	8%	15	23%
general response	53	65%	4	5%	25	30%
Restricting development in areas with important natural resources.	100	68%	13	9%	33	23%
random sample	48	75%	6	9%	10	16%
general response	52	63%	7	9%	23	28%

	SUPPORT		OPPOSE		UNSURE/NA	
Requiring DRB approval for the creation of any new lots.	61	42%	27	18%	58	40%
random sample	31	48%	13	20%	20	31%
general response	30	37%	14	17%	38	46%
Requiring DRB approval for creation of more than 5 new lots.	81	55%	13	9%	52	36%
random sample	41	64%	7	11%	16	25%
general response	40	49%	6	7%	36	44%
Using a tax dollars to help fund the purchase of conservation easements.	70	48%	23	16%	53	36%
random sample	30	47%	13	20%	21	33%
general response	40	49%	10	12%	32	39%

12. What would be the most effective steps Waterbury could take to support recreation and rec-based economic dev?

	1ST		2ND		3RD		4TH		5TH		6TH		NO ANSWER	
Improve parks & rec areas.	27	18%	38	26%	19	13%	14	10%	8	5%	6	4%	34	23%
random sample	15	23%	16	25%	9	14%	6	9%	3	5%	4	6%	11	17%
general response	12	15%	22	27%	10	12%	8	10%	5	6%	2	2%	23	28%
Improve bike/ped facilities.	56	38%	17	12%	18	12%	12	8%	7	5%	4	3%	32	22%
random sample	24	38%	6	9%	11	17%	7	11%	4	6%	3	5%	9	14%
general response	32	39%	11	13%	7	9%	5	6%	3	4%	1	1%	23	28%
Improve water access.	10	7%	14	10%	22	15%	22	15%	15	10%	29	20%	34	23%
random sample	8	13%	9	14%	6	9%	10	16%	5	8%	15	23%	11	17%
general response	2	2%	5	6%	16	20%	12	15%	10	12%	14	17%	23	28%
Website for Waterbury recreation.	13	9%	21	14%	22	15%	27	18%	19	13%	11	8%	33	23%
random sample	11	17%	7	11%	13	20%	10	16%	8	13%	5	8%	10	16%
general response	2	2%	14	17%	9	11%	17	21%	11	13%	6	7%	23	28%
Kiosks & signs for Waterbury rec.	9	6%	10	7%	20	14%	24	16%	36	25%	15	10%	32	22%
random sample	5	8%	8	13%	9	14%	12	19%	14	22%	7	11%	9	14%
general response	4	5%	2	2%	11	13%	12	15%	22	27%	8	10%	23	28%
Hire a full-time recreation director.	10	7%	11	8%	15	10%	8	5%	16	11%	52	36%	34	23%
random sample	3	5%	6	9%	9	14%	3	5%	8	13%	24	38%	11	17%
general response	7	9%	5	6%	6	7%	5	6%	8	10%	28	34%	23	28%

13. Should Waterbury encourage more renewable energy production?

	SUPPORT		OPPOSE		UNSURE/NA	
Solar collectors for personal use.	103	71%	7	5%	36	25%
random sample	48	75%	5	8%	11	17%
general response	55	67%	2	2%	25	30%
Solar farms for utility energy production.	78	53%	24	16%	44	30%
random sample	35	55%	14	22%	15	23%
general response	43	52%	10	12%	29	35%
Wind turbines for personal use.	69	47%	28	19%	49	34%
random sample	32	50%	15	23%	17	27%
general response	37	45%	13	16%	32	39%
Wind farms for utility energy production.	50	34%	44	30%	52	36%
random sample	22	34%	24	38%	18	28%
general response	28	34%	20	24%	34	41%
Biomass for personal use.	70	48%	15	10%	61	42%
random sample	28	44%	11	17%	25	39%
general response	42	51%	4	5%	36	44%
Biomass for utility energy production.	68	47%	20	14%	58	40%
random sample	30	47%	11	17%	23	36%
general response	38	46%	9	11%	35	43%
Hydro for personal use.	63	43%	25	17%	58	40%
random sample	29	45%	13	20%	22	34%
general response	34	41%	12	15%	36	44%
Hydro for utility energy production.	67	46%	26	18%	53	36%
random sample	34	53%	13	20%	17	27%
general response	33	40%	13	16%	36	44%

14. What would be the most effective steps Waterbury could take to manage future residential development?

	1ST		2ND		3RD		4TH		NO ANSWER	
Allow multi-family housing in a larger portion of the village.	39	27%	31	21%	12	8%	27	18%	37	25%
random sample	19	30%	14	22%	6	9%	11	17%	14	22%
general response	20	24%	17	21%	6	7%	16	20%	23	28%

	1ST		2ND		3RD		4TH		NO ANSWER	
Allow high-density housing at the state office complex property.	51	35%	31	21%	13	9%	13	9%	38	26%
random sample	22	34%	12	19%	5	8%	9	14%	16	25%
general response	29	35%	19	23%	8	10%	4	5%	22	27%
Expand growth areas to provide opportunities for more housing.	16	11%	26	18%	46	32%	21	14%	37	25%
random sample	10	16%	10	16%	16	25%	13	20%	15	23%
general response	6	7%	16	20%	30	37%	8	10%	22	27%
Increase opportunities for housing outside growth areas.	16	11%	11	8%	28	19%	53	36%	38	26%
random sample	7	11%	5	8%	15	23%	22	34%	15	23%
general response	9	11%	6	7%	13	16%	31	38%	23	28%

14.a. Should Waterbury encourage more residential development?

	SUPPORT		OPPOSE		UNSURE/NA	
Within Waterbury Village.	84	58%	20	14%	42	29%
random sample	38	59%	11	17%	15	23%
general response	46	56%	9	11%	27	33%
Within Waterbury Center Village.	77	53%	25	17%	44	30%
random sample	34	53%	14	22%	16	25%
general response	43	52%	11	13%	28	34%
Outside village areas.	58	40%	42	29%	46	32%
random sample	25	39%	21	33%	18	28%
general response	33	40%	21	26%	28	34%

15. What would be the most effective steps Waterbury could take to manage future commercial development?

	1ST		2ND		3RD		4TH		5TH		NO ANSWER	
Create more parking in the village.	31	21%	6	4%	18	12%	30	21%	29	20%	32	22%
random sample	19	30%	5	8%	11	17%	10	16%	9	14%	10	16%
general response	12	15%	1	1%	7	9%	20	24%	20	24%	22	27%
Expand the boundaries of designated downtown.	17	12%	12	8%	19	13%	28	19%	34	23%	36	25%
random sample	12	19%	6	9%	12	19%	7	11%	13	20%	14	22%
general response	5	6%	6	7%	7	9%	21	26%	21	26%	22	27%
Allow variety of com uses of state office property.	50	34%	25	17%	26	18%	7	5%	8	5%	30	21%
random sample	24	38%	14	22%	7	11%	3	5%	7	11%	9	14%
general response	26	32%	11	13%	19	23%	4	5%	1	1%	21	26%

	1ST		2ND		3RD		4TH		5TH		NO ANSWER	
Attract new small businesses to Waterbury.	39	27%	47	32%	16	11%	7	5%	6	4%	31	21%
random sample	24	38%	16	25%	10	16%	0	0%	4	6%	10	16%
general response	15	18%	31	38%	6	7%	7	9%	2	2%	21	26%
Attract new large businesses to Waterbury.	21	14%	19	13%	26	18%	16	11%	31	21%	33	23%
random sample	15	23%	8	13%	8	13%	8	13%	14	22%	11	17%
general response	6	7%	11	13%	18	22%	8	10%	17	21%	22	27%

15.a. Should Waterbury encourage more commercial development?

	SUPPORT		OPPOSE		UNSURE/NA	
In Waterbury Village.	93	64%	13	9%	40	27%
random sample	40	63%	10	16%	14	22%
general response	53	65%	3	4%	26	32%
Around the triangle in Waterbury Center Village.	65	45%	38	26%	43	29%
random sample	33	52%	19	30%	12	19%
general response	32	39%	19	23%	31	38%
In Colbyville.	57	39%	38	26%	51	35%
random sample	28	44%	20	31%	16	25%
general response	29	35%	18	22%	35	43%
Along Route 100.	56	38%	46	32%	44	30%
random sample	30	47%	21	33%	13	20%
general response	26	32%	25	30%	31	38%
Along Route 2 west of the village.	81	55%	19	13%	46	32%
random sample	39	61%	13	20%	12	19%
general response	42	51%	6	7%	34	41%

16. What would be the most effective steps Waterbury could take to manage future industrial development?

	1ST		2ND		3RD		4TH		5TH		6TH		NO ANSWER	
Accommodate growth in existing areas.	58	40%	21	14%	9	6%	6	4%	5	3%	1	1%	46	32%
random sample	29	45%	11	17%	2	3%	4	6%	3	5%	1	2%	14	22%
general response	29	35%	10	12%	7	9%	2	2%	2	2%	0	0%	32	39%
Expand existing areas to adjoining land.	10	7%	24	16%	13	9%	19	13%	11	8%	20	14%	49	34%
random sample	7	11%	13	20%	8	13%	9	14%	3	5%	7	11%	17	27%
general response	3	4%	11	13%	5	6%	10	12%	8	10%	13	16%	32	39%

	1ST		2ND		3RD		4TH		5TH		6TH		NO ANSWER	
Designate land elsewhere for industry.	13	9%	12	8%	16	11%	19	13%	14	10%	23	16%	49	34%
random sample	6	9%	7	11%	4	6%	11	17%	5	8%	13	20%	18	28%
general response	7	9%	5	6%	12	15%	8	10%	9	11%	10	12%	31	38%
Allow non-industrial uses w/in ind areas.	14	10%	17	12%	20	14%	19	13%	13	9%	14	10%	49	34%
random sample	9	14%	8	13%	11	17%	5	8%	6	9%	8	13%	17	27%
general response	5	6%	9	11%	9	11%	14	17%	7	9%	6	7%	32	39%
Allow only industrial uses w/in ind areas.	12	8%	10	7%	22	15%	16	11%	18	12%	19	13%	49	34%
random sample	8	13%	3	5%	8	13%	9	14%	9	14%	10	16%	17	27%
general response	4	5%	7	9%	14	17%	7	9%	9	11%	9	11%	32	39%
Limit existing ind areas to existing uses.	11	8%	14	10%	8	5%	11	8%	25	17%	31	21%	46	32%
random sample	8	13%	7	11%	4	6%	2	3%	9	14%	20	31%	14	22%
general response	3	4%	7	9%	4	5%	9	11%	16	20%	11	13%	32	39%

16.a. Should Waterbury encourage more industrial development?

	SUPPORT		OPPOSE		UNSURE/NA	
In Waterbury Village.	60	41%	42	29%	44	30%
random sample	27	42%	24	38%	13	20%
general response	33	40%	18	22%	31	38%
In Waterbury Center Village.	32	22%	70	48%	44	30%
random sample	12	19%	40	63%	12	19%
general response	20	24%	30	37%	32	39%
Along Route 2 west of the village.	83	57%	22	15%	41	28%
random sample	42	66%	13	20%	9	14%
general response	41	50%	9	11%	32	39%

17. How should Waterbury allocate funds among the following?

	TOTAL		RANDOM SAMPLE		GENERAL RESPONSE	
Roads and bridges	2,403	23%	1,304	26%	1,099	21%
Sidewalks, paths, trails	1,154	11%	561	11%	593	11%
Public transit	575	6%	253	5%	322	6%
Energy conservation, efficiency or alternatives	710	7%	315	6%	395	7%
Parks and recreation	804	8%	421	8%	383	7%
Land conservation and historic preservation	800	8%	329	7%	471	9%
Affordable and special needs housing	598	6%	300	6%	298	6%
Economic development	958	9%	399	8%	559	11%
Police services	856	8%	425	8%	431	8%
Fire and rescue services	1,077	10%	588	12%	489	9%
Other	386	4%	121	2%	265	5%

18. Age?

	<30		30-44		45-64		65+		NO ANSWER	
	3	2%	32	22%	46	32%	29	20%	36	25%
random sample	1	2%	14	22%	23	36%	18	28%	8	13%
general response	2	2%	18	22%	23	28%	11	13%	28	34%

19. How many years have you lived in Waterbury?

	<5		5-19		20+		NO ANSWER	
	8	5%	57	39%	46	32%	35	24%
random sample	3	5%	25	39%	25	39%	11	17%
general response	5	6%	32	39%	21	26%	24	29%

20. Do you own or rent your home?

	OWN		RENT		NO ANSWER	
	110	75%	7	5%	29	20%
random sample	57	89%	2	3%	5	8%
general response	53	65%	5	6%	24	29%

21. How many people in each age group live in your household?

	TOTAL	RANDOM SAMPLE	GENERAL RESPONSE
0-4 years	24 11%	7 9%	17 12%
5-17 years	38 19%	19 20%	19 18%
18-24 years	18 10%	8 11%	10 10%
25-44 years	73 29%	29 27%	44 32%
45-64 years	109 46%	50 50%	59 43%
65-74 years	35 18%	28 31%	7 7%
75+ years	21 10%	14 17%	7 5%

22. Where do the members of your household work?

	TOTAL	RANDOM SAMPLE	GENERAL RESPONSE
No one in the workforce	21 14%	16 25%	5 6%
Work from home	29 20%	13 20%	16 20%
Waterbury	36 25%	16 25%	20 24%
Barre-Montpelier area	26 18%	12 19%	14 17%
Stowe-Morristown area	16 11%	10 16%	6 7%
Burlington area	33 23%	17 27%	16 20%

23. Do you live in the Village of Waterbury?

	YES	NO	NO ANSWER
	38 26%	80 55%	28 19%
random sample	22 34%	39 61%	3 5%
general response	16 20%	41 50%	25 30%

24. Do you support a merger of the town and village?

	YES	NO	NO ANSWER
	69 47%	25 17%	52 36%
random sample	28 44%	18 28%	18 28%
general response	41 50%	7 9%	34 41%

25. How did you hear about the survey?

MAIL	NEWSPAPER	FP FORUM	WEBSITE	FRIEND	OTHER/NA
64 44%	6 4%	28 19%	3 2%	7 5%	38 26%

1. What specific changes are needed to improve Waterbury's overall direction, quality of life or economic health?

State Offices

1. Bring state workers back. [13 responses]
2. Begin construction on the state offices & municipal offices.
3. Getting more businesses & their employees back in town. I don't care if it's the state workers in the complex or not - bring people back!
4. Getting people back into the state complex and building a long-term recreational support system to attract out-of-town visitors.
5. We need the state workers or new businesses in town.
6. Return of state workers & possible mix of private businesses at site of former state complex flooded out by Irene.
7. Return of state employees. New businesses.
8. Workers are needed back in the community at the state office complex. The future complex decisions need to be made and acted upon.
9. For further improvement we need to have the state employees back to have a vibrant economy.

Retail

10. More retail in downtown. Another take-out food option like a Whole Foods.
11. More retail space downtown.
12. More retail businesses.
13. I am a business owner in Waterbury and I live in Duxbury. I would like to see better economic development and encouragement of retail business in town.
14. Attract more shops (fill empty spots in the center!). Keep up the events that get people out and about like art in the alley, holiday stroll, etc.
15. Encouraging more business and businesses good for everyday life of residents = those that will keep us shopping here not elsewhere.
16. Keep encouraging business growth / opportunities in village to give residents more reasons to shop local.
17. Retail other than what is already here.

Economic Development

18. Diversify business. I've always been nervous with so much GMCR.
19. Waterbury is need of an economic development office/department.
20. Bring more businesses to Waterbury.

Village/Downtown

21. Lighting in the downtown is poor and does not invite evening activities/ shopping, etc.
22. Village needs a bit of a refresh but I hear it will happen in 2014.
23. Count on-street parking for shopping.
24. Improved downtown zoning that encourages retail in storefronts – no more offices. in store spaces.
25. Recognition of the village as a historical entity in need of preservation – not just part of village.
26. Too much traffic and congestion.
27. Make business parking more clear and relocate halfway house (kids have felt threatened at Rusty Parker park).

Police Department

28. Stop putting the police dept under fire.
29. Keep a village police force! Vote to change it to cover the Waterbury Center as well.
30. Need to keep the police department!
31. My few run-ins with the police have been most unpleasant. Complete lack of professionalism!
32. Need to make the entrance of the village at the railroad overpass, Route 2, Route 100 and Union Streets more attractive to visitors. It looks like you are entering a dying rail yard! This seems like a reasonable project to accomplish.
33. It seems that 80% of the police force's time is spent sitting at radar traps and harassing citizens. That has to stop!
34. Less speeding tickets.

35. A town-wide police department is necessary for further improvement and it cannot be sustained with support from village resident. The financial burden is too great.

Resources

36. Much better protection of land from development. Waterbury Center's land use patters are classic sprawl with large lots that have overtaken prime agricultural land. We need to address these land use issues by promoting denser development in designated areas and protecting open space.
37. Zoning should limit building homes to about 1500 feet in elevation due to soil types, steepness of access for public emergency vehicles, and maintenance of the beauty and wildlife of Waterbury.
38. We need to be proactive to preserve our small-town quality of life. In our concern over economic development that was set back by Irene, we need to be careful not to allow sprawling development along Route 100, development along our ridgelines, or carving up of our open spaces.
39. Farmers need to be more respectful of neighbors and the environment. There is a lot of animal waste being washed into our streams (spreading manure in winter, etc.). There seems to be no regulation on the structures they can build on their property, how close those structures are to others, the aesthetic aspect of them, etc.

Government

40. More collaboration between SB and town (we need to merge!). Better communications from SB & trustees to citizens.
41. More volunteers for the Planning Commission.
42. There needs to be more cooperation between town residents and village residents. Mainly some people in the town need to see the importance of a thriving village.
43. It concerns me that often enough an "academic" approach smacking of "...we know what's good for you here are some fuzzy numbers.." [as re: the police debacle last year] has been allowed to prevail at times. I am happy that Mr. Viens has joined our selectboard to interject some grassroots reality into some of the proposals.
44. Stop trying to get the village and town to merge and figure out how to help people without getting more money from government. Taxes are way too high now.
45. Too little attention to needs of residents and too much to businesses.
46. We also need to merge the village into the town so that the Selectboard can speak with one voice for all of Waterbury.
47. Don't tear down building that Waterbury wants to use for town offices and library. Restructure inside of existing building.
48. Decrease tax rate for those who are not receiving any kind of tax reduction.
49. Lower taxes. Put things on hold.

Roads, Sidewalks & Biking

50. Sidewalks are in bad shape. Street cleanliness, striping and park landscaping could be improved or at least put on an annual schedule.
51. More paving needs to be done in the town before we lose all of our roads. This is very important. We are spending more tax dollars on things that should be put on the back burner not the other way around. I fear we are losing our roads in town. Maple Street and Guild Hill are prime examples. The problem is, however, not limited to these roads. Just look at the rest.
52. Improved road maintenance and traffic flow patterns (interstate ramps, etc.).
53. Bike lane on Main Street.
54. Bike path (Stowe to Valley).

Library

55. A new and larger library with community meeting space and room for small groups to meet learn computer skills, etc.
56. Larger library that meets our need.
57. A new library is a must and new town offices. These should be done together.

Irene

58. Irene was a set back but also an opportunity to set a vision for what that portion of town could become. It needs to be redeveloped as quickly as possible.
59. More support for Revitalizing Waterbury.

60. Revitalizing Waterbury is doing a nice job addressing these issues.

Other

61. Attracting more visitors to our town.
62. We need a taxi or van – some public transportation. Bus?
63. Make improvements to the town pool. Many kids depend on it.
64. High-speed internet needed across entire town.
65. We need a cohesive vision for what Waterbury will look like in the future.
66. More communication on town goals/planning.
67. Control growth.
68. Zoning regs for the houses on South Main Street should be revisited.
69. More affordable housing.
70. Increase in housing overall but primarily affordable housing!

2. What specific changes are needed to improve roads, sidewalks, trails, transportation in Waterbury?

Bikes

1. Bikes belong on road not sidewalks – if you have wheels you are a vehicle (except small children).
2. If I have to register my car to drive on the roadways, I think bikes should too!
3. Make biking people buy plates to help pay for the work done on road.
4. Shoulders are very unsafe (ruts, holes, etc.). We must ride in roadway.
5. Bike lanes.
6. Biking on Main Street Stowe Street difficult.
7. Bike lanes and signage.
8. Designated bike lanes would be wonderful. I ride along the side of the road and there are many potholes and obstacles I have to ride around, and when I get in the line of traffic I feel very unsafe. More speed limit enforcements would also be great!
9. Bike path from village to center and to Stowe. Improve sidewalks.

Sidewalks

10. More sidewalks to encourage walking.
11. Skateboarders will get hit or killed (Legion to Reservoir).
12. Sidewalks need to be brought up to ADA code.
13. Add sidewalks in Center. Reduce speed.
14. Repair sidewalks. Find more off-street parking. Resurface roads so they're not minefields for bike tires.
15. Improve sidewalks. Expand trail (walk/bike) network throughout town.
16. Pedestrian access on Route 100.
17. Safe crossing near Snowfire for kids going to GMPA and CVGA.
18. Repainting of the crosswalks earlier after winter would be better but I think that's a state issue.
19. Connect sidewalks and paths together, e.g. sidewalk at end of Winooski Street.
20. Sidewalks. Crosswalks need to be enforced. Speed bumps on Stowe Street.
21. Many areas of sidewalk at grade with the road which is scary at times of traffic.
22. There is not a safe way to get into Waterbury from the north. Going down 100 to crossroads is not viable for walking and very busy, and Stowe Street is so narrow poor sidewalk that is really more related to the street than a sidewalk. This road needs desperately widened repaired and marked with a bike lane, safe sidewalk, etc. It has become the main route to Waterbury Village now that there is a light at Exit 10 and the Crossroads intersection takes forever to get through!
23. More (and wider) sidewalks would be nice.
24. Sidewalks in village are in rough shape. Sidewalks in town (Waterbury Center) are non-existent making walking along roads hazardous.
25. I have to give the sidewalks a poor rating because I think there is a need for improvement. We really need a sidewalk to Shaw's and surrounding development for one.
26. Sidewalks in the Center. Walking here is unsafe. There are limited accommodations for bikers.
27. Sidewalk on Stowe St could use some improvement especially between the underpass and Hillcrest Terrace.
28. Would love a sidewalk all the way on Route 100 to Stowe!!
29. Repair broken sidewalks.

30. Better sidewalks. Often trip while walking. Sometimes flooded and muddy. One has to be careful.
31. Fix the sidewalks.
32. A sidewalk or trail or path of some sort that connects the middle school to village to center.
33. Sidewalks and biking are NOT where we need to spend any funds.
34. Sidewalks (with curbs) in the downtown/Main Street area. High curbs (similar to Stowe) make a sidewalk look welcoming - give a 'finished' appearance to a town (inviting investment/tourism).
35. Need curb on sidewalk at corner of Main St and Park Row where the traffic lane is inches from the sidewalk. This is very dangerous without a curb. Also the traffic light on Route 100 that is set up so interstate exiting traffic from southbound 89 can quickly make the left towards Waterbury Center trips too fast. This is terribly annoying!!! This should not trip instantly at 8 p.m.!! It should be functioning only during peak hours when traffic may back up onto interstate. It isn't doing its intended job now. It is just annoying.
36. Better walking and biking on Route 100.
37. We need a crosswalk and cross light at the bottom of Blush Hill Road. There is no complete stop for walkers or bike riders to cross this busy road safely.
38. More sidewalks. Placement of wires underground.
39. Sidewalks are horrible for wheelchairs and strollers. Very poor conditions dangerous holes and level changes. Hopefully new sidewalks will be more ADA compliant. Need crossing on top of dry bridge on Stowe St to allow for good visibility.

Paths and Trails

40. More bike paths.
41. Would love to have bike trails similar to Stowe.
42. Bike paths / sidewalks.
43. No more paths and trail and wider street in village. Fix what we have the way it is.
44. Continue with the proposed biking/walking paths.
45. Continue with plans to create a bike/walking path which connects the center to Crossett Brook MS.
46. It would be so nice to have some walking trails for people of all ages.
47. Signs to help people find walking/biking path behind cornfields and state office complex.
48. Safe paths for biking to bypass extremely congested roads.
49. Continue development of bike/ped paths in Waterbury Village & improve and widen bike lanes on Route 100 between Waterbury & Stowe.
50. The village could use better walking and biking access to get around the village. A walking/biking connection needs to be made with the town. It would be great if a walking/biking trail went from the village to the town center green. Possibly with a business going into the old town general store that would cater to walkers/bikers/people using Hope Davey Park.
51. Walking/biking to the Middle School safely created.

Roads

52. Wider road shoulders where sidewalks are unavailable.
53. Wider shoulders for walking and biking when possible.
54. Many roads need more room allocated to walking and biking.
55. The shoulders are terrible through downtown. The intersection of Hollow Rd and Rt. 100 in the center needs to be fixed it is very dangerous.
56. Roads and sidewalks need to be rebuilt.
57. Road ditches need rubble in them to help stop silting in.
58. Secondary roads too bumpy.
59. Roads need upkeep.
60. Main Street / downtown is in horrible condition.
61. Less plowing and sanding due to cost, pollution and its impossible to make perfect.
62. We are faced with demands to make our roads faster straighter and more amenable to higher speeds. We should resist these demands. I would like to see attention paid to traffic calming which includes allowing roads to feel less like a super highway. I wish we could have less ditching and tree cutting along some of our roads so that we can get more of a canopy effect over the road. I realize this makes for more maintenance at times but the contribution to quality of life (more visually appealing more inviting for walking and biking) is worth it.

63. As our town officers are painfully aware, both Stowe Street and especially High Street are in need of major repair. Residents understand the priorities and are being extremely patient.
64. There are a few crazy intersections in Waterbury Center that could use better traffic direction. For example, the one in the Center with the telephone pole in the center of the road and the one where Hollow Road meets Route 100. Also eventually Guptil will need a light at 100.
65. Properly paved roads. Larger shoulder for bikers. Even and obvious sidewalks.
66. Repave Main Street and Stowe Street paint a bike lane on Main St. Maybe between the sidewalk and the street parking there is enough room.

Road Maintenance

67. Waterbury highway/road crews do an excellent job addressing repairs and ongoing maintenance throughout the year.
68. More blacktop repairs – though we can't afford it.
69. Start and complete projects in a timely manner and improve safety of road projects.
70. Plowing of Ashford Lane is poor. Kennedy and Acord Drive are plowed much more often.
71. With all the grading done on certain town roads would it be just as economical to pave them?
72. Too much salt is spread on our winter roads especially gravel roads.
73. Maintenance kept up.
74. In general annual road and sidewalk maintenance doesn't seem to happen till the fall. Next thing you know it's winter and we really didn't get to enjoy them especially when the kids are out of school and tourists in town. Seems that come May 1st those items should be scheduled and addressed before school lets out.

Traffic

75. Too much traffic on Route 100 and downtown in village – creates unsafe conditions.
76. Do something about the traffic on Route 100! Rush hour is a nightmare and everyone exceeds the speed limit. I have never seen the State Police monitoring the speed of cars on Route 100 between the Interstate exit and Stowe.
77. A traffic light may be needed at Guptil/ 100. Problem is it's needed in the morning but probably not any other time of day.
78. It's the drivers who need to improve . . .
79. Maintenance of town/village roads.

Enforcement

80. More police pick up for speeding.
81. More crosswalks and enforcement downtown. More traffic speed enforcement on Main Street especially by Dac Rowe. More education for drivers and punishment of scofflaws.
82. Vehicular speed in town needs to be kept down.
83. Speed limits could be reduced on some roads.

Other

84. Need to be specific whether village or not to rate these. Big difference between them.
85. Air quality is poor downtown. Breathing is difficult. Too much traffic pollution.
86. The merger is necessary so that Selectboard is responsible for all aspects of Waterbury.
87. I would love to have a community dog park for people in the town & village.
88. Have to believe money.
89. None.

3. What specific changes are needed to improve housing in Waterbury?

Affordable Housing

1. I hear we need more low-income housing.
2. Create more affordable housing for young people on limited income including couples without children.
3. Beautiful beautiful area. We're house shopping and it's expensive. The quality of living justifies it and I understand the trade off.

4. More affordable housing for families and condos for older people who want to stay/or move into community.
5. More affordable housing projects - we don't need condos like Stowe we need real homes for real people.
6. More housing for people who don't want to spend a fortune. Affordable is needed.
7. More affordable housing.
8. Overwhelming governmental "hoops" make development of affordable housing too expensive for landowners to consider.
9. Need more affordable condo/apartments for medium income people = not just low income.
10. Affordable accessible and safe housing for young families is limited.
11. Something needs to be done to rein in taxes. It's making housing unaffordable.
12. Housing stock is old. Rents are high. Housing choice for young families especially is limited and expensive.
13. Rents are too high, especially for young people starting out on their own.
14. Develop some affordable housing projects.
15. We need more low income housing and better laws to keep them affordable.
16. More moderately priced apartments.
17. Affordable housing.
18. More "entry-level" homes and multi-family units.

Village/Downtown

19. It would be nice if more of the Main St houses were actually used by families and not business and agencies that seem to rarely be open.
20. Stop developing areas for retail.
21. We should encourage housing mixed with compatible business especially in the village.
22. Incentives for landlords in village. They pay both town and village taxes plus non-homestead rate plus no rebates.

Regulations

23. We need to further look at zoning incentives to encourage additional housing units and funding to assist in development where possible.
24. Allowing tightly clustered development to save costs of infrastructure makes sense as long as the clustering is offset by preservation of open space.
25. Home inspections! Be thorough! Enforce the trash pick-up laws! It should be weekly not once every two weeks, for example, at the Huntington Place condos.
26. Include speed of getting zoning and other regs.

Other

27. Taxes are high. Homes/property lose value. Is that quality?
28. Lower taxes, time.
29. Waterbury is a great place to live and housing is hard to find and more expensive than many places.
30. Housing outside of village limited due to lack of access to public water and sewer.
31. Maybe the town could buy up some of the really bad housing near retail zone and encourage smart development.
32. More apartments – parking.
33. Better, healthier economy overall.
34. Housing quality – Is it safe? Hygienic? Mold?
35. Not of interest to me.
36. I am not in the market so feel it unfair to rate.

4. What specific changes are needed to improve job opportunities, economic development, or businesses in Waterbury?

State Complex

1. State complex for jobs.
2. Creative use of state office complex a possibility.
3. We need the sate office complex back and the merger would allow current funds to assist in development of additional jobs to be used in all of Waterbury not just the village.

4. Bring the state back ;-) More economic development vision & experience on the town level. Most SB folks have very little understanding of economic development.
5. Waterbury will continue to thrive if it keeps lobbying for the state complex to return. Also flood mitigation of the village is critical to keeping the state complex and residents if another big rain event were to happen. If my house flooded again i would definitely move.
6. The state office complex people need to come back to Waterbury. The sooner the better.
7. Jobs were better when the state was here.
8. We need to develop more opportunities for business to survive given the possible reduction in state workers.

Types of Businesses

9. Many goods are high priced in Waterbury.
10. We could use a clothing store that sells things that aren't specialties.
11. No place to buy affordable shoes, boots and clothes.
12. Clothing store.
13. Challenge to purchase basic "goods" such as clothing, chicken feed, lumber, etc.
14. Need to be able to shop for clothing and shoes.
15. Need something besides pizza parlors, bars.
16. I can't get everything I need in Waterbury, but I can get a lot.
17. We need an affordable place to buy quality shoes and clothes. We do not need any more bars or restaurants we need places to shop.
18. Need a 'variety' store.
19. Need more stores for clothing arts/crafts Vermont-made products.
20. The quality of the existing stores are great but there are some basic items that you must head to Burlington to obtain.
21. We need a general store in town.
22. Seriously lacks retail space. Had to go to Williston to buy a spool of thread!
23. Waterbury has many fine dining opportunities but lacks many other types of retail shopping. The internet and competition from regional big box stores are the reason for this.
24. Needs a bike shop as the 5 Hills just closed.
25. Could use a really good horse tack store in Waterbury.
26. Office supplies or school supplies are not available in the Town of Waterbury.
27. I miss Vincents.

Availability of Space/Land

28. No place to build, which means no opportunity for high paying jobs.
29. Lack of space for new business. Change zoning?
30. Without sewer and water outside the village expansion of opportunities will remain limited by availability of services within the village.
31. We should designate areas in the village and town for economic development, new businesses, etc.

Employment Opportunities

32. Create more job opportunities for high school and in-college students, as well as increase opportunities for adults for full-time good-paying jobs so that they can support families.
33. Job opportunities for teens like a retail movie theater.
34. There aren't many job opportunities here. Even GMCR is a "local" business doesn't hire locally.
35. At the current time job opportunities are scarce. Some businesses are hurting. The reduction of state employees is taking its toll.

Other

36. The town could invest in marketing itself to businesses and consumers – or incentivize its businesses to promote Waterbury.
37. Keep support of downtown business strong.
38. Anything that will attract business. Lower taxes. Energy breaks.
39. Keep increasing local specialty companies and those like B&J, GMC.
40. GMCR needs to hire more locals for the better paying jobs.
41. We are lucky to have GMCR Ben & Jerry's and some great small businesses.

42. We have two large employers in town which is great. It would be nice to encourage growth of some smaller business. Technology?
43. Despite Irene there is a lot going on in the Village which suggests a bright future. Waterbury is becoming a place where people come to shop dine and recreate. That makes it even more important that we pay attention to walkability aesthetics and preserving our open spaces.
44. Our taxes in Waterbury are too high now and we lose people because of high taxes.
45. Vermont in general is hostile territory for any entrepreneur.
46. Leasing needs to be more affordable.
47. An economic development office would aid in improving these items.

5. What specific changes are needed to improve emergency response and public safety in Waterbury?

1. Police don't communicate internally very well or keep good records.
2. More support/ training/ personnel improvement for police (getting rid of them is not the answer). Better integration between police and state folks.
3. One rarely sees the officers in the Village unless they are ticketing for speeding. When Officer Burrows was employed he was a frequent face around town both on foot in on patrol. The police chief appears unhealthy and you never see him unless you go in the station. The police department should be restructured or disbanded.
4. I would like to see community policing. As a business owner I want to see the police out & about in town. Walk the streets of the village stop by & talk to business owners. I see a lot of activity on Stowe Street, but I do not see the police force out. I support the department but they really need better leadership and a better image in town.
5. Police force needs more foot presence on street not just sitting in motor running car waiting for an occasional speeder. Traffic to Ice Center can be busy and when there are special events it's dangerous to walk (walkers seem to annoy hockey/soccer moms). Need police presence when there are special events. Schedules should be given to police. Ice Center should be required to purchase speed bumps or have them installed permanently. We were told they couldn't be permanent because of plowing - must be Randle St doesn't get plowed.
6. Need to work on professionalism of police. This has brought about a lack of trust which is leading to the village voting whether to keep them or not. This never would have happened if the police was professional.
7. Encourage police however current police does not spend time wisely.
8. Decrease the size of the police force.
9. Healthier local police force.
10. Town manager needs to do a better job of managing police personnel. It's almost too late now.
11. The town police are a joke and a waste of tax dollars.
12. Get a new police department.
13. Get rid of village police. State police can handle.
14. Eliminate village police.
15. The town does not need its own police force and I'm not sure the village needs one either. For serious crime, the state police are available. For nuisance petty complaints, a contract with state police or sheriff is preferable.
16. As a town resident I live on a private road without public plowing or road maintenance. I do not want an expansion of the police force. I have a very high tax rate for the services I receive but choose to live here based on the quality of life. If taxes increase, I will no longer be able to afford it.
17. Village police is quite adequate.
18. Leave village police as is.
19. Leave police department alone. Use some respect.
20. I am satisfied with current response. Nothing needs to be changed!
21. We need to support & maintain the Waterbury PD. The state police do a great job but they are already stretched too thin. Have had excellent experiences with our local PD!
22. Keep police presence downtown. I'll pay the extra taxes.
23. Give everybody a raise and more staff. Increase.
24. Town wide police services. Better traffic control in village especially during events commuter time at bottom of ramp Stowe St during AM school drop off.
25. Local police should cover town and in village should direct traffic at critical times and places. Perhaps we should have two police districts with different costs to taxpayers or contract with state police for coverage outside the village.

26. Definitely need to keep police department.
27. We need to keep village police force and expand to town.
28. Again merger is necessary to adequate fund and support a properly staffed townwide police department. The village cannot continue to fully fund an adequately staffed police department. The response by the town fire department and ambulance service is outstanding.
29. I think it's important to maintain a local police presence. Let's not forget when it was voted to cut the police budget & how the village responded to a subsequent hike in crime. I think looking back on the police blotter for the Waterbury Record will speak for itself & how the police presence is missed. I certainly don't want to wait for a state officer to come from Worcester VT to help me if I run into trouble. (No slight to the state police). It just doesn't make sense to sacrifice our safety to save some money. Please let's not cut essential services.
30. The possibility that police services in the village may be eliminated is short sighted as it will adversely impact the business environment here. For one thing it is highly likely that due to the interstate Waterbury without police protection will become a focal point for drugs.
31. A village and town without police services (possibility in near future) is not an advertising feature guaranteed to attract new business.
32. Town police could improve response for town residents. Traffic enforcement too!
33. I hope I never need these services but I do wonder how long it might take a police officer to respond to a situation in the middle of the night.
34. As a resident along Route 100 I question whether stretching our limited police coverage to include a marijuana pharmacy is wise. Two other towns/cities have vetoed the idea which heightens the questionability.
35. Better traffic control options to crease ease of movement for emergency vehicles.
36. Install a couple of cameras in areas that have repeat problems.
37. Road sign at Evergreen Woods might help to locate us.
38. Nationally, end drug habits.
39. Upkeep.
40. Have felt uncomfortable with young children at Village Market and Rusty Memorial Park with emotionally disturbed people.
41. Emergencies and disasters could be improved if more leaders of our town would get training themselves.

6. What specific changes are needed to improve the natural environment and access to recreation in Waterbury?

Noise & Air Quality

1. Green Mountain Coffee Roasters puts out a lot of noise near my house (from exhaust, etc. on buildings).
2. GMCR pollutes with noise, smell and traffic in the village. Let them expand in the town for a change.
3. Traffic noise is loud in Waterbury and many days downwind from GMCR the air smells funny, like some sort of gaseous odor.
4. Jake brakes need to be banned. Other towns have signs, Lets get some in Waterbury.
5. Stop train constant blaring through village at 1 a.m.
6. Stop outside music at 8:30 p.m.
7. There need to be tougher ordinances regarding barking dogs. Dogs that bark for hours at a time do not allow neighbors to enjoy the quiet of their own backyard.
8. Noise of Route 100 and interstate are the only negatives on noise.
9. We are what we are. Close to major highway. Good and bad for noise, traffic.
10. Bad car pollution. Water needs to be filtered. Drinking water sometimes stinky. Will we be sick when the state offices are worked on? All that dust, mold, lead, old paint going into our air?
11. Air quality regulations – no outside wood boilers in hollows and prohibit old dirty wood stoves and furnaces – or incentives upgrades.

Parks and Recreation

12. Take better advantage of existing natural areas – parking, paths, tables, safe areas for children.
13. This all can happen if we ourselves, and we teach our children to, enjoy our state parks. Nothing to buy or build. Just enjoy.
14. Waterbury is fortunate to have the state parks at Little River and Waterbury Center.

15. New Hope Davey playground. New pool.
16. Playground at Hope Davey needs updating.
17. The town parks need work. The playgrounds at Hope Davie and the one by the Waterbury pool need to be improved greatly.
18. Town parks need upgrading as far as play structures for children.
19. We could use some more infrastructure at Dac Rowe. A concession stand would be nice.
20. Some form of water reduction should be done at the Dac Rowe field. Terrible when it rains.
21. Dac Rowe Anderson Park & town pool could use some major improvements (i.e. better restroom facilities, adding snack bar, etc.).
22. All great. Grooming the walking path and track around Dac Rowe for cross country skiing would be nice. Also nice would be developing the park behind Thatcher Brook School that was promised to be made a park when Waterbury Center fire station did the land swap.
23. More parkland. Town farm. Town forest.
24. Need fewer ball fields, more general use green space.
25. Increase overall greenspace in Waterbury.
26. Add more green space by preserving open space currently available by giving land owners incentives to preserve (knowledge of how land trusts can benefit them etc.).
27. We should look to develop a couple areas for quiet enjoyment of the views and nature. It would be great to have a quiet interpretive path in Sweets Well field on Loomis Hill where people could walk, sit and enjoy the nature around them. We should have a dog park for people to exercise their dogs in an an area other than the sidewalks.
28. Where are the "town parks?" Beyond the rec fields and Rusty Parker are there any others? Nature parks? Town hiking trail?
29. If there are places to enjoy nature/quiet/scenic views then please make them known.
30. Recreational softball players have been drunk and disorderly (peeing in our backyard).
31. Who takes care of skate park? I clean garbage every time I'm there with kids. Poorly managed/supervised.
32. Public parks are generally left to the care of others.
33. Parks are little appreciated by municipal authority and are maintained involvement. Fortunately there is a municipal commitment to maintain recreational fields. Waterbury could use more play areas for children and better maintain what they already have.

Trails

34. Perry hill trails are amazing. No longer a local secret. Love the town center summer concert series.
35. Could use more trails in town for walking/biking.
36. The mountain biking corridor being developed between Stowe and Waterbury is great. And we have great riding on Perry Hill. How can we promote this to create tourism for the town? I think you would find this demographic has disposable income and would spend $$ at restaurants and businesses here in town.
37. It would be good to get more people to explore the village and town by developing walking/biking paths that connect the 2 areas.
38. I enjoy walking and biking around town.

Rivers & Reservoir

39. River beds need to be cleaned out and deepened.
40. Clean up Thatcher Brook along Route 100. Make it more scenic.
41. Improve the quality of water in the Reservoir due to the milfoil problem.
42. Landfill on Rt 2 is a big risk terrible odors and likely to pollute the river. Would like to see much more emphasis on river quality and seeing the river as a place for recreation.
43. Relocate town sand pile on Moran Ln away from Thatcher Brook where it currently erodes directly into the brook.
44. Rivers need to be free of pollution from up river sources.
45. Quality of the Winooski River and downstream waters may be negatively impacted by the quality of Waterbury's sewer discharge and if so should be addressed.
46. Needs improvement: More riparian buffers and improved soils along the river (i.e. no more conventional corn in the floodplain that contributes to

phosphorous loading of Lake Champlain). And better land use planning / management - less sprawl!

Other

47. Growth threatens to destroy the quality of life.
48. Improved water treatment plant and sewer system available through out town
49. Culverts should be installed with fish passage enabled. Shaw Mansior dip is case in point.
50. Increased citizen involvement with groups such as Waterbury LEAP would help to improve things in these areas. Waterbury is blessed with a lot of concerned activist folks who care about these issues.
51. Still quite dusty nice street trees. Continue maintenance on them please!
52. We are blessed and need to keep it that way.
53. Limiting the use of security lighting - particularly at higher elevations where their impact is particularly disturbing.

7. What specific changes are needed to improve community services in Waterbury?

Library

1. The library needs more space.
2. Staffing and programs at the library are excellent but the space is inadequate and too small for a community of our size.
3. The library is too small for a town of our size. Needs more space.
4. New library!
5. We definitely need a new and better library in town.
6. Need new library.
7. Library is too small. Sometimes we go elsewhere to have more room for the kids to move about and enjoy books without being cramped
8. Library needs to be expanded. Need a pediatrician in Waterbury again.
9. Build new library at site of Wasson and Stanley Hall. Best to tear down both and start anew!
10. We need a new library! We need something a lot bigger with more selections, DVDs and programming.
11. Need new library as we all know.
12. The library while doing a wonderful job with what it has is woefully inadequate.
13. Library has outgrown there antiquated space. Hopefully they will be given space in Stanley Hall if that is purchased.
14. We need a bigger and modern library.
15. New library building.
16. Also I like the library but it needs to be bigger and more modern facilities.
17. The library does a wonderful job with the poor space it occupies and should be replaced.
18. We must get a new library. It is critical to the infrastructure of our town.
19. We need a new library facility.
20. The library needs more space.
21. Given the dedication of our library's board and volunteers functioning despite the cramped inadequate facility one has to realize how much more vital this precious asset could be! The library and our Historical Society need space so badly!!
22. Library service is good considering work conditions in an out-moded, too small building.
23. The service at the library is fantastic.
24. The library does the best it can in its current location but needs updating.
25. Library is very small with little selection and could use updating.
26. New library.
27. New, bigger library.
28. Library needs "major" technology update with more open space for groups.
29. I would like library to have some evening and Sunday hours.
30. Library needs a new/larger space.
31. We need a new library.
32. New library building!
33. Library is excellent but needs more space.
34. Expand the library.

35. Excellent quality of the library – This refers to the extraordinary efforts and service by the people who are "the library" to us. The building and space are so substandard for this use!
36. New library building and facilities.
37. The staff at the library do a great job with what they have. We need a new library!
38. We need a new and up-to-date library that can provide the services to people that can't afford them otherwise. The library could provide activities for seniors as well.

Schools

39. The schools enjoy a very good reputation. The world is moving to digital. The decision to expand the library is confusing when most communities are downsizing.
40. Better drama programs in the schools would be good.
41. If you're asking about TBPS i think it's excellent CBMS good and HUHS poor!
42. Teach our kids! Eliminate nonsense field trips.
43. Our schools should be best in nation for what we pay. Our number of kids declines – taxes should go down.
44. Class sizes are small. Test scores are low but taxes still keep going up. Increase class size and teach teachers how to teach basics.

Youth Activities

45. Work to create activities for youth in this community. There really are none!
46. Great athletic fields ice center swimming pool but little to do for teens after school and weekends.
47. Great recreational program – soccer, football, biking, etc.
48. Need positive activities for teens. Need stronger rec program.
49. Something for teens.
50. There are lots of activities through Middle School (i.e. after school sports dance etc.) but there is not a place where high school kids can hang out.
51. Aside from sports there is nothing for tween/teens/young adults to do but get into drugs and cause trouble! Bowl? Movie? Mini golf?

Town Pool

52. The swimming pool is a wonderful resource and rare in a community of our size but little appreciated by town government and accordingly in a sad state. Access is limited to those families able to pay. Sure there is a state day use swimming area but that also can cost a young family dearly so is available to those who can afford it.
53. Waterbury is fortunate to have a public swimming pool however I believe it in sad shape and unaffordable to many young families.

Senior Activities

54. Wish there were more opportunities for seniors to attend some of the events around (e.g. theatre). Many of us cannot drive at night.
55. More activity for seniors more capable of doing/going more (check out Montpelier's Senior Center and activities).

Healthcare

56. Add a psychiatrist & drug/alcohol specialist to Waterbury Medical to handle these needs in the community
57. Need competition for Waterbury Medical.
58. When I moved here I tried to go to the local doctor in Waterbury Village and was told they were accepting "no new patients." I found that frustrating.

Childcare

59. There aren't a lot of daycare options.
60. Childcare is limited.

Other

61. If funding warrants it a full time "cultural" manager could address such needs that affect youth/seniors & others.
62. Need more public transport or taxis for hire.
63. We have all we need, plus, but it seems we are teaching our children that if it doesn't come with a price tag it's not good enough.
64. No children so I'm going to skew your results.
65. I'd lump Waterbury in with the Mad River Valley.

8. What specific changes are needed to improve community infrastructure?

Parking

1. Need to enforce 2 hour or 15 minute parking.
2. There is not enough parking. Why take away parking and build a bike path.
3. More public parking.
4. More parking around Stowe Street and Route 2 intersection.
5. Better signage to municipal parking.
6. Keep parking that already exists in the village. Strike deal with TD Bank to build 3 story parking garage in their lot with hourly parking meters to pay for it.
7. Parking would be better if police enforced time limits.
8. Don't take parking spaces away with the downtown improvement – create more.
9. Lots of parking. Takes a long time to figure out where it is if you didn't grow up in Waterbury.
10. Parking in the village is terrible.
11. One idea for healthy communities is to have fewer parking near stores and have people walk. Interesting idea.
12. The condition of the municipal parking lots are in need of repair regular cleaning and stripping.
13. Need more free parking to increase business in village.
14. Parking needs better signage and Main st. needs to be redone!
15. Parking in the village will be a much more severe problem if parking spaces are reduced along South Main St.
16. As the village grows and attracts more business parking may eventually become a problem.
17. Parking is becoming quite an issue as Waterbury grows.
18. Evening functions in town are particularly difficult for seniors who must find distant parking due to congestion from the bars and restaurants.
19. Reserving public parking spaces on Main Street for specific businesses is the wrong approach to parking management. Ticketing for using public spaces in front of specific businesses is the WRONG approach to parking management.
20. Public parking in the village must be expanded (the new street project will actually exacerbate an already bad situation.
21. Don't give up limited parking we now have to bike path. Need to do all we can to help local businesses
22. Parking is always an issue. Spaces can be found but it usually involves a lot of walking to destination. Not a problem for me but it is for many.
23. Parking in the village already limited will be made worse with the new street project.
24. More parking! The new signs are helpful.. Maybe designated locations for local businesses & their employees/tenants to park so we can have more available parking for customers.
25. Parking is good now but in future will need more.

Energy

26. An easy [illegible] would be to make the tennis court lighting coin operated or at least controlled by users not on auto pilot.
27. Like I have said, fix what we have but all this solar energy is like trying to put all our eggs in one basket. Very bad idea.
28. We should be looking into use of solar panels to supplement energy for municipal use.
29. Energy efficiency could be improved with a greener facility built for town offices, library, historical society, and police.
30. Solar installations for town facilities. Wind turbine for the ice center.
31. More support & investment in energy efficiency (as opposed to focusing only on solar which seems to be the trend.
32. Alternative energy resources.
33. New municipal infrastructure must be designed to be energy efficient.
34. As new facilities are built energy efficiency must be paramount. Waterbury should be a leader in renewables and recycling.

Stormwater

35. I'd encourage municipality to work with Champlain Blue when planning stormwater issues.

36. Public Works needs to keep storm drains clear.
37. Some storm water drains are higher than the property around it. How can they drain?
38. Who cares about stormwater when we need to think bigger like flood of 2011. Parking is what it is.

Telecommunications

39. Cell phones don't work everywhere in Waterbury.
40. We need to press to get high speed internet throughout the town. It's my number 1 issue with living here. I live off Shaw Mansion in Evergreen Woods. I now need to commute every day of the week and some weekends to Burlington. With high speed internet I could work from home 2-3 days a week. My job and I'm assuming most people jobs are increasingly being tied to internet access with work programs becoming "cloud based". What can we do to make this happen?
41. HS internet service is spotty as is cell service (almost non-existent in the Center).
42. HS internet and cell phone access is spotty at best. As an investment in the future Waterbury should do better.
43. Surprisingly there still are pockets of poor cell service.
44. Need AT&T service increased in the center.
45. DSL provided by Fairpoint outside the Village is an important improvement but still relatively slow especially during heavy usage at which time it slows to dialup.

Water/Sewer

46. Hopefully town will be addressing the need to upgrade old outdated water system in next few years.
47. Access to water/sewer is fine. Expansion in my opinion isn't needed.
48. Water and sewer should be extended along the Route 100 corridor.
49. Sewer extensions in Waterbury Center.
50. Sewer and water should have a plan for future expansion north of the village.
51. Decisions about expanding water and sewer need to be very carefully made. If the lines go up Route 100 the pressures for sprawl will be intense. It is a mistake to think that zoning can prevent it.
52. We do not have public water or sewer.

Other

53. We need a new municipal building.
54. We do not have public water or sewer.

9. What specific changes are needed to improve local government?

Merger

1. Would we please have one government! Having our town manager etc. deal with two separate governing bodies for a place this small is a waste of their time
2. Two governing boards for a community the size of Waterbury is a waste of time and energy. Merger must continue to be pursued.
3. I hope there will be a merger of the Village and Town but until that occurs the Town should not take on expenses that properly belong to the Village (for example providing facilities for the Village police).
4. A merger would enable more efficient and a simpler government with one vision going forward.
5. It is stupid to fight the merger of the village and town.

Communications

6. The Town Website could be more informative about ongoing activities.
7. Town and Village should have a FB page and Twitter feed more frequent website updates and a more positive engagement with citizens.
8. Publicity of and interactive website where up-to-date info is available on town meetings and plans. Don't wait for the Waterbury Record or Burlington Free Press or TV station to fill us all in.
9. FPF is a great resource.
10. Must continue to work on informing residents of area when decisions that may impact them are being made. I'm not a Winooski St resident but I don't think

the handling of park land swap of community garden land for library project was handled professionally at all. Too sneaky.

11. Would like to see synopsis of select board meetings in each Waterbury Record - like in Exit 10.
12. When public hearings occur it would be great if the public attended.
13. Citizens need immediate information about what is going on with government, planning boards, school boards. It seems we find out too late.
14. If one doesn't have computers, no access to issues.
15. Town meeting day is a joke for those people with jobs. It needs to be changed so that everyone has a chance to vote and be heard.
16. More attention to citizen concerns. Seems like business concerns always trump citizen concerns such as the comedy fest in Waterbury Center.

Taxes

17. It's a choice I made when moving to a private development. However taxes have continued to increase and the tax rate is not representative of what every homeowner pays as many have tax assistance.
18. Over taxed. Budget needs review! Unhappy with lister. Had not been in our house since mid-80's. Did not visit after flood as he didn't think we'd been affected when he "drove by" despite our house being on a chart from Irene as having 60% damage. Took a few calls to right the issue only after we'd read that he had visited all affected homes.
19. Oversight of tax dollars spent is good. I believe the best is done with the amount of tax dollars brought in.
20. It will never be excellent because majority of taxes goes to schools. I guess for the amount that goes to the town things are good.
21. Less taxes for school and more municipal.
22. Taxes too high.
23. Cost of services are high, but know that the high cost is due to number of people in town. Cost of living in small town in Vermont – a double edge sword.
24. The value of the municipal tax is great but the school tax adds to the burden without apparent good value the municipal tax is.
25. Would be OK paying more for better roads and police service.

Town Employees & Volunteers

26. Love all our volunteers and paid staff. Stellar people.
27. We are fortunate to have one of the best town/village managers in the State.
28. We have an outstanding Town Manager here in Waterbury. He & all town officials provided excellent leadership during Irene crisis.
29. The town police department is a complete waste of assets!
30. Town manger is a good money manger but poor people manager. Many town elected officials are corrupt and favoritism is shown to business owners over townspeople.
31. Town planner is slow on follow through.

Roads

32. What services besides schools? Good job on roads.
33. Road maintenance and safe, smooth traffic patterns at all hours are a key measure of a community's concerns for its citizens.
34. Roads are in awful condition

Municipal Facility

35. Build a new municipal facility that includes the library & historical society so info access and people can come together in one place. Police too?
36. New building to house it.

Other

37. We have groups that plan what they want for Waterbury and no matter what most of the people want doesn't matter or even considered because they believe they know what's best for everyone.
38. Our local government does a superb job with scarce resources. My only fears are that the town will take on more responsibilities than it has now and that we will allow Waterbury to become the provider of services to other communities without asking them to pay their share as we have done for example with the ice center.
39. No improvements in Center for sidewalks, roads, lighting.

10. What specific locations or natural resources should be protected?

Reservoir

1. Reservoir [19]
2. Properties around reservoir. [2]
3. Reservoir at Blush Hill is under developed. Needs work.
4. Waterworks
5. Encroachment on the Reservoir.

Uplands & Ridgelines

6. Camel's Hump [10]
7. Loomis Hill [5]
8. Sweet Road [3]
9. Blush Hill [2]
10. Hunger Mt. [2]
11. Ridgelines [3]
12. Wooster Ridge [3]
13. Perry Hill [2]
14. The flanks of the Greens and the Worcesters for sure!
15. Protect higher elevations from housing development.

Scenic Views

16. Mountain views
17. Views [3]
18. Viewsheds
19. Scenic views [2]
20. .Views are difficult to protect on private except by zoning restrictions on high elevation mountain sides.
21. River Road

Farms & Farmland

22. Woodard Farm
23. Farmland / open meadows.
24. Farmland north of Mavis Road.
25. All remaining farmland.
26. All farms
27. WC farms
28. State farm
29. Any available farmland. It is unfortunately almost entirely lost to development but there is still hope to save some.
30. Try to conserve farmland.

Rivers & Floodplains

31. Winooski River
32. Thatcher Brook streambrook
33. Village floodplains. Change zoning laws in floodplain to reflect a cumulative effect model.
34. Limit development in floodplains.
35. We need to dig out our rivers or we will have more floods.
36. The Winooski floodplain needs to be better managed. More trees and more fields (Not bare ground with corn fields). Corn fields are very compact and do not absorb water from floods well. Pasture land does.
37. There remains an auto tire waste dump along the Winooski River west of the village which will during another flood simply wash into the river unless removed. The state will probably protect the Little River reservoir area which should be recognized and protected as a major Waterbury resource.
38. Water quality
39. Wetlands [2]
40. Floodplains
41. The village of Waterbury from future flooding
42. Riparian buffer surrounding the Winooski River should be expanded.

Wildlife Habitat & Undeveloped Land

43. Shutesville Hill Wildlife migration corridor [2]

44. Deer wintering areas [2]
45. Habitat
46. State forests, i.e. CC Putnam Little River etc.
47. Undeveloped parcels along Route 100 [2]
48. Development on the Rt 100 corridor should be reviewed. If thoughtful well planned and controlled development to a certain degree could be an economic assess to Waterbury.
49. Large interconnected parcels of undeveloped land.
50. Undeveloped land rich in wildlife that also provides recreation such as hiking or hunting.
51. We should protect the open space when possible.
52. Use Value protects our forestland and deer yards and there is no need for local regulation.
53. Preserving forestland will take care of some other of the above list.
54. Making provisions for "green belts" ought to be included beyond those within housing developments. ie: wildlife corridors

Trails & Recreation Areas

55. Perry Hill for recreation. The trail network brings a lot of people into town and contributes significantly to our local economy. More should be done to support the trails and potentially expand them.
56. Hiking and nature trails
57. VAST trails
58. Trails
59. Mountain bike trails
60. Dac Rowe field
61. Horseshoe grassy area
62. Little river park
63. Recreational activity areas

Historic Buildings and Civic Facilities

64. State office complex [3]
65. Historic buildings
66. Pre-1900 buildings
67. The integrity of our historic buildings. Old station lumber should never have been torn down. What's next?!
68. Do we really have any "historic buildings" that require protection? If we are referring to the flooded state buildings come up with the best overall plan for that area. If that means taking down buildings so be it.

11. Are there other approaches to resource protection that Waterbury should consider?

Protection of Open Space

1. Waterbury is awesome because of the environment we live in. We must protect our ridgelines and open space. Development should be more clustered to ensure open space. Also as new people come to Waterbury we need to protect our access to trails located on private land.
2. Building more in less space. Understand and incorporate Cumulative impacts of development on resources.
3. Focus on large tracts for resource protection. Not fragmented areas already impacted.
4. Identify open spaces and areas that need to remain undeveloped. Create a conservation master plan.
5. Land conservation
6. I totally support these efforts. I wish Waterbury did some of these things years ago!
7. Increasing protection in all areas now will reduce problems with trying to increase protection in the future.
8. Maybe you should create jobs patrolling resources to protect them? I suggest you look around New England. Learn from the mistakes of places like Derry, New Hampshire (way too crowded). Too much density. They lost the original character of the historic town.
9. Forestry Department should review any plan to remove large trees. Seems that we are losing trees at a whim.

Balancing Resource Protection and Growth

10. A balanced approach is important. We need to protect our natural resources and farmland and support growth and energy independence.
11. It's all about common sense. We need some development and growth is this town. Yes it should be done with care for environment and aesthetics but don't choke off growth with red tape.
12. As above I think that some green areas whether for farming or wildlife habitat should receive tax easements for remaining "open" would enhance - as this has done in Stowe - the scenic aspect of the area. Limiting further 'strip development' of Route 100 would not only boost businesses in Waterbury and Waterbury Center but improve the "Byway" aspect of that vital tourist route.
13. Strike a balance between residential and commercial with Main Street and periphery streets. Restrict the typical "norm" that comes with commercial because it is right in the middle of the residential communities.
14. Affirmative action now on all development issues before "sprawl" gets away from us is of utmost importance.

Developed Areas

15. Multi-family developments should include generous space for outdoor play, gardening, enjoying a natural feature - something more than "just a yard."
16. Don't build buildings in the village where there aren't already buildings. There are plenty of empty storefronts or houses to use.
17. Growth outside of designated growth centers is problematic without access to sewer and water.
18. Commercial base (i.e. retail, parking, office, etc.).
19. Fix Winooski Street bridge over river to allow downstream passage of flood waters.

Funding

20. What about impact assessment fees? These are a very important tool used in other towns.
21. Unsure of the last option because it would all depend on the easements. Tax dollars are very competitive and the budget right now is very tight.
22. Find grants, federal/state money, private/corporate donations, fundraising, and work with environmental organizations and land trusts.

Property Rights / Reduced Regulation

23. Landowners should be allowed to manage their own resources on their land without interference from outside entities or parties claiming entitlement that they do not have.
24. Less regulations. Allow business to develop. Lower taxes.
25. Lower taxes. Let people build business. Watch the area grow. No growth = death.
26. I don't support any rules, laws or leaders that are socialistic in anyway or form.
27. People pay taxes to have a home and land. They should be able to do what they want with it as long as it doesn't hurt neighbors.
28. I'm concerned that family farms who are deciding to sell their land will lose expected value if restrictions are placed on what can be done with the land.
29. Do not duplicate state regs and laws.

Process

30. DRB members (especially builders on it) should automatically recuse themselves when they work for applicants.
31. I believe encouraging through regulations is necessary.
32. Town needs to determine resource protected area goals and weigh decisions based on goals.
33. Public hearings and voter referendum.

Other

34. Don't know what DRB is.
35. What is DRB?
36. What is DRB? What are you talking about? Define your terms.
37. This question (regulate development) was poorly worded. Are you asking if we want more regulation or more of the resource? I am in favor of tightly regulating development of all of the items listed from historic buildings to hillsides.
38. Difficult to answer. Don't know where the "designated growth centers" are.

39. Would need more information on considered resources (inventory should help clarify this).
40. Need more information.

12. What specific recreation projects or improvements should be undertaken?

Walking and Biking

1. Improved/expanded walking and biking options.
2. Sidewalks, bike paths, walking trails.
3. Pedestrian paths.
4. Fix the sidewalks. More walking paths.
5. Make downtown a pedestrian-only area. Create ring roads around it and parking and transportation.
6. Bike trails. Go to Stowe – look at al the out of state traffic they generate.
7. 2-foot smooth bike lane on shoulder. Currently shoulders are very unsafe.
8. A bike/walk path along river.
9. Bike path in town.
10. Walk/bike path connecting to Stowe bike path and going to the valley.
11. Improve facilities for bikers and pedestrians.
12. Perhaps improvements to the walking path.
13. Connect trails and sidewalks from MRV/Crosset Brook to Little River State Park. Route 2 sidewalks, bike lanes.
14. Connect bike trails and systems.
15. Perry Hill trail improvements.
16. More support to MBVT for Perry Hill mountain bike trail maintenance.
17. Bike paths, trails
18. As the Stowe/Waterbury mountain bike trail comes on-line we should publicize and promote this to generate tourism.
19. Better walking and biking along route 100.
20. Mountain bike trails and foot paths - would also be good for economic development.
21. Make more mountain bike trails up at the perry hill trails by the ice center.
22. Building a bike network so people can ride from the south part of town (Ice Rink) to Little River State Park without having to fight cars on Route 2. Also look into creating a path from town to Crosset Brook Middle School for kids to get to school.
23. Bike route through downtown.
24. Walking/biking area behind state office complex and cornfield could be better maintained, signage w/ mile markers, include benches.
25. Walking/nature path around lake.
26. Sidewalk up route 100.
27. Improve pedestrian and biking lanes/paths.
28. Some kind of hiking/strolling path that connects to the village and passes through spots with views, stream access, that is patrolled, with benches, picnic tables, etc is one idea.

Water Access

29. Winooski River access.
30. Boat ramp into the Winooski.
31. River rafting or better funding to the Res.
32. Improve water access – only after merging.
33. Nicer access to the river.

Parks and Recreation Areas/Facilities

34. Bowling alley. Movie theatre.
35. Create a community center.
36. More use of Doc Rowe field. No drinking at events.
37. Improved playgrounds.
38. Improve Blush Hill access to reservoir.
39. New pool.
40. [illegible] indoor pool.
41. Improvement of pool/ rec facilities.
42. Improving downtown, bike paths, library.

43. Build a new library. Recreation isn't just physical – can be reading, book groups, genealogy, concerts, plays, playing cards, historical society, etc.
44. Develop the Ice Arena area to include more recreation facilities like batting cages and other fun stuff.
45. I would like to see quiet parks and a dog park. Having a dog park would be a way to reduce traffic on sidewalks and safer for bikes and pedestrians.
46. Resurface tennis courts.
47. Increase seating capacity near gazebo
48. Do a better job maintaining the outdoor ice rink by swimming pool in winter (flooding it regularly when it will be cold), a more consistent lighting schedule for the outdoor rink and tennis courts.
49. We could use a nice indoor recreation facility, perhaps adjacent to Dac Rowe or another building adjacent to ice rink.
50. Improve the parks- more playground structures etc.
51. Add concession stand and a second exit to Dac Rowe.
52. Create a picnic pavilion at Dac Rowe.
53. Closer partnership with state on state parks, additional development of ice center property with additional rec activities, redevelopment of pool area.
54. Pool needs to be either dismantled and removed for the land to be used differently or major renovations to happen so that it is upgraded and open longer through the summer.
55. Cheaper membership to the pool- as a Duxbury resident who lives 1 mile outside of town I'm considered an "out of town" resident and had to pay a ton of money for swim lessons and to have a pool membership.
56. We need pool upgrades. The town pool is a jewel.
57. Make access to Ice Center safer, Very dangerous traffic. Most bikers driving there are courteous drivers, not skaters/soccer group.

No Expansion

58. We have enough. The taxes do up each time you come up with a new way to spend money.
59. None that required local tax money.
60. Never hire a full-time recreation director. More cost. Higher taxes.
61. Fire the town planner and hire a full-time recreation director.
62. Recreation director – Who has a friend or college kid that needs a job and us taxpayers pay for?
63. We do NOT need to hire a full-time recreation director. Don't really know how much more improvement can be done on our current parks/recreation areas. We maintain these facilities as best we can with the amount of tax dollars available.
64. A full time recreation director should only be considered if fees support position. Given fees limit use, I don't think it's a good idea.
65. Recreation should never replace maintenance of public highways.

Other

66. Marketing plan for promoting recreation.
67. Hire a full-time rec director.
68. Hiring a recreation director part-time would move up the effectiveness list if this person worked with youth to develop youth-based activities in Waterbury
69. Don't you need some expert advice here (on the question above), rather than a survey?

13. Are there specific locations where renewable energy projects should or should not be encouraged?

Location

1. Blush Hill near cell towers.
2. Thatcher brook school
3. Where they make economic sense.
4. They should be encouraged everywhere.
5. Encouraged everywhere.
6. Not sure. Ask people with the knowledge to make the correct decision.
7. Should not be encouraged where it will diminish the scenic value of town – along roads (especially Route 100) and on hillsides.
8. Don't take the ridgelines for wind turbines. Encourage solar!
9. Preferably where not immediately visible.

10. Not in any place where it will have a negative impact on our environment, nor where it will affect precious views.
11. Renewable energy growth trumps views.
12. Solar farms on town owned land. Solar panels on all municipal buildings. New municipal construction to meet LEED standards.
13. Projects should only be located in developed areas. Undeveloped areas should be protected.
14. Designated growth areas. Viewsheds. Wildlife habitat.
15. Would depend on the size of a given project and how it fits into existing area. Example, solar collectors on roofs could probably work anywhere.
16. Each project will need to be evaluated for the site used.
17. Identify prime areas and approach landowners to discuss benefits.

Wind

18. No wind turbines! They will prove to be a very costly folly.
19. Go solar. Down with wind turbines.
20. Wind turbines – depends on where
21. This is not Arizona! Not enough wind here.
22. If ridgeline turbines restrict large areas no longer available for hunting, fishing, hiking, snowmobiling, biking, not good.
23. No windmills on ridgelines. Solar farms screened.
24. I don't think we should encourage clear cutting but if someone wants to on their personal property we should not prevent it either.
25. No wind projects in Waterbury.
26. I don't think Waterbury has huge wind potential (I am not an expert but have looked the the Renewable Energy Atlas). I think solar and biomass are good options.
27. We all need to be open to seeing this technology in "our backyard" I have beautiful views of camel's Hump and the backside of Bolton. Would I want those views completely taken over with wind turbines? No, however I believe we need to be energy independent and I am willing to compromise some of my personal enjoyment for renewable energy.
28. I do not support wind turbines for utility energy production.
29. Renewable energy project should not be encouraged on ridgelines and viewsheds.
30. Wind turbines and biomass for personal use could adversely affect neighborhoods.
31. I would be concerned about wind and biomass for personal use because of potential impact on neighbors.

Solar

32. I'd prefer solar panels on a roof instead of fields filled with huge panels like in Hinesburg.
33. Do not ruin open spaces with solar "farms."
34. Solar rooftops rather than solar farms.

Other

35. Town should support but not subsidize!
36. This is only a village issue when it comes to the village government's usage. The rest is a personal choice.
37. Let people make their own decisions.
38. If someone wants to do it totally on their own with no tax dollars. They should be able to do it.
39. Encourage = NOT mandate
40. I'm OK with wind and solar, but I'd rather see larger more significant projects, than having everyone in my neighborhood plant a wind turbine.
41. Energy efficiency is best on a large scale not at the personal production level.
42. The use of biomass for an installation that produces power and heat or just heat is desirable. However, power is more likely to be produced more efficiently by natural gas.
43. Energy efficiency of town owned buildings should be prioritized at the same level or above renewables, just FYI.
44. Keep the wood chip facility at the state buildings.
45. Town heating plant is great.
46. We should not building anymore dams on streams.
47. Unsure.

14. Where should Waterbury encourage more residential development?

1. Residential development in Waterbury Village – where?
2. People will build where taxes are lower.
3. Stop telling people what they can and can't do. Let people decide themselves.
4. No increase in the size of village.
5. Question assumes growth is good. I disagree.

15. Where should Waterbury encourage more commercial development?

1. Waterbury is big enough.
2. The village is losing its historical character as GMCR takes over. Enough already!!
3. Attract businesses if it can help lower our property taxes.
4. Traffic mitigation needed in Colbyville.

16. Where should Waterbury encourage more industrial development?

1. No more growth.
2. Limit industrial growth. Pilgrim Park is OK.
3. This will help the ones with money and do nothing to lower our taxes.

17. How should Waterbury allocate town funds?

1. $20 for municipal building with library, historical society and police.
2. $25 for library.
3. $10 for library facility including historical society.
4. $10 for a savings fund.
5. $5 for automatic retired veterans' tax break.
6. $5 for cultural resources.
7. $1 for library and cultural services building.
8. Police, fire and rescue services – very important to a viable community.
9. Better water and air quality must be pursued. Keep large trucks out of our downtown.
10. Allocate another $100 for the library.
11. Feel like I can't do this without more familiarity with existing numbers.
12. Nothing I could write would be close to the reality of what things cost.

18. Other comments?

Police

1. I have lived in this "town" my entire life. I think Waterbury is an amazing place to raise a family and make a home, or I would have left a long time ago. I think it is great this 'new' conversation about the local police force. Maybe it is time for a change? That being said, I do not like the idea that the vote on November 4th is binding. I think there are too many questions remaining. I would like to know what figures are available for small/medium sized Vermont towns that do and do not have local police, what are the crime rates? It is ironic to me that the paper spoke of the police force and informed us of the pot factory coming at the same time. I am not sure why I got this form when other members of my family and neighborhood didn't, but I appreciate the opportunity to share my thoughts.
2. Regarding police department, I support the police department but it needs to be run better. Physically fit officers and policing of pedestrians at signalized intersections and ticketing of arrogant bicyclists running stop signals. Keep the town planner out of business people's running their business. Stabilize Waterbury were it is now. Let the housing and businesses go elsewhere. We have more than enough people and traffic already.
3. Big mistake to eliminate Police Department. It would be a license for serious crime and vandalism. State police would respond but [illegible] would prevail. It is very selfish for Town residents not to contribute for adequate police presence.
4. Keep police.
5. The current village police force is not effective
6. Support a merger with a completely overhauled police department or no police department.
7. I think police services should be addressed separately from the merger.
8. Police force needs revamping. We need it but not with the current frills, need more presence, less sitting around. Worry less about the occasional speeder! Need to find way to make merger more town friendly so they'll finally approve.

Merger

9. Merger would make sense on many levels & efforts to do so should be continued. Most folks love it here & act like we're "one" so why not formalize it?!
10. Never support merger under present mindset of officials.
11. Merger can not be considered until question of police force and village water plant resolved.
12. I believe the necessity to cooperatively to recover from the damage of Irene has brought the community together and identified the need to work together as one community and in come cases one region to recover and forge a stronger future. With the complexities of accomplishing this, government has to be as simple and efficient as possible to make it happen. The complexities of have village trustees with the town complicate the process and result in inefficiencies. A merger would eliminate this. The police department is an example of a townwide need that is only funded by the village properties. The village can no longer fund a fully staffed police department. I believe going forward having a merger that eliminates the village is necessary for Waterbury to forge the best future possible. Waterbury is truly blessed with an abundance if hearty volunteers and dedicated elected officials that work tirelessly for our benefit. For that we are grateful.
13. Get over merger of town and village. Combine, economize and save money.
14. Support merger only if village sets up water and sewer district that is self funded!
15. Whatever saves money and gives us best protection.

Irene

16. We need to use lessons we learned from Irene and change the zoning regulations in flood hazard areas to be more stringent than they currently are. The Planning Commission and DRB have not heeded advice from state flood officials which continue to put people in the Winooski River corridor at risk. They appear to worry more about disappointing developers than protecting ordinary people.
17. You should know that in spite of my cranky comments, we do (for the most part) enjoy living in Waterbury. We did "enjoy" Hurricane Irene (in a way). But I am determined to move to higher ground. Rain makes me nervous these days. I never want to experience another flood.
18. Long overdue. Perhaps Irene will move folks to work together for the common good.
19. Officials went above/beyond for irene recovery!! Kudos.
20. Work hard to study flood mitigation, another flood would mean the state complex would never return and most village residents would end up moving, then business would close. Study the Winooski St bridge bottle neck and make sure the state lowers the land behind the complex to allow more water to pass through. Don't build anymore buildings back there.
21. Flood mitigation.

Library

22. It would be nice to promote and support more cultural activities in town. More support of library, perhaps a theater.
23. The library was not included in the list of choices for town support but should be moved to a building in the state complex.
24. Build new municipal office and library at Stanley Hall.

Government

25. Waterbury needs a Selectboard that lives and pays their bills like the lower income people. Stop spending. How much did this mailing cost and how was it paid for? Could have been handed out in November at election time.
26. Government efficiency.
27. Term limits.
28. This state and this country as a whole need to get back to the basics just as all schools should be doing as well. Common sense goes a very long way as long as regulations aren't overbearing. Bigger government is not and will never be the answer. Our state and country need to adhere to the Constitution and our laws and regulations that are already on the books. Let's face it, we all need to be more conservative and stop becoming a nanny state and country. Communities should be helping their citizens in need, not federal or state governments.
29. We need to be able to maintain well what we already have. Waterbury doesn't focus on preventative building maintenance as well as we should.

Taxes

30. Taxes cannot continue to go up when our home values are going down.
31. Lower taxes. Lower taxes. Lower taxes. Lower taxes. Bring in more independent business. Give tax breaks to attract. Let people build. Economy will thrive. Regulate = death. Break the unions with the schools/teachers. It is killing us! The more services you try to provide, you attract less people willing to work. Costs the town more money. If you tell people they can build it, they will come. If the state does not move back, let business move in. Less regulations, lower taxes, bust the unions = growth for all!
32. I think it is really sad when a few people think they know what is best for everyone else. The lose sight of anyone else's hopes and dreams. They also seem to forget the needs of the people. Home and food and affordable housing. They take money and want to put it in parks, walking paths, ball fields that a few people who don't have problems with basic living conditions get to use. We also teach our children no sense of value, to earn what they want through hard work and sacrifice. We will leave them unbelievable taxes which will keep them working so hard they won't be able to enjoy all you got them. It is too bad.
33. We are going to spend too much money to tear down and rebuild the building for municipal building. We can reconstruct the interior of the existing building to accomplish our needs. We seem to thing the funds from FEMA and the state is free money. Who is the town, state and federal government? It is us, the people of all three. Who pays the town, the state and the federal government? How many buildings were torn down after the '27 flood? How many thousand did it cost to restore those buildings? Stop spending so much money. We all owe our souls to China. Stop it! We need to stop thinking all this money is free.
34. I don't mind paying taxes at the current rate as long as services provided continue to grow and progress. Keep up the good work. Thank you.

Traffic, Parking and Roads

35. Don't spend a ton of money to fix an intersection that isn't broken by Snowfire. Make it easier for kids to cross the street but don't spend 5 million dollars when you could probably just paint a crosswalk and hire a crossing guard.
36. Parking.
37. Something needs to be done about the Guptil [?] Road / Route 100 intersection.

Development, Growth and Planning

38. Waterbury is special for a variety of reasons. The natural environment is certainly one of the key reasons. All future plans should keep Waterbury's unique quality of life unique. Let's not make Waterbury look like the usual interstate exit / franchise row of America.
39. Development incentives such as expansion of water/sewer.
40. Keep it green and scenic. Keep ridgelines and farms. Preserve historical buildings.
41. Waterbury Village is a beautiful testament to the 1880s. Yet we only have explored part of its historic potential. The entire village should become a historical district.
42. The buzzword needs to be sustainability instead of growth.
43. We need to think beyond ball fields when we talk about recreation.
44. Waterbury is overdeveloped and until we resolve problems such as traffic no further development should be encouraged. Waterbury also needs to have a public discussion of what we want our town and village to be in 100 years, including population, natural areas, recreation, and jobs. Then we should develop a plan and zoning based on that 100 year vision. Without a long-term vision, we may be destroying the very qualities that we love most about the town by piecemeal development that does not consider cumulative impacts and quality of life issues.
45. Work hard to keep village grocery store open and not have it run out of business by a Shaws that shouldn't be there in the first place. Work on decreasing traffic in route 100 area around Shaws. Can be terrible.

Survey

46. Survey too long.
47. Thank you for asking!
48. This is a great survey! Please communicate results along with number of residents in town and village that responded.
49. Thank you for gathering input from the community!
50. Thank you for the opportunity to participate!
51. Thank you for this survey and keep up the great work!

52. The last four or so screens of this survey had no questions so i think i was unable to complete the entire survey. There were no questions about ridge-line development. I hope that we will not see wind-towers or other development on our ridgelines.
53. I moved to Waterbury reluctantly in '81,and 'fell in love,' with Waterbury over time. This small town is incredibly caring as well as always trying to improve. Revitalizing Waterbury is so effective. Thank you for wanting public's opinion.

Other

54. Many questions couldn't be answered since I don't know current regs.
55. I really don't know enough to answer most of these questions with any expertise [illegible]. The only sector I have researched is #13 and 13A because wanted [illegible] with solar years ago.
56. Waterbury is a great town that needs to focus on its positives and build a strong and creative vision of the future. We get stuck in the weeds a lot and get dragged into stupid situations like the police or the firefighters being against the library (remember that?!) And we only hurt ourselves by this pettiness.

DRAFT

ENERGY PLAN

FOR THE
TOWN OF WATERBURY

PREPARED BY

The Central Vermont
Regional Planning Commission

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JULY 09, 2018

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EXECUTIVE SUMMARY & INTRODUCTION

The Town of Waterbury has for a long time taken a comprehensive and thoughtful approach to energy planning. The Town has had a strong commitment to becoming one of the greenest towns in Vermont and helping local residents save money and energy. The passage of Act 174 in 2016, which allows towns a higher level of deference in Section 248 proceedings if they meet specific planning standards, offers an opportunity for Waterbury to reexamine the actions the community is taking to meet its energy goals. As with previous plans, this means looking comprehensively at how we use energy, and ways to reduce energy use.

The Waterbury Energy Plan represents the efforts of the Planning Commission, Waterbury LEAP, and assistance from the Central Vermont Regional Planning Commission to develop a plan that will receive a Determination of Energy Compliance (DOEC). A DOEC will give the Waterbury Energy Plan "substantial deference" before the PUC for applications that seek to receive a Certificate of Public Good.

The 2016 State Comprehensive Energy Plan identified a goal to have 90% of the state's energy needs derived from renewable sources by 2050. As part of this goal, the Vermont State Legislature passed Act 174 in 2016. Act 174 provides an avenue for regions and municipalities to have increased input in PUC determinations for Certificates of Public Good regarding renewable energy generation facilities. As such, Act 174 identified standards that need to be met in support of the state's goal of 90% renewable energy by 2050 in order to have a plan receive a DOEC and have "substantial deference". Otherwise, a plan will receive "due consideration" in the Section 248 review process. Act 174 is categorized as enhanced energy planning and goes beyond what is outlined in 24 VSA 117 Section §4348a and §4382 respectively.

Through Act 174, three primary planning areas are identified and need to be met satisfactorily in order for successful compliance. These sections include Analysis & Targets; Pathways & Implementation Actions; and Mapping. All three sections include an evaluation of energy sectors that include thermal (heating), electrical, and transportation.

<u>Section I: Analysis & Targets</u>

This section provides a baseline of information for where a municipality currently stands in terms of energy and identifies the trajectories and pace of change needed to meet targeted reductions and conservation of energy. It incudes information on current electricity use for residential and non-residential uses; existing and potential renewable resource generation; and current transportation energy use information. Additionally, targets are established to provide milestones for thermal efficiency, renewable energy use, and conversion of thermal and transportation energy from fossil fuels to renewable resources. These milestones are intended to help the municipality measure progress towards the overall goals and are not identified as requirements. Targets are established for the years 2025, 2035, and 2050 which coincide with the State Comprehensive Energy Plan.

Specific information in this section notes that Waterbury currently uses approximately 42,000 megawatt hours of electricity on an annual basis across the identified sectors. By comparison, Waterbury's share of new renewable energy generation needed to meet the state's goal is approximately 33,000 megawatt hours. Based on the mapping and resource data (Section III), Waterbury has resources available to generate approximately 1,800,000 megawatt hours of energy.

Other analysis includes 2050 targets for fuel switching of vehicles from fossil based to alternative power, and conversion or installation of high efficiency heating systems for residential and commercial structures. Specific targets for Waterbury include approximately 6,500 alternative powered vehicles and approximately 1,200 heating systems. The specific 2050 targets for transportation and heating renewable use in Waterbury are 90.2% and 92.1% respectively. It's important to note that the targets for alternative powered vehicles listed in Section One are based on maintaining current land use and transportation policies. Transit, ride sharing, telecommuting, or similar policies may be prioritized by the Town which would impact these targets and reduce dependency on individual vehicle needs.

Section II: Pathways & Implementation Actions

Section II provides the basis for how Waterbury will meet their target year goals as noted in Section I. The implementation actions are categorized by:

1. Conservation & efficient use of energy
2. Reducing transportation demand and single occupancy vehicles trips, and encouraging the use of renewable sources for transportation
3. Patterns and densities of land use likely to result in conservation of energy
4. The siting of renewable energy generation

The implementation actions that are identified in this section focus primarily in areas where the Town of Waterbury is already working to support its residents and businesses through local land use, transportation, and environmental planning activities.

To this end, the current Waterbury Town Plan was first reviewed and implementation actions that pertained to any of the above mentioned sections were noted. These implementation items were carried forward for inclusion in the energy plan to establish consistency with the two documents. To ensure all the categories for implementation as noted above were adequately addressed, guidance from the Department of Public Service related to implementation was utilized.

The implementation actions identify who will be responsible for completing each action, the timeframe for when it should be completed, and an anticipated outcome that will help provide a measure of success. This section will serve as the basis for how energy planning will be incorporated into local activities. The implementation actions that were included are based on Waterbury's ability to lead the action. This will create consistency with regard to implementation and put the responsibility for action on the Town. Other partners are listed when appropriate to indicate which groups will be engaged to support the successful completion of the identified actions.

Section III: Mapping

The mapping section allows the Town of Waterbury to visually identify where renewable energy generation is most suitable. This section combines resource information with specific known and possible constraints to the development of renewable energy generation. The mapping section also allows the opportunity to identify preferred locations for renewable energy development and areas that are unsuitable for development of any kind. In addition, the maps identify existing infrastructure to support renewable energy development.

In general, the mapping information looks at state-level data and breaks it down to a municipal perspective. From there, an analysis was done (as noted in Section I) regarding the potential renewable energy generation that might be possible based on resource areas and constraints. This information is useful to visualize what geographies throughout Central Vermont are most ideally suited or best to avoid regarding renewable energy siting.

This section also contains specific information regarding the development and siting of renewable energy resources that are reflected on the maps. The Regional Planning Commission did, however, identify additional possible constraints to be considered. These include elevations above 2,500 feet, slopes greater than 25%, municipally owned lands, and lakeshore protection buffer areas of 250 feet. The decision was made to include these resources as possible constraints to allow for further analysis by the region or the municipalities to determine if development of renewable energy generation facilities may be appropriate based on specific conditions.

Appendices

There are two appendices included with this plan. Appendix A provides definitions for the known, possible, and regional constraints that are included on the maps and discussed in Section III. These definitions include source information and in several instances provide insight as to why the particular resource is listed as a known, possible, or regional constraint. Appendix B includes the specific resource and constraint maps. Included in the resource mapping is data specific to wind, solar, hydrological, and woody biomass. All of these maps also include information regarding three-phase power and transmission lines; roads; and other relevant data used to assist with siting of renewable energy development.

How This Plan Will Be Used

The Waterbury Energy Plan will establish the policies that will help the Town achieve its share of the state's goal of 90% of the state's energy coming from renewable sources by 2050, as outlined in the 2016 State Comprehensive Energy Plan. In order for this document to have standing, it will need to receive a Determination of Energy Compliance (DOEC) from the Central Vermont Regional Planning Commission (CVRPC). This determination will give the Waterbury Town Plan "substantial deference" before the PUC during their review of applications for Certificates of Public Good related to renewable energy generation facilities. Once a DOEC has been issued, the Waterbury Town Plan will be used to establish a position in proceedings before the PUC if warranted Additionally, where applicable, the Town Plan will be used during Act 250 proceedings before the District 5 Environmental Commission.

Additional Energy Generation Technology

The general premise of the Waterbury Energy Plan is based on the idea that generation of energy will be achieved using more renewable sources and less fossil fuel based resources. To this end, the focus for generation of energy is primarily based on existing technologies such as solar, wind, and hydroelectric. Additionally, the plan notes woody biomass and biogas as renewable forms of energy generation when developed in a sustainable manner. This direction is taken from the State's Comprehensive Energy Plan which focuses on electrification of the grid with alternative energy generation in order to meet their goals of 90% of the state's energy use coming from renewable sources by 2050.

The sources of renewable energy generation that are identified in this plan include current technologies that are known and supported in Vermont. Advances in the development of renewable energy technologies may result in generation measures or techniques that are not currently considered in this plan but may be more efficient or effective. As such, this plan will consider renewable generation technologies that do not have an adverse impact on the Town of Waterbury, the Central Vermont Region, or the policies that guide the Planning Commission and not be limited exclusively to the generation techniques and technologies noted herein.

ANALYSIS & TARGETS

In order to adequately determine if the Town of Waterbury are on the right path to meeting it's share of the state's goal of 90% of the energy used being produced by renewable sources, an identification and analysis of current energy use is necessary. To this end, the following questions have been identified to help determine current energy use and targets for moving forward.

I. *Does the plan estimate current energy use across transportation, heating, and electric sectors?*

II. *Does the plan establish 2025, 2035, and 2050 targets for thermal and electric efficiency improvements, and use of renewable energy for transportation, heating, and electricity?*

III. *Does the plan evaluate the amount of thermal-sector conservation, efficiency, and conversion to alternative heating fuels needed to achieve these targets?*

IV. *Does the plan evaluate transportation system changes and land use strategies needed to achieve these targets?*

V. *Does the plan evaluate electric-sector conservation and efficiency needed to achieve these targets?*

These five questions and their respective responses serve as the basis for identifying where the Town of Waterbury is now, where it needs to go, and how it will get there in terms of its energy future.

The information needed to answer the five questions listed above was procured from various sources. This includes information from the American Community Survey (as part of the U.S. Census), The Vermont Agency of Transportation, the Vermont Department of Labor, the Vermont Department of Public Service, Efficiency Vermont, the Vermont Energy Investment Corporation (VEIC), and the Central Vermont Regional Planning Commission. A significant portion of the data related to targets was provided by the VEIC through a process known as Long-Range Energy Alternatives Planning or LEAP. This modeling factors in a significant number of data points and has been used extensively throughout the world for energy planning such as this.

The data that is used throughout this section was developed using a top down approach. In some cases, data was provided at a regional level and thus was allocated to each municipality based on a methodology appropriate for that particular dataset. In other cases, information was provided at the municipal level and then aggregated to identify the regional total; then reallocated to each municipality. Based on this process anomalies in the information may have been created. To that end, it is important to note that the data provided herein is only a starting point and should be used to establish a general direction, not a required outcome. This data is presented as a way to gauge Waterbury's overall progress towards achieving 90% of its energy uses produced from renewable sources. As new or better data is provided or developed, these tables should be updated to reflect the changes.

I. Estimates of current energy use across transportation, heating, and electric sectors

In order to effectively evaluate where the Town of Waterbury needs to go in terms of their energy future, the community needs to understand how it is using and generating energy. This section outlines the estimates of current energy use for the community. This information is based on best available data and may change over time as new information is provided.

Transportation

Transportation is one of the largest consumers of energy in Waterbury. Transportation typically consists of passenger vehicles, light duty trucks, and heavy duty trucks. It may also include transportation related to public transit, rail, or air service, however those uses are minimal and trips may not originate within the municipality. As such, this section focuses primarily on vehicles, however rail, air, and public transit are addressed in other sections of the energy plan and throughout the municipal plan. Table 1 provides an overview of the current energy usage in Waterbury related to transportation.

TABLE 1
CURRENT TRANSPORTATION ENERGY USE

DATA CATEGORY	INFORMATION
Total number of vehicles	3,945 vehicles
Average miles traveled per vehicle	12,500 miles
Total annual miles traveled	49,312,500 miles
Average gallons of fuel used per vehicle per year	576 gallons (21.7 mpg)
Total gallons of fuel used per year	2,651,209
Transportation energy used per year (in Billions)	319 BTUs
Average regional cost per gallon of fuel	$2.95
Fuel costs per year	$7,821,067

Notes:
1. Total vehicles provided by the American Community Survey.
2. Average miles traveled & Average gallons of fuel used per vehicle provided by VTrans.
3. Average cost per gallon of fuel provided by the CVRPC—June 2018.
4. Information related to public transit is not included in this table.
5. Total gallons of fuel is based on fuel efficiency of 21.7 miles per gallon.

Electricity

In 2012, Waterbury's energy use was split at 67% by commercial and industrial customers and 33% by residential customers. Waterbury's commercial and industrial consumption has grown about 4% annually since 2005, and residential consumption has grown about 2% annually since 2005. The Vermont Public Utility Commission regulates utility rates. In 2018, the U.S. Energy Information Administration reported the average cost per kilowatt hour (kWh) in Vermont was approximately 15 cents and approximately 18 cents for all of New England. ~~In 2009 Green Mountain Power's average rate for all electricity delivered was 12 cents per kilowatt-hour (kWh), compared with a New England average of 16 cents per kWh.~~ Waterbury's current electricity use is noted in Table 2.

TABLE 2 CURRENT ELECTRICITY USE	
USE SECTOR	**CURRENT ELECTRICITY USE**
Residential	14,648 megawatt hours
Commercial & Industrial	27,962 megawatt hours
TOTAL	**42,610 megawatt hours**

Notes:
1. Information provided by Efficiency Vermont thru 2016.

Home Heating

2015 American Community Survey data indicate that approximately 51% of homes in Waterbury are heated with fuel oil, which represents an increase from 42% in 2010 but a decrease from 53% in 2000. The percentage of homes heated with propane or bottled gas increased from less than 30% in 1990 to approximately 36% in 2015. The percentage of homes in Waterbury heated with electricity has remained at approximately 1%. Finally, the percentage of homes heating with wood increased from approximately 4% in 2010 to almost 11% in 2015.

Municipal Energy Use

Together the town spent approximately $328,859 on energy for municipal operations in calendar year 2012: 52% on electricity; 33% on gasoline and diesel fuel; and 15% on heating fuel.

Table 3 provides a breakdown of the fuel sources used for residential heating in the Town of Waterbury while Table 4 lists the current commercial energy use.

TABLE 3 CURRENT RESIDENTIAL HEATING ENERGY USE				
FUEL SOURCE	**NUMBER OF HOUSEHOLDS**	**PERCENT OF HOUSEHOLDS**	**HEATED SQUARE FOOTAGE**	**BTUs (in Billions)**
Propane or Natural Gas	814	35.8%	1,281,076	76.86
Electricity	26	1.14%	25,046	1.5
Fuel Oil	1,170	51.45%	1,914,031	114.8
Coal	0	0.0%	0	0
Wood	246	10.82%	478,224	28.7
Other (includes solar)	18	.79%	14,130	0.8
No Fuel	0	0.0%	0	0
TOTAL	**2,274**	**100%**	**3,712,507**	**222.8**

Notes:
1. Data provided by the American Community Survey, 2015.

TABLE 4 CURRENT COMMERCIAL ENERGY USE		
COMMERCIAL ESTABLISHMENTS	**AVERAGE THERMAL ENERGY USED PER ESTABLISHMENT**	**TOTAL COMMERCIAL THERMAL ENERGY USED**
288	686	197,502

Notes:
1. Thermal energy use is expressed in Millions of BTUs.
2. Information provided by the Vermont Department of Labor and the Department of Public Service.

II. 2025, 2035, and 2050 targets for thermal and electric efficiency improvements, and use of renewable energy for transportation, heating, and electricity

Energy efficiency is commonly viewed as the most effective and lowest-cost option for reducing energy consumption for electricity, heat, and transportation. Energy efficiency and conservation efforts such as improved insulation and weatherization of new and existing structures; improvements in building design; and the use of high-efficiency vehicles often have a dramatic impact on reducing fuel consumption. These methods are supported and encouraged by the town. In a challenging economy and at a time of increasing concern for the impacts of climate change, steps to reduce fuel use, fuel expenditures, and to shrink emissions make good sense for the pocketbook and the environment.

For the purposes of this section, thermal and electric efficiency will be defined as overall improvements or reductions in the amount of energy used to run mechanical systems or provide climate control for structures. To effectively identify efficiency improvements for Waterbury, the Central Vermont Regional Planning Commission has provided targets for efficiency improvements for each of the target years. These improvements relate to residential, commercial, and overall electric efficiency. The target number may seem to be skewed towards the later years, however there is an expectation that efficiencies will increase with technological advances and occur over time regardless of additional actions being taken. The thermal efficiency targets for residential and commercial improvements are noted in Table 5.

TABLE 5 TARGETS FOR THERMAL EFFICIENCY IMPROVEMENTS			
SECTOR TYPE	**2025**	**2035**	**2050**
Residential Thermal Efficiency	20%	42%	92%
Commercial Thermal Efficiency	22%	33%	61%

Notes:
1. Information derived from VEIC LEAP Modeling.

In order for Waterbury to help support the state's goals of 90% of the energy used being derived from renewable sources by 2050, the Central Vermont Regional Planning Commission allocated megawatt hour targets for the years 2025, 2035, and 2050. This municipal target is based on an allocation from a region-wide target for renewable energy generation. Table 6 notes Waterbury's targets for renewable energy use and Table 7 identifies the targeted renewable energy generation.

TABLE 6 TARGETS FOR RENEWABLE ENERGY USE			
SECTOR TYPE	**2025**	**2035**	**2050**
Transportation Renewables	9.6%	31.3%	90.2%
Heating Renewables	52.5%	67.1%	92.1%

Notes:
1. Information derived from VEIC LEAP Modeling.

TABLE 7 TARGETS FOR RENEWABLE ENERGY GENERATION			
SECTOR TYPE	**2025**	**2035**	**2050**
Electricity Renewables (in megawatt hours)	8,148	13,036	32,590

Notes:
1. Information provided by The Department of Public Service

Groups to Support Energy Planning

State and local support for energy planning makes identifying energy related actions and implementing energy objectives a more manageable task. Several groups exist that fill this role. A brief overview of these groups is noted below including some of the accomplishments that benefit the Town of Waterbury.

Waterbury LEAP

Waterbury LEAP (Local Energy Action Partnership) is a local non-profit organization with a mission to "promote energy efficiency and the use of renewable resources, and to engage our community in reducing carbon emissions in Waterbury, Vermont and the surrounding area."

LEAP is one of more than 100 Vermont municipal energy committees, and is widely considered one of the most active and productive such organizations in the state.[1] Waterbury LEAP is the only energy committee in Vermont to become a 501(c)(3) non-profit. It took that step because its stated goal is "to help turn Waterbury into the greenest town in Vermont by 2020."

LEAP is tracking its progress and guiding its efforts through the use of a number of measurable indicators that will show Waterbury's progress and allow the town to have friendly challenges with other communities. Some recent LEAP initiatives include:

- Hosting a free LEAP Energy Fair each April that has become one of the largest in the state with 600+ attendees and 70+ exhibitors on many energy-related topics.
- Raising the funds and placing solar PV panels on Thatcher Brook Primary School and Crossett Brook Middle School.
- Initiating the Waterbury/Duxbury Solar Year in April 2012 and in 11 months helping to double local residential solar capacity in those two towns.

1. See www.waterburyleap.org.

» Participating in the Vermont Home Weatherization Challenge in 2013 with the target of weatherizing 3% of the homes within our community in one year.
» Assisting the Town of Waterbury and Crossett Brook Middle School evaluate the possibility of establishing solar orchards that would help to meet a significant portion of the electrical needs of the municipal buildings and the school.

Efficiency Vermont

Efficiency Vermont helps all Vermonters to reduce energy costs, strengthen the local economy, and protect the environment by making homes and businesses energy efficient. A volumetric charge on electric customers' bills supports energy-efficiency programs.

Efficiency Vermont provides technical assistance, rebates, and other financial incentives to help Vermont households and businesses reduce their energy costs with energy-efficient equipment, lighting, and approaches to construction and major renovation. Additionally, it partners extensively with contractors, suppliers, and retailers of efficient products and services throughout the state.

It is operated by a private nonprofit organization, the Vermont Energy Investment Corporation, under an appointment issued by the Vermont Public Utility Commission.

III. Evaluation of the amount of thermal-sector conservation, efficiency, and conversion to alternative heating fuels needed to achieve these targets

Energy Audits and Energy Efficiency Measures

The Environmental Protection Agency estimates that half of the energy used in most buildings is for heating and cooling. Much of this energy is lost - seeping through cracks in windows and doors for instance - which wastes energy and money and makes homes and businesses less comfortable.

Weatherization is the practice of modifying a building to protect its interior from the elements, to reduce energy consumption, and to optimize energy efficiency. Investing in thermal efficiency improvements – primarily air sealing, insulation, and heating system replacements—can dramatically reduce a home's heating energy use and an owner's fuel bills. Vermonters' 2010 fuel bills were nearly twice as much as those of a decade earlier.

An estimated 62,000 single and multi-family homes in Vermont will require energy efficient improvements by 2020. The state's volatile weather conditions play a critical role in how buildings can cost-effectively be heated and that most of the economic benefit of money Vermonters spend on fossil fuel accrues outside the state. At current fuel prices home energy efficiency investments can save Vermont residents approximately $1,000 per year.[2]

As a result, the task force suggests "comprehensive and rapid weatherization" of Vermont's buildings to:

» Reduce the vulnerability of Vermont ratepayers to fuel market volatility and dramatic weather fluctuations.

2. Thermal Efficiency Task Force Report, 2013

» Ensure that more of the money spent on energy will stay within the Vermont economy.

One of the most important goals in the 2016 Vermont Comprehensive Energy Plan is for the state to use energy audits, weatherization, and other tools to substantially improve the energy fitness of 25% of the state's housing stock by 2020.

After weatherization, the next step to increasing home heating efficiency is replacing outdated or inefficient home heating systems with high efficiency units. In general, this conversion would typically include replacing a system that used fossil fuel such as oil with an electric heat pump, wood burning system, or other renewable based heating systems. Specifically, Table 8 identifies the number of new efficient wood heating systems or heat pumps needed in each target year to meet Waterbury's portion of the state's comprehensive energy goals.

TABLE 8
THERMAL SECTOR CONVERSIONS PER TARGET YEAR
(RESIDENTIAL & COMMERCIAL)

SYSTEM TYPE	2025	2035	2050
New Efficient Wood Heat Systems	13	14	94
New Heat Pumps	231	598	1,129

Notes:
1. Information derived from VEIC LEAP Modeling.
2. Heat pumps includes both space heating and hot water heating.

A building energy audit is a service where the energy efficiency of a structure is evaluated by a person using professional equipment (e.g., blower doors, infrared cameras) to identify best ways to improve energy efficiency in heating and cooling the house. The goals are to:

» Evaluate the building's overall thermal performance.
» Identify cost effective ways to improve the comfort and efficiency of the building.
» Estimate the potential savings in fuel and expenses for the proposed changes.

Many building and energy contractors in Central Vermont offer home and business energy audits for a fee (typically ranging from $300-$500). Depending on income, some families or individuals may qualify for free audits or energy efficiency grants from Efficiency Vermont or other organizations.

In 2008 and 2009, Waterbury LEAP partnered with Efficiency Vermont to provide free building energy audits to almost a dozen local businesses and to all Waterbury municipal buildings. Many of the audit recommendations were acted upon in the following year.

As noted above, in January 2013 Waterbury LEAP joined the Vermont Home Energy Challenge and aimed to have an additional 3% of Waterbury homes weatherized by the end of the year. Our community will need to continue on the pace of weatherizing 2-3% of our homes per year to reach a goal of weatherizing 25% of the housing stock by 2020.

IV. Evaluation of transportation system changes and land use strategies needed to achieve these targets

Transportation Efficiency

According to the 2016 Vermont Comprehensive Energy Plan, transportation accounts for approximately one third of the overall energy use in Vermont, at 33.7%. Nationally, transportation represents 28.6% of overall energy use. This difference is a result of Vermont's higher dependence on automobile transportation due to the state's rural character, more dispersed population, as well as a relatively small industrial base.

Gasoline and diesel account for more than a quarter of all energy consumed in Vermont across all energy sectors. Gasoline and diesel consumption is twice that of fuel oil and kerosene used for heating. Petroleum combustion in the transportation sector is also the state's largest contributor to greenhouse gas emissions.

Fuel prices are typically higher in northern than in southern New England. Significant increases in the costs of gasoline, diesel fuel, and heating fuel have occurred over the last decade. Price spikes in recent years highlight our area's heavy reliance on limited sources and types of fuel and leave the local population, particularly low-income residents, vulnerable to fuel shortages and price fluctuations.

Waterbury has witnessed an ongoing growth in commuter traffic, due largely to the increasing number of families in which both parents work, the number of residents who are employed in Montpelier and Burlington, and the I-89 Exit 10 interchange which brings commuters through Waterbury from outlying areas. As a result, traffic on the state roads through Waterbury has continued to increase. Traffic on Route 2 has increased by around 30% between 1990 and 2010.

The percentage of Waterbury's employed residents driving alone to work has remained at around 70% since 1990. In 2010, the American Community Survey reported that only 14% of working residents carpooled and only 1% took public transportation. Within the downtown core, 11% walked to work.

There is currently one commuter parking lot in Waterbury. Limited public transit services are provided through Green Mountain Transit, a nonprofit transportation provider serving the central Vermont. Waterbury and its residents would benefit from programs and facilities to encourage increased ridesharing, use of mass transit, walking and biking, and an overall reduction on our community's dependence on the automobile.

One component of reducing fossil fuel based energy used in the transportation sector is to convert or replace older vehicles with alternative fuel vehicles such as electric or biodiesel. Table 9 identifies the targets for the number of new electric or biodiesel vehicles over each of the target years to help Waterbury reduce its transportation energy consumption to a point that will help meet the state's comprehensive energy planning goals. Again, this information assumes efficiency and improved technologies will be included in the development of vehicular fuel technology.

It should be noted that another consideration is to reduce the total number of vehicles overall. This can be done through the creation of compact development patterns, increased transit opportunities, or alternative transportation options such as bicycles or walking. The Town should evaluate additional objectives that will promote a shift away from vehicle use rather than rely on the conversion of vehicles to renewable fuels.

TABLE 9 TRANSPORTATION FUEL SWITCHING TARGETS			
FUEL TYPE	**2025**	**2035**	**2050**
Electric Vehicles	339	2,341	4,675
Biodiesel Vehicles	591	1,095	1,776

Notes:
1. Information derived from VEIC LEAP Modeling.

V. Evaluate electric-sector conservation and efficiency needed to achieve these targets

Conservation and efficiency of electricity is a key component to achieving the state's comprehensive energy planning goals. Over time, advancements in technology will provide a degree of the needed efficiency and conservation measures to achieve these goals, but also, efforts can be taken now to ensure the Town of Waterbury is on track to meet its conservation and efficiency targets. Table 10 outlines the electric efficiency improvements needed for each of the three target years. Additionally, information related to more proactive ways to achieve these efficiencies are also noted below.

TABLE 10 TARGETS FOR ELECTRIC EFFICIENCY IMPROVEMENTS			
SECTOR TYPE	**2025**	**2035**	**2050**
Electric Efficiency	1.5%	7.3%	15.2%

Notes:
1. Information derived from VEIC LEAP Modeling.

Energy-Efficient Design

It is much more time- and cost-effective to plan, design and build a structure and its systems with energy efficiency in mind at the outset than to perform weatherization activities after the building has been constructed.

Leadership in Energy and Environmental Design (LEED) consists of a suite of rating systems for the design, construction and operation of high performance green buildings, homes and neighborhoods. Developed by the U.S. Green Building Council, LEED is intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

Across Vermont, in 2012 nearly one-third of new homes were EnergyStar rated. The 2016 Vermont Comprehensive Energy Plan sets a goal of 60% by 2020.

School Energy Efficiency

Schools are one of the largest consumers of energy in most Vermont communities. Because they are such large consumers of a variety of energy sources, they often offer significant opportunities for saving fuel and taxpayer expenditures. There have been local efforts to save schools, and local taxpayers, fuel and funds.

In 2010, a team of students at Crossett Brook Middle School conducted a research project and proposed specific steps the school could take to replace older, less efficient lighting with more energy-efficient technology. They presented their recommendations to the Waterbury-Duxbury School Board and the plan was unanimously accepted. Thanks to their work, local taxpayers, are saving approximately $6,000 per year in energy costs.

During the 2012/2013 school year, Harwood Union High School participated in the Vermont Whole School Challenge organized by Efficiency Vermont and the School Energy Management Program. Over the course of the school year students and teachers, with assistance from outside groups such as Efficiency Vermont and Waterbury LEAP, are striving to cut the school's overall electric use by 10%.

Local Food

The average food item in the average grocery store travels between 1,000 and 1,500 miles to reach the table. Food transportation consumes a considerable amount of energy, and the related emissions contribute to climate change. A typical meal bought from a conventional supermarket chain - including some meat, grains, fruit and vegetables - consumes 4 to 17 times more petroleum for transport than the same meal using local ingredients.

The Waterbury-Duxbury Food Council is a local volunteer group with a mission to strengthen community by supporting and building a sustainable, local healthy food system. In 2012, the group conducted an assessment of current assets, including natural resources, manufactured assets, financial assets, human assets, and community assets. The assessment found that the Waterbury area has:

- A favorable growing climate, abundant water, land available to grow on, some of which has prime soils and soils of statewide distinction.
- A centralized location at the crossroads of a well-developed state highway system linked to a well-maintained local road network.
- At least 25 small producers with experience growing/raising various products.
- One of the few commercial-scale composting operations in Vermont as a source of grower inputs.
- 18 processors making very popular specialty products.
- A vibrant restaurant community with 22 establishments from coffee shops to fine dining, most with a demonstrated willingness to use local ingredients.
- At least 16 retailers of different sizes who recognize the consumer demand for local product.
- A knowledgeable consumer base seeking to meet their food demands more locally and willing to support food-related endeavors with their time, energy and money.
- Numerous home producers which serve a great portion of our meals extending into "micro-scale" sale or bartering to friends and neighbors.
- An active mid-week farmers market featuring local products.

Renewable Energy

The Town of Waterbury actively supports the use and development of renewable energy. Specifically, through 2016 renewable energy generation installations create approximately 50,000 megawatt hours of energy each year. This includes a mix of solar, wind, hydroelectric, and biomass. This allocation of renewable energy generation will help the Town meet their renewable energy goals. The specific breakdown of renewable energy generation is outlined in Table 11. Table 14 also provides a breakdown of existing renewable energy generation and identifies those sources generating 10 kW or more.

TABLE 11
EXISTING RENEWABLE ENERGY GENERATION

RESOURCE TYPE	MEGAWATTS	MEGAWATT HOURS
Solar	2.4	2,943.36
Wind	<.01	3.07
Hydroelectric	13.60	47,654.4
Biomass	0	0
Other	0	0
Total Existing Renewable Energy Generation	16	50,600.8

Notes:
1. Information provided by the Department of Public Service
2. Due to rounding, totals may not be accurate.

Waterbury has several renewable energy resources available, most notably hydropower, solar, wind and wood. Development of these non-fossil fuel resources supports local jobs and economies by keeping energy expenditures and investments in state. Since 1998, the state has allowed "net metering." Under net metering, a household or business can use small-scale renewable energy to generate power for their own use and sell any excess back to the utilities. State tax credits and incentives further encourage the use of renewable energy.

Hydroelectric

In the past, local waterways powered numerous mills and provided small-scale electricity across Vermont. Remnants of Waterbury's water-powered past can still be seen in Colbyville and Mill Village. Today, power from in-state and out-of-state hydroelectric dams (most notably Hydro Quebec) supply approximately 40% of Vermont's annual power needs.[3]

One hydroelectric dam remains in operation in Waterbury. The Little River #22 facility at the Waterbury Reservoir is owned by Green Mountain Power (GMP) and produces 15,500 megawatt hours of power per year. The DeForge Hydroelectric Station at Bolton Falls, located in both Waterbury and Duxbury, is also owned by GMP and produces 25,800 megawatt hours per year.[4]

3. Vermont Department of Public Service , 2016 Comprehensive Energy Plan
4. Vermont Energy Atlas

No new potential sites for large-scale hydroelectric facilities have been identified in Waterbury. Small upland tributaries may offer feasible micro-hydro sources of power for individual homes but careful planning will be needed to ensure aquatic habitat or river corridors are not adversely impacted.

One innovative hydroelectric option has been incorporated in Waterbury. In 2017 the Sewer and Water District installed an in-line hydroelectric generator in the 12 inch water main supplying Waterbury Village. The facility is on Guptil Road and generates approximately _____. This is one example of an innovative option for renewable energy generation.

Solar

Converting radiation from the sun into electricity is a clean, renewable energy source. Solar photovoltaic (PV) cells convert sunlight into electricity for homes and businesses, while solar thermal arrays provide hot water for domestic use and may even be designed to augment a household's heating system.

Advances in technology have improved solar efficiency and solar arrays are becoming more affordable. The cost to install one kilowatt of PV in Vermont fell by nearly 40% from 2004 to 2011. Federal and state incentives and leasing programs have improved financial accessibility to the technology. Green Mountain Power's willingness to pay a small premium for solar energy (the "solar adder") has also helped to support the burgeoning solar industry. In 2014, the State of Vermont ranked nationally in the top ten in solar installations.[5]

As of 2018, solar collectors were installed at approximately 180 sites in Waterbury with a total photovoltaic capacity of 2.2 megawatts. A small number of commercial sites account for the majority of this installed generation, however residential scale use is increasing. Waterbury has included a solar array at the public water supply well field along Sweet Farm Road and incorporated solar panels on the roof of the Fire Department showing leadership by example for installation of renewable generation. Table 15 lists the existing sites in Waterbury with an installed generation capacity of 10 kW or more.

Waterbury has made great strides to incorporate solar energy into its energy portfolio. According to the Energy Action Network's Energy Dashboard, Waterbury ranks 43rd among Vermont municipalities in total solar installation with 187 sites. A number of south-facing roofs and slopes provide the potential for even greater use of the technology, although some roofs may need to be retro-fitted to support solar panels.

According to the Vermont Energy Atlas, there are over 2,100 potential rooftop solar sites in Waterbury with a potential capacity of nearly 2.9 megawatts. There are also over 3,200 acres of potential solar sites suitable for ground-mounted solar arrays, 1,672 acres of which are not classified as agricultural soils. Additional information on potential generation is noted in Table 13 and is reflected on the maps in Appendix B.

Commercial leasing programs now allow households and companies access to solar energy at fixed costs that often are less than their current electricity bills. Further advances in technology will likely improve the efficiency, and lower the cost, of solar panels. Finding space for additional solar arrays remains an issue in Waterbury, particularly for residents and businesses lacking south-facing rooftops or land.

5. Vermont Department of Public Service, 2016 Comprehensive Energy Plan

Wind

Improvements in turbine technology in combination with federal and state subsidies have recently made investments in wind power more attractive across the country as well as in Vermont. The Vermont Energy Atlas identifies two potential industrial scale wind energy sites in Waterbury that receive sustained winds averaging more than 20 mph. Several hundred residential (30 meters high), small commercial (50 meters high), and large commercial (70 meters high) sites with moderate wind speeds of 15-20 mph have also been identified. Almost all sites are located on ridge lines in the Worchester Range and in the Green Mountain range. Specific suitability for wind resources is noted in the mapping section. The wind maps identify where wind speeds are appropriate for smaller scale wind generation and do not include large industrial scale wind suitability.

The 2013 Community Survey indicated that there is less local support for wind farms for utility energy production than other types of renewables. The survey results suggest that many worry about the impacts large -scale wind may have on our natural and scenic resources, particularly Waterbury's forested ridgelines.

In order to support large-scale wind projects, we believe that projects must meet certain criteria to ensure that they do not cause undue negative impacts on natural, recreational, and aesthetic resources. Waterbury plans to establish clear and specific guidelines that can be used when evaluating proposed large scale wind projects. Also, the current Central Vermont Regional Energy Plan limits wind generation facilities to hub height of 125 feet and restricts development above 2,500 feet in elevation. Waterbury will work to maintain consistency with these regional limits.

Wood

Historically, wood has been Vermont's, and Waterbury's, most abundant local energy source. Statewide residential firewood consumption grew from 275,000 cords per year in 1997 to 315,000 cords in 2008, a nearly 15% increase.[6] Current use of cordwood for heating in Waterbury is unknown. In addition to firewood, wood biomass heating, in the form of woodchips and pellets, is becoming more popular.

Approximately 37% of Vermont's households utilize biomass (including cord wood and wood pellets) to heat at least a portion of their homes.[7] According to the Vermont Energy Atlas, Waterbury's forests have the ability to produce 5,765 tons of low grade wood material per year, equivalent to an electric capacity of 2,719 megawatts.

Use of wood biomass in the Waterbury area for heating is unknown, but two examples are Harwood Union High School and the Green Mountain Club:

» In the fall of 2008, Harwood installed a woodchip-fired heating system for its 170,000 square foot facility with a grant through the Vermont Fuels for Schools Program. During its first heating season, the system consumed 900 green tons of woodchips (replacing 35,000 gallons of heating oil) and saved the school over $34,000 in heating costs.[8]

6. Vermont Department of Forests, 2009
7. Vermont Department of Public Service , 2016 Comprehensive Energy Plan
8. Biomass Energy Resource Center, 2010

» The Green Mountain Club on Route 100 in Waterbury Center installed a wood gasification boiler in 2011. The boiler provides all the heat and hot water for the club's seasonal staff building and is fired by sustainably harvested wood from club lands in Lowell, Vermont.

» The State of Vermont installed a woodchip-fired heating system for the entire Waterbury State Office complex in 2015.

There are potential negative side effects to extensive wood harvesting and burning, among them habitat impairment, soil erosion, sedimentation and water pollution if forests are not properly managed, as well as the degradation of air quality and an increase risks of accidental fires. These are, however, easily manageable risks. Best forest management practices, as outlined by the state and independent forest certification groups, can reduce the adverse impacts of harvesting while regular maintenance of wood stoves and adherence to fire codes lessens the risk of accidental fires.

According to the Vermont Department of Public Service, the efficiency factor for biomass is between 60% and 80%. This is noted in Table 13. Use of wood for heating is calculated as carbon- neutral; that is, the carbon sequestered by a tree during its lifetime balances with the carbon emitted during its burning.

If factoring in the fossil fuels used to cut and haul wood/wood biomass, as well as the inefficiencies of current biomass burning, wood may not be fully carbon neutral. More efficient burning of woody biomass would greatly improve biomass's potential for wider adoption as a local power source. This could be supported by converting to high-efficiency wood heating systems as noted in Table 8.

Other Local Renewable Energy Sources. Other potential local renewable energy sources include:

» Methane recovery systems that convert farm manure or landfill gases into electricity
» Bio-fuels produced from green crops such as soy beans, or from waste vegetable oil
» Geothermal energy, which uses the temperature differential in water taken from deep wells to heat and cool buildings

Siting

An analysis of existing land and renewable resource potential will help determine the amount of local renewable energy that could be developed within the Town of Waterbury. Table 7 identifies the amount of renewable energy generation (in megawatt hours) that The Town of Waterbury would need to generate by 2050 to help meet their share of the Region's total renewable energy generation.

The information in Table 12 includes an analysis of the renewable energy generation potential and will be complemented by information and maps that are in Appendix B of the plan. Table 13 notes the amount of generation that could occur if all the areas identified as prime or secondary resources were developed with renewable energy, specifically for solar and wind. By comparing the two tables, it becomes clear that there is adequate land area available for Waterbury to accommodate renewable energy generation that can meet their share of the region's renewable energy allocation. It should be noted, however, that not all renewable energy generation is appropriate at the same scale. For example, wind may be appropriate in the Town of Waterbury at a residential scale, but not at a commercial scale. Local objectives will need to be established to address these issues. Also, it should be noted that not all areas are appropriate for development of renewable energy and more detailed analysis may be needed to identify appropriate locations for renewable energy development.

TABLE 12 POTENTIAL RENEWABLE ENERGY GENERATION		
RESOURCE TYPE	**MEGAWATTS**	**MEGAWATT HOURS**
Rooftop Solar	3.71	4,555
Ground-mounted Solar	725.06	889,210
Wind	302.95	928,837
Hydroelectric	.01	28
Biomass & Methane[9]	Unknown	unknown
Other	0	0
Total Potential Regional Renewable Energy Generation	1,031.73	1,822,630

Notes:
1. Information calculated by the CVRPC based on data provided by the Vermont Center for Geographic Information and efficiency factors provided by the Department of Public Service.

One final factor to consider is efficiency of renewable resources and their ability to generate energy. Since not all sources of renewable energy generation provide the same level of capacity, it is important to understand the efficiency differences between the common types of renewable generation. Simply put, the sun doesn't always shine and the wind won't always blow therefore these renewable generators are not always producing energy. These efficiency factors will allow the municipality to utilize whatever renewable resource is most appropriate for the specific circumstances. Table 13 notes the efficiency factors for common types of renewable energy generation.

TABLE 13 RENEWABLE GENERATION OUTPUTS & CAPACITY FACTORS		
RESOURCE TYPE	**CAPACITY FACTOR**	**ANNUAL MEGAWATT HOUR OUTPUT PER INSTALLED MEGAWATT**
Solar	14% - 16%	1,300
Small Wind	20% - 25%	2,000
Utility Scale Wind	25% - 35%	2,600
Methane	60% - 90%	6,600
Biomass	60% - 80%	6,100
Small Hydroelectric	40% - 60%	4,400

Notes:
1. Information provided by the Vermont Department of Public Service.
2. "Capacity Factor" indicates the percent of time an identified resource is actively producing electricity.

9. Biomass and methane are not restricted by resource locations and should be sited accordingly to provide maximum benefit to the greatest number of end users or to meet municipal needs. Siting will be more dependent on local regulatory controls and should be planned for accordingly.

TABLE 14 EXISTING RENEWABLE ENERGY GENERATION GREATER THAN 10 kW BASED ON EXISTING CERTIFICATES OF PUBLIC GOOD					
Category	**Sub Category**	**Name**	**Electricity Type**	**Utility**	**Capacity *(in kW)***
Hydro	Hydropower	Bolton Falls No. 1	Grid	Green Mountain Power	7,550
Hydro	Hydropower	Little River No. 22	Grid	Green Mountain Power	5,800
Solar	Ground-mounted PV	Village of Waterbury Solar I, LLC	Group Net Metered	Green Mountain Power	500
Solar	Ground-mounted PV: Tracker	The Cold Hollow Cider Mill	Net Metered	Green Mountain Power	139.3
Solar	Roof-Mounted PV	Sun CSA, LLC	Group Net Metered	Green Mountain Power	135
Solar	Roof-Mounted PV	Peck Electric Co.	Group Net Metered	Green Mountain Power	115
Solar	Roof-Mounted PV	Keurig Green Mountain	Net Metered	Green Mountain Power	95.1
Solar	Ground-mounted PV	Ivy Computer, Inc.	Net Metered	Green Mountain Power	80
Solar	Roof-Mounted PV	USINE, LLC	Group Net Metered	Green Mountain Power	50
Solar	Ground-mounted PV	The Energy Mill	Net Metered	Green Mountain Power	37.1
Solar	Roof-Mounted PV	Alchemy Holdings, LLC	Group Net Metered	Green Mountain Power	32.4
Solar	Roof-Mounted PV	Waterbury Fire Station	Net Metered	Green Mountain Power	32
Solar	Ground-mounted PV: Tracker	Green Mountain Club	Net Metered	Green Mountain Power	30.2
Solar	Roof-Mounted PV	Chris Noyes	Net Metered	Green Mountain Power	20
Solar	Ground-mounted PV: Tracker	Evergreen Gardens Of Vermont	Net Metered	Green Mountain Power	16
Solar	Ground-mounted PV	Wilford Sayah	Net Metered	Green Mountain Power	15.8
Solar	Ground-mounted PV: Tracker	Martha Staskus	Net Metered	Green Mountain Power	15
Solar	Roof-Mounted PV	Matthew Abair	Net Metered	Green Mountain Power	13.2
Solar	Roof-Mounted PV	Grant & Mona Eckfeldt	Net Metered	Green Mountain Power	12
Solar	Roof-Mounted PV	Jay Provencher	Net Metered	Green Mountain Power	11.4
Solar	Roof-Mounted PV	Amy & Michael Marshall-Carney	Net Metered	Green Mountain Power	11.4
Solar	Roof-Mounted PV	Crestone Acoustical Solutions	Group Net Metered	Green Mountain Power	11.4
Solar	Roof-Mounted PV	Duane Peterson	Group Net Metered	Green Mountain Power	11.4
Solar	Roof-Mounted PV	Lindsey & Corey Barrett	Net Metered	Green Mountain Power	11.4

TABLE 14 (continued) EXISTING RENEWABLE ENERGY GENERATION GREATER THAN 10 kW BASED ON EXISTING CERTIFICATES OF PUBLIC GOOD					
Category	**Sub Category**	**Name**	**Electricity Type**	**Utility**	**Capacity *(in kW)***
Solar	Roof-Mounted PV	John Hynes	Net Metered	Green Mountain Power	10
Solar	Ground-mounted PV	Krister and Clarissa Adams	Net Metered	Green Mountain Power	10
Solar	Roof-Mounted PV	Mark Frier	Net Metered	Green Mountain Power	10
Solar	Roof-Mounted PV	Dorothy Goulet	Net Metered	Green Mountain Power	10
Solar	Roof-Mounted PV	Shayna Partridge	Net Metered	Green Mountain Power	10
Solar	Roof-Mounted PV	Stacey Ambler	Net Metered	Green Mountain Power	10

Notes:

1. Information provided by the Department of Public Service via the Energy Action Network's Energy Dashboard. Complete information on existing generation from the Energy Action Network can be found at: https://www.vtenergydashboard.org/my-community/waterbury/statistics

Conclusion

As noted throughout this section, the Town of Waterbury face challenges similar to the rest of the state regarding its energy future including the need for conservation, renewable energy development, and changing habits and attitudes towards renewable technology and land use choices. All of these components need to work together in order to ensure a collective and comprehensive approach to energy planning is initiated.

The information provided in this section has shown that Waterbury has the ability to shape its energy future within the spectrum of the avenues that it can control. The unknown component is whether or not the changes and development will occur and when. The State Comprehensive Energy Plan has set a goal of 90% renewable energy by the year 2050. This goal is achievable if all stakeholders including the state, the region, the municipalities, the energy developers, the private land owners, the special interest groups, and the interested citizens come together to discuss the issues and work collectively to identify the outcomes that satisfy the needs of the whole to the best of their ability.

This plan primarily explores renewable energy related to the production of electricity and electrification of the grid. In addition to the resources noted herein, it's important to consider other forms or technologies that could contribute to our renewable energy future. With advancements in safety, efficiency, and technology, the Region's energy future could look vastly different in the next five or ten years. This will not only impact the generation of energy, but the delivery and infrastructure to support distribution of energy.

PATHWAYS & IMPLEMENTATION ACTIONS

The following goals and implementation actions outline the specific pathways for the region to consider in order to effectively support the State of Vermont's goals that are outlined in the 2016 Comprehensive Energy Plan. These goals are intended to cover a variety of pathways that address land use and siting of developments (including renewable energy generation); efficiency of building construction and weatherization; and fuel switching from fossil based fuels to more sustainable and renewable options.

A. Conservation and Efficiency

Objective A-1: Increase conservation of energy by individuals and organizations.

Conservation of energy is a key component to achieving the State's goals of 90% energy derived from renewable sources by 2050. Conservation of energy in-turn will reduce the amount of energy needed to support the existing and future systems thus allowing small increases in generation to support more uses overall.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Incorporate energy efficiency and conservation when conducting residential and economic planning, and when creating local zoning regulations.	Municipality	High 1 to 3 years	Energy issues considered during planning and permitting process
2	Increase education on renewable energy and energy efficiency including weatherization through activities such as workshops or community forums.	Municipality, Regional Partners, LEAP	Medium 3 to 5 years	Workshops or outreach activities completed
3	Work with LEAP, to encourage local residences and businesses to have energy audits and perform weatherization work to the greatest extent possible.	Municipality, LEAP	Medium 3 to 5 years	Weatherization of structures increases annually
4	Identify and promote additional incentives (e.g., tax credits, property tax exemptions) and other regulatory mechanisms to encourage businesses and residents to undertake weatherization, efficiency or renewable energy projects.	Municipality	~~Low~~ ~~5 to 10 years~~ Medium 3 to 5 years	Incentives identified and promoted

Objective A-2: Promote energy efficiency in the design, construction, renovation, operation, location and retrofitting of systems for buildings and structures.

Energy efficient building designs provide benefits to the owners and occupants by reducing the amount of energy needed to heat, cool, and maintain the mechanical systems within the building. Establishing and promoting energy efficiency in design, construction, retrofits, ~~and~~ renovations, as well as location will ensure new buildings and building practices will be more efficient into the future. These efficiencies can also lead to conservation of energy which can promote cost savings and affordability for owners and renters.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Support local organizations (including LEAP, Waterbury in Motion, Waterbury Farmer's Market and Food Council) in their efforts to assess, plan, finance, and promote specific efforts to meet the energy efficiency, conservation, and sustainability goals and objectives.	Municipality, local partners/organizations	High On-going	Support provided to local organizations
2	Partner with existing organizations to provide education and assistance on the development of "stretch codes"[10] for residential and commercial building standards.	Municipality, LEAP, Vermont Energy Investment Corporation	Medium 3 to 5 years	New regulations established as appropriate
3	Review zoning bylaws to consider including incentives for buildings that utilize a south-facing orientation.	Municipality	Medium 3 to 5 years	Bylaws reviewed and amended as appropriate to include incentives
4	Identify community organizations or existing businesses to develop or disseminate information regarding the use of landscaping for energy efficiency including the importance of tree canopies, pervious surfaces, and similar design practices.	Municipality, LEAP, local landscape companies	Low 5 to 10 years	Organizations identified and information distributed ~~available for distribution~~
5	Identify information or develop new materials that promote the use of Vermont's residential building energy label/score to inform the community of the importance of energy efficiency in building design and construction.	Municipality	Low 5 to 10 years	Materials developed and distributed ~~available for distribution~~

10. Vermont has Residential Building Energy Standards (RBES) and Commercial Building Energy Standards (CBES). Stretch energy codes are those that achieve greater energy savings than the base RBES and CBES by including more stringent requirements for design and evaluation of energy efficiency.

Objective A-3: Identify ways to decrease the use of fossil fuels for heating.

Reliance on fossil fuels such as oil, kerosene, or propane for heating is an unsustainable practice. Fossil fuels are non-renewable therefore they will eventually be depleted to a point where they are too expensive or too rare to be viable. Establishing alternative sources of renewable fuels for heating or conversions to heating from electric sources (which can be generated through renewable methods) will promote a more sustainable thermal energy future.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Identify funding programs or partners that can assist with conversion of heating sources from fossil fuels to renewable based systems for homes and businesses.	Municipality, CVRPC, regional partners, state agencies	High 1 to 3 years	List of funding sources established & maintained
2	Identify technologies such as cold climate heat pumps, ground source heat pumps, district heating[11], or high efficiency combustion wood stoves that would be suitable for home and business conversions and educate users on their advantages.	Municipality, CVRPC industry experts	High 1 to 3 years	Information sessions conducted bi-annually
3	Improve the thermal efficiency of homes, businesses and public buildings through greater use of energy audits and design efficiency.	Municipality, local partners	High On-going	Increased energy audits and greater design efficiency achieved
4	Identify potential locations throughout the community that could benefit from district heating projects based on building density, proximity to resources such as biomass, or status as a use by right where applicable.	Municipality	~~Low~~ ~~5 to 10 years~~ Medium 3 to 5 years	Locations identified and mapped

11. District heating is a system for distributing heat generated in a centralized location for two or more homes and/or buildings' heating requirements.

Objective A-4: Demonstrated municipal leadership by example regarding efficiency of municipal buildings.

Leading by example is the most effective way to show the municipality is committed to implementing the actions that will support a renewable energy future. Municipalities typically own multiple buildings that can benefit from energy efficiency measures. This could include adding solar panels to the municipal center, town highway garage, or replacing outdated oil burning heating systems with high efficiency heat pumps.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	~~Encourage new municipal and other town buildings to meet LEED standards and encourage current structures to become more energy efficient.~~ Update municipal policies to require that new municipal buildings meet LEED or comparable standards, and that any maintenance and upgrades to existing buildings incorporate efficiency measures through design and materials.	Municipality, LEAP	High 1 to 3 years	LEED standards are incorporated into new municipal building designs
2	Promote municipal solar, school solar, and community solar or other renewable energy projects on town, village, or state land and take steps to help viable projects move forward.	Municipality, school district, state agencies	High 1 to 3 years	Renewable energy projects installed as appropriate
3	Encourage the placement of any new municipal buildings in existing, compact centers as appropriate.	Municipality	Medium On-going	New buildings are located in existing centers when appropriate

B. Reducing Transportation Energy Demand, Single-Occupancy Vehicle Use, and Encouraging Renewable or Lower-Emission Energy Sources for Transportation

To this end, Waterbury will encourage greater transportation efficiency by supporting the expansion of public transportation, carpooling, and bike/ pedestrian access and to encourage greater use of electric and more fuel efficient vehicles. By 2025, Waterbury aims to reduce the use of fossil fuels for transportation by 20%.

Objective B-1: Encourage increased use of transit as a primary method to complete daily trips and reduce demands on existing infrastructure such as roads and parking.

Public transit offers communities the ability to move multiple persons utilizing existing roadway or railway infrastructure. Convenient, reliable and efficient public transit provides an alternative mode for individuals that might otherwise choose to drive alone. Public transit has the ability to reduce the need for parking, provide more walkability in communities, and reduce congestion on local roads.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Identify and support actions that will increase utilization of Green Mountain Transit, Vermont Transit, Amtrak rail service, ride sharing, and taxis thereby reducing reliance on automobiles.	Municipality, GMT, VTrans, CVRPC, regional partners	High 1 to 3 years	Actions identified and supported
2	Participate actively in the regional transportation planning process to ensure that regional plans support the goals, objectives, and actions of this plan.	Municipality	High On-going	Active participation maintained
3	Promote multi-modal transportation systems that will integrate (and facilitate transfer among) rail, bus, taxi, pedestrian, and bicycle traffic throughout Waterbury and specifically in activity centers such as schools, downtown, or villages.	Municipality, GMT, VTrans, CVRPC, transportation providers	High On-going	Multi-modal system integration continues to be a priority

Objective B-2: Promote the shift away from single-occupancy vehicle trips to reduce congestion, impacts to local facilities, and support alternative options for transportation needs.

Due to the rural nature of Central Vermont, single-occupancy vehicle trips are a common occurrence. While many people rely on their vehicle to perform general day-to-day tasks, reducing the rate of these trips can improve congestion on local roads; reduce conflicts with vehicles and pedestrians; and provide more support for ride shares, public transit, or similar multi-occupancy trips.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Work with utility companies to inventory and map infrastructure such as fiber optic cable to identify gaps that may prohibit information accessibility or telecommuting options.	Municipality, utility providers	High On-going	Identify gaps and prioritize needs
2	Support local carpooling and car-sharing initiatives, mass transit, bike and pedestrian efforts to improve transportation efficiency and reduce emissions.	Municipality	Medium On-going	Municipal support provided
3	Work with transit providers to identify possible future park & ride locations that will support areas with current or future development density.	Municipality, GMT, VTrans, CVRPC,	Medium On-going	Potential park & ride locations identified

Objective B-3: Promote the shift away from gas/diesel vehicles to electric or non-fossil fuel transportation options to reduce dependency on non-renewable fuel sources for transportation.

Reducing the dependency on fossil fuels and other non-renewable fuels is a key pathway to achieving the state's energy planning goals. Switching to electric or non-fossil fuel based vehicles will help reduce greenhouse gas emissions and promote cleaner fuel alternatives.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Identify businesses in the municipality that operate large fleets of vehicles to provide assistance evaluating the possibility of integrating electric or non-fossil fuel based vehicles into their fleets.	Municipality, business community	~~Medium~~ ~~3 to 5 years~~ High 1 to 3 years	Businesses inventoried and contacts established
2	Inventory existing locations of electric vehicle charging stations to identify where gaps may exist and develop a long-term plan for new stations to provide greater access for electric vehicle owners.	Municipality, Drive Electric Vermont, state agencies	Medium On-going	Inventory of locations mapped & potential gaps prioritized for future installations
3	Facilitate the construction of electric vehicle charging stations at appropriate locations throughout the Town.	Municipality, Green Mountain Power, Drive Electric Vermont	Medium On-going	Charging stations installed

Objective B-4: Facilitate the development of walking and biking infrastructure to provide alternative transportation options for the community.

Walking and biking provide valuable alternatives to motorized vehicle travel. Ensuring a safe, efficient, and convenient infrastructure exists to promote walking and biking is essential to the future growth and sustainability of Waterbury.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Ensure that the design of Waterbury's Main Street follows Vermont's Complete Streets guidelines.	Municipality, VTrans	High 1 to 3 years	Complete Streets guidelines followed
2	Develop a comprehensive way-finding signage system for Downtown Waterbury to orient visitors and residents and provide, where appropriate, directional and information signage for pedestrian crossings, parking, schools, etc.	Municipality	High 1 to 3 years	Way-finding system developed and implemented
3	Require a minimum width of five feet, and wider where appropriate, for downtown sidewalks.	Municipality, VTrans	High 1 to 3 years	Sidewalks widened where appropriate

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
4	Where possible, widen shoulders to facilitate pedestrian and bicycle traffic along higher speed roadways.	Municipality, VTrans	Medium On-going	Roads widened and designated for bicycle or pedestrian use
5	Encourage and facilitate multi-modal transportation in the locally defined growth areas, including the provision and maintenance of adequate pedestrian and bike facilities.	Municipality	Medium On-going	Pedestrian and bike facilities incorporated into growth areas
6	Extend sidewalks and other types of bicycle and pedestrian facilities to under-served areas and areas of new development within and adjacent to Downtown Waterbury.	Municipality, VTrans, CVRPC	Medium 3 to 5 years	New facilities established to identified areas
7	Take steps to improve and expand the municipality's system of alternative and recreational pedestrian/bike paths, including the provision of signage to facilitate its use. In addition, encourage "pedestrian friendly" new development. Evaluate and propose changes to the by-laws that will give greater effect to this action.	Municipality, local partners	Medium On-going	Recreational paths are improved and by-laws updated as necessary

Objective B-5: Demonstrated municipal leadership with respect to efficiency of municipal transportation to show an on-going commitment on behalf of the Town of Waterbury.

The Town of Waterbury can lead by example through their decisions to purchase or lease energy efficient or alternative fuel vehicles for use in the daily operations of the municipality. This will signal a commitment to the community at large and mark a positive step towards reduced dependency on fossil based fuels.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Encourage, to the extent possible, the use of energy efficient municipal vehicles.	Municipality	Medium 3 to 5 years	Vehicles purchased as needed to replace fleet
2	Continue to install electric vehicle charging stations when development or redevelopment of municipally owned property occurs.	Municipality, Schools	Medium On-going	Charging stations installed

C. Patterns and Densities of Land Use Likely to Result in Conservation of Energy

Objective C-1: The Town of Waterbury is committed to reducing sprawl and minimizing low-density development by encouraging density in areas where infrastructure exists or is planned to support growth.

Land use policies that work to limit the proliferation of large lot development in favor of small lots in a compact area help communities address conditions that create sprawl, or the outward pattern of development that is characterized by auto-centric uses in an expanded geography. By limiting conditions that lead to sprawling development patterns, Waterbury can more effectively support energy independence.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Encourage compact and mixed-use patterns of development that reduce the need for automobile travel.	Municipality	High On-going	Compact and mixed use development created
2	Develop a sewer service plan focused on serving existing compact areas and restricting extensions of infrastructure that will promote sprawl development.	Municipality	High 1 to 3 years	Sewer service plan developed
3	Evaluate municipal regulations to ensure higher density development patterns are located in downtowns or village centers to maintain existing settlement patterns and do not inadvertently promote sprawling development.	Municipality	Medium On-going	Regulations are evaluated as needed and recommendations are included
4	Cluster development to the extent possible based on site conditions to minimize the impact on significant natural resources and scenic lands.	Municipality	Medium On-going	Development occurs consistent with clustering

Objective C-2: Strongly prioritize development in compact, mixed-use centers when feasible and appropriate and identify ways to make compact development more feasible throughout the Town of Waterbury.

Compact development patterns create opportunities whereby land uses that support where people live, work, and recreate, are all within close proximity. This not only creates a greater sense of place but it provides opportunities to walk, bike, or utilize public transit as the primary mode of transportation. Additionally, compact development patterns can promote conservation of energy through the redevelopment of underutilized spaces therefore including more energy efficient building designs.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Evaluate existing regulations and amend as necessary to support and encourage infill development, redevelopment, adaptive reuse of existing buildings such as historic structures, and reuse of "brownfield" sites.	Municipality, CVRPC	High 1 to 3 years	Regulations evaluated and ~~recommendations~~ amendments made as appropriate
2	Inventory and map existing infrastructure such as water and wastewater to evaluate capacity and development potential.	Municipality	Medium 3 to 5 years	Infrastructure mapped and updated as needed
3	Ensure that financial incentives are available for development within locally defined growth centers.	Municipalities, state agencies	Medium 3 to 5 years	Incentives identified
4	Evaluate municipal regulations to determine the viability of reducing or removing the need for parking in established villages, downtowns, or other areas with a compact development pattern.	Municipality	Medium 3 to 5 years	Regulations are reviewed and amended as appropriate
5	Evaluate alternative land use regulations such as form-based codes and identify communities where similar regulations have been successfully implemented to determine effectiveness of creating desired development patterns.	Municipality, CVRPC	Low 5 to 10 years	Evaluations completed

D. Development and Siting of Renewable Energy Resources

Objective D-1: Evaluate generation from existing renewable energy generation including the identification of constraints, resource areas, and existing infrastructure by energy type.

Identifying and mapping existing renewable energy generation facilities throughout the Town will provide a baseline to determine the generation that currently exists. This information can provide a better understanding for where developments are currently being established and can help prioritize assistance that may be needed at the municipal level. Additionally, mapping existing constraints will provide the Town with a better understanding of resources that are available within their community.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Regularly update maps regarding existing generation facilities to maintain an up-to-date inventory of locations.	CVRPC, Department of Public Service, Municipality	On-going	Updated maps provided as requested
2	Regularly update maps regarding known and possible constraints to ensure consistency with state guidelines on renewable energy siting.	CVRPC, State Agencies, Municipality	On-going	Updated maps provided as necessary
3	Update municipal maps to reflect changes regarding preferred or unsuitable locations for renewable energy generation.	CVRPC, Municipality	On-going	Maps and information updated as necessary
4	Work with state agencies and the Region to map locations of woody biomass or methane generation for possible fuel sources.	CVRPC, State Agencies, Municipality	On-going	Specific locations are identified and mapped

Objective D-2: Evaluate generation from potential renewable energy generation including the identification of constraints, resource areas, and existing infrastructure by energy type.

Identifying and mapping potential renewable energy generation throughout the Town will provide the municipality with information regarding available land area where renewable energy generation could be located. This information can be used to help the Town prioritize and evaluate where future renewable generation could or should occur based on municipal land use policies and constraints. Additionally, information on potential renewable energy generation will ensure the Town is working to support the state's renewable energy generation goals of 90% of the state's energy needs coming from renewable sources by 2050.

	IMPLEMENTATION ACTION	RESPONSIBILITY	PRIORITY/ TIMELINE	MEASURE OF SUCCESS
1	Evaluate known, possible, regionally, and locally identified constraints to ensure up-to-date information is available for future planning purposes.	CVRPC, State Agencies, Municipality	On-going	Constraints will be evaluated and mapped as necessary
2	Update information on utility infrastructure including existing and proposed transmission facilities to ensure accurate data exists.	CVRPC, Utility Providers, Municipality	On-going	Utility information is updated and mapped as necessary
3	Evaluate and update preferred and unsuitable locations for future renewable energy generation siting as needed based on state, regional, and municipal policies and plans.	CVRPC, Municipality, State Agencies	On-going	Preferred and prohibited locations are evaluated and mapped as necessary
4	Update generation potential based on future land developments, changes to land uses, or updates to priority areas as identified by state, regional, or municipal actions.	CVRPC, Municipality, State Agencies	On-going	Generation potential is updated as necessary
5	Evaluate and prioritize future renewable energy generation technologies and locations to best suit municipal needs and policies.	CVRPC, Municipality	On-going	Locations and technologies will be evaluated and prioritized

MAPPING

The siting and generation of renewable resources is a critical part to identifying whether or not the region can meet its share of the state's renewable energy goals by 2050. Furthermore, this analysis is important to determine where resources are available throughout the region to ensure no one municipality is unduly burdened with supporting more than should be reasonably anticipated. Finally, this information will better position the Town of Waterbury to evaluate the renewable energy generation options that are available to meet these goals.

To this end, maps were created for the Town of Waterbury that identifies resources related to solar, wind, hydroelectric, and woody biomass. Maps were also created to identify constraints that may limit the overall area of possible resource development within the town. The following information will address the evaluation of current and future generation potential within the Town of Waterbury.

Existing Renewable Energy Generation

As noted in the Analysis and Targets section, Tables 11 and 14 identify the existing renewable generation for the Town of Waterbury. Information on existing generation is a representation of all projects that were issued a Certificate of Public Good by the Public Service Board through the end of 2016. Projects that are currently under review are not included in these numbers therefore additional renewable energy generation may be developed that will not be noted in the total generation represented in Table 11 or 14.

Potential Renewable Energy Generation

Table 12 in the Analysis and Targets section identifies potential generation of renewable energy for Waterbury. This information is based on mapping data provided by the Vermont Center for Geographic Information (VCGI) and the Department of Public Service. This information includes specific data related to prime resource areas for solar and wind development which is an indication of where the conditions are most ideal for generation of the specific resource. Also included with this data is information regarding constraints to be considered when evaluating areas for renewable energy development. Additional detail regarding known and possible constraints is discussed below.

Constraints[12]

As part of this effort, the Central Vermont Regional Planning Commission has identified information for each municipality related to renewable energy generation that includes an analysis and evaluation of resource areas within each municipality and how those resource areas are impacted by statewide and regionally identified constraints. In order to determine the impacts, an understanding of the constraints needs to be discussed.

12. Appendix A provides specific definitions for the known and possible constraints.

For the purpose of this plan, constraints are separated into two main categories; known and possible. Known constraints are those areas where development of a renewable resource are very limited and therefore are not likely to occur. Known constraints that have been identified include:

- Vernal Pools (confirmed or unconfirmed)
- River Corridors as identified by the Vermont Department of Environmental Conservation
- Federal Emergency Management Agency Identified Floodways
- State-significant Natural Communities and Rare, Threatened, and Endangered Species
- National Wilderness Areas
- Class 1 and Class 2 Wetlands (as noted in the Vermont State Wetlands Inventory or Advisory Layers
- Regionally or Locally Identified Critical Resources

Similarly, the state has identified a list of possible constraints to be considered. Possible constraints identify areas where additional analysis will need to occur in order to determine if development of renewable energy resources is appropriate. In some cases, conditions may be prohibitive, but in others the conditions may be suitable for renewable energy development. The possible constraints include:

- Agricultural Soils
- Federal Emergency Management Agency Special Flood Hazard Areas
- Protected Lands (State fee lands and private conservation lands)
- Act 250 Agricultural Soil Mitigation Areas
- Deer Wintering Areas
- Vermont Agency of Natural Resources Conservation Design Highest Priority Forest Blocks
- Hydric Soils
- Regionally or Locally Identified Resources

In addition to the items listed above, the Regional Planning Commission, through its Regional Energy Committee, has identified additional constraints to be included for all the municipalities that were noted as being regionally significant. For the purposes of this mapping exercise, all of the regional constraints are considered possible constraints. This is due to the fact that the Regional Energy Committee determined that, like the statewide possible constraints, conditions could be such that developing renewable energy resources in these locations could occur but should be studied further at the municipal level to determine if the specific conditions regarding these locations are suitable. The possible regional constraints that were identified include:

- Elevations above 2,500 feet
- Slopes greater than 25%
- Municipally Owned Lands
- Lakeshore Protection Buffer Areas of 250 feet

<u>Methodology</u>

With all the known and possible constraints identified, this information was overlaid on the resources maps for solar and wind resources. Where known constraints existed the resource areas were deleted. Where possible constraints existed, the resource areas were shaded. The resulting areas included those lands where prime resources exist without any constraints and prime resource areas with possible constraints. The total area

within these two categories served as the basis to determine the amount of resource that is available for potential development within the Town of Waterbury.

As noted in Table 12 of the Analysis and Targets section, based on the solar, wind, and hydroelectric potential within Waterbury, approximately 1,822,000 megawatt hours of energy could be produced, well above the town's allocation of 32,590 megawatt hours by 2050 as noted in Table 7. The potential energy generation for the Town of Waterbury increases when other sources of renewable energy generation such as biomass, biogas, and methane are included. No specific generation numbers are listed in Table 12 for these types of energy generation as their siting is not specifically tied to the availability of a resource, therefore calculating a potential for generation would be difficult.

Transmission Infrastructure

In addition to identifying and calculating possible generation of renewable energy based on resources and constraints, the mapping included in this plan also incorporates the existing three phase power infrastructure throughout the municipality. This is important to include because renewable energy generation needs three phase power to provide energy generation back to the grid. Without three phase power, renewable energy generation would be limited to scales necessary to serve uses in close proximity that would not require transmission infrastructure.

Similar to limits on three phase power are potential limitations on existing transmission infrastructure and the ability to transmit energy from its point of generation to the possible users. As noted previously, the mapping includes three phase power, but it also includes information on current transmission infrastructure. This is another component to consider when identifying where specific generation types should be located to ensure the transmission capacity exists within the grid or to identify areas where upgrades may be needed before development of renewable energy generation can occur. Based on the factors noted above, it may be appropriate for mapping to identify areas where significant energy loads are currently occurring or anticipated based on future land use and zoning.

Preferred & Unsuitable Siting Locations

The Town of Waterbury recognizes the preferred locations that have been identified by the State of Vermont's Net Metering Rules. Additional preferred locations may be identified after an analysis of the needs with the community have been conducted. The state preferred locations include but are not limited to:

- Parking lots
- Gravel pits
- Brownfield sites
- Landfills
- Rooftop installations

There are several locations throughout the Town of Waterbury that have been identified as being unsuitable for development. In general, these areas have been identified due to their significance as supporting wildlife habitat. In these locations development may be possible, however the specific siting, scale, and amount of land disturbance will be a critical factor to consider. These areas include:

- Shutesville Hill Wildlife Corridor

The Shutesville Hill Wildlife Corridor is indicated on the Forest Integrity Map which is part of the Waterbury Town Plan and is specifically referenced and discussed in other sections of the Waterbury Town Plan.

Finally, the Waterbury Energy Plan supports the development of renewable energy generation technology that will not adversely impact the built or natural environment or conflict with identified policies. Due to the diverse nature of Waterbury including urban and rural areas, there was no way to develop a consistent policy that would be equitable to all areas, therefore renewable energy generation types (both current and developed through future advances in technology or innovations in the industry) may be considered for application in the Town of Waterbury.

Local Mapping

To provide a more specific visual representation of resources and constraints, mapping was developed by the Central Vermont Regional Planning Commission that includes:

- Solar Resource Areas
- Wind Resource Areas
- Hydroelectric Resource Areas
- Known Constraints
- Possible Constraints
- Woody Biomass Resource Area
- Existing Renewable Generation Sites
- Statewide Preferred Generation Sites

These maps should be used as a starting point to determine what areas may exhibit characteristics consistent with conditions that would support renewable energy development. More detailed review and analysis should be conducted to determine specific boundaries for resource areas or constraints. These maps can be found in Appendix B.

APPENDIX A

KNOWN & POSSIBLE CONSTRAINT DEFINITIONS & DESCRIPTIONS

The following is a list of the known, possible, and regional constraints that were used and referenced in the mapping section of this document. A definition of the constraint including source of the data is provided.

Known Constraints

Vernal Pools (confirmed and unconfirmed layers) –
Source: Vermont Fish and Wildlife, 2009 - present

Vernal pools are temporary pools of water that provide habitat for distinctive plants and animals. Data was collected remotely using color infrared aerial photo interpretation. "Potential" vernal pools were mapped and available for the purpose of confirming whether vernal pool habitat was present through site visits. This layer represents both those site which have not yet been field-visited or verified as vernal pools, and those that have.

Department of Environmental Conservation (DEC) River Corridors –
Source: DEC Watershed Management District Rivers Program, January 2015

River corridors are delineated to provide for the least erosive meandering and floodplain geometry toward which a river will evolve over time. River corridor maps guide State actions to protect, restore and maintain naturally stable meanders and riparian areas to minimize erosion hazards. Land within and immediately abutting a river corridor may be at higher risk to fluvial erosion during floods.

River corridors encompass an area around and adjacent to the present channel where fluvial erosion, channel evolution and down-valley meander migration are most likely to occur. River corridor widths are calculated to represent the narrowest band of valley bottom and riparian land necessary to accommodate the least erosive channel and floodplain geometry that would be created and maintained naturally within a given valley setting.

Federal Emergency Management Agency (FEMA) Floodways –
Source: FEMA Floodway included in Zones AE – FEMA Map Service Center

These are areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. A "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

State-significant Natural Communities and Rare, Threatened, and Endangered Species –
Source: Vermont Fish and Wildlife, National Heritage Inventory

The Vermont Fish and Wildlife Department's Natural Heritage Inventory (NHI) maintains a database of rare, threatened and endangered species and natural (plant) communities in Vermont. The Element Occurrence (EO) records that form the core of the Natural Heritage Inventory database include information on the location, status, characteristics, numbers, condition, and distribution of elements of biological diversity using established Natural Heritage Methodology developed by NatureServe and The Nature Conservancy.

An Element Occurrence (EO) is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential

continued (or historical) presence and/or regular recurrence at a given location. For species Elements, the EO often corresponds with the local population, but when appropriate may be a portion of a population or a group of nearby populations (e.g., metapopulation).

National Wilderness Areas –
Source: United States Department of Agriculture Forest Service

A parcel of Forest Service land congressionally designated as wilderness.

Class 1 and Class 2 Wetlands –
Source: Vermont Significant Wetland Inventory (VSWI) and advisory layers

The State of Vermont protects wetlands which provide significant functions and values and also protects a buffer zone directly adjacent to significant wetlands. Wetlands in Vermont are classified as Class I, II, or III based on the significance of the functions and values they provide. Class I and Class II wetlands provide significant functions and values and are protected by the Vermont Wetland Rules. Any activity within a Class I or II wetland or buffer zone which is not exempt or considered an "allowed use" under the Vermont Wetland Rules requires a permit.

Class I wetlands have been determined to be, based on their functions and values, exceptional or irreplaceable in its contribution to Vermont's natural heritage and, therefore, merits the highest level of protection. All wetlands contiguous to wetlands shown on the VSWI maps are presumed to be Class II wetlands, unless identified as Class I or III wetlands, or unless determined otherwise by the Secretary or Panel pursuant to Section 8 of the Vermont Wetland Rules.

Possible Constraints

Agricultural Soils –
Source: Natural Resources Conservation Service (NRCS)

Primary agricultural soils" are defined as "soil map units with the best combination of physical and chemical characteristics that have a potential for growing food, feed, and forage crops, have sufficient moisture and drainage, plant nutrients or responsiveness to fertilizers, few limitations for cultivation or limitations which may be easily overcome, and an average slope that does not exceed 15 percent. Present uses may be cropland, pasture, regenerating forests, forestland, or other agricultural or silvicultural uses.

The soils must be of a size and location, relative to adjoining land uses, so that those soils will be capable, following removal of any identified limitations, of supporting or contributing to an economic or commercial agricultural operation. Unless contradicted by the qualifications stated above, primary agricultural soils include important farmland soils map units with a rating of prime, statewide, or local importance as defined by the Natural Resources Conservation Service of the United States Department of Agriculture.

FEMA Special Flood Hazard Areas -

The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA) on NFIP maps. The SFHA is the area where the National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Protected Lands –

Include State fee land and private conservation lands. Other state level, non-profit and regional entities also contribute to this dataset. The Vermont Protected Lands Database is based on an updated version of the original Protected Lands Coding Scheme reflecting decisions made by the Protected Lands Database Work Group to plan for a sustainable update process for this important geospatial data layer.

Act 250 Ag Mitigation Parcels –
Source: Vermont Department of Agriculture

All projects reducing the potential of primary agricultural soils on a project tract are required to provide "suitable mitigation," either "onsite or offsite," which is dependent on the location of the project. This constraint layer includes all parcels in the Act 250 Ag Mitigation Program as of 2006.

Deer Wintering Areas (DWA) –
Source: Vermont Department of Fish and Wildlife

Deer winter habitat is critical to the long term survival of white-tailed deer (Odocoileus virginianus) in Vermont. Being near the northern extreme of the white-tailed deer's range, functional winter habitats are essential to maintain stable populations of deer in many years when and where yarding conditions occur. Consequently, deer wintering areas are considered under Act 250 and other local, state, and federal regulations that require the protection of important wildlife habitats. DWAs are generally characterized by rather dense softwood (conifer) cover, such as hemlock, balsam fir, red spruce, or white pine. Occasionally DWAs are found in mixed forest with a strong softwood component or even on found west facing hardwood slopes in conjunction with softwood cover. The DWA were mapped on mylar overlays on topographic maps and based on small scale aerial photos.

Vermont Conservation Design include the following Highest Priority Forest Blocks: Connectivity, Interior, and Physical Landscape Diversity –
Source: Vermont Department of Fish and Wildlife

The lands and waters identified in this constraint are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend.

Hydric Soils –
Source: Natural Resources Conservation Service

A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. This constraint layer includes soils that have hydric named components in the map unit.

Regional Constraints

Elevations above 2500 feet –

This constraint uses USGS contours over 2500 feet.

Lake Shore Protection Buffers (250 Foot and 800 Foot in Calais Only) –

For this constraint, CVRPC selected Vermont Hydrologic Dataset lakes and ponds greater than 10 acres and then buffered those by 250 feet and use the Town of Calais Land Use Regulations for shore lands in Calais.

Slopes Greater Than 25% –

For this constraint, CVRPC performed a slope analysis using a 10 meter Digital Elevation Model.

Municipal Lands –

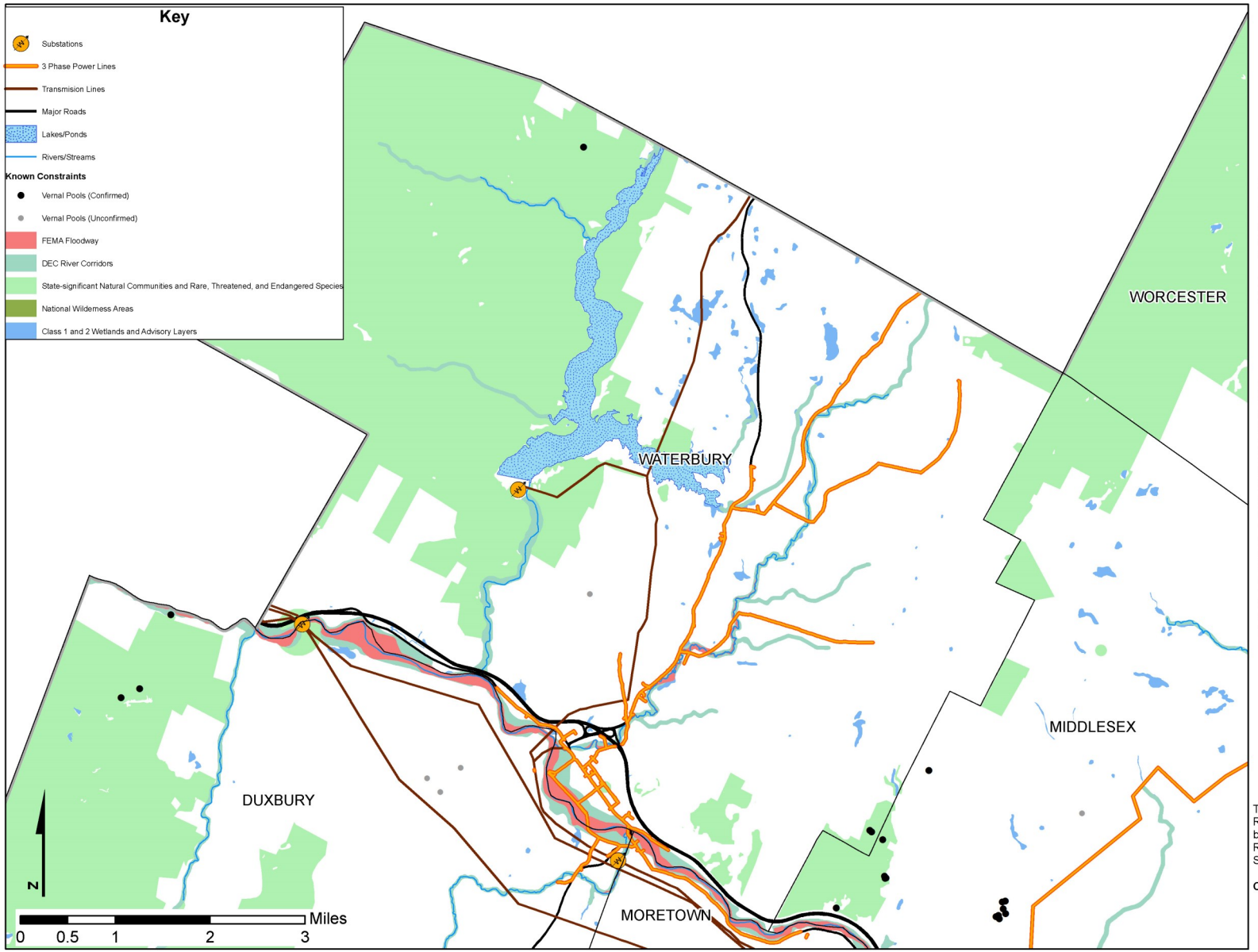
For this constraint, CVRPC used the Vermont Center for Geographic Information's Protected Lands Database.

Local Constraints

One local constraint has been identified which is the Shutesville Hill Wildlife Corridor. This location is shown on the Forest Integrity Map and discussed in several other sections of the Waterbury Town Plan. The Shutesville Hill Wildlife Corridor is a critical connection between the Green Mountains and the Worcester Range. It has been identified as one of the five most important wildlife corridors in the State of Vermont by the Staying Connected Initiative. Development of any kind in this area is highly restricted. Additional guidance on protection of this critical resource is noted throughout the Waterbury Town Plan and local regulations.

APPENDIX B

MUNICIPAL RESOURCE MAPS



WATERBURY
Known Constraints Map

Known Constraints

These constraints signal likely, though not absolute, unsuitability for development based on statewide or local regulation or designated critical resources.

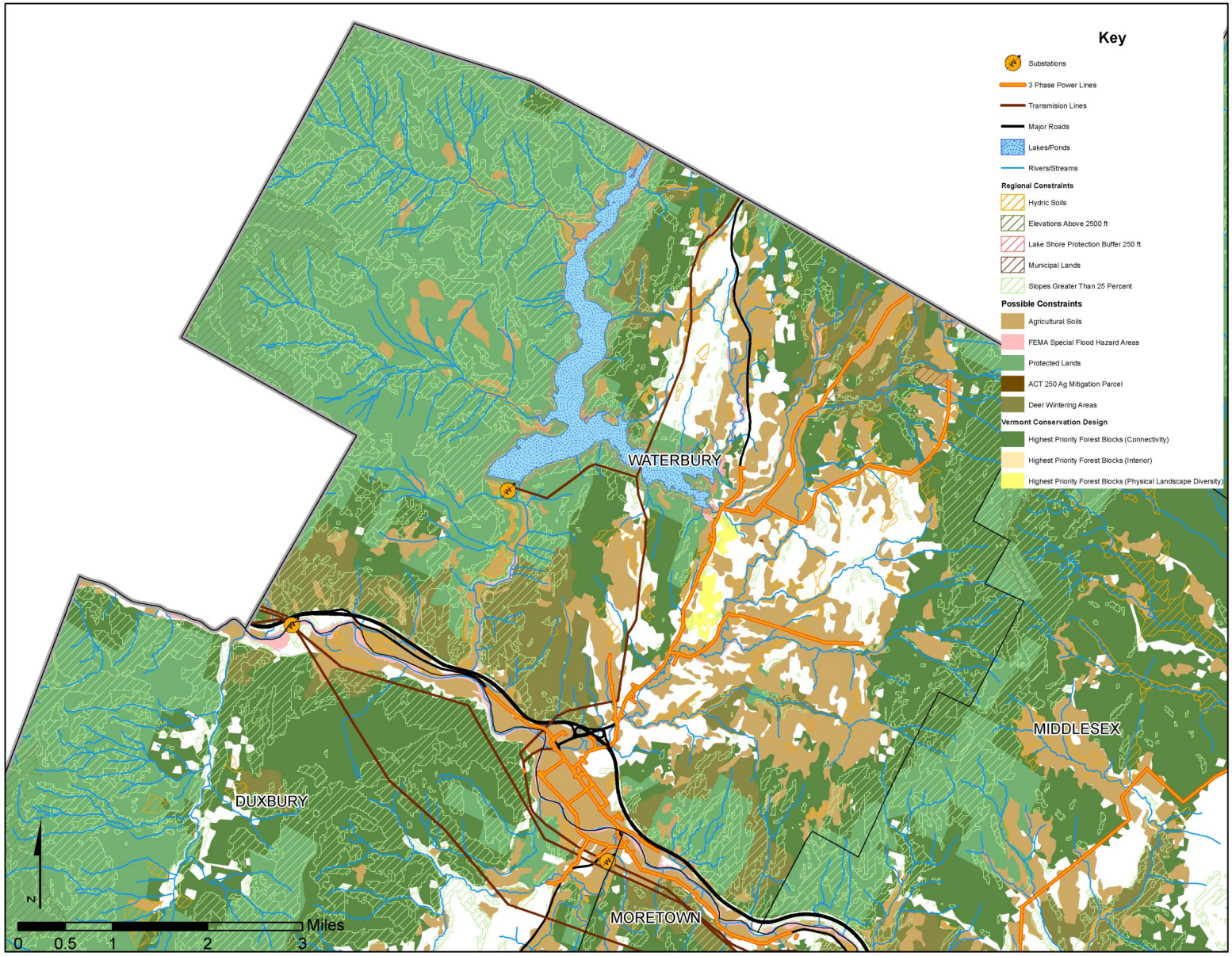
Link to Data -
http://vcgi.vermont.gov/opendata/act174

Known Constraints
Vernal Pools incuding confirmed and unconfirmed - Vermont Fish and Wildlife
DEC River Corridors - DEC WSMD Rivers Program 1/2/15
FEMA Floodway included in Zones AE - FEMA Map Service Center
State-significant Natural Communities and Rare, Threatened, and Endangered Species - Vermont Fish and Wildlife, Natural Heritage Inventory
National Wilderness Areas - USDA Forest Service
Class 1 and Class 2 Wetlands (VSWI) and Advisory Layers - VT Watershed Management Division

This map was created as part of a Regional Energy Planning Initiative being conducted by the Bennington County Regional Commission, and the Vermont Public Service Department.

Created: December 2016 by CVRPC GIS.

CVRPC



WATERBURY
Possible Constraints Map

Possible Constraints

These constraints signals conditions that would likely require mitigation, and which may prove a site unsuitable after site-specific study, based on statewide or regional/ local policies that are currently adopted or in effect.

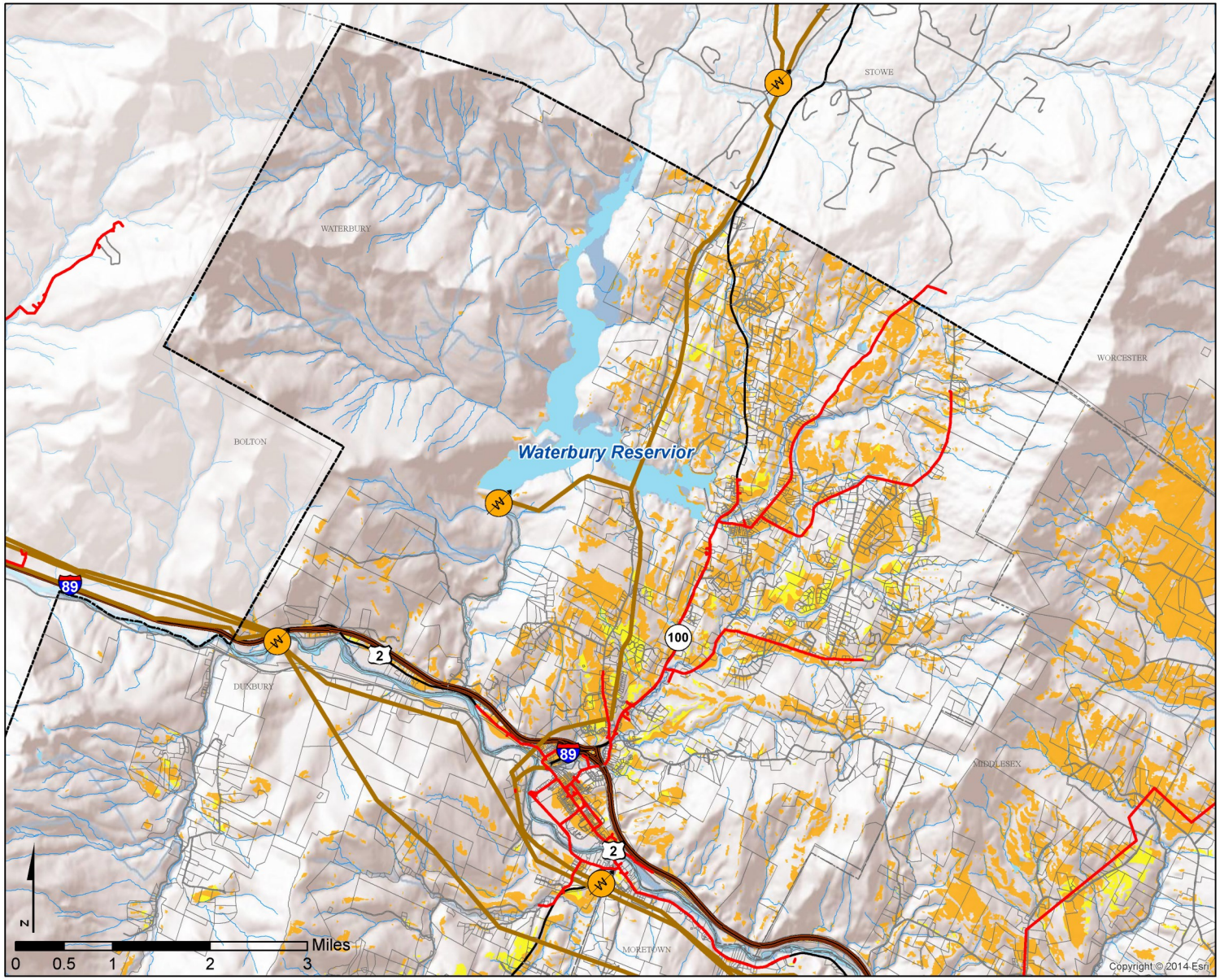
Link to Data - http://vcgi.vermont.gov /opendata/act174

Possible Constraints Data Sources
Agricultural Soils include local, prime and statewide classifications - NRCS
FEMA Special Flood Hazard Areas include Zones A and AE - FEMA Map Service Center
Protected Lands - Include State fee lands and private conservation lands - VCGI
Act 250 Ag Mitigation Parcels include parcel as of 2006 - VT Dept. of Ag
Deer Wintering Areas - VT Fish and Wildlife
Vermont Conservation Design include the following Highest Priority Forest Blocks: Connectivity, Interior, and Physical Landscape Diversity) - VT Fish and Wildlife
Hydric Soils include soils that have hydric named components in the map unit - NRCS

This map was created as part of a Regional Energy Planning Initiative being conducted by the Bennington County Regional Commission, and the Vermont Public Service Department.

Created: December 2016 by CVRPC GIS.

CVRPC



WATERBURY

Solar Resources Map

Legend

- Substations
- 3 Phase Power Lines
- Distribution Lines

Solar Potential

- Prime (No Constraint)
- Secondary (Possible Constraint)
- Parcels

Roads

- Interstate
- US Highway
- Vermont State Highway
- Town Class 1-3

Known Constraints

Areas not shown on map

Vernal Pools
River Corridors
FEMA Floodways
Natural Communities & Rare, Threatened and Endangered Species
National Wilderness Areas
Wetlands Class 1 and 2

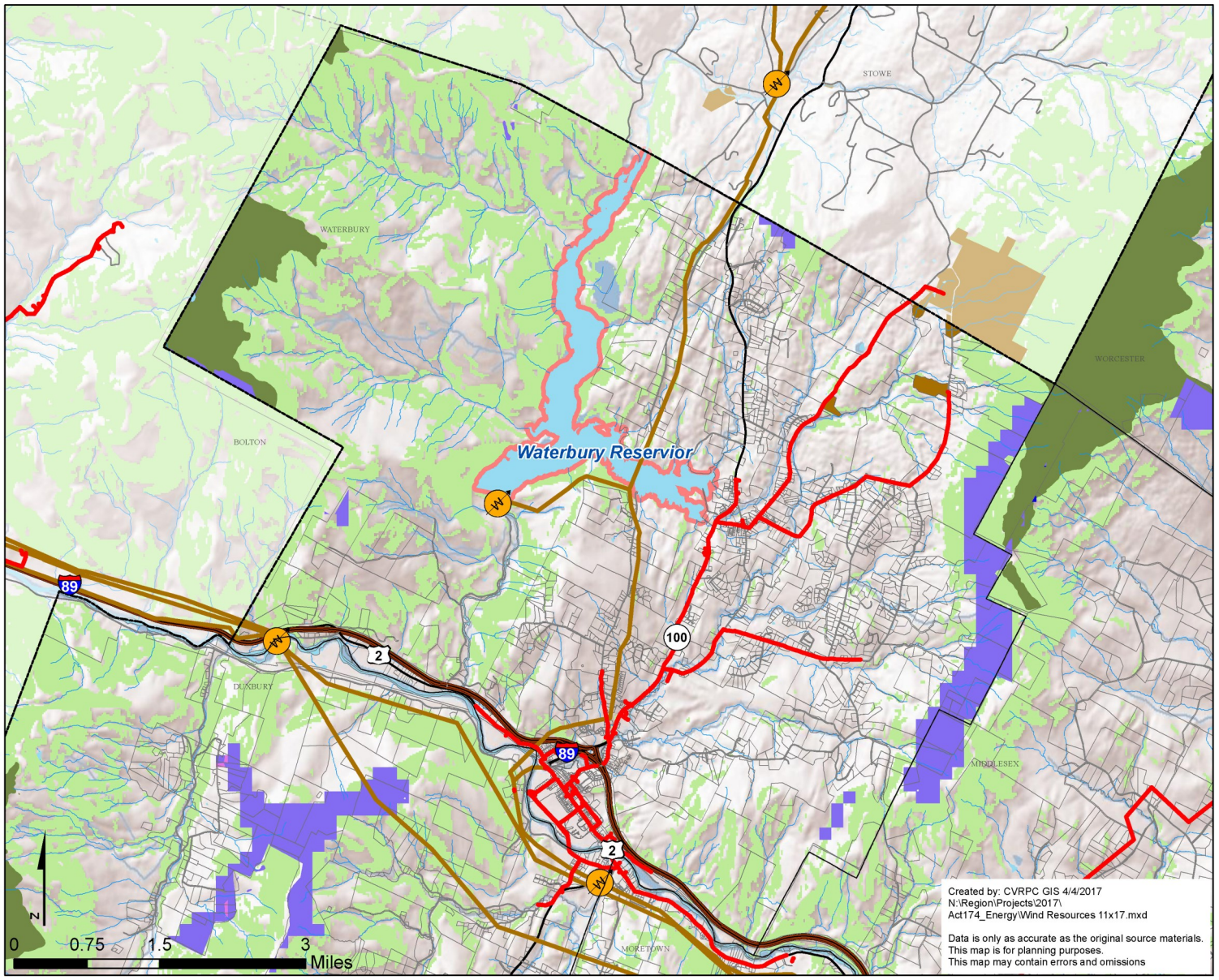
Possible Constraints

VT Agriculturally Important Soils
FEMA Special Flood Hazard Areas
Protected Lands
Act 250 Agricultural Soil Mitigation Areas
Deer Wintering Areas
Highest Priority Forest Blocks
Hydric Soils
Elevations Above 2500Ft
Lake Shore Protection Buffer 250 Ft
Municipal Lands
Slopes Greater Than 25 Percent

Created by: CVRPC GIS 4/4/2017
N:\Region\Projects\2017\
Act174_Energy\Solar Resources 11X17

Data is only as accurate as the original source materials.
This map is for planning purposes.
This map may contain errors and omissions

CVRPC
CENTRAL VERMONT REGIONAL PLANNING COMMISSION



WATERBURY
Wind Resources Map

Legend

- Substations
- 3 Phase Power Lines
- Transmission Lines

Wind Potential

Prime Wind (No Constraint)
Hub Height (m)
50 70

Secondary Wind (Possible Constraint)
Hub Height (m)
50 70

- Parcels

Roads

- Interstate
- US Highway
- Vermont State Highway
- Town Class 1-3

Regional Constraints

- Elevations Above 2500 ft
- Lake Shore Protection Buffer 250 ft
- Municipal Lands
- Slopes Greater Than 25 Percent

Known Constraints

Areas not shown on map
Vernal Pools
River Corridors
FEMA Floodways
Natural Communities & Rare, Threatened and Endangered Species
National Wilderness Areas
Wetlands Class 1 and 2

Possible Constraints

VT Agriculturally Important Soils
FEMA Special Flood Hazard Areas
Protected Lands
Act 250 Agricultural Soil Mitigation Areas
Deer Wintering Areas
Highest Priority Forest Blocks
Hydric Soils

Created by: CVRPC GIS 4/4/2017
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Act174_Energy\Wind Resources 11x17.mxd

Data is only as accurate as the original source materials.
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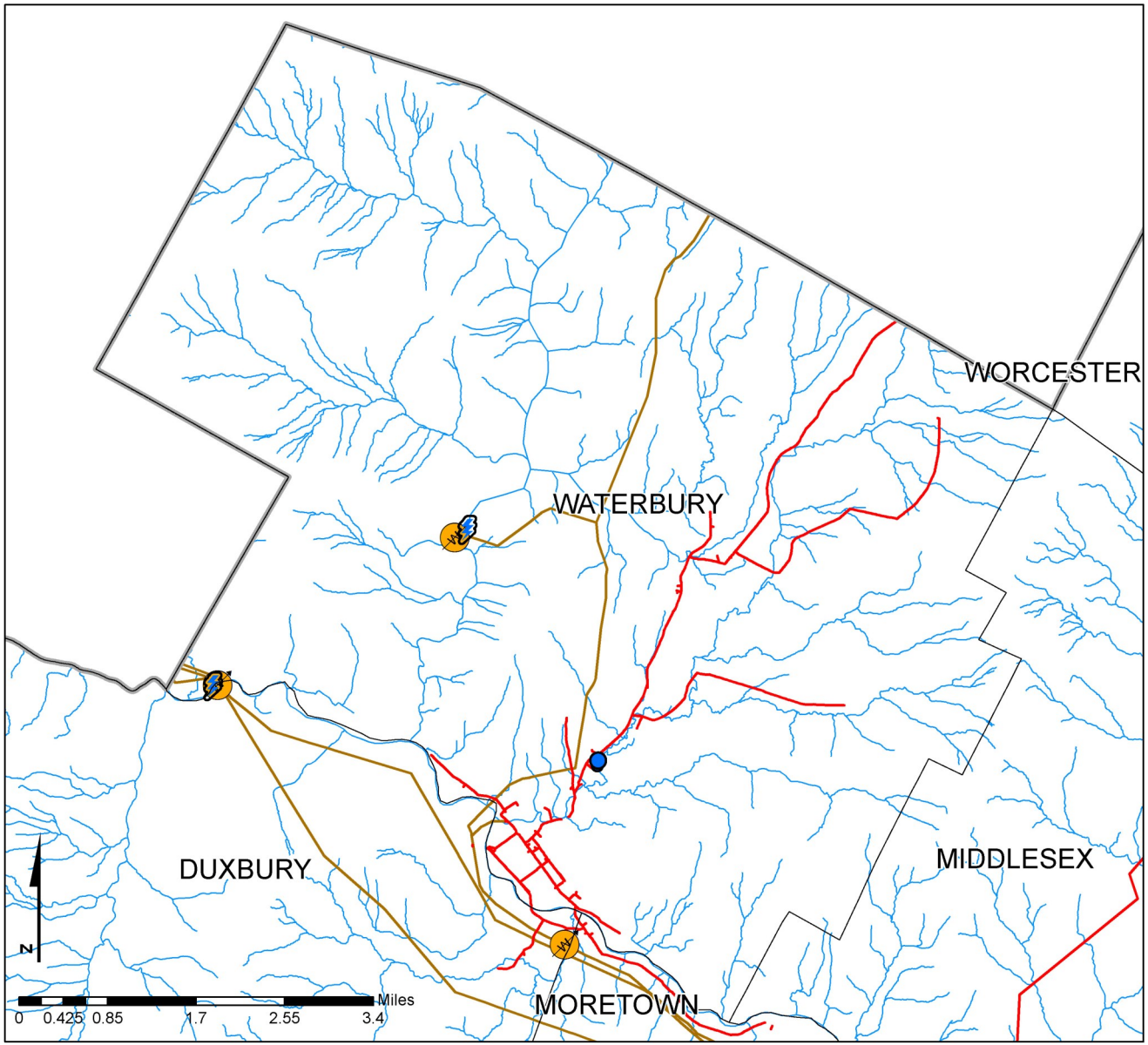
This map may contain errors and omissions

CVRPC
CENTRAL VERMONT REGIONAL PLANNING COMMISSION



WATERBURY
Hydroelectric Resources Map

Key

- Substations
- 3 Phase Power Lines
- Transmission Lines
- Major Roads
- Lakes/Ponds
- Rivers/Streams
- Dams not on National Wild and Scenic Rivers
- Dams on National Wild and Scenic Rivers

Potential Hydroelectric Facilities

Potential Hydroelectric Facilities

- < 50 kW Capacity
- > 50 kW Capacity
- High Hazard with < 50 kW Capacity
- High Hazard with > 50 kW Capacity

Methodology

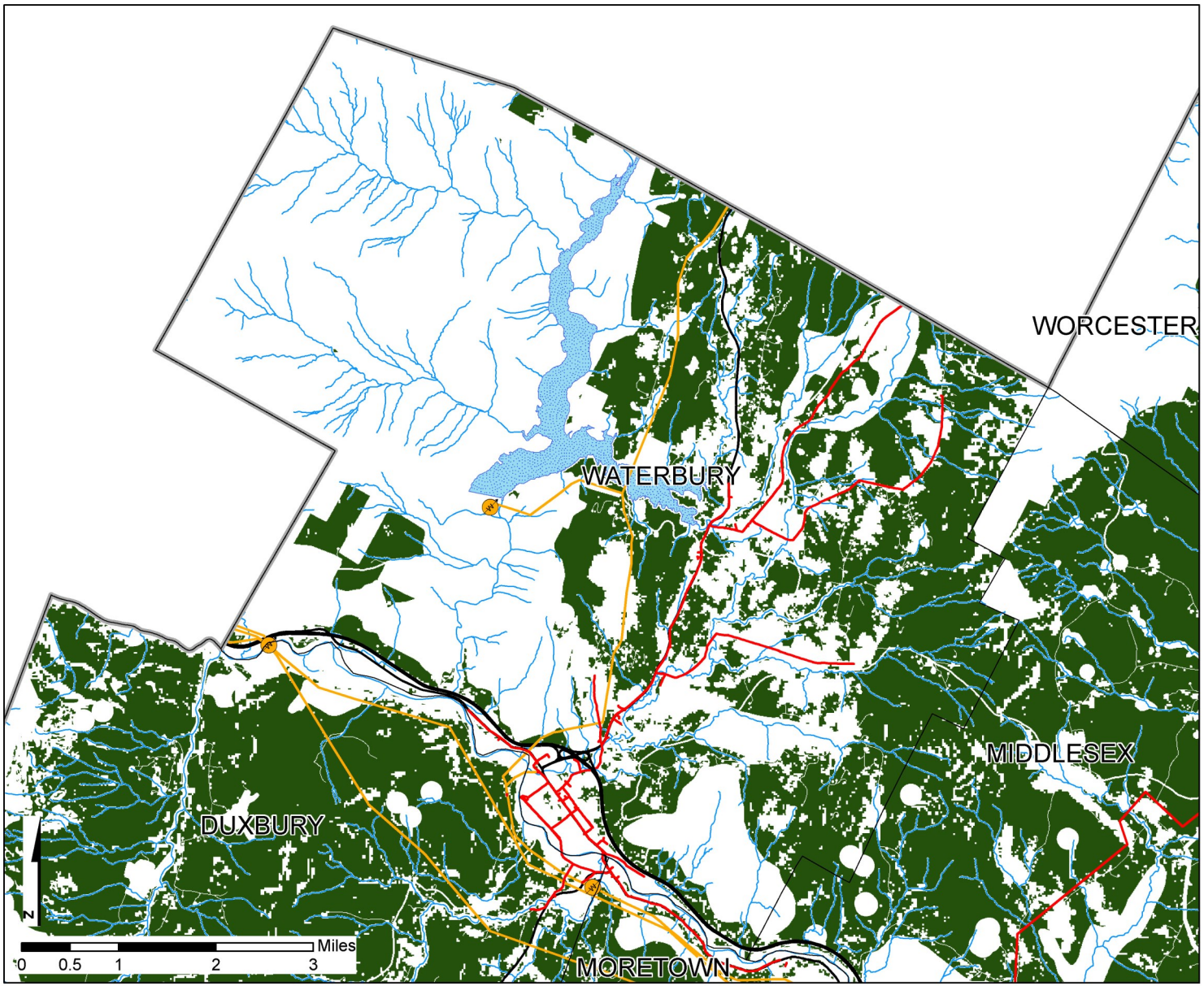
This map shows areas of resource potential for renewable energy generation from hydroelectric , i.e., dams that could be converted in to hydroelectric facilities as well as active hydroelectric sites. Existing hydroelectric dam information was extracted from the Vermont Dam Inventory, while potential hydroelectric sites were derived from a study conducted by Community Hydro in 2007.1 Based on estimates conducted within the report, this map categorizes dams based on their potential hydroelectric generation capacity, and the downstream hazard risk that would be involved in hydroelectric production at each site.

High hazard potential dams are those where failure or mis-operation will probably cause loss of human life. The other rankings were grouped together and their failure or mis-operation results in no probable loss of human life, but could cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns. These dams are often located in predominately rural or agricultural areas, but could be located in areas withpopulation and significant infrastructure.

This map was created as part of a Regional Energy Planning Initiative being conducted by the Bennington County Regional Commission, and the Vermont Public Service Department.

Created: December 2016 by CVRPC GIS.
N:\Region\Projects\2017\Act174_Energy\Hydroelectric Resources 11x17.mxd

CVRPC
CENTRAL VERMONT REGIONAL PLANNING COMMISSION



WATERBURY
Woody Biomass Resources Map

Key

- Substations
- 3 Phase Power Lines
- Transmission Lines
- Major Roads
- Lakes/Ponds
- Rivers/Streams
- Woody Biomass

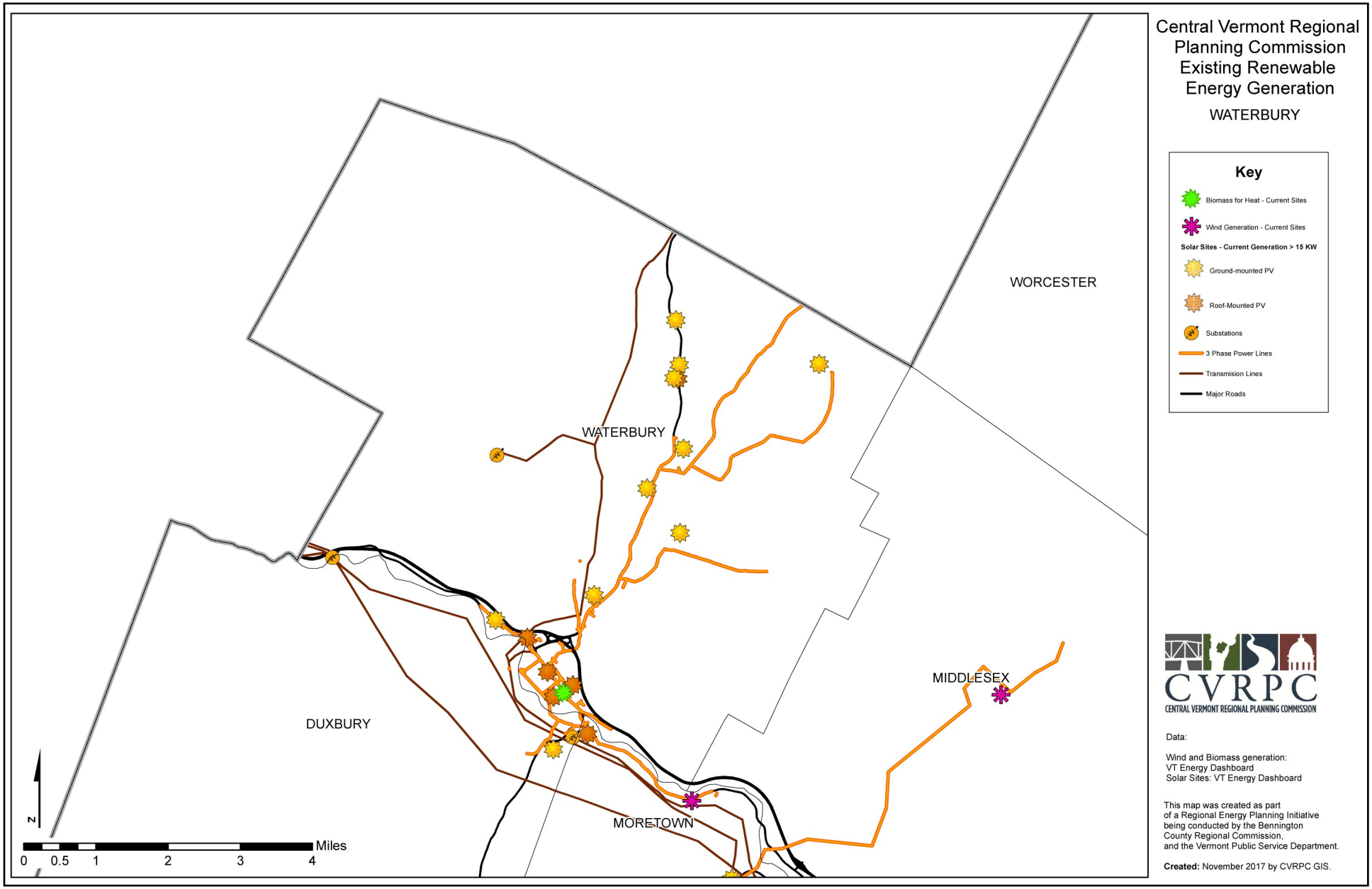
Methodology

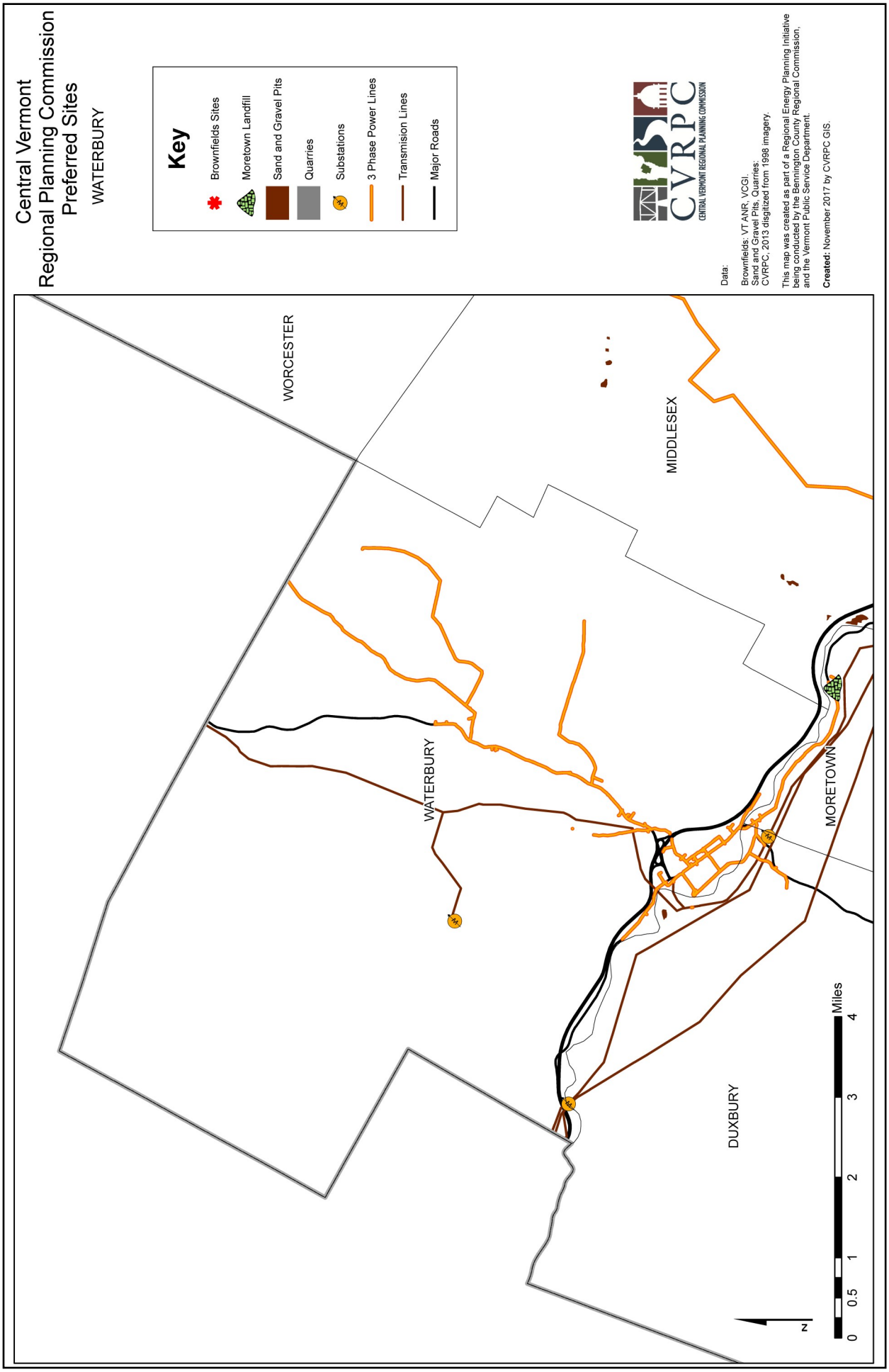
This map shows areas of resource potential for woody biomass, i.e., locations where forested areas are. This map also considers various other conditions, such as ecological zones, that may impact the feasibility of renewable energy/alternative heating source. These conditions are referred to as constraints. This map does not include areas where other types of biomass, such as biomass from agricultural residue, could be grown/harvested.

This map was created as part of a Regional Energy Planning Initiative being conducted by the Bennington County Regional Commission, and the Vermont Public Service Department.

Created: December 2016 by CVRPC GIS.

CVRPC
CENTRAL VERMONT REGIONAL PLANNING COMMISSION


Central Vermont Regional Planning Commission
Existing Renewable Energy Generation
WATERBURY
Key
Biomass for Heat - Current Sites
Wind Generation - Current Sites
Solar Sites - Current Generation > 15 KW
Ground-mounted PV
Roof-Mounted PV
Substations
3 Phase Power Lines
Transmision Lines
Major Roads
WORCESTER
WATERBURY
DUXBURY
MORETOWN
MIDDLESEX
N
0 0.5 1 2 3 4
Miles
CVRPC
CENTRAL VERMONT REGIONAL PLANNING COMMISSION
Data:
Wind and Biomass generation:
VT Energy Dashboard
Solar Sites: VT Energy Dashboard
This map was created as part of a Regional Energy Planning Initiative being conducted by the Bennington County Regional Commission, and the Vermont Public Service Department.
Created: November 2017 by CVRPC GIS.


Central Vermont
Regional Planning Commission
Preferred Sites
WATERBURY
Key
Brownfields Sites
Moretown Landfill
Sand and Gravel Pits
Quarries
Substations
3 Phase Power Lines
Transmision Lines
Major Roads
CVRPC
CENTRAL VERMONT REGIONAL PLANNING COMMISSION
Data:
Brownfields: VT ANR, VCGI.
Sand and Gravel Pits, Quarries:
CVRPC, 2013 disgitized from 1998 imagery.
This map was created as part of a Regional Energy Planning Initiative being conducted by the Bennington County Regional Commission, and the Vermont Public Service Department.
Created: November 2017 by CVRPC GIS.
WORCESTER
MIDDLESEX
WATERBURY
MORETOWN
DUXBURY
N
0 0.5 1 2 3 4
Miles