CHARLOTTE TOWN PLAN

Amended March 1, 2016

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1. INTRODUCTION TO THE PLAN

1.1. A VISION FOR THE FUTURE OF CHARLOTTE

The Town Plan expresses a vision for the future of Charlotte. This vision is a reflection of the Town's history, the Town and the region as they are today, and the aspirations of the residents for its future. The vision consists of community-wide goals and objectives, and also recognizes and addresses important and timely issues.

Charlotte's physical setting has influenced its form and character since its early days. Its location on the shores of Lake Champlain within the Champlain Lowlands has impacted the Town's industry, agriculture, and settlements. Today, Charlotte with its magnificent scenic qualities, its working landscape of farms and forests, and its convenient location near employment centers is attracting many new residents. The Town is witnessing the decline of one of its more important assets - dairy farms. Some dairy farms are converting to other types of agricultural operations, which is a desirable outcome; other lands are being developed in ways which preclude the future possibility of agriculture, which is a less desirable outcome. Encroachment on wildlife habitat, wetlands, and productive woodlands is an important issue, as is the need to identify and protect the quantity and quality of groundwater resources. Increased use of Lake Champlain, shoreline development that threatens water quality, and public access are also issues addressed in the Plan. As growth occurs, concerns arise about additional cost of Town services and the ability of the Town to meet the needs associated with growth. In addition, as the value of land and cost of housing soars, the social and economic diversity of the Town is threatened, and the availability of affordable housing for residents and land for farming decreases.

In its vision for the Town's future, the Charlotte Town Plan builds on its most valuable characteristics - rural landscape and healthy environment, diversity of its population, small-town character, history, and active participation by citizen volunteers. Essential components of this vision are:

- To balance property owners' rights to reasonable use of their land with overall public health, safety, welfare and the goals of this Plan.
- To reinforce historic settlement patterns by focusing growth in village centers and promoting a town center;
- To maintain and enhance the integrity and continued viability of natural and cultural features with high public value, including prime and statewide agricultural soils, steep slopes, surface and groundwater resources, shoreland buffers, wildlife habitat and other ecologically important natural areas, scenic views and vistas, historic districts, sites and structures, land in active agriculture, and conserved land.
- To recognize and preserve the Town's unique environmental and cultural resources through both regulatory and non-regulatory actions;
- To promote social, economic, cultural and racial diversity and sense of community through actions that encourage affordable housing, enhance the agricultural economy, provide essential commercial services, and enable environmentally-sensitive rural enterprises;
- To enable access to and appropriate use of open land and recreational resources, both public and private;
- To plan for capital improvements consistent with the fiscal ability of the Town; and

- To promote community interaction and spirit.

1.2. The Process for Developing the Plan

1.2.1. Previous Town Plans

The Charlotte Planning Commission is responsible for developing the plan. For the first Town Plan, the Planning Commission sought broad citizen involvement. Work began in earnest in 1984 when an advisory committee submitted preliminary findings and conclusions on planning issues to the Planning Commission. In 1986, a questionnaire was distributed at Town Meeting to obtain public opinion on the most pressing planning issues.

1990 Plan

In July 1987, the Planning Commission took a significant step to involve the community in planning for its future. With the assistance of the Town's planning consultant, the commission organized eight citizen committees to research issues important to the Town and to develop recommendations for future action. The committees were Housing, Farming, Pattern of Future Growth, Lake Champlain and its Shoreline, Community Facilities and Services, Town Environment, Natural Resources, and Commercial and Industrial Development. The committees were given instructions on what tasks they were to accomplish, the form for their reports, and the time-frame for their work.

Three months later the committees presented their findings in a town-wide meeting. The results of the committees' work were astounding. Utilizing the talent and commitment of residents, the Town was able to obtain detailed analysis of its natural resources, the farm economy, affordable housing opportunities, water quality data for Lake Champlain, commercial and industrial potential, and significant vistas and other items. The reports were pulled together in papers summarizing goals, objectives, and strategies for the Town. Each committee then reviewed these papers.

A town-wide meeting was held in August 1988. The proposed land use strategy was presented, with slides illustrating the significant features and pressing planning issues facing the Town, and public comment was solicited. Many summer residents, as well as year-round residents, were present at that meeting. Maps of the Town showing the proposed land use strategy were then displayed in the Town planning office. People were invited to comment on the maps and to discuss questions or comments with the Planning Commission. Neighborhood meetings were held in the East Charlotte and West Charlotte villages. Both the Planning Commission and the Selectboard held public hearings to obtain formal comments on the Plan. The most significant public involvement in the formulation of the plan was through the survey, committee work, and informal discussions with neighborhood groups and individuals.

In response to a petition signed by Charlotte residents, the Selectboard warned a public meeting to determine by Australian ballot whether town plans would be voted on by Australian ballot at duly warned Town Meetings. Residents voted in favor of a Town vote on plans. The 1990 Town Plan was the Town's first "Act 200 Plan." This meant that the plan was developed and adopted according to the procedures of Act 200. These procedures include requirements that the plan be consistent with statewide goals and policies set forth in Section 4302 of Chapter 117 and be compatible with the approved plans of adjoining municipalities and the regional plan.

1995 Plan

In August 1994, the Planning Commission decided, provided the plan's statistical information was updated, that the Town Plan should be re-adopted. This decision relied upon two premises:

1. Considerable effort and public participation was conducted to develop the plan as originally adopted by Australian Ballot at the March 1990 Town Meeting; and

2. Based on the confidence in the process to develop the plan, the policies, goals, objectives, and other pertinent sections remained applicable for the ensuing five years.

Between 1994 and 1998 zoning bylaws in the Conservation and Industrial areas were amended.

2002 Plan

In January 1999, the Planning Commission began a comprehensive assessment of the Plan for the 2000 update with the help of a part-time planning consultant and Town staff. Seven Town Plan Update Committees were established and chaired by Planning Commissioners, their task being to review the existing Plan and make recommendations for any changes based on updated information and trends. The committees were: Housing; Economy; Community Facilities and Transportation; Agriculture; Natural Resources; Lake and the Lakeshore; and Neighborhoods and Villages. Approximately 100 volunteers joined in the work, with many attending weekly community workshops of the various committees over a five-month period, and in this way the Update Committees developed recommendations.

Two written public surveys were also used to collect additional information about residents' desires for Charlotte's future. One survey was placed as an insert to the January 28, 1999 *Charlotte News*. With 125 responses, the results of the survey were published in the *Charlotte News* on March 11, 1999 and discussed at a subsequent community workshop. The second survey, prepared by the Economy Committee, addressed economic development. It was distributed at 1999 Town Meeting. Nearly 90 residents responded and results were discussed at a community workshop. Survey results were integrated throughout the plan and are included in Appendix B.

The Selectboard identified some important unresolved issues remaining in the draft, and so decided to place the 1995 Town Plan on the ballot for re-adoption at the March 2000 Town Meeting, and continue work on the revisions. The 1995 Town Plan was re-approved and adopted by the voters on March 7, 2000.

During the spring and summer of 2000, the Planning Commission and Selectboard worked on a new draft of the Town Plan. Public hearings were held in the fall and winter of 2000. The new draft was on the ballot of the 2001 Town Meeting, and was defeated.

The Planning Commission tried to determine why that version of the plan was not acceptable to the community. They recognized two items in the defeated plan which needed further investigation and evaluation:

1. Rezoning the industrial/commercial district on East Thompson’s Point Road to residential, and
2. Language regarding Transfer of Development Rights (TDRs) which had been understood to require the Town to enact such a program.

The Planning Commission deleted these sections and voters adopted the Town Plan on March 5, 2002.

The 2002 plan maintained much of the structure and content of the earlier plans; the main structural change being the delineation of policies and strategies in some of the plan's sections. The principal content change was the added focus on the villages, particularly the West Charlotte Village.

The reasons for this focus were twofold. First, the West Charlotte Village has become, within the last ten years, a real town center where municipal, cultural/social, postal and commercial services are provided. The fact that this village hosts these services currently and may in the near future provide additional services warrants a close look at how they interrelate and how they can be provided most effectively, efficiently, and aesthetically.

Secondly, in looking forward, the Town's need for housing is projected to grow. The provision of housing in village areas accomplishes several goals:

1. It can address affordability issues by allowing for smaller lots, shared structures and shared infrastructure; and
2. It reinforces the village concept by providing a mixture of residential and commercial uses and also by establishing a clear contrast with the surrounding rural countryside, especially when coupled with protective mechanisms for outlying areas.

The 2002 plan laid the groundwork for future studies, such as groundwater studies, village master plans for the West and East Charlotte Villages, and a town-wide plan for open space protection, in order to assure that future growth in the Town will be environmentally sound and will be in keeping with the current character of the village and non-village areas.

1.2.2. West Charlotte Village Plan

A West Charlotte Village Plan was completed in October 2002. There were ideas in that plan which were not broadly endorsed by the public, consequently the Planning Commission decided not to adopt the recommendations of the plan, although some of the concepts of the plan may be revisited. There have been recent discussions regarding undertaking an East Charlotte Village Plan; the Planning Commission foresees this to occur following the adoption of this Town Plan.

1.2.3. Current Town Plan

The 2007 Town Plan revision has been approached by the Planning Commission as a relatively minor update because:

1. There is no new census information since the last amendment;
2. Voters were satisfied with the last Town Plan; and
3. The Town has not changed significantly since the last Town Plan was adopted.

Nonetheless, the update process has included public input and addresses new statutory requirements. Public feedback included a 2006 town-wide survey patterned after the 1999 survey, with a few additional questions—-tallies of both surveys are included as appendices. Several public work-sessions were also held.

1.3. THE LAYOUT OF THE PLAN

The chapter entitled "Goals for the Future of the Town" states the public aspirations and the objectives that will lead to the accomplishment of those aspirations. "Charlotte Yesterday" provides a brief history of the Town. "Charlotte Today" describes the current social, economic, land use, environmental, and community service conditions of the Town. "Charlotte Tomorrow" outlines the policies and strategies necessary to implement the vision for the future of the Town.

1.4. USE OF THE TOWN PLAN

The Town Plan must meet the requirements of Title 24 Chapter 117 Section 4382 of Vermont Statutes Annotated (VSA). Additionally, the Town Plan may be consistent with the goals established in 24 VSA Section 4302, and compatible with approved plans of other municipalities in the region and with the regional plan. However, in order to be approved by the regional planning commission (under the provisions of 24 VSA Section 4350, the Town Plan must be consistent with the goals of Section 4302 and compatible with other municipal plans and with the regional plan.

The Town Plan is intended to guide the work and decisions of the Selectboard, and all official Town boards and bodies, as well as residents, seasonal homeowners, private employers and Town employees.

In some places, the plan specifies policies and these are to be used to review and guide development proposals and use of public resources. In other places, the plan offers suggestions of possible strategies that would need to be enacted, for example, in the Land Use Regulations or through a Town Committee; these suggestions are meant to guide discussion and need further action and scrutiny before implementation.

The purpose of the Town Plan is:

- To plan for the future of the Town in a manner that the community desires;
- To provide the basis for revisions to the Land Use Regulations and (if the Town so wishes) for the adoption of an Official Town Map;
- To guide decision-making under the Land Use Regulations;
- To provide the framework for a capital budget and program (if adopted);
- To provide a guide and a resource for community programs and decision-making;
- To provide a standard for review under the provisions of Title 10 Chapter 151 (Act 250) and Title 30 Chapter 248;
- To provide a standard for review under the provisions of Title 24 Chapter 117;
- To assist with the development of the Regional Plan and the plans of neighboring municipalities; and
- To be a source of information about the Town.

1.5. PROCESS FOR MANAGING AND AMENDING THE PLAN

It is the Planning Commission's responsibility to develop, maintain, review and revise the plan at least every five years. The Planning Commission will review annually the plan to determine progress towards its

implementation. As part of this annual review, the Planning Commission will note any changes that should be considered in the next five-year update of the plan.

In preparation for the next update of the plan, the Planning Commission will conduct a comprehensive assessment of the current plan. Statistical data on changes occurring over this period will be reviewed, the status and effectiveness of policies and implementation strategies will be reassessed, and assumptions on issues facing the Town reevaluated. With this information policies can be amended and new implementation programs developed as necessary.

Title 24 Chapter 117, Vermont's growth management and planning statute, requires that town plans be consistent with statewide planning goals as provided in the statute, be coordinated with the plans of neighboring municipalities, and be compatible with regional plans. In particular the Town should consult with the Chittenden County Regional Planning Commission, which reviews towns' plans to determine their conformance with the requirements of the statute.

When considering an amendment to the plan, the Planning Commission is required to prepare a written report on the proposal. The contents of the report are specified in Section 4384(c) of the Vermont Municipal and Regional Planning and Development Act.

2. GOALS FOR THE FUTURE OF THE TOWN

2.1.1. To maintain and protect Charlotte's rural character and heritage.

Objectives:

1. Support and enhance a viable farming community within the Town and preserve an agricultural land base for this purpose.
2. Preserve the beauty of the landscape through the protection of open land, panoramic views of the Green Mountains, Lake Champlain and Adirondack Mountains, the dark night sky, and valuable natural resources.
3. Preserve the small-town character in the villages and rural areas.
4. Promote social, economic, cultural and racial diversity in the population.
5. Preserve historic structures and districts, including covered bridges, agricultural structures, public buildings, and village areas.
6. Keep gravel roads as gravel roads to retain their rural character and scenic qualities.
7. Maintain and promote volunteer services.

2.1.2. To direct and manage growth in the town.

Objectives:

1. Promote environmentally-sensitive activities that provide residential, commercial, industrial, and public opportunities to meet the needs of existing and projected populations and retain the social and economic diversity of the Town.
2. Balance property owners' rights to reasonable use of their land with overall public health, safety, welfare and goals of this Plan.
3. Reinforce historic settlement patterns and focus community growth in village areas and the town center.
4. Support housing throughout the Town that meets a range of incomes, local needs, and the Town's fair share of Chittenden County's need for affordable housing.
5. Provide for commercial and industrial uses that are compatible with the rural character and resources of the Town and broaden the tax base without creating a negative fiscal, social, or environmental impact on the Town.
6. Manage growth and development to be in harmony and scale with the rural character, historic pattern, quality of settlement in the Town, and areas of high public value.
7. Publicize, administer, and enforce Town regulations for the control and management of growth.
8. Coordinate the plan with adjacent communities, the Chittenden County Regional Planning Commission, and the Chittenden County Metropolitan Planning Organization.
9. Encourage citizen participation in the development, adoption, and implementation of the plan and its implementing by-laws and programs.

2.1.3. To provide adequate and efficient governmental services.

Objectives:

1. Meet the needs of existing and projected populations in keeping with rural community goals.
2. Where possible reduce fiscal burdens on the Town and associated burdens on residents and encourage fiscal responsibility.
3. Enable and support continued strong and vital voluntary participation in local government.

2.1.4. To encourage sound conservation practices in land, water and other natural resource uses, and provide a healthy environment for people, plants and animals.

Objectives:

1. Protect and manage use of the lake and its shoreline for its scenic beauty, unique character, and recreational and environmental values.
2. Protect and manage the quality and quantity of surface water and groundwater supplies, and protect air quality.
3. Protect ecological functions related to wildlife habitat, wetlands, productive or unique forestlands, biological diversity, significant natural communities and other special natural areas.
4. Provide controlled access to open land, the lake and recreation areas designated for public use.
5. Restrict development in areas where it may create hazards to public health and safety.
6. Limit development in areas of the Town where significant environmental resources or other features with high public value are located, by directing development away from those areas.
7. Promote a long-term strategy for the disposal of solid waste with the Chittenden Solid Waste District.
8. Encourage energy conservation and the development and use of renewable energy resources through land use planning which enables village patterns of settlement and local employment opportunities that reduce travel requirements; integration of bicycle lanes and pedestrian walkways; protection of productive woodlands; and on-site production of environmentally clean power such as solar or wind energy.
9. Develop a long-term strategy for sewage disposal in the west village area.
10. Support the work of the Charlotte Land Trust and similar conservation organizations.

3. CHARLOTTE YESTERDAY

3.1. EARLY SETTLEMENT

The Town of Charlotte was founded in June 1762, when Benning Wentworth, Royal Governor of the Province of New Hampshire, granted charter to a group of 65 men in Duchess County, New York, for the Town "Charlotta," in the name of King George III, and in honor of his bride, the German princess Charlotta Sophia of Mecklenburg Strelitz.

Thousands of years before this event the land that was to be Charlotte lay beneath the glacier, and after its receding, beneath cold glacial seas. Marine fossils can still be found in the fertile valley that remains. When the Rutland & Burlington Railway was cut through Charlotte in 1849, the bones of a small whale were found just north of Thompson's Point Road.

Before its settlement by Europeans, the land was home to nomadic American Indians, probably Algonquins, who camped and hunted in the heavily forested, rolling terrain where bear, deer, beaver, and all manner of animal life prospered.

Although some of their children did, none of the original proprietors ever settled in Charlotte. They were the first of the Town's landowners with, as W.S. Rann relates in *The History of Chittenden County, Vermont*, the "desire to buy cheap and sell dear." Consequently, they "did little more than open roads, construct bridges, and provide for the building of the necessary mills, in order to increase the market value of their property."[2]

The first settler of Charlotte is said to be Derrick Webb, of English/Dutch origin, who, in March of 1776, arrived and left, as he did again the following spring. The true settlers of Charlotte came, Webb among them, in 1784, and in greater numbers over the next ten years, primarily from Massachusetts and Connecticut. They came alone or with families, up the Champlain Valley following a trail of blazed trees, up the lake from Whitehall by raft, sometimes across the frozen lake. Settlement was rapid, induced in part by the thick forests of oak and pine which were felled and rafted to Quebec for the masting of the Royal Navy of Great Britain. The settlers soon found the good soil, gentle slopes and flat, well-drained meadows of Charlotte to be ideally suited to agriculture, which quickly became their principal industry.

In less than ten years, Charlotte was the county's largest settlement, a town of 635. James Hill and his family had settled on Hill's Bay, at a place still known as Hill's Point. John McNeil had arrived from Litchfield, Connecticut and, using a sailing vessel, established a ferry service to Essex, New York. Land was cleared, wheat was planted, roads were opened and Charlotte was a major stop on the stage route from Montreal to southern New England and New York.

In many ways, water determined the pattern of colonial development in Charlotte. Holmes Creek, emptying into the lake in the northwestern corner of Town, just south of Hill's Point, powered the Town's first gristmill and drew development in the west. The covered bridge at the Town Beach marks this historic site.

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[2] Rann, W.S. *The History of Chittenden County, Vermont*, Syracuse, 1886, p. 535.

The lake itself and the advantages of ferry transportation offered further incentives to western settlement. In Charlotte Center, just at the intersection of what are now Church Hill and Hinesburg Roads, arose a fresh, clear spring which provided settlers with good drinking water and fostered development. Farther to the east were Lewis Creek and the "LaPlotte" River, ideally suited to powering the gristmills and sawmills that were needed in the growing community.

Also critical to the pattern of Charlotte's development is the ridge of hills which runs north/south, Mutton Hill, Pease Mountain, Mt. Philo, dividing the Town through its center, separating east from west and limiting their mutual access. Not only has it led to the growth of separate villages, some feel it has demonstrated how "peoples separated by territorial barriers cannot always be at one in sentiment."[3] As early as 1869, the *Vermont Historical Gazetteer* said "the effect has been a separation of interest, mutual jealousy, and want of harmony between the two sections."

Be that as it may, villages developed in three distinct spots: Charlotte Four Corners, at what is now the intersection of Greenbush and Ferry Roads; Charlotte Center, on Church Hill Road; and Baptist Corners, at what is now the intersection of Hinesburg Road and Spear Street.

3.2. Pattern of Settlement

3.2.1. Charlotte Four Corners

Charlotte Four Corners developed quickly from its earliest days as a crossroads, with gristmill to the north, ferry to the west. In 1811, Joseph Barton built his tavern at the northwest corner, famous for its upstairs ballroom with a swing floor. The Methodists built a church in 1823. Sixty years later the corner was home to two stores, a shoe shop, a blacksmith's shop, the Charlotte Female Seminary, a cheese factory which produced 40,000 pounds of cheese a year, a post office and, just to the west, the railroad station. In 1882, at the railroad depot, Wilbur Fields operated a hay barn and hay press which received and pressed some 700 tons of hay a year. In the later part of the 1800s, John Holmes had a 100-acre orchard on a slope overlooking the lake, and a dock on Hill's Bay from which he shipped apples not only to cities across the United States, but also to London.

3.2.2. Thompson’s Point

The late 19th century saw the rise of two unique communities in the west of Charlotte. The first was at Thompson's Point at the south end of Converse Bay. The Town of Charlotte purchased the entire point of land in 1839 and has owned it ever since. Its earliest use was for a ‘poor farm’ supported in part by tent camping, but in the late 1800s, striking Gothic cottages were built on lots leased from the Town, and a thriving summer community evolved.

3.2.3. Cedar Beach

Cedar Beach was the site of another summer colony which developed in Charlotte, but in a manner quite different from Thompson's Point. In 1872, J.T. Bagley, a gentleman from Burlington selected a campsite

[3] Rann, W.S. *The History of Chittenden County, Vermont*, Syracuse, 1886, p. 535.

and pitched his tent for a few weeks of summer camping. He so enjoyed himself that the next summer he invited friends to join him and the "Jolly Club" at Cedar Beach was born. From one cottage in 1873, the community grew over the next ten years to include an ice house, a stable, a large pier, many cottages and some 1,000 people. In 1883, the Jolly Club became the Cedar Beach Association, Inc., more houses were built, and improvements made. The pier was extended to facilitate the docking of the great lake steamers which stopped in the morning to pick up commuters to Burlington and returned them to their families in the evening. For the next 30 years or more, the colony prospered, a utopian summer community of swimming and boating, card games, dances, and canoes of young singers floating in the moonlit night. The Association and the camps still remain, but the end of steamer service on the lake signaled the close of an era at Cedar Beach.

3.2.4. Church Hill Road

Progress on Church Hill Road was early and swift, as it quickly became the principal stage road north to Burlington. In 1786, Hezekiah Barnes, Captain in the Colonial Army and later General of the Vermont Militia, with his wife and four children, settled and built a large log tavern next to the great spring. Across the road, on the southeast corner of the intersection, General Barnes established a trading post. Added to and changed over the years, the structure stands today. In 1789, he added the stone house, now the home of Mr. and Mrs. William Pinney. In 1790, Gen. Barnes's clientele overflowed the log tavern, and he built a substantial frame tavern with ten fireplaces just north of the stone house. This building served many purposes over the years and ended as a two-family tenement in the 1940s. It stood empty when in 1948 Mr. and Mrs. J. Watson Webb purchased the building for the Shelburne Museum, where it now stands proudly renovated as the Stage Coach Inn. When stage travel was at its peak, Gen. Barnes kept a team of oxen in yoke day and night to help teamsters through the mud, up the steep hill to the north. With the decline of stage travel, this hill became a sledding favorite for young Charlotters of the 1880s and ‘90s.

The Congregational Church was the first church in Charlotte, built in Charlotte Center in 1798. The Charlotte Town House, or Town hall, was built in 1850; it now houses the Charlotte Museum. By 1880, Alanson Edgerton and Sons operated a cider mill, horse-powered, which produced 20 barrels a day, 700 a year, from apples grown along Greenbush Road, Hill's Point, and Mt. Philo Road. These farmers shipped their best apples by freight to New York City and took the remaining apples to the mill for cider and vinegar. H.D. Alexander had a vineyard and fruit farm on Church Hill Road with several thousand choice vines covering eight acres.

3.2.5. Baptist Corners

Baptist Corners saw early growth and industry. In 1798, Gad Root ran a tannery and shoe shop; in 1807, the Baptist Church was built which gave the settlement its name. By 1815, the section of Spear Street between Carpenter Road and the Four Corners boasted a brickyard, blacksmith shop, gristmill, sawmill, chair factory and marble mill. Lewis Creek just north of what is now the Quinlan covered bridge was the site of many mills. Both covered bridges across Lewis Creek saw great activity; sawmills, gristmills, clothing mills, woodworking mills, a cooper's shop, a butter tub manufactory and a foundry were all established along the banks of the creek. By 1858, Baptist Corners was home to a Catholic Church as well. In 1870, the Charlotte Young Men's Literary Club had raised funds to build the Lyceum Hall where the club, renamed the East Charlotte Lecture Association, carried out spirited debates on Friday nights. Lyceum Hall now houses the Charlotte Grange.

3.3. Role of Agriculture

Despite its mills and smithies, taverns and stores, Charlotte's principal industry was always agriculture, as its pattern of development demonstrates; apart from the villages, settlements in Charlotte were individual and widely separated. In its colonial days, Charlotte's agriculture was one of self-sufficiency; cattle were kept for milk, butter, cheese and beef, as well as for shoe and harness leather; sheep provided mutton and wool; swine, turkey, geese and chickens were kept for family use; maple products provided sweetness in lieu of imported sugar; and wheat, corn and oats were grown for family needs and livestock feed.[4] "The superior adaptation of the Town to agricultural purposes was one cause of its rapid settlement."[5] As early as 1806, the grand list of Charlotte was $31,961, surpassed by only ten other towns in the state.

Because of its excellent farming, by the early 1800s, the Champlain Valley was known as New England's breadbasket. Wheat was of great economic importance and was taken to markets in Albany and Troy, New York. Dairy and poultry products found their way as far as the markets in Boston. In 1806, Charlotte had eight hotels, supported in great part by farmers on their way to market. This shift from self-sufficiency to a market-oriented agriculture was aided by changes in transportation, in particular the building of the southern canals. The addition of a railroad to Charlotte in 1849 contributed greatly to the ability to reach other markets. By 1837, a large industry of Merino sheep breeding had developed in the area for export to Australia and the west. After the Civil War, Australian wool was, in turn, flooding the American market, and dairying became dominant in the valley, primarily in the form of butter and cheese production.

By the 1880s, competition from western markets, and later from oleomargarine, transformed the dairy industry, and the shift to fluid milk began. With the advent of the automobile and the truck and highway system, Charlotte farmers were able to reach the big Boston market with their high quality milk.

In the late 1800s, Charlotte produced some notable agriculturists including field botanist Cyrus Pringle, a renowned collector and hybridizer, whose extensive collections were housed in UVM's Pringle Herbarium. Orson Alexander introduced eight new potato varieties including the still dependable "Green Mountain." Frederick Hinsdale Horsford, who studied botany and later specialized in hybridizing, introduced the telephone pea and "Little Giant Corn." He and Pringle went into the nursery business in 1883. By 1893, Horsford had bought out Pringle's interest and established the F.H. Horsford Nursery at its present site. Horsford went on to become internationally known as a pioneer in lilies. His sons and grandsons continued his horticultural work.

The 1900s saw a decrease in the number of farms in Charlotte. As has been the case throughout the Champlain Basin, farm size and herd size have tended to increase. An increase of herd size has generally meant an increase in the amount of pasture land a farmer must have, a development that can be extremely expensive in an urbanizing area.

Since the end of World War II, economic opportunities in Vermont have increased, decreasing the economic importance of agriculture in the region. Yet if one considers the income from recreation and tourism, much of which is related to a working rural landscape, and the income from those economic

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[4] Lapping, Mark B. *Shelburne Farms: The History of an Agricultural Estate*, p. 77.

[5] Beers Atlas, 1869.

opportunities which are drawn to Vermont because of its high quality, rural life, then agriculturally-derived income is still substantial in the State. [6]

3.4. Municipal History

The municipal history of Charlotte is a straightforward one. The first Town Meeting was held in Moses Yale's log cabin facing Converse Bay on July 6, 1785. The Town was officially organized at a meeting in March 1787 at which men were elected to serve as clerk, constables, selectmen, listers, leather sealer, half-tithing men, surveyors of highways, and sealer of weights and measures. Twelve prominent men were appointed jurymen. It was decided that hogs should be confined. In 1786, Daniel Horsford was elected first justice. John McNeil was elected as the first representative to the legislature of the independent Republic of Vermont in 1788.

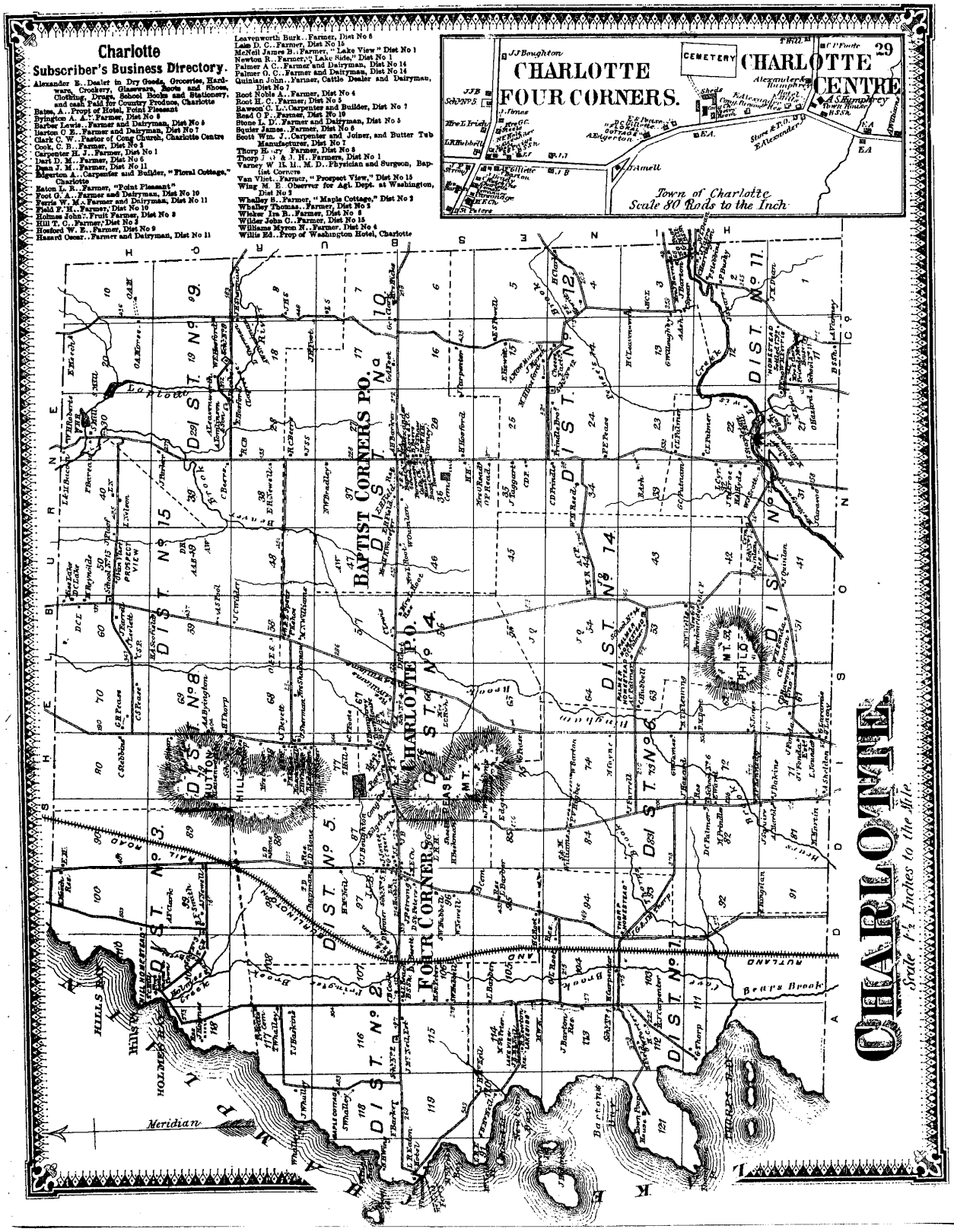
By 1886, Town offices included: Selectmen, Treasurer, Town Clerk, Constable and Tax Collector, Overseer of the Poor, Listers (3), Auditors, Trustee of Public Money, Fence Viewers, Grand Jurors, Inspector of Leather, Inspector of Wood and Shingles, Superintendent of Thompson's Point, Town Agent, and Superintendent of Schools.

In 1869, Charlotte had 14 school districts; by 1948, nine remained. In 1949, the four remaining districts were consolidated and Charlotte Central School was built. An addition to the school was completed in 1968 and a kindergarten added. Further additions were completed in 1989 and 1997 providing additional classrooms, gymnasiums, and support facilities. Today, students in kindergarten through 8th grade attend CCS. Charlotte high school students, with students from Hinesburg, St. George, Williston and Shelburne, attend Champlain Valley Union High School built in Hinesburg in 1963.

It was not until the mid-1960s that Charlotte developed planning and zoning ordinances to control growth over the Town's 26,520 acres and to protect its resources. Interestingly enough, those resources have not changed significantly since Charlotte's earliest days; the superior soil and breathtaking environment are still valuable assets.

[6] Lapping, Mark B. *Shelburne Farms: The History of an Agricultural Estate*, p. 78.

Charlotte circa 1869 (from Beers Atlas, Tuttle Publishing Company)



4. CHARLOTTE TODAY

4.1. THE PEOPLE

The Town of Charlotte is proud of its diverse population which is a product of many years of change in the character of the community and the economy of the region. In 1791 the Town, with 635 people, was the most populated in the county. Charlotte held this position until sometime between 1800 and 1810 when it was surpassed by Burlington. In 1840, Charlotte reached a peak in its population for that century of 1,702 people. However, over the next 100 years the Town experienced a decline in population to a low of 1,082 in 1940. This pattern was consistent with that of the state during that period when there was a large migration of Vermonters to the west. This situation turned around over the next 40 years as the population steadily increased (see Table 1). Resident surveys undertaken with several Town Plan updates have identified growth pressures and rate of growth as one of the biggest challenges currently confronting the Town.

Table 1: Population Growth in the Town of Charlotte: 1791-2005

Year	Population	Year	Population	Year	Population
1791	635				
1800	1,231	**1900**	1,254	**2000**	3,569
1810	1,679	**1910**	1,163	**2005 (est.)**	3,651
1820	1,526	**1920**	1,160		
1830	1,702	**1930**	1,089		
1840	1,620	**1940**	1,082		
1850	1,634	**1950**	1,215		
1860	1,589	**1960**	1,271		
1870	1,430	**1970**	1,802		
1880	1,342	**1980**	2,561		
1890	1,240	**1990**	3,148		

Source: U.S. Census, Vermont Department of Health

Charlotte's population consists of both seasonal and year-round residents. There are no estimates of the number of seasonal residents in the Town although the Vermont Health Department estimated there were 184 seasonal housing units in 1992, 166 seasonal housing units in 1996, and 174 seasonal housing units in 2000. Some seasonal housing units have been renovated to year-round residences over the past 15 years, although the zoning regulations restrict conversions on Thompson’s Point, where many seasonal houses are located. Due to the limited number of overnight accommodations and large tourist attractions in the Town, the number of transients is estimated to be very low. Therefore, the Town's Service Population is comprised almost entirely of year-round and seasonal residents.

Charlotte exhibits the characteristics of many of the "outer ring" towns of the county - a relatively small but growing population. Table 2 compares Charlotte's growth from 1960 to 2000 with that of Chittenden County as a whole.

Table 2: Population Growth in the Town and Region: 1960-2000

	Charlotte		Chittenden County	
	# Increase	Ave. Annual %	# Increase	Ave. Annual %
1960-70	530	4.18%	24,706	3.32%
1970-80	759	4.21%	16,403	1.65%
1980-90	587	2.29%	16,227	1.40%
1990-2000	421	1.34%	14,810	1.12%

Source: U.S. Census

Population trends serve as an important indicator of the potential pressures and demands a community must consider in planning for future facilities, services, housing, and land use patterns. However, forecasted population trends should be regarded with caution. Between the years 1990 and 2000, Charlotte received approximately 421 of the 14,810 new county residents, or 2.8% of the county's growth. This increase in population represented an average annual growth rate for the Town of 1.34% and 1.12% for the County. By 2010, the Chittenden County Regional Planning Commission (CCRPC) projects Charlotte's population to reach 4,062 persons. That growth would constitute 2.8% of the county's growth and would represent an average annual growth rate of 1.5%.

In the late 1990s, several companies located or expanded in the region, including Husky and IDX. At that time these companies felt that their labor needs would not be filled by the existing county labor pool. The IDX projection included in its Act 250 application indicated that its expansion could result in approximately 95 new Charlotte residents and the need for 37 new homes here by the year 2008. This suggests that the CCRPC estimates may be low, although the expansion of these companies has not occurred as predicted.

Consistent with regional trends between 1970 and 1980, Charlotte saw a growing share of its population in the 25-34 age category and a smaller share in the school-age category as the "baby-boom" generation matured. As this generation in turn created its own families, the "baby-boom echo" affected the demographics of the school-age population. In 1980, the percentage of those under five years old was 7.3%. This percentage grew to almost 10% in 1990. In 2000, this percentage was down to 5.6 % of the Town's population. This undulation has impacted elementary school enrollment.

In contrast, between 1980 and 2000 there was a steady increase in the absolute population in the 65-and-over age group. The number of persons 65 or older increased from 181 in 1980, to 199 in 1990, to 275 in 2000. In percentage terms, the percent of Town residents aged 65 or older was 7.1% in 1980; it was 6.3% in 1990, and 7.7% in 2000. This situation has continuing implications for the provision of community services and housing for seniors, especially as the large middle-aged group of residents move into older age.

The Town has witnessed dramatic changes in the composition of its residents from the early settlers of the 18th century who were primarily farmers or people engaged in local Charlotte businesses and industries. Today, most of the Town's workforce commutes to jobs outside the Town, although 12% work at home (according to the 2000 Census). In 2000, 52% of Charlotters in the work force were employed in management or professional occupations, while 1.8% were employed in farming or forestry occupations.

The Town has also seen a small increase in its ethnic diversity in recent years, although 97% of residents were classified as white in 2000.

Table 3: Racial and Ethnic Make-up of Residents

White	3,523	98.7%
Black or African American	14	0.4%
American Indian or Alaska Native	5	0.1%
Asian	36	1.0%
Other race	20	0.6%
Hispanic or Latino (any race)	25	0.7%

Source: 2000 U.S. Census

Of the 2,607 residents in 2000 16 years of age or older, 1,904 (73%) were employed full-time; this was down from 78.8% in 1990. 1% of Charlotters in the labor force were unemployed in 2000 (down from 1.3% in 1990), a figure that is considered equivalent to "full employment." Also, 703 residents, or 27% of the Town's population 16 years and over, were not considered to be in the labor force in 2000.

In spite of the changes in the size of the Town's population and the composition of its workforce, the continued presence of a farming population and the Town's relatively low population density help keep Charlotte's rural character. Nevertheless, Charlotte's density grew from 62 persons per square mile in 1980 (or about one person for every 10 acres), to 76.2 persons per square mile in 1990, and to 86.05 persons per square mile in 2000. According to the 1990 U.S. Census, per capita income in Charlotte in 1989 was $20,769; median household income was $51,004; and median family income was $59,920. The 2000 Census reported per capita income of $33,942, median household income of $62,313, and median family income of $71,090. Charlotte had the fifth highest median household income among Vermont towns in 1999.

Although these data indicate that the average income of Charlotte's population is high, in 1999, 46 families (4.5%) and 174 individuals (5%) maintained incomes below the poverty level. 54 families (4.3%) received public assistance income, of which the mean amount was $3,849.

Several trends in population raise issues that the Town must address in order to accomplish town-wide goals. They are:

- How to maintain the social and economic diversity of the Town in the face of increasing incomes of residents and the declining farm population;
- How to identify and address the needs of the low and moderate income persons and the over age-65 population in the Town;
- How to monitor and address the Town's growth rate in order to provide efficient delivery of Town services while maintaining the Town's rural character and primarily volunteer form of government; and
- How to plan for energy-efficient and economical transportation for the commuting workforce.

4.2. Housing

The type, location, and price of housing affects the social, economic, and physical character of the Town. Historically, housing in Charlotte has been concentrated in village settlements, clustered in summer camp areas along the shoreline, or located in a dispersed pattern on farms and in the surrounding countryside. It is this dispersed pattern that has become prevalent in the last 30-40 years. Subdivisions in the rural areas have increased the percentage of "rural residents," while the village settlements have grown only slightly, and the summer camp areas have increasingly been converted to year-round residences.

While this dispersed pattern has offered many people a desirable rural lifestyle, it has eroded the open spaces and viable farmland so important to the Town's landscape, and it has created strips of development along the Town's roads and highways. As important, it has failed to locate housing more convenient to services and prospective public transportation.

Since at least 1990, the Town Plan has discouraged these dispersed patterns of development. During the Town Plan 2002 update, the 100+ residents attending community meetings, others working on Town Plan Update Committees and the 215 people completing written surveys reinforced the importance of curtailing these development patterns. They generally recommended that clustered housing and well-designed, integrated, viable Planned Residential Developments should be even more strongly encouraged by Town regulations to help better protect natural resources and large undeveloped parcels of land.

The majority of respondents to the 2006 survey and those attending public sessions for the 2008 Town Plan update continue to want the Town to remain rural and to protect the working farms. Although homeowners choose to live in Charlotte for its rural character and open farmland, the increase of residents is diminishing the character that makes Charlotte so attractive. Furthermore, in some parts of Town conflicts have surfaced between farming operations and their residential neighbors, as residents become concerned about the impacts of farming, such as surface and groundwater pollution, odor from manure, noise and light from night-time work, and oversized farm vehicles on Town roads.

4.2.1. Quantity of Housing Units

The number of year-round housing units in the Town grew nearly 109% from 714 in 1970 to 1,500 in 2000. Of the 1,500 year-round housing units in 2000, 1,085 were owner occupied, 202 were renter occupied, and 213 were vacant. Additionally, there were 174 seasonal housing units in 2000.

Zoning permit records for new dwelling units indicate that the rate of growth in housing units was highest in the 1980s, although the number of permits has consistently ranged from the mid teens to the high twenties during the past 20 years. The growth in housing units in the Town is attributed in part to the downward trend in the size of households over the last three decades. In 1970, the average household size for year-round units was 2.94 persons. This figure increased to 3.0 persons per household in 1980, decreased to 2.75 person per household in 1990, and slightly increased to 2.77 persons per household in 2000.

Table 4: Growth in Housing Units by Type, Charlotte

	Number				Ave Annual % Change		
Type	1970	1980	1990	2000	1970-1980	1980-1990	1990-2000
Year-Round	612	855	1,145	1,287	3.97%	3.39%	1.24%
Seasonal	102	188	184	174	8.43%	-0.21%	-0.54%
Total	714	1,043	1,329	1,461	4.61%	2.74%	0.99%

Source: U.S. Census, Vermont Department of Health

Table 5: Permitted Residential Units, 1980-2006

Year	Permits	Year	Permits	Year	Permits
1980	27	**1990**	30	**2000**	24
1981	24	**1991**	13	**2001**	21
1982	23	**1992**	26	**2002**	14
1983	32	**1993**	32	**2003**	15
1984	34	**1994**	23	**2004**	22
1985	40	**1995**	25	**2005**	25
1986	41	**1996**	29	**2006**	25
1987	53	**1997**	28		
1988	39	**1998**	20		
1989	25	**1999**	13		

Source: Town Records, Zoning Administrator, and CCRPC. Includes single-family, multi-family, and mobile homes.

Smaller household sizes may be due to several trends in the Town and County. In general, households with non-related people grew rapidly in the '70s and are continuing to do so in the '80s. The percentage of people in Charlotte living with non-related household members increased from 2% in 1970 to 11% in both 1980 and 1990, to 23% in 2000. The percentage of people in single-parent households (for families) grew from 3.8% in 1970, to 10.9% in 1980; and this remained level at 10.3% in 2000. In theory, the trend toward smaller and more fragmented households creates demand for a greater number of housing units.

Table 6: Households, 1970-2000

	1970	1980	1990	2000
Ave Household Size	2.94	3.00	2.75	2.77
# of Households	480	824	1,096	1,287

Source: U.S. Census Bureau

In 2000 (according to the Census) 1,326 residences (89%) in Charlotte were single-family dwellings, 96 were in structures with two or more units, and 28 were mobile homes. Of all dwellings (including single family, multi-family, and mobile homes), 1,085 (72%) were owner-occupied, 202 (13%) were renter

occupied, and 213 (14%) were vacant. The number of rentals has increased since 1980 and 1990, when 172 units and 188 units, respectively, were renter-occupied.

4.2.2. Affordability of Housing

Housing prices in Charlotte are high relative to the County and State. The 2000 Census indicates that the median value of dwellings in Charlotte was $203,100, compared with $136,500 for Chittenden County and $111,200 for the State.

Average sale prices increased almost 40% between 2000 and 2006, and almost 200% since 1986. Some of the increase is influenced by sales of waterfront properties; nevertheless non-waterfront properties have increased significantly as well.

There are a limited number of dwellings that are available for families with a median-level income, as well as incomes that are lower than median. For example, based on the 2000 Census, 89% of homes in Charlotte are single-family dwellings, while approximately 9% are attached, and 2% are mobile homes. Furthermore, there are a limited number of rental properties available (approximately 13%), and most of these are single-family dwellings or seasonal dwellings.

Many factors play a role in the price of housing, including the desirability of the Town as a place to live. The predominance of poor quality soils for on-site sewage disposal, the lack of municipal sewer or water systems, and the five acre density requirement for residential dwelling units are all contributing factors. Additionally, many building sites require mound systems to overcome the limitations for sewage disposal, which contribute to the cost of housing.

As a result of these factors, most new housing in Charlotte is considerably above what is considered “affordable” or even “moderate” (based on Chittenden County thresholds) even when the Planning Commission has required clustered developments. For example, homes that were built in a recent subdivision, which was approved (as a planned residential development) with building lots of one acre and less and a restriction on dwelling sizes of 2,500 square feet, have sold in the range of $350,0000 to $450,000.

This situation has contributed to a lack of affordable housing for low- and moderate-income families, and a concern for the Town's ability to achieve social, economic, and cultural diversity in Town.

Table 7: Average Housing Sale Prices in Charlotte 1986-2006

Year	1986	1993	1998	2000	2006
All Sales	$163,906	$230,000	$331,094	$347,040	$483,400
Residential					$567,000
<5 acres	$101,048		$254,803	$258,144	$585,900
<5 acres non-waterfront					$352,600

Source: VT Dep’t of Taxes and Multiple Listing Service (1993)

The Town took a big step towards addressing the lack of affordable housing when it adopted new Land Use Regulations in March 2006. The new regulations provide a much higher density allowance — 1/4 acre in village areas, ½ acre for adaptive reuse, and 1 acre in rural areas — for housing that is permanently affordable. The regulations are the culmination of a several-year effort by the Charlotte Affordable Housing Committee, the Planning Commission, the Selectboard, and many others who worked on this provision, as well as an earlier provision that the Town voted down the previous year.

In November 2006, a non-binding ballot item was approved supporting implementation of the master plan for the Town-owned Burns parcel, which included the creation of up to nine affordable dwellings. In preparing for Town Meeting 2007, the Selectboard initially planned on asking voters to approve the conveyance of five acres of the Burns parcel to a non-profit housing organization, but ultimately decided against warning this ballot item because of new information that was recently generated regarding the use of the wastewater disposal capacity on the parcel. The Selectboard is still analyzing information and options for the parcel.

The Charlotte Affordable Housing Committee has also been working with interested landowners to identify sites for either the conversion of existing dwellings or the development of new dwellings for affordable housing. The Committee has worked on several other initiatives as well, including the creation of a dedicated Town fund to be funded by the municipal property tax, similar to the Conservation Fund. The fund, named the Charlotte Housing Trust Fund, was approved by voters at Town Meeting 2007, as was initial funding of $40,000 per year for three years from the municipal budget.

In the summer and fall of 2006, with the assistance of a grant from the Vermont Housing and Conservation Board, the Town contracted with Douglas Kennedy of LandVest to conduct an Affordable Housing Needs Assessment. The study had several purposes:

1. To compare the availability of affordable housing to the need, in order to obtain a rough estimate of the number of affordable dwellings that are needed in Town;
2. To determine the type of dwellings that are needed, e.g. the number of bedrooms, and rental or owned; and
3. To conduct a survey of residents and those who work in Town which will assist with analyzing the above questions by querying residents about whether their offspring or parents are in need of affordable housing, and also by querying people who work but do not live in Town whether housing affordability is a factor in their decision to not live in Town.

Below are excerpts from the Executive Summary of the study, which used a market-based approach:

For purposes of the needs assessment, three 'market areas' were defined for analysis:

1. *The Town of Charlotte;*
2. *The 'Primary Market Area' – defined as the area within seven to eight miles of the center of Charlotte—this is the geographic area from which the majority of residents of a Charlotte-based affordable housing project would most likely be drawn; and*
3. *The 'Region' - defined as the area within 17 to 18 miles of the center of Charlotte—this area was used to identify some of the broader demographic changes occurring in the Charlotte area.*

The demand side of the analysis focused on estimating the number of households that might be eligible for and interested in moving to an affordable dwelling. These estimates were performed at a number of levels – ranging from rental housing (oriented toward very low income households) to ownership housing (oriented toward moderate income households). Affordable demand is summarized below – broken down by rental/ownership and income level in terms of number of households. The figures are for the Primary Market Area, the most realistic area from which to estimate demand for affordable housing in Charlotte.

Table 8: Summary of Demand in Primary Market (# of Households)

Source: "Market Study of Affordable Housing Needs in Charlotte Vermont" Douglas Kennedy, December 2006

	Rental Demand		Ownership Demand
	Family	Elderly	Total
<50% Median Income	103	20	
50-60% Median Income	67	11	
60-80% Median Income	77	12	118
80-100% Median Income			107

The supply side of the analysis looked at existing housing supply, with a focus on housing that is affordable to – or specifically targeted to – households with low to moderate incomes. It is estimated that in the Primary Market Area the current supply of affordable housing is approximately 245 in the rental market and 209 in the ownership market.

Rental housing vacancy is low and market rents have moved up at a strong pace in recent years.

The median price of R1 residential properties sold in Charlotte increased at an annual rate of 12.5 percent between 2000 and 2005. The number of lower value (less than $200,000) homes available on the market has declined significantly in the town in recent years. Although the grand list indicates that properties in this price bracket remain, sales and listing data make it clear that few are available on the market.

Seasonal housing accounts for 12 percent of Charlotte's housing stock. The seasonal housing stock in combination with significant waterfront real estate has tended to push pricing upward in the community. We note that comparatively high housing values in Charlotte act to prevent some households from living in the town.

There are several recent rental and ownership housing projects oriented toward the affordable market in the area. All of these projects have experienced strong demand and are either at or near 100 percent occupancy or completely sold out.

The findings indicate a combined gap (family and elderly, all income groups) in rental categories is approximately 46 units; the gap for families alone is 36. Findings also show a need for 16 ownership units at the primary market area level. Overall, these findings are relatively consistent with the Regional Housing Targets (see below) of approximately 40 affordable and moderate units in Charlotte between 2000 and 2010, although the LandVest study is seemingly based on more specific analysis than the Regional Housing Targets.

Table 9: Residential Values in Charlotte – 2000 & 2006

	2000		2006	
Value	Sales	Units	Sales	Units
Up to $100,000	3	61	0	13
$100,001 - $150,000	5	186	1	38
$150,001 - $200,000	11	220	2	78
$200,001 - $250,000	4	180	6	147
$250,001 - $300,000	5	181	5	140
More than $300,001	19	403	35	858
Total	**47**	**1,231**	**49**	**1,274**

Source: Charlotte Listers Office

4.2.3. Regional Housing Targets

In August, 2006, the Chittenden County Regional Planning Commission (CCRPC) adopted a new Regional Plan which identifies new housing targets for all towns within the County for the period between 2000-2010. The targets were developed by CCRPC through a study and process that culminated in a report entitled "Recommended Housing Targets," which was endorsed by CCRPC on November 22, 2004.

The ten year targets for Charlotte as identified in the regional plan are as follows:

- Total Housing (including moderate, affordable, and market rate)—195 units
- Moderate Income Housing—20 units
- Affordable Housing—20 units.

Title 24 Section 4382(10) V.S.A. states a Town Plan shall include "a housing element that shall include a recommended program for addressing low and moderate income persons' housing needs as identified by the regional planning commission pursuant to subdivision 4348a(a)(9) of this title." The Town believes that the targets for affordable and moderate income housing in the Regional Plan are appropriate and important goals, although the Town notes that it may be difficult to measure the quantity of moderate income housing over the long term as such housing is not usually restricted by covenants and therefore may move out of the range of moderate income buyers as general values increase or as owners renovate and upgrade their homes.

The Town believes that the actions that the Town has recently taken and will potentially take in the coming years (as described above) will result in the creation of 20 units each of affordable and moderate income housing.

With regard to the target for market-rate housing, the Town's overriding land use goal, as expressed throughout this Plan, is to attempt to remain rural. Nevertheless, the rate of development over the past five years has been fairly close to the "target" of 19.5 dwellings per year. However, the creation of affordable dwellings in Town did not meet the targets—only four dwelling units were created during this period which have covenants restricting resale prices. No other new dwellings were constructed which, considering the costs of both land and building, were within the threshold of affordability.

Table 10: Number of Dwelling Units Constructed Per Year

	2002	2003	2004	2005	2006
Single Family dwellings:	14	15	22	18	18
Two-family dwellings:	2	0	0	0	0
Multi-Family dwelling units:	0	0	0	7	7
Affordable dwellings:	2	0	0	0	2

Source: Charlotte Annual Reports for 2005 & 2006

Because the Town's desire is to remain rural, the Town believes that, with the exception of affordable and moderate income housing, the creation of new housing is not a goal. Therefore the Town does not agree with Housing Policy #4 of the Regional Plan, which states "municipal plans should assess the community's ability to meet the 2010 Housing Targets, identify any local barriers to housing production that prevent attainment of the Targets, and develop programs of local actions to address those barriers."

The Town also does not agree with Housing Policy #7 of the Regional Plan, which states "municipalities should encourage housing at the maximum densities allowed by local plans and regulations. The Town views "maximum density" not as a goal, but conversely, as a worst-case scenario. The Town has adopted density requirements as a means of providing a measure of equity to property owners who pay taxes on their property, some for many years, and who may wish to redeem some of the value of their land. Nevertheless, landowners may or may not desire to develop their property to the maximum density; the decision to develop property is the prerogative of the *owner*, not the Town. However, given residents' strong desire that Charlotte remain rural, the Town believes that building out to maximum density should not be a requirement or even encouraged.

The above paragraphs about "maximum density" are not intended to imply a conditional intent regarding landowners' rights to develop their property to the density authorized by the land use regulations in consideration of all applicable standards, including those in Chapters VII and VIII. The Town fully intends to administer and enforce its adopted zoning regulations as written.

4.3. THE ECONOMY

As a rural community, the Town of Charlotte has a local economy primarily based on small businesses associated with agriculture, local services, tourist services, light industries, and water-related recreation and transportation (ferry). Additionally, there are approximately 84 people employed at Charlotte Central School.

Local agriculture employment in Town includes several dairy farms and numerous specialty farms, including orchards, fruit farms, organic vegetables, flowers and livestock. A survey conducted several years ago by the Economic Committee showed a strong desire among residents to establish a farmer's market and encourage farm stands on farm property. Farmers' markets have been held in two weekly locations, and farm stands, community supported agriculture (CSA) operations, and local stores are helping to increase the availability of fresh farm products to local consumers.

According to the 2000 Census, 234 Charlotte residents work from home. Home occupations include, but are not limited to, such businesses as bed and breakfasts, antique dealers, consulting services, woodworking, crafts, agricultural enterprises, repair shops and varied occupations connected to the regional, national and international economy through technology. Home occupations are important to the local economy and provide employment in rural areas. This type of economic activity enables more flexibility, reduces travel, and can provide an incentive for residents to preserve historic buildings on their property if they can establish an income producing business in the space. In addition, people working daily in Charlotte can help to satisfy need for fire and rescue volunteers and other community service. . While the Land Use Regulations allow the use of accessory buildings for home occupations, it is intended that home occupations not detract from the rural residential character of the Town.

According to the Department of Employment and Training[7], there were 485 jobs in Charlotte in 2005, down from 494 jobs in 1997, but up from the 410 jobs reported in 1992. In 2005 there were 106 businesses, up slightly from the 102 businesses in Town in 1997. The Economic Committee identified the need for a Business Directory for Charlotte. It would be useful for networking and inexpensive advertising for home occupation businesses, who would voluntarily join the directory.

The Committee also identified a need for the Town to pursue and facilitate more local and home-business employment opportunities.

There is little industry in the Town due to its location at a distance from the interstate highway system, regional facilities, and lack of municipal water and sewer service. The 1990 Commercial and Industrial Committee found that the additional tax base from industrial development would not pay the cost to the Town of developing municipal water or sewer. As a result the Committee found that small workforce, low water use and non-polluting industries would be most appropriate for the Town.

The local retail and service operations accommodate primarily year-round and seasonal residents needs, although Town businesses do provide some services for other communities as well. There are small grocery stores in both East and West Charlotte; a take-out food and video store in East Charlotte; veterinarian and

[7] DET figures represent employment covered by unemployment insurance only, and only those firms reporting figures.

medical offices as well as other offices, and light manufacturing businesses near the railroad tracks in West Charlotte. The commercial district in West Charlotte Village also includes the historic Old Brick Store and (until very recently) the Flying Pig Bookstore.

Residents travel to nearby communities for some of their convenience goods such as grocery, hardware, and drug store purchases, and to regional centers for comparison goods such as department store, apparel, and home furnishing purchases. Based on the Economic Committee's findings from two resident surveys, desirable future services mentioned by residents include a larger grocery store, a hardware store, a pharmacy, a cafe or small restaurant, and a bank or ATM machine. These retail and commercial services should be relatively small in scale, but large enough to be marketable and profitable. All new business structures should be designed in a way to be consistent with Charlotte's rural and historic character.

The 2000 Town Plan Update Economic Committee found that the general location and size of the existing commercial zones at that time were adequate to meet the Town's commercial needs, however, the Committee thought that some modification in the boundaries and standards may be needed to address potential impacts.

Specific site-planning standards have been added to the Zoning Regulations since 1995. Additionally, The Town Plan Update Committees identified a need for more specific Design Guidelines for the industrial and commercial areas located adjacent to the village areas to augment the existing Design Review standards in the Zoning Bylaws [Section 4.6.F]. A major concern with the West Charlotte Village commercial/mixed use area is the potential impact of commercial development on traffic on F-5 and Route 7, particularly at the intersection of these two highways. Standards limiting the scale and location of development to reflect these concerns need to be added.

The Economic Committee found that the boundaries of the East Charlotte Village commercial district included areas that may not be suitable for commercial use. In particular, the easterly boundary is contiguous to a significant wetland designated for inclusion in a Conservation District. This boundary should be moved westward to provide a buffer for the wetland, and northward to follow Hinesburg Road. Also, access to commercial properties should be carefully considered so as to avoid traffic congestion and safety problems and to promote a commercial core along this street. With these changes, and the implementation of site-planning standards, the size and location of this district should be adequate, given the commercial services requirements of East Charlotte.

The Town needs to address water and sewer capacity in the Village and Commercial Districts in order to meet the Plan's goal for compact settlement in the village areas. The analysis should include the consideration of a small community system to serve the West Village and Commercial District. This could help to increase developable land opportunities to achieve the current goals for small increases in local employment, some basic retail services, and a concentration of development in the village centers.

The groundwater and soils analysis study recommended throughout this plan will provide more information regarding wastewater disposal capacity of the existing industrial districts. The study will also provide an overview of new wastewater disposal technology that is being adopted by the state. These modern systems broaden the type of soils and slopes that are capable of disposal, which will allow development to occur in areas where it has been limited. Soils, groundwater, and slope constraints are no longer fool-proof indicators of wastewater disposal capacity.

Currently 3.5% of the Grand List is commercial or industrial property consisting of 28 parcels of land. While it appears at this time that sewage disposal capacity is limited in the industrial and commercial districts, the recommended groundwater/soils analysis and review of new wastewater disposal technology will provide up-to-date information about the development capacity of the sites. There appears to be support in the Town for increasing commercial development within the existing districts.

Both the Economic and the Village Town Plan Update Committees (for the 2000 Town Plan) encourage expanding the job base in the existing industrial and commercial districts near the commuter rail station to enable jobs within walking distance of the station. Employees commuting to Charlotte from Burlington or other northern areas could take the commuter rail and potentially reduce overall traffic in Town. In addition, Charlotters working in communities along the rail line could ride the commuter rail and would be more likely to shop at or use commercial services located near or adjacent to the rail station. Unfortunately, the commuter train is not operating at this time.

The 2000 Town Plan Update Economic Committee believed that trends in the local economy raise the following issues that the Town must address in order to meet town-wide goals:

1. How to increase employment opportunities in the Town;
2. How to guide commercial development to meet community needs, prevent burdens on services, and be compatible with the rural character of the community;
3. How to plan for transportation for the commuting population that is energy-efficient and economical, and ensure auto, pedestrian and bicycle safety if commercial and industrial businesses and services increase;
4. How to use the Commuter Rail station location in Charlotte to the Town's greatest economic advantage.

Report of the Charlotte Business and Economic Planning Committee

Following the adoption of the 2002 Town Plan, the Selectboard appointed a Business and Economic Planning Committee which looked at various issues and provided the following report on April 1, 2003:

Introduction

The Charlotte Town Plan calls for the formation of a Committee to study business and economic development in Charlotte, and specifically to:

1. *Identify appropriate types of employees and businesses for the Town;*
2. *Work with existing businesses that may need to expand and/or diversify;*
3. *Research the appropriateness of the current industrial/commercial zoned districts;*
4. *Help retain and increase opportunities for local employment that maintain and enhance the historic, small scale, rural character of Charlotte;*
5. *Provide technical assistance and advocacy for businesses meeting guidelines in #4 above through the permit process;*
6. *Establish an Economic Resource Guide or Business Directory to support networking and marketing of local businesses including home occupations.*

The Economic Planning Committee was formed through invitation by members of the Selectboard and first met on September 24, 2002. In attendance at either that or subsequent meetings were: Lydia and Jack Clemmons, Josie Leavitt, Bill Lockwood, Lambert Lussier, Al Moraska, Dave Nichols, Bill Rattner, Spin Richardson, Dave Schermerhorn, Rolf and Carolyn Sennhenn, Carrie Spear, and Sylvia Sprigg. At a subsequent meeting, Carrie Spear was elected Chairperson and Bill Lockwood was asked to represent the EPC on the Burns Property/West Village Planning Committee.

The EPC has met on a number of occasions for a period of six months, and then disbanded. It addressed the goals 1-6 (above) in the following conclusions:

1. Identify appropriate types of employees and businesses for the Town.

Consistent with numerous opinions voiced by Charlotters in the past and with the implied preference in #4 above, it is the recommendation of the EPC that smaller rather than larger, and agricultural, office and service-oriented rather than industrial types of businesses be the focus of future economic growth in Charlotte. Due to concerns about increased traffic on increasingly residential town streets and roads, limited septic capacity of local soils, and a decided preference for open space and rural viewscapes, increasing the number of large, centralized businesses simply doesn't fit the lifestyle vision of many Charlotters.

Conversely, in numerous meetings, the EPC repeatedly favored the growth of home occupations and specifically recommends that consideration be given to increasing the number of unrelated employees allowed in a home occupation from three to five, with perhaps a limit on the total number employed regardless of relationship to the homeowner.

The benefits of home occupations to the community are numerous. By creating a growing group of Charlotters who both live and work in town, a greater sense of "community" will likely be encouraged. Expanding home occupations provides a greater opportunity for employment within Charlotte for both residents and non-residents alike, increases demand for existing service and retail businesses, and may facilitate daytime staffing of Fire and Rescue. (Note: as more families and businesses locate in Charlotte, no amount of Fire Department staffing and equipment will make up for the lack of water. Therefore, the EPC encourages an active campaign on the part of the Town to increase the number of fire ponds throughout the community.)

A few of the smaller types of businesses and home occupations mentioned by members of the EPC as potentially desirable include:

- *Prepared food delivery to homes*
- *Antique or gift shops*
- *Hair dressers and barbers*
- *Small-scale family farms which could cooperatively share the cost of equipment*
- *Restaurant*
- *Dentist*

The EPC believes that a Business Advocate would be a valuable asset to those wishing to establish or expand a home occupation (see #4 below).

2. Work with existing businesses that may need to expand and/or diversify.

For many of the same beneficial reasons listed above, the EPC believes that existing businesses of all kinds and sizes should be supported and encouraged and their growth facilitated within the Town.

Given the relatively small size of Charlotte's current commercial and industrial zoned areas, there is already limited ability for existing larger businesses to expand significantly. Other factors such as limited septic capacity may restrict growth in existing commercial/industrial zones as well (through availability of septic capacity nearby may help to alleviate this restriction in certain areas). Thus, it is unlikely that any new large businesses would choose to locate in Charlotte.

Though originally constructed as single business facilities, currently all of the buildings in the Ferry Road industrial/commercial zone are being utilized as multi-business facilities. Occupants include commercial artists, professional and business consultants, publishers, sales and marketing offices, direct marketing and product distribution facilities, research and development offices, as well as a private school. Many of the businesses occupying these spaces started as home occupations in Charlotte and as they grew discovered that thy needed additional space. Others are occupied by local residents who have needed "incubator" space in which to start a business. And demand by Charlotters for this type of space appears to be slowly growing.

Therefore, the EPC believes that it is critical that all Town boards, commissions, and residents recognize the unique value of the existing large buildings and properties within the current commercial/industrial areas and encourage the maximum utilization of these facilities in every way possible by working with their owners and tenants to expedite permitting, etc.

Similarly, in the case of existing smaller businesses and home occupations, the EPC believes that it is critical that the Town do everything possible to facilitate this kind of growth. As previously mentioned, a formally appointed "Business Advocate" to serve as a resource for small business people as they work through the regulatory and permitting process would be a tremendous asset. Also as previously mentioned, ensuring that there are facilities in the current commercial/industrial zones into which growing businesses can expand is crucial if we are truly committed to having businesses in Charlotte.

3. Research the appropriateness of the current industrial/commercial zoned districts.

Currently there are two areas zoned "industrial/commercial" in the Town. The first, immediately west of the railroad tracks and divided by Ferry Road has to the north, an auto-body shop and a railroad station with dedicated parking area and driveway, and to the south, a two story frame building housing a private school, two metal clad mixed use office/warehouse/workshop buildings each with footprints of approximately 35-40,000 square feet with adjacent parking, and a wood frame farmhouse and barn which has been renovated into office space. Additional undeveloped land lies in open fields both to the south and west. A second "industrial/commercial" zone abuts U.S. Route 7 and Thompson's Point Road, and is undeveloped.

Given current county and regional development patterns, it is unlikely that either of these locations will be in great demand for further industrial/commercial development. Due to an increasingly competitive business climate, developers and business owners are primarily interested in sites offering

easy access and proximity to airports and major highways, low infrastructure costs, and ready availability of a fairly large, qualified workforce. Charlotte has none of these.

Therefore, the reality of future development in Charlotte's current industrial/commercial zones is that it will likely focus more on mixed use with substantial focus on single and perhaps multi-family residential construction. With practical limits on septic capacity in the current industrial/commercial zones even this form of mixed development is likely to be relatively modest.

Therefore, it is the opinion of the EPC that the areas currently zoned "industrial/commercial" are adequate given the current needs of the Town.

4. Help retain and increase opportunities for local employment that maintain and enhance the historic, small scale, rural character of Charlotte.

This goal has been largely addressed in previous discussion. Charlotte is already home to a number of businesses which are distinctly rural/small town in character, specifically: two "country stores"; an orchard; two pick-your-own berry farms; a seasonal outdoor flea market; a seasonal outdoor farmers market; and while not specifically "rural" in character, a number of book/gift/antique/specialty shops. In addition, a health/food oriented publishing company, a mail order and retail seed company, and a country living catalog distribution center, though not of necessity located in the country, gain credibility by being here. Facilitating both the founding and growth of similar types of businesses is key to Charlotte's future, healthy growth, and increasing employment opportunities here.

As previously discussed, easing the creation and growth of home occupations, providing "incubator" and growth space outside of the home, and providing help in growing businesses through a "business advocate" are all ways in which this goal may be facilitated. In addition, recognizing that businesses such as the Charlotte Flea Market are genuine additions to the community and draw retail customers to other businesses in Charlotte is vital. Providing an inexpensive handout in which Charlotte businesses could advertise might be one way to enhance crossover retail traffic from one business (such as the Flea Market) to other businesses (such as the country stores).

Perhaps most important, the EPC believes that a concerted effort must be made to establish Charlotte as a friendly, welcoming place for small businesses to locate and grow. Logically this should start with businesses already in Charlotte and be evidenced through maximum support and cooperation at all levels of Town government. Without this no amount of enthusiasm or advocacy from the EPC or others will convince business people that Charlotte is a good place to grow.

5. Provide technical assistance and advocacy for business meeting guidelines in #4 above through the permit process.

This has been thoroughly discussed in previous sections. Assisting business people through the permitting process is a logical function for a Business Advocate.

6. Establish an Economic Resource Guide or Business Directory to support networking and marketing of local business including home occupations.

A fundamental assumption relative to this goal is that only those Charlotte businesses wishing to be listed in a Guide or Directory should be. Therefore, regardless of the form that such a vehicle might take, it would be the responsibility of the "publisher" of the Guide/Directory to make it known publicly that such a vehicle is to be published, to request submissions, and then to publish the listing. Conversely, it would be the responsibility of individual businesses to request inclusion and submit appropriate information.

Such a vehicle could take a variety of forms:

- *It could be a small printed list or an insert in the Charlotte News;*
- *And/or it could be a page on the Town's website;*
- *Or, for local retail businesses it could be a printed flyer which would include a Charlotte road map with local businesses and attractions highlighted together with promotional descriptions, coupons, etc. This could be distributed at the business locations themselves, the ferry landing, as well as at area attractions, the costs presumably borne by the participating businesses as "advertisers." Initiation of this type of activity might best be left to the interested businesses themselves.*

Regardless of the form such a Directory took, it would of course need to be updated on a regular basis and would require a budget.

Therefore, while supporting this goal as indicated above, for practical purposes the EPC believes that it can perhaps be best achieved by enlisting the help of organizations already engaged in publishing in Charlotte. The Charlotte News has been contacted and its editor expressed interest in pursuing the idea in the future, perhaps in connection with the Charlotte-area advertising which it already offers to local business people. In addition, production of such a Directory or listing in print or on the Town website would be a logical activity for the "Business Advocate" mentioned previously.

In general, it is the conclusion of the EPC that its current "committee" structure is best suited to addressing short-term goals and inappropriate to satisfy the long-term and ongoing nature of the majority of the goals assigned. As stated previously, the EPC therefore recommends that the Selectboard or Planning Commission consider the creation of a Business Advocacy or Advisory office and the appointment of a part-time or full-time advocate or group to carry out the business-related goals state above and as defined by the Town Plan.

4.4. THE LAND

4.4.1. The Setting

The Town of Charlotte is situated in northwestern Vermont on Lake Champlain about 10 miles south of the urban center of Burlington in Chittenden County. The Town encompasses approximately 50 square miles (32,320 acres), almost 20% of which is water. The Town is bounded to the west by the lake, to the north by the Town of Shelburne, to the east by Town of Hinesburg, and to the south by the Towns of Ferrisburgh and Monkton.

Charlotte's overall physiographic character is one of small rolling hills with numerous flat terraces and bisecting streams. Three general regions can be identified. Between Lake Champlain and Route 7, the land slopes gradually from an elevation of 100 feet at lake level to approximately 250 feet. East of Route 7 the Town is divided by a range of hills which includes Mutton Hill, Pease Mountain, and Mt. Philo. The highest elevation is Mt. Philo - 980 feet. East of these hills the land features gently rolling terraces ranging in elevation from 300 to 400 feet. In the southeast corner the land becomes more rugged with steep stream valleys and elevations of up to 800 feet. Major water bodies in addition to Lake Champlain are Lewis Creek, the La Platte River, and the smaller tributaries of Thorp Brook, Pringle Brook, Holmes Creek, Bingham Brook, and Mud Hollow Brook.

A description of the Town from the top of Mt. Philo from the 1880s is, in many respects, still fitting today:

> *Looking eastward, a panorama is presented to the beholder, only exceeded in beauty and grandeur by that extending before the westward-looking eye. Eastward, the Green Mountains stand against the horizon, with Camel's Hump and Mansfield piercing the clouds, silent, grand, "rock-ribbed, and ancient as the sea," between which and the beholder lie many peaceful glens and rural glades, well-kept farms and modest homesteads. Westward, a more glorious scene is presented to the beholder, for just enough of the intervening country with its beautiful farms and neat dwellings, just enough of the blue waters of the unequaled Champlain, backed by the long stretch of the Adirondacks, rough, rugged, silent and sublime, to form a picture beautiful in the extreme, one that perhaps may be the better summed up in the two words: "Vermont's best."*

Since that time, the scene has changed somewhat, though the setting is still glorious. While the views from Mt. Philo to the west still contain many beautiful farms, there is a marked difference as one looks east toward the Green Mountains. Much agriculture has disappeared, replaced by regrowth of brush and forests. However, now a myriad of homes of those seeking the rural character of the Charlotte landscape lie within much of this woodland and regrowth.

4.4.2. Physical Characteristics

Geology

The bedrock formations of Charlotte consist principally of dolomite which interbeds with limestone near the southwestern side of Route 7. Surrounding this dolomite-limestone is a belt of shale. East of this shale belt lies a bed of quartzite mixed with dolomite which eventually turns into predominantly dolomite in the most eastern part of Charlotte.

The two stream valleys, Mud Hollow and Bingham, include a thin belt of limestone that flows wider in the north and Shelburne area. The hills and low mountains mark the western edge of a low angle thrust fault where the overlying bedrock has been moved to the west. The hill and low mountains are erosional remnants caused by this folding and faulting. They dip eastward with their steeper sides to the west.

The hills are covered with glacial till in contrast with the majority of Charlotte which is covered with Lacustrine and Marine clays and silts. Tills are usually poorly drained and include gravels instead of silts. One long belt of this silt lies on the western side of Pease Mountain stretching north-south. In the northeast corner lies a section of ice contact gravel. It is well-sorted and well-drained above the high water level. A

gravel quarry is located in this area. Other surficial materials include peat and muck in swamps and poorly drained areas. These areas lie in the mideastern edge and southwest corner of the Town.

Soils

Soil characteristics are an important consideration for all development and for natural resource based operations such as agriculture and forestry. The NRCS has classified the soils in the Town as part of the Chittenden County Soils Survey. The information in the survey is valuable for identifying soils that are suitable for agriculture, forestry, recreation, and land development. Extreme stoniness, shallow depth to bedrock, high water table, and low permeability create severe limitations for buildings, roads, and septic systems. Much of Charlotte consists of silts and clays with very low permeability.

The Soil Conservation Service, the predecessor to the Natural Resources Conservation Service (NRCS) in 1986 re-evaluated soils in Chittenden County according to their capability to support conventional on-site sewage disposal systems and mound systems. Because the Town has no municipal sewage disposal systems, this classification has been an important information base for determining the capability of land to support development. According to the SCS criteria, 12% (3,198 acres) of the land was suitable for conventional on-site sewage disposal systems; 44 % (11,562 acres) was suitable for mound systems; and 44% (11,681 acres) was unsuitable for any on-site sewage disposal. This analysis showed that the development potential of the Town is constrained by its soils; that costly mound systems are required for nearly half of the land; and that the 12% suitable for on-site systems will be very important for shaping the growth of the Town. It should be noted that portions of the 12% are already developed and, further, that some of these soils are also primary agriculture soils under active agricultural use.

The State has classified all surface waters in the Town, including Lake Champlain, as Class B waters. The State prohibits discharges of treated water from sewage systems into Class B waters without a designated waste management zone, and there are no waste management zones established within the Town. Therefore treated water from sewage systems in Charlotte must be disposed through indirect discharge methods.

In more recent years there have been more frequent applications for subdivisions with community disposal systems. While these community systems may help to foster desirable patterns of development by clustering homes using a common system, the Town must assure they will be adequately installed by developers and maintained by homeowners to protect the Town from having to take them over in the future. It is also projected that there will be more applications involving long sewer lines to connect subdivisions with the good disposal sites. These sewer lines raise concerns for hook-ups and long-term maintenance as well.

Modern wastewater system technologies are making soil and slope conditions less important in guiding where septic systems can be placed. These modern technologies are more expensive, but can be approved and placed on lands previously unsuited for septic systems. The existence of these new technologies makes it even more essential to plan for development and protection of natural resources. Poor soils cannot be counted on to protect Charlotte from over-development.

Slopes

Elevations in Charlotte range from 100 feet above sea level along the low-lying lake shoreline to 980 feet on the top of Mt. Philo. Steep slopes and high elevations are found along the spine from Mutton Hill to Mt.

Philo. Steep slopes are also evident on Barber Hill, in the Lewis Creek area, in the extreme southeast corner of the Town, and in the eastern side of Town east of Bean Road and Dorset Street.

Steep slopes present a significant limitation to development. In addition to increasing construction and maintenance costs, development on steep slopes can create environmental hazards such as erosion. Care should be taken with development in areas where slopes range from 15-25%. Slopes greater than 25% are generally unsuited for development.

Flood Hazard Areas

Flood hazard areas are areas that are likely to be inundated by flood once every 100 years. Portions of the shoreline of Lewis Creek, Lake Champlain (on McNeil's Cove, Converse Bay, and Holmes Creek, and the mouth of Thorp Brook are designated flood hazard areas, based on the 100 year flood maps prepared by the federal government and approved by the Town of Charlotte under its Flood Hazard Area Zoning Regulations. The rest of the Town's flood hazard areas are currently being inventoried and mapped. The Town has requested the Federal Energy Management Authority to map the flood hazard area of the LaPlatte River. Additional flood hazard mapping should be coordinated with wetlands mapping.

If a flood hazard area is improperly used and unprotected, a flood can create a serious threat to the public; private investments can be destroyed; and significant natural resources can be damaged. The Town of Charlotte does not allow development within known flood hazard areas.

4.4.3. Pattern of Development

The historical pattern of development in Charlotte is that of a few small, compact village settlements surrounded by open land in which rural homesteads and farms lie. Additionally, summer home communities are clustered along the shorelines of Thompson's Point and Cedar Beach, served by a system of interconnecting roads.

This historical pattern has increasingly changed over the last few decades. A growing regional population, new wastewater technology, and the desirability of living in scenic rural areas relatively close to Burlington has resulted in increased residential development throughout the Town. Continuation of this trend may ultimately shift the character of Charlotte from rural to suburban. Furthermore, additional development in rural areas (away from employment areas) reduces air quality and is not cost effective or desirable; the Town’s resources must be spread more thinly to support such development, and it impacts the rural character of Charlotte.

The Villages

The villages of West Charlotte, once called Charlotte Four Corners, and East Charlotte, historically known as Baptists Corners, are the two principal areas in the Town where residential development is more dense than surrounding areas and where commercial services and public uses are located.

Charlotte's planning goals and policies support the concentration of growth in or near the existing settlements of East and West Villages, although new rural hamlets and clustered developments are also allowed in certain situations. The Land Use Regulations adopted in 2006 include district regulations covering both villages. The evolution of these village areas and the conditions in each are noticeably different from one another. The Village Committee for the 2002 Town Plan update (which began in 1998)

recognized that it would be more appropriate to distinguish East Charlotte Village and the West Charlotte Village from each other in any future land use regulations.

West Charlotte Village

The West Charlotte Village is currently focused on the intersection of Greenbush Road and Ferry Road (F-5); it extends generally from this intersection to the north and south on Greenbush Road and to the east and west on F-5. The village area includes approximately 500 acres, with lot sizes ranging from .06 of an acre (2,613 s.f.) to 53 acres. There are approximately 67 primary buildings in the West Village area, up from 60 in 1990. Commercial and public uses are located on F-5, which is compatible with current zoning. The State of Vermont has designated portions of the West Village area as a State Historic District on the State Register of Historic Places

The West Village includes the “Town Center.” Since 1990, significant investment has been made in this area including the Town Hall, Library, Fire and Rescue station, Senior Center, Post Office, and the relocation of the Quinlan School. Locating public services in this area has reinforced the "village feel" of the West Charlotte Village, and seemingly encouraged additional public and private investment. The public facilities complement the more densely settled residential uses, a few retail stores, and the light industrial/commercial area to the west on Ferry Road.

The public buildings and historic residences create a unified and attractive village core with its own unique character. The Town does not wish to lose this character. The 2002 Update Committee stressed the importance of preserving the existing character of the village areas as one of the Town's most important goals. They felt that while it is important to concentrate future growth in village areas, there was still a need to do some amount of disbursal so that no one area of the Town is overburdened. For the 2007-08 amendment, the Planning Commission’s view is that it is appropriate to provide for hamlet settlements outside of villages in ways that will not encroach upon important natural resources.

There are no public water or sewer systems serving the village area. The private supply of water in the village area is inadequate for some homes and more than ample for others. All sewage disposal in the village area uses private, in-ground systems. The Town Office, Library, Senior Center and Fire and Rescue station use a Town-owned community system located on the “Burns property” south of Town Hall. The West Village area experiences significant traffic volumes, especially in the summer due to ferry and boater traffic headed to or from Route 7 and Lake Champlain. This volume creates a traffic concern in the area, especially at the intersection of Ferry Road and Greenbush Road. The Chittenden County Municipal Planning Organization (CCMPO) conducted traffic counts on Ferry Road just east of the intersection with Greenbush Road in 2005 — the Average Annual Daily Traffic Count (AADT) was 3,700 vehicles, compared to 2,650 vehicles in 1995. The study also found that, although the speed limit is 25 miles per hour, the average speed is 32 miles per hour, and the 85th percentile (which is frequently used for setting the speed limit) is 39 miles per hour.

The 2002 Town Plan Update Neighborhoods and Villages Committee (Village Committee) analyzed the extent of the boundaries of the West Village "area." The Village Committee agreed that the West Charlotte village area extends beyond the then-current village residential and commercial zoning districts designated in the Town's Land Use Regulations and includes the Commercial/Light Industrial District. The exact limits

of the districts are indicated on the Existing Land Use Map and the Future Land Use Map (Maps 2 and 3) in the current Town Plan, as well as on the Charlotte Zoning Map in the Land Use Regulations.

The Commercial Light/Industrial District includes the train station for the commuter train, which ran between 2000-2002. The Village Committee noted that the addition of public transportation to this area could make it very attractive for mixed uses, including residential units. They felt that the Town should consider the opportunities to create further concentrated growth around the station. While the commuter train is not currently running, this portion of the village is still appropriate for a mixture of uses. In fact, the Lake Champlain Waldorf School is now operating its high school in the "Creamery Building;" this is a welcome addition to the West Charlotte village.

As the 2002 Town Plan was in its final stages of adoption, the Planning Commission initiated a "master-planning" process for the West Charlotte village, which was a recommended action-step of the 2002 Town Plan. The master-planning process took the form of an analysis of development and conservation options, techniques and strategies within the village. Although useful in its analysis, the report generated by the process was not endorsed by all village residents; the report may have been misunderstood by the public as prescribing higher density, when its real purpose was to analyze *possible* density. It also must be acknowledged that distribution of the report occurred considerably later than the public participation process, leading to a disconnect between the process and the product in the eyes of many residents. The use of outside consultants for the project also seemed to generate unease on the part of some townspeople.

Elements of the report have been implemented in the Land Use Regulations, for example the inclusion of the commercial/light industrial area on Ferry Road into the village, the increase of density allowed for new affordable housing, and the explicit consideration of natural resources within village developments. Nevertheless, residents' concern about higher density was taken under advisement, and no village-wide change of density is proposed in this Town Plan revision. It is also recognized that there is sentiment against a formal "design review" process in the village, although design guidelines, which would be recommendations rather than requirements, could be an acceptable option for the village.

East Charlotte Village

The East Charlotte Village is less densely settled than West Charlotte Village, and the immediate surroundings contain more open land. In general, East Charlotte experiences less traffic congestion than the West Village, although both Spear Street and Hinesburg Road are Class 2 highways and function as major collectors

The small, historic portion of the East Charlotte village area is to the south of the intersection of Hinesburg Road and Spear Street. Most of the development is close to Spear Street. The village has 34 acres of developed property and about 41 primary structures, including a general store, the Charlotte Grange Hall, a Catholic church, several single-family residences, a small apartment building, and a small mobile home park. A horse farm is also located in the southern part of the village, a hay farm is located just south of the village area, and a new "community supported agriculture" vegetable farm is being developed to the east of the village. A telecommunications tower is located just south of the village.

Sheehan Green, a relatively recent residential subdivision, expanded the village area to the northwest and northeast, where the homes are sited in close proximity to preserved farm fields. The townwide interest in

promoting "village development" rather than rural sprawl, as well as the desire on the part of some property owners in or near the village to develop their properties, suggests a reevaluation of the current limits of East Charlotte with respect to future growth. Discussions have begun regarding such growth, and a recommendation of this Town Plan is that such discussions and planning continue with the assistance of the Planning Commission.

Rural Areas

In Town surveys, committee reports, and public information meetings, Charlotte residents have continued to express a desire to see the open land of the Town preserved and the rural character protected. Over and over they have stated their fears that the current pattern of development will harm those values. In the survey taken in 1999, over 70% of a total 123 respondents stated that future growth and development should be focused in the village areas to help prevent disbursed development and protect open space and farms. In addition, the number one problem facing Charlotte cited by the majority of respondents was development/growth/sprawl and loss of open space and rural character.

One reason for their concern is the steady rate of land subdivisions and the construction of single-family housing over the past 20 years. Between 1983 and 1986 alone, the annual number of lots created through subdivision increased from 31 to 122. Over 4,000 acres were affected by land subdivision in 1986 alone. By 1988 the number of lots created through subdivision had declined to about 50; however, another 112 lots were still pending review by the end of the year. Over 1,800 acres were involved in these approved or pending projects in 1988.

While some important actions have been taken to help modify these patterns, such as amendments to the zoning and subdivision regulations as well as the creation of the Charlotte Land Trust and the Charlotte Conservation Fund, the issues raised in the 1990 and 1995 Town Plans regarding the trends in land development still hold true today. Other impacts of growth include:

- Open land subdivided into large lots often removes or reduces the viability of land for agriculture, productive forests, wildlife habitat and water resource protection;
- Large lots are beyond the means of an increasingly larger share of the population and are affecting the social and economic diversity of the Town;
- Scattered development of housing along public and private roads and in open meadows is despoiling vistas and views;
- There is an increasing danger of losing the focus for community life and the small-Town neighborhood environment;
- Public costs for roads, emergency services, and school transportation are increased by sprawling, rural development;
- Public access to recreational resources, including those related to water, may be reduced by development;
- The Town's reliance on springs and drilled wells for water and septic systems for wastewater disposal necessitates better understanding and monitoring of ground water resources; this reliance also may increasingly produce conflicts over "rights" to use these resources, as such uses become more constrained;

- Excessive curb cuts for driveways along state and Town highways will impact traffic safety and cause congestion; and
- Houses located in or near Areas of High Public Value may have long-term deleterious impacts on those habitats and the ecological functions they provide

Poor soils and steep slopes have partially "protected" Charlotte from extensive development by limiting wastewater disposal options. Poor soils and limited septic capacity will no longer protect Charlotte from development with the introduction of new wastewater disposal systems and policies being approved by the State.

With new technology wastewater systems can be placed on a much broader variety of soil and slope conditions, opening more land for potential development. This technology can also facilitate concentration of new growth in designated areas such as the villages in cases where traditional wastewater systems have been limited by soil conditions. This new technology creates an added incentive to plan effectively for how future growth should be directed.

Within the subdivision review process there have been consistent efforts to minimize the adverse impact of large-lot development. While traditional subdivision patterns break up the landscape into five-acre lots, provisions in the Land Use Regulations that allow and in some cases require clustering through planned residential development designs (PRDs). PRDs help to minimize adverse impacts on areas of high public value while creating more of a neighborhood quality in developments. Private community water or septic systems can help make clustering feasible. The potential for increased development in Town, partially due to new wastewater technology and policies, warranted making PRD design a requirement for major subdivisions.

It is important to recognize however, that a pattern of numerous scattered clusters of residential development can also contribute to wildlife habitat fragmentation and sprawl patterns of development if not properly located. This makes it very important to consider the area's resources, landscape and neighborhood when evaluating a development proposal.

In spite of these attempts to address land development problems, the landscape that is so important to Charlotters is changing. This landscape was created when agriculture was the dominant local economy and the community was relatively self-sufficient. Because of Charlotte's increased desirability as a "bedroom community" for the greater Burlington area, Charlotte residents are realizing that more proactive planning techniques must be used to protect the Town's natural and cultural resources.

At the 2002 Town Plan Update Committee meetings and in the 1999 survey, several potentially-useful proactive planning techniques were mentioned or discussed, including the following:

Expand the Town Center and Focus Future Growth in the Village Areas

The number-one element of the vision for the Town expressed by this plan is that the Town is committed "to reinforc(ing) historic settlement patterns by focusing growth in village centers." Every plan since 1990 has stated that "The villages of East and West Charlotte will provide for housing, commercial services, and public buildings and facilities. These areas were selected based on their central location, the presence of existing development at a higher density than the remainder of Town,

the presence of and potential for commercial services, the availability of land for additional development, and the presence of soils with slight limitations for development."[8]

Every Town Plan since 1990 has supported compact patterns of development that place more people within close proximity to services, public transportation and each other to reduce the need for automobile travel and to create a center for community activity. Additionally, the Town needs to provide for a variety of housing opportunities, especially affordable family and senior housing, in order to maintain economic and age diversity in the population here. Furthermore, the villages are the most appropriate locations for such housing, particularly for seniors, because of the proximity to existing and prospective services.

Match Land Use Regulations with the Goals of the Plan

Parts of the Land Use Regulations are not consistent with important goals of the Town Plan. Specifically, the five-acre-minimum lot size does not allow for focusing sufficient future growth in village areas any more than it protects resources in other areas of Town. In addition, a minimum five-acre lot size in today's housing market does not provide affordable housing opportunities for moderate or lower income people, another central goal of the Plan. The five-acre density also does not allow the conversion of existing buildings on the smaller lots in the West Village area to dwellings.

During the 2002 Town Plan update discussions, the Village Committee noted that it could be desirable to reduce the minimum lot size and adjust the dimensional requirements in the West Village area. They believed that this would enable greater density of residents in close proximity to public services and transportation corridors. Their thinking was that higher density would primarily be achieved through the reuse of existing structures, existing undeveloped small lots, and possible subdivision of existing larger lots, but not at the expense of the existing desirable village character or the loss of existing buildings. During later Town Plan work-sessions, reduction of the five acre per unit minimum density in the West Village and raising the five acre per unit minimum density in rural areas was not favored. The consensus of opinion was that programs such as a contiguous and non-contiguous planned residential developments, which are enabled by the current Land Use Regulations, will hopefully encourage development in village areas in lieu of rural areas.

Establish Design Guidelines

The Land Use Regulations do not provide any direction to land owners or the Planning Commission as to how changes to buildings within the State historic districts should be addressed. A gradual consensus emerged from the discussions that historic design guidelines would be the most appropriate first step.

The guidelines envisioned by the 2002 Village Committee would be flexible, but would be intended to encourage the preservation of the rural, small Town, historic character of Charlotte and incorporate such character into new development in the State Historic Districts. Further discussion brought out the

[8] Slight limitations is a term used in soil type analysis for septic capacity.

idea that the design guidelines could also be appropriate for the village areas adjacent to the Historic Districts.

Complete a West Village Soil and Groundwater Study

It is absolutely clear that water and wastewater disposal capacity in the West Village area must be studied. The 2002 Village Committee felt that a complete understanding of the groundwater and soils conditions and the location of existing wells and septic systems in the West Village area was an important part of the information that would be needed to help determine how exactly the West Village area could or should grow.

Adopt an Official Town Map

An Official Town Map (as enabled by 24 VSA 4421) would allow the Town to designate areas that would be appropriate for future roadway development or Town facilities. It could help the Town plan for the future expansion of the Town's facilities proactively, rather than addressing them individually over time as crises arise.

Couple Village Area Density Increases with Farmland and Natural Areas Protection

One of the goals of increased density in village areas is to help preserve farmland and natural areas in the rural areas of the Town. This pattern provides more living and commercial opportunities in the village areas, absorbing future growth and reducing patterns of scattered development that fragments farmland and natural areas throughout Town. The 2002 Village Committee thought that smaller lot sizes in the West Village area should not be established without also establishing strong measures to enable preservation of working farms and farmland, and to protect natural resources and open land.

The 2002 Village Committee summarized its discussions by stating that higher density village areas, village design guidelines, and expanded and effective techniques and regulations to preserve farms and important natural areas would be helpful, and indeed necessary, to achieve the goals of this Town Plan.

The ideas and strategies described above were discussed and endorsed during the 2007 update to the Town Plan; it was noted that the Land Use Regulations *currently* allow (since 2006) the creation of smaller lots within villages and hamlets and clustered rural development, and the simultaneous protection of working farms and natural areas, via the Planned Residential Development provisions for both contiguous and non-contiguous parcels. Additionally, planning for the best use of the wastewater capacity on the Burns property, including potential service to existing and new structures and uses, is an important step towards the realizing the goal of strengthening the village core.

4.4.4. Agriculture

As the brief Town history notes, from the Town's early settlement to today, agriculture has been a significant part of the landscape, rural character, and economy of the Town of Charlotte. Beers Atlas in 1869 stated that "the superior adaptation of the Town to agricultural pursuits was one cause of its rapid settlement." Child's Gazetteer in 1882 mentions that the industry of the people of Charlotte has always been devoted to agriculture due to its rich fertile soil.

Based on surveys and community meetings for the last several Town Plan updates, preservation of working farms and natural areas is a clear priority for Charlotte residents. Loss of farms and farmers will dramatically change the Town's character, which was established from the earliest period of settlement and is strongly valued by current Charlotte residents.

The Land

Charlotte has an abundance of fertile soils well suited to agriculture. Of the total land area of 26,520 acres, 3,301 acres are identified by the Natural Resource Conservation Service (NRCS) (Formerly the Soil Conservation Service) as having a high agriculture potential. High and medium potential soils are called "primary agricultural soil" by Vermont's Act 250 and are considered to be worthy of preservation by the state. Fifty percent of Charlotte is primary agricultural soil as compared to only 20% of the soils state-wide. Currently (1999) approximately 10,706 acres are in active agricultural use, and another 5,524 acres are "open" and capable of being utilized for farming purposes.

Charlotte's stock of high potential arable soils consists primarily of glacially deposited loams located on the higher ridges. These soils largely correspond with the earliest settlement patterns as they were sought out by Charlotte's first settlers. West Charlotte and East Charlotte village areas are located on these soils as well as sections of Route 7 and Spear Street Extension. The high potential soils are capable of varied agricultural enterprises and are essential for intensive agriculture. Their preservation even in small plots is important.

Charlotte's medium potential soils are primarily lacustrine clays deposited by the Champlain Sea below 300 feet in elevation. These soils support our dairy industry and are best used for grazing and extensive forage production. These soils are often found in large contiguous blocks facilitating the use of large modern machinery. With the trend towards larger and fewer dairy farms, it is important that medium potential soils be preserved in blocks larger than a current farm unit. It is essential that the development pattern not fragment the use pattern of this resource.

Charlotte's 13,142 acres of low potential soils are an agricultural resource, particularly where they are in association with medium potential soils and have been improved through artificial drainage. Some loams, too steep or stony to cultivate, produce excellent stands of sugar maples.

The Farms

For the past 60 years, dairying has been the primary form of agriculture in Charlotte. The number of dairy farms has declined, however, to 16, down from 20 in 1989 and 40 in 1979. Due to lower prices of milk, higher production costs, capital problems, development pressures, and labor problems, many small to medium dairy farms have ceased operations. It was projected by the 1989 Town Plan Agriculture Committee that the number of dairies would decline and stabilize at 10 to 12 large farms by 1995. They projected that these dairies would require an average of 500 good acres to operate or a total of about 5,000 acres. Fortunately, farming did not decline as much as the 1989 Committee's projections; 16 dairy farms still existed in 1995, although that number has since decreased. Historically Charlotte's agriculture was diversified; sheep, beef, and small grains were predominant in the 19th century. Today, the Town is witnessing increased diversification in its agriculture. Perhaps the most promising form of extensive farming is hay production. Growing hay is well-suited to Charlotte's clay soils and compatible with Charlotte's desire for sustainably managed open land. Marketing of high quality horse hay by one farmer

has proved successful and has spawned satellite haying operations and interest in a regional hay cooperative. Diversification into sheep, and beef production has increased livestock products in the Town. Four riding stables provide still another form of agricultural business in the Town.

Several specialty farms in the Town, some of which are new and some of which have been operating successfully for years, provide breeding stock, wildflowers, berries, vegetables, organic farm products, nurseries, orchard products and community supported agriculture (CSA). Many of these enterprises are suited to the Town's prevalent heavy clay soils. The viability of vegetables, small fruits, nurseries and landscaping businesses are enhanced by Charlotte's proximity and accessibility to the large Chittenden County market. The 2000 Town Plan Update Agricultural Committee thought that alternative forms of agriculture can succeed in Charlotte, and will help to preserve open, working farmland.

Farm Economy Issues

Discussions of the Agriculture Committee revealed that farm-related businesses could be another important part of the local economy that could support the economic viability of Charlotte's farms. Direct-marketing, value-added products such as cheese, farm equipment and supply operations, agricultural cooperatives, and fence businesses, among others, are some of the commercial enterprises that would be appropriate. Existing commercial and industrial zones have space for these operations, but they are not currently allowed in the rural district. Farm stands located at farms selling produce raised on the property are allowed; seasonal stands selling produce from off the site are also allowed, but not on Route 7 except with Site Plan Review.

The Economic Committee conducted a survey at Town Meeting 1999 and an overwhelming majority of respondents supported the further expansion of a local farmers market. Survey respondents stated that the preferred location for the market should be in the West Village area but the location could change from week to week to be more accessible for Charlotters from other areas. For the last several years, the Farmer’s Market has been operating successfully in both the West Village (at the Senior Center) and the East Village (on the green in front of Spear’s Corner Store). The Agricultural Committee agreed that an expanded farmers market is desirable and added that a year-round facility should be studied as an outlet for fresh greenhouse and preserved agricultural products and arts and crafts.

The patterns of ownership of farmland indicate which properties or operations are likely to remain in farming and which are at risk for being converted to non-agricultural uses. The 1990 Town Plan Agriculture Committee analyzed the patterns of ownership of farmland in the Town. In 1990, about 60% of Charlotte, including most of our good farmland, was held by 102 owners. These holdings were divided into three categories: farms, estates, and investments. Farmers owned the bulk of Charlotte's farmland (6,949 acres), but many of these farms were not financially stable. Of the farmer-owned dairies, 9 of 16 were considered to be "at risk" of being sold within five years. Of the 11 farms owned by retired farmers, 10 were unlikely to stay completely in agriculture beyond the current owners. Of the diversified farms, however, 9 out of 10 are considered to be strong. Active farmers in surrounding towns owned four parcels in Charlotte, one of which was likely to be developed in the near future.

Many small farms were bought by professional and business people in the 1960s and 1970s and turned into country estates. In 1990, there were 3,859 acres in this category. Most of the owners are quite committed to open land and therefore, might be cooperative in efforts to preserve this land.

Investors own many of Charlotte's largest tracts of farmland. In 1990, there were 24 parcels and 4,691 acres owned by investors with over half of the acreage owned by four individuals. These holdings are critical to Charlotte's agricultural base.

Recognizing that unfairly burdensome property taxes were forcing many farmers out of business, both the Town of Charlotte and the State developed programs to stabilize taxes on agricultural lands. The Town program is no longer active. However, many local farmers utilize the State's Current Use Program. Table 8 reflects recent participation in this program.

In 1988, a new State working farm tax abatement program was set up to rebate up to $13,000 in taxes per property for farmland and farm buildings. Those who enroll must give a right of first purchase or right of first refusal to the State should they ever go out of farming or put their property on the market. In 1994, 6,163 acres or 23% of the land in the Town was enrolled in the State program and another 1,200-1,500 acres in the Town program.

In 2001, 106 parcels comprising approximately 11,194.83 acres, or 43% of the land in the Town, were enrolled in the State Current Use Program. In 2007, the number of parcel has increased by almost 50%, to 142 — however the value of property in the program has doubled.

Farmers have stated clearly that without such a program they could no longer afford to farm. They have also stated that additional tax abatement and other economic incentives are necessary to preserve working farms in Charlotte. Currently farmers are partially subsidizing, through high local taxes, the rural character and open land enjoyed by all Charlotters. Charlotte residents have expressed over and over again through surveys and public meetings that they want to protect rural character and working farmland in Charlotte. The Town needs to work closely with the State program to ensure predictability of State reimbursements to the Town for the tax abatements offered by the program.

Table 11: Participation in the State Current Use Value Appraisal Program

By Program	2001 (acres)	2007 (acres)
Forest Acreage	1,941.24	2,642.73
Non-Productive Forest Acreage	192.14	229.33
Agricultural Acreage	8,116.28	9,163.79
Non-Productive Agricultural Acreage	28.00	0.00
Total Program Acres	**11,194.83**	**12,035.85**
Excluded Areas	917.17	1,220.83
% Town Land Area (25,820 acres)	43%	47%
Total Program Parcels	**106**	**142**

By Property Type	2001 (value)	2007 (value)
Dwellings and Non-Farm Buildings	$17,679,600	$39,789,000
Farm Buildings (100%)	$1,593,800	$4,937,600
Subtotal Buildings	**$19,273,400**	**$44,726,600**
Acres Excluded	$6,400,200	$15,085,900
Acres Enrolled	$18,395,700	$29,960,700

Subtotal Land	**$24,795,900**	**$45,056,600**
Total Listed Value	**$44,069,300**	**$89,773,200**

Total Value of Tax Reduction	2001	2007
Use Value of Acres Enrolled	$1,914,209	$1,519,500
Owner's Grand List	$26,835,169	$58,036,900
Exempt Reduction	$17,234,131	$31,736,300
Total Reduction in Taxes for Enrolled Property	**$370,533**	**$525,101**

Source: Charlotte Listers Office

Charlotte Land Trust

The Charlotte Land Trust (CLT) was originally formed in 1986 as an outgrowth of an agriculture committee appointed by the Planning Commission to assist in developing a new town plan. Members of the committee were concerned about increasing development in town and decided to form a local land trust. In the early years, the organization assisted in an impressive number of local conservation projects, primarily resulting in conservation easements that are held by the Vermont Land Trust. In 1995 the board filed for incorporation to become a non-profit, 501(c)(3) corporation in order to be able to hold easements and make it possible to raise money for conservation projects. In the last 6 years, CLT has welcomed numerous "Friends of the Land Trust" who support the land trust's work through contributions to the organization.

From the start, CLT's focus has been to conserve farmland and to make affordable farmland available to farmers. Other notable goals are to preserve land for wildlife habitat and corridors, public recreation, scenic vistas and significant natural areas.

CLT helped educate town residents in 1995 about the proposed Town Conservation Fund, which was voted on and approved at Town Meeting in March 1996, and renewed for another ten years in March 2006. This fund has been extremely helpful in making local conservation projects possible and has been used towards the funding of ten conservation projects in town totaling 702 acres—some of the easements on these properties are held by the Charlotte Land Trust and others are held by the Vermont Land Trust.

Since 1995, CLT has acquired 11 easements on local land, totaling 360 acres. They have assisted the Vermont Land Trust on numerous other projects in town. As of 2007, the amount of conserved land in Charlotte totals approximately 3,812 acres (out of the 26,530 acres in town). In addition, the Town holds approximately 1,308 acres in open space agreements.

In 1995 the Town sponsored an inventory of agricultural land to inform the Town's agricultural district planning and land conservation priorities. The Charlotte Land Trust oversaw the consultant who mapped existing and potential farmland, agricultural uses of each farm unit, conservation lands, agricultural management districts, and agricultural soils. This information has been incorporated into the Town Plan, and is used by the Charlotte Land Trust and the Planning and Zoning Office.

During the 2002 Town Plan Update, discussion participants felt that it is important that the Charlotte Land Trust initiate more contact with farm landowners. They also indicated the need for the Land Trust to educate the public more clearly about how the Land Trust can help property owners protect farmland and natural areas. In addition, residents recommended that the Land Trust focus more on making land affordable for farmers.

Conflict with Expanding Residential Use

It is anticipated that a significant percentage of farmland is likely to change hands within the next five years. This situation could result in abandoned farmland, subdivision and development of farmland, reduced family farming and erosion of the Town's rural character. Fragmentation of farmland reduces the viability of agricultural operations, and increases the likelihood of conflicts between residential property owners and farmers.

A continuing issue in the Town is the compatibility of residential developments with farming operations. Farms create dust and noise from machinery, may often apply pesticides and manure to the land which can create an unpleasant odor, and use roads for oversized, slow-moving equipment. Historically these operations did not create problems; many residents grew up with these conditions and were used to them as a way of life. As the Town has grown and more people have moved in from non-agricultural areas, conflicts have arisen. The Town Plan Update Committees found that there is still a strong commitment to maintain sustainable agricultural operations with unpleasant odors, slow-moving vehicles, dust and all.

Land Use Options & Strategies

The Rural District includes all lands outside the village areas, commercial/mixed-use areas, industrial/mixed-use areas, Conservation District, and Shoreland District and the Shoreland Seasonal Home Management District.

The district is intended for agricultural, forestry, rural housing, recreation, and wildlife habitat and resource protection purposes. Additionally, the district may include, where appropriate, ag-related commercial activities. Commercial uses shall be in harmony with agricultural and natural resources, and residential areas. The challenge is to allow all of these uses without compromising the resources within the district.

Significant resources in the district include:

- Prime agricultural soils and productive farmland;
- Open space, scenic vistas and views especially in the center and western parts of the Town;
- Locally- and regionally-significant wildlife habitat and natural areas especially in East Charlotte;
- Large parcels of good farmland;
- Aquifer protection areas;
- Productive woodlands; and
- Public roads with high scenic and conservation value.

Some of these resources are shown on the maps of Agricultural Potential of Soils, Critical Wildlife Habitat, Environmental Features, and Roads with High Scenic and Conservation Values in this Plan. An over-arching goal of the Town Plan and the Land Use Regulations is to protect and wisely manage these

valuable natural resources through the placement of housing away from these and other features with high public value in order to minimize any adverse effects.

For approximately 25 years, agricultural land has been zoned with a five-acre-minimum lot size. As a result, land has been divided into five and ten acre lots for residential purposes. This practice is wasteful of valuable agricultural resources, and has an adverse visual impact as well. However, Town residents have felt over the years that five acres is an appropriate compromise between very large lot sizes and high density zoning. Consequently the Planning Commission has had to rely on other strategies to protect farmland, such as master planning, and using conservation design techniques, such as clustering and creating building envelopes.

When master plans are undertaken the Planning Commission can work with applicants to locate housing units off important farmland and to take advantage of clustering and Planned Residential Development (PRD) designs. As an example, a subdivision several years ago of a 300+ acre farm resulted in the protection of 180 acres, which is available for continued agricultural use. More recent subdivisions have created a higher percentage of protected land.

To facilitate developers' use of master-planning, the current Land Use Regulations require major subdivisions to be designed as PRDs, and impacts on agricultural land must be minimized. The Land Use Regulations also allow non-contiguous parcels to be used for a PRD; this allows one parcel to be protected, and another parcel (in a suitable location) to be developed using a cluster design. Both the PRD requirement (for major subdivisions) and the provision allowing non-contiguous PRDs are intended to help protect good quality agricultural land from being developed and/or fragmented.

Unfortunately, it is not uncommon for landowners to approach subdivision in a relatively piecemeal fashion; often they cannot afford the expense of performing an overall master plan for their entire property. The Town should study and decide the feasibility of creating a funding source for assisting farm and other large property owners with the cost of preparing a Master Plan for their properties. The funds will be used as an incentive for thoughtful PRD designs to help maximize the preservation of natural resources, rural character, and views in balance with reasonable economic gain for the property owner in the development of the property.

In the development review process, agricultural and natural resource values will be identified; where more than one feature of high public value is identified, the parcel will be managed for the protection of the resources as prioritized by the Planning Commission. The Town Plan maps will be used to indicate the general location of these resources; additional professional information may be required by the Planning Commission and field delineation may be necessary. The property owner/applicant proposing development may be asked to plan for the entire parcel and take the protection of these features into account.

The recommended overall density for the Rural District is and will continue to be one unit per five acres for market rate (unrestricted) dwellings, although lot sizes may be less than five acres within Planned Residential Developments (PRDs) for the protection and management of farmland and natural resources. Up to four dwelling units in a new structure will be permitted in a PRD; more units will be allowed (with review) in existing structures as long as requirements for septic and water supply can be met and there is no loss to the overall character of the structure, the farm resources, or the character of the surrounding area.

On farm parcels or land contiguous to farm parcels, housing will have to meet standards that are designed to minimize the impact on farmland and on farming operations. The land not used for building should retain its productive potential and eligibility for the state (and any local) tax exemption programs.

As proposed developments increase in size (by Charlotte standards), two impacts are more likely to result. One possible impact is the destruction or diminishment of Areas of High Public Value on or in the vicinity of the property proposed for development. By their nature, most of the resources that are classified as Areas of High Public Value require large tracts of land to be able to continue to be viable. Large developments are more likely to require and impact a large land base.

The second possible impact may be on the ability of the Town to provide services to all residents in a manner and at a cost that is similar to the Town's past ability to provide such services. To address these prospective impacts, larger developments may be required to create a higher percentage of open space, and may also be required to include one or more phasing mechanisms.

Designated open space lands may be in common or individual ownership; individual ownership will be permitted when the goals of protecting and managing the agricultural and natural resources are met through such mechanisms as conservation easements and building envelopes.

Agricultural Planning Areas

Four agricultural planning "districts" were delineated in the 1990 Town Plan and are retained in the current Town Plan with some modifications. The term "district" has been replaced by "area" in order to clarify that the delineation is not meant in a regulatory sense (i.e.: these are not zoning districts), but rather in recognition that there are distinctive characteristics that currently exist with regard to the farmland in each of these four general areas, and the Town hopes to protect the particular resources of each area. The four areas are:

Area A: West Charlotte

This area is characterized by a mix of dairy and non-dairy farms; it also hosts significant residential uses and is experiencing strong pressures for development and therefore has high land values. This area is also an important part of the Champlain Valley view shed. There are approximately eight dairy farms in this district (two with barns in Ferrisburgh), six parcels in non-dairy agriculture (horses, sheep, berries, hay, heifers, vegetables), and several rental parcels available. The land in this area tends to be somewhat rolling.

Area B: North Route 7 Corridor

This area has historically hosted prominent dairy operations, and with the conservation of the Nordic Farm, will continue to do so in the foreseeable future. There are rental parcels in this area also. The area features significant supplies of prime agricultural soils. These agricultural conditions coupled with scenic vistas of statewide significance and the proximity to Route 7, a regional arterial highway, require special development considerations.

Area C: Central Charlotte

This area is characterized by contiguous farm parcels with generally level topography and extensive primary agricultural soils. The land lends itself to large-scale crop production with large equipment. The area has the potential of providing the Town with a permanent "critical mass" of agricultural land. Its current use is primarily for dairy and crops. The farmers are the owners of most of this land. Portions of this area afford significant scenic vistas of extensive rolling farmland uninterrupted by housing development.

Area D: East Charlotte

This area is characterized by non-contiguous farm parcels, several rental parcels, and some diversified agriculture, including vegetable, beef, and dairy operations. Soils are not as consistently good, however this area, perhaps more than the others, hosts an abundance of wildlife habitat.

By recognizing the particular characteristics of each area, strategies and policies for land use and agricultural protection can be tailored to meet the unique situations, and thereby have a greater likelihood of success.

Other Strategies

An ongoing concern of many farmers is that their children are not interested in continuing to farm. At the same time, many new farmers face the barrier of finding land and facilities that are available and suitable for their needs. Potential assistance for both of these problems may found with the Land Link Vermont program. This is a program of the University of Vermont Center for Sustainable Agriculture that connects beginning and relocating farmers with farmland owners and farming opportunities; it also provides education and support for farm families starting or transitioning their farm businesses to the next generation.

4.4.5. Natural Resources

The Town of Charlotte is rich with natural resources. These resources are critical to the Town's rural character and the health and integrity of its environment. Natural resources which have been identified in the Town include forest lands, wetlands, critical wildlife habitat, groundwater (aquifers), surface waters, and special natural areas.

Forest Lands

Forest lands are important for wood and non-wood forest products, aquifer recharge, wildlife habitat, erosion control, streamside buffer zones, nature study and aesthetics. Because other sections of the plan discuss wildlife habitat areas and aquifer recharge areas, this section is directed towards woodlands used for harvesting or having the other values listed above.

Compared to most towns in Vermont, Charlotte has few commercially productive woodlands remaining, and the Town values those few that exist. Poor soils, drainage problems, fragmentation of stands, and residential development are responsible for the small amount of productive woodlands. Ten areas of potentially productive woodlands were identified and mapped by the 1990 Charlotte Town Plan Natural Resources Committee and the County Forester. In 1990 these areas included: (Environmental Assessment Map key indicated in parentheses):

- Johnson Lumber/Burleigh/Sturgess/Olson properties (Wo1): highly productive forest land on north side of Lewis Creek; on south side, valuable as good contiguous forest land; most in current use;
- LaPlatte River area (Wo 2): good quality pine, oak, and mixed hardwoods; portions in current use; valuable also as wildlife habitat and to protect an adjacent wetland;
- Hinsdale parcels (Wo 3): areas of valuable sugar maple groves; aesthetic value as well;
- Mt. Philo (Wo 4): lower elevation lands surrounding Mt. Philo have been identified as good productive woodlands that are also extremely valuable for recreation, wildlife, and aesthetics; undergoing some subdivision in southeast area;
- Mutton Hill(Wo 5): productive forest land undergoing some subdivision;
- Whalley Woods (Wo 6): mixture of species, owned by Town, valuable for conservation;
- Aube parcel (Wo 7): in LaPlatte River area;
- Eno parcel (Wo 8); small parcel planted in softwoods;
- Kaplan sugarbush (Wo 9): small parcel in active use; and
- Bean parcels (Wo 10): in current use, mixture of hardwoods and softwoods.
- Bean parcels (Wo 10): in current use, mixture of hardwoods and softwoods.

Most of these properties are in the State Use Value Taxation Program and as a condition of that program are being managed according to a forestry management plan. In light of the length of time since this list was created, this information should be reviewed and updated.

Non-wood forest products such as mushrooms, berries, fiddleheads, nuts, Christmas greens, and, of course, maple sap are harvested from Charlottes forested lands. Only maple syrup has important commercial value, but many residents gather the other products as a hobby or for household use. Many economically unproductive wooded areas are also extremely valuable for firewood, wildlife habitat, wetland protection, aquifer recharge, and their ecological functions and aesthetic values as natural areas. Forest lands in Charlotte are of significant value as multiple use areas.

Wetlands

Wetlands are areas that are inundated by surface or ground water for two weeks or more during the growing season and at a frequency significant enough to support vegetation conducive to living in anaerobic condition. Wetlands may include marshes, swamps (in some cases with trees), bogs, wet meadows, river and lake overflows, and ponds. Wetlands are particularly important and fragile areas. They are important because they:

1. Provide temporary water storage for flood waters;
2. Play a key role in maintaining the quantity and quality of surface and ground water through physical and chemical actions;
3. Mitigate effects of erosion and runoff;
4. Provide especially rich wildlife habitat for plant, animal, bird and aquatic species;
5. Provide resources for education and research in natural sciences; provide recreational opportunities; and
6. Contribute to community open space and scenic beauty.

The presence of wetland conditions may be temporarily masked by agricultural practices such as draining and mowing.

In 1999, the Charlotte Conservation Commission completed a wetlands mapping project, which updated and expanded previously available information. The database and map are based on professional interpretation of recent color infrared aerial photographs and preliminary field checking by Agency of Natural Resources staff. Approximately 1,200 wetland units are mapped. These are categorized as: Forested Wetlands, Emergent Wetland, Scrub-Shrub Wetland, Unconsolidated Bottom Wetland, and 4 categories of Mixed Wetlands. See "Wetlands of Charlotte, based on Interpretation of Aerial Photographs" map. Note that this map identifies the approximate location of wetlands but that more detailed examination of vegetation and soils is needed to delineate the functioning edge of a wetland. Also note that some wetlands may not have been detected in the mapping process due to conditions when aerial photographs were taken or land use changes such as the digging of very recent ponds. All of these mapped wetlands are included as components of the Critical Wildlife Habitat map.

Wetlands are threatened by filling, digging of ditches, draining, and dumping within them. They are also threatened by activities that occur around them including development on adjacent upland areas, diversion of streams feeding or draining wetlands, and shoreline development and boat traffic within shoreline wetland areas. The State of Vermont also has a Wetland Protection Law implemented through the Water Resources Board. Wetlands contiguous with mapped federally and state protected wetlands, come under the same protection.

Critical Wildlife Habitat

Natural terrestrial and aquatic plant communities and the wildlife species they support, contribute to the rural character of Charlotte and represent a special feature of life in the Town which may never be regained once it has been destroyed. All wildlife species have three basic life requirements: food, water and cover, which collectively comprise the habitat of a given species. All species are limited by the life requirement in least supply. To promote a diversity of wildlife species, it is important to conserve not only a variety of habitat types, but also critical areas which contain the limiting life requirement. Without these critical areas, many species will not persist regardless of the total amount of land protected.

Wetlands are essential for otter, beaver, mink, moose, muskrat, raccoon, bobcat, amphibians, reptiles and a great variety of birds including osprey, heron, bittern, geese, ducks and other waterfowl and shorebirds. Wetlands are often the most biologically productive habitats within a region, and provide all three basic life requirements described above. Some species, such as frogs, salamanders and wetland birds, breed only in wetlands where they can find the cover and food sources they require to give birth and raise their young. Wetlands of the Champlain Valley provide the most important waterfowl breeding and nesting area in the State, with many of these species migrating from long distances to these areas they depend on.

The primary threats to wildlife populations (not only in Charlotte but worldwide) are habitat destruction and fragmentation. Because much of the rich native forest in the Champlain Valley has been converted to farmland, urban or residential areas, the remaining forested areas are extremely important for wildlife species locally and regionally. Forested areas are critical for species such as deer, fisher, turkey, grouse, bobcat, mink, otter, black bear, flying squirrel, porcupine, gray fox, short and long-tailed weasel, and birds including pileated and red-headed woodpecker, great horned owl, raven, blue jay, ovenbird, red-eyed vireo, solitary tanager, crossbills, warblers, rose-breasted grosbeak, thrushes, brown creeper, kinglets, flycatchers, peewee, nuthatches, veery, American redstart, and finches. The largest patches of forest in a region are especially important, as these areas may be critical for the larger, wide-ranging species that have the most

demanding area requirements and are most sensitive to human disturbance. Large forest patches also have less border habitat or edge, where human activities and infrastructure can lead to high disturbance and mortality of certain species.

Wetlands and upland forests contain the greatest diversity of plant and animal species, and therefore are the richest habitat. Other habitats associated with these such as meadows/grasslands, scrub/shrub areas, regenerating forests, vernal pools and the protected corridors connecting them provide key hunting/feeding/breeding grounds, staging areas and buffers for forest dwellers and others. Linkages (or corridors) are linear habitats which connect patches of habitat; these connections are essential to keep habitat patches (genetic reservoirs) from becoming isolated; if cut off from the local and regional movement of wildlife (especially the important predator species), populations can die out. Many of the smaller wetland and wooded areas in Town retain their wildlife populations only because they are connected to larger, less disturbed areas. These connection or linkages are disappearing, mostly due to housing development which fails to provide for their protection. There are few large and unbroken tracts of wetland or forest left in Town.

While most of the Town can be considered wildlife habitat, this Plan is concerned primarily with locally and regionally-significant wildlife habitat, particularly that which is in short supply, such as wetlands and upland forests. Locally and regionally-significant wildlife habitat in Charlotte includes 18 Vermont Natural Heritage Communities which are also of statewide significance. As part of the 1990, 1995 and 2000 Town Plan, critical wildlife habitat was identified and mapped by individuals in the Town who study, protect, harvest from or just enjoy the natural wild plant and animal life, and by natural science professionals. Each area was inspected and evaluated by knowledgeable individuals.

The spring 2008 update of the town habitat map will provide benefits to the Planning Commission in their review of future development projects, and to the Selectboard in their decisions to support purchases from the conservation fund. The areas included on the May 2000 Critical Wildlife Habitat map together form a network that supports healthy communities of plants and animals.

The May 2000 Critical Wildlife Habitat map categorizes wildlife habitat as follows:

- Forest Habitat (upland forests)
- Wetlands Habitat (all wetlands identified in 1999 through air photo interpretation, as also shown on Wetlands of Charlotte Map)
- Associated Supporting Habitat (such as meadows, scrub/shrub areas, regenerating forests, and other open habitats) specifically identified because of their value for wildlife breeding, feeding or movement
- Major Linkages (linear habitat which connects larger patches of habitat)

In addition, the map documents known road crossings used by wildlife.[9]

[9] In the 1990 and 1995 Town Plans, a brief description of each mapped habitat was included in the text and keyed to the map. However, because the May 2000 Critical Wildlife Habitat map displays a network of habitats, it is not appropriate to describe the Forests, Wetlands, Associated Support Habitats or Linkages as discrete units. The map indicates the major components of the

During the late 1990s, the Charlotte Conservation Commission carried out a project to map and assess significant wildlife habitat and natural communities in Charlotte, in order to update the map and make more detailed information available. Technical assistance was provided by not only local experts but also consulting ecologists, University of Massachusetts air photo interpreters, University of Vermont faculty and graduate students in the School of Natural Resources and the Field Naturalist Program, Vermont Agency of Natural Resources, Natural Resources Conservation Service, The Nature Conservancy and Chittenden Regional Planning Commission. Computerized databases have been compiled for use with the ArcView software which the Town Office began using in 1999, and wall maps for display purposes printed. Information available includes descriptions of natural plant communities (particularly wetlands and upland forests), probable and documented presence of wildlife species, ecological functions and value of habitat within the Town and region, and special features.

These databases of information are regularly updated as more information is compiled by the Conservation Commission, with professional advice and assistance from ecologists, state specialists and others. The Planning Office can now create useful maps for planning and evaluating development proposals by combining this information with other layers such as orthophotos, parcel map, land currently in agriculture, conserved public and private land, etc. The computerized map files are archived at Chittenden County Regional Planning Commission.

The Conservation Commission's Habitat Map Update project (in 2007 & 2008) involves reviewing and updating the map to align the map more closely with the findings of the 1995-2001 Vermont Biodiversity Project and Vermont Department of Fish and Wildlife/Agency for Natural Resources recommendations (as they published in 2004 in *Conserving Vermont's Natural Heritage: A Guide to Community-Based Planning for the Conservation of Vermont's Fish, Wildlife, and Biological Diversity*). It is expected that the update of this map will be ready in the spring of 2008, and will be incorporated into the Town Plan soon thereafter via an amendment in accordance with the statutory amendment process. Until then the previous maps (from the 2002 Town Plan) are to be considered "in effect" as part of this Town Plan.

Ground Water

Groundwater is found underground in porous rock strata and soils. It is a finite and vulnerable public resource, as it is the source of most of Charlotte's drinking water. The state has mapped some significant Ground Water Source Areas for the community water supplies serving the Pineridge Water System, Lynrick Acres, and Wildwood West. Additional work is needed, however, to identify and map ground water resources and understand resource characteristics and any limitations, as well as the nature and extent of contamination threats. Only in this way can the Town rationally plan for development, and take measures to protect ground water quantity and quality for current and future residents. The State is in the process of collecting additional ground water information.

Major potential sources of water contamination exist in Charlotte. The Town's former landfill, private dumps and leaking underground petroleum storage tanks can easily contaminate large areas of groundwater

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network of Critical Wildlife Habitat; the associated databases contain detailed site-specific information, as well as descriptions of relationships within the network, ecological functions and other relevant information. The wall map, at a scale of 1:18,000 and the databases may be consulted at the Town Hall.

in serious and long-term ways. Other potential sources of groundwater contamination include: salt storage piles, treated sand storage piles, manure storage areas, onsite sewage disposal systems, run-off from impervious surfaces such as parking areas, chemical fertilizer and pesticides used on farms and lawns, and uncontrolled dumping of waste, chemical cleaning products, and petroleum. These present a threat to both surface water and groundwater quality. Current Town regulations contain no specific language on the protection of the identified aquifer recharge areas.

According to well yield data, groundwater supplies are limited in some areas, such as portions of West Charlotte Village. The availability of ground water may vary substantially throughout the Town, even among contiguous parcels of land. As land is subdivided and changes in water use are proposed, there needs to be a clearer understanding of the potential impacts on current users and of the quantity and quality of potable water which will be available for future residential, commercial and industrial users.

Surface Waters

Surface water in Charlotte drains in four directions and contributes to three watersheds, due to the ridge running north-south which includes Pease Mountain, Mutton Hill, and Mt. Philo and another ridge running roughly parallel to F5 and Hinesburg Road. Water in the northwest quadrant formed by these divisions drains north into Lake Champlain; in the southwest quadrant, drainage is south into Town Farm Bay; this is the Lake Champlain Watershed. The northeast quadrant is part of the LaPlatte River Watershed; and in the southeast surface water drains south into Lewis Creek and the Lewis Creek Watershed.

The following is an inventory of the named streams in the Town:

- LaPlatte River: this river flows generally north through the northeast corner of the Town. It flows through land used primarily for agriculture and has been the subject of an ongoing study by the University and State of Vermont on non-point sources of pollution and stream flow. Portions of the LaPlatte River in Hinesburg and Shelburne contain designated waste management zones. The area along the LaPlatte is of known archeological sensitivity. Throughout its length in the Town the river is suitable for recreational boating, and a section runs through the Plouffe Lane Natural Area, a Town-owned parcel previously used as a landfill.

- Mud Hollow Brook and Bingham Brook: these are two significant tributaries of the LaPlatte. Mud Hollow Brook, a seasonal stream of fairly low volume, flows north from a low-lying, seasonally wet area east of and between Pease Mountain and Mt. Philo. Bingham Brook, also of low volume, flows north from higher land to the east along Guinea Road. Bingham Brook feeds into Mud Hollow Brook north of the Hinesburg Road in a heavily wooded area. The combined volume, significant even in dry weather, flows slowly northeast through a wetland in a deep ravine surrounded by a pine forest west of Spear Street. Both these brooks are of known archeological sensitivity.

- Lewis Creek: Lewis Creek flows generally west through the southeast corner of the Town from Hinesburg to Ferrisburgh. It flows swiftly through relatively rugged terrain that is primarily forested. This creek provides opportunity for sport fishing and boating. Near the midpoint of its course through the Town, it broadens into a body of water known as Scott's Pond, which was once contained by a dam. Two historic covered bridges cross it. It is within an area designated by the

Town as both a critical wildlife habitat and a natural area. A portion of this natural area is owned by A. Johnson Company. Delineation of this creek's watershed and important resources should be more fully developed. Lewis Creek is currently designated as impaired by the State of Vermont. The Lewis Creek Association is working with the State and landowners to reduce erosion, sedimentation and bacterial contamination in Lewis Creek.

- Holmes Creek and Pringle Brook: Holmes Creek flows generally west from the west side of Mutton Hill to a wetland near the Town beach. Near its midpoint, it is joined by Pringle Brook, which drains a perennially wet area north of F5 just west of Route 7. Both Holmes Creek and Pringle Brook are relatively undisturbed streams with important seasonal drainage functions for the flat and slow-draining section of Town. Holmes Creek has been designated by the state of Vermont as a warm water fish habitat.

- Thorpe Brook: This brook originates in a wet area at the foot of Pease Mountain between U.S. Route 7 and Greenbush Road. It flows generally south to a wetland along the east shore of Town Farm Bay. This area is a significant wildlife habitat and natural area designated by both the Town and the state of Vermont.

- McCabe's Brook: Officially unnamed on current Town maps, this stream originates between Old Route 7 and Mt. Philo Road and flows generally north into Shelburne Bay at the mouth of the La Platte River.

- Unnamed Streams: There are numerous small, unnamed streams in Town, mostly of low volume and largely seasonal in nature. They are of extreme importance for seasonal drainage, especially west of Route 7 where the land is seasonally flood-prone and covered with slow-draining soils. Two unnamed streams are especially significant for their association with wetlands:

  - A tributary of the LaPlatte which originates near the intersection of Bingham Brook Road and Spear Street Extension and flows generally north through a large, dramatic wetland adjacent to the microwave tower east of Spear Street Extension.

  - A stream which originates in a wetland parallel to and west of Bean Road, flows into and out of a wetland near the intersection of Bean Road and Prindle Roads, and then generally south to its confluence with Lewis Creek.

Streams in Charlotte face threats from human activity including:

- Bacterial contamination from improperly functioning septic systems, manure spread too close to streams, and animal grazing too close to streams;
- Chemical contamination from landfills, road salt and sand, herbicides, illegal dumping along stream banks, parking lot runoff, and agricultural and lawn chemicals;
- Erosion and siltation from improper controls at construction sites, improper forestry practices, loss of vegetation on stream banks, improper use of culverts and diversions at road crossings of streams; and
- Increases in biological oxygen demand from leaking septic systems, runoff containing fertilizers and manure.

Presently all lands within 100 feet of named streams are in a Conservation District under the Town Land Use Regulations. This land may not be developed but may be counted for density purposes [Table 2.8 of the Land Use Regulations]. In addition, the Land Use Regulations require setbacks of 150 feet from the Lake Champlain shoreline, 100 feet from edge of named streams and 50 feet from the edge of unnamed streams. Some lands along Lewis Creek and at the mouth of Thorp Brook are classified as flood hazard areas and are also regulated under Table 2.10 of the Land Use Regulations. All surface waters within the Town have a state water quality classification "B". Class B waters are to be managed to achieve water of a quality which consistently exhibits good aesthetic value and provides high quality habitat for aquatic biota, fish, and wildlife. Class B waters may be used for public water supply with filtration and disinfection, irrigation and other agricultural uses, swimming and recreation.

Special Natural Areas

Natural areas are areas of land or water that retain their natural character and contain unusual or significant flora, fauna, geological, or related features of ecological and educational interest. Information on special natural areas in Charlotte has been obtained by the Conservation Commission from the Vermont Natural Areas Inventory, the Vermont Natural Areas Map, the Nature Conservancy, the Vermont Non-Game and Natural Heritage Program, and citizens of the community. Details are available to property owners, but only the general locations of the less fragile areas are included in Town Plan Map 8, which are:

- Charlotte Road Cut (N1): unique geological feature;
- Pease Mountain (N2): geological feature (Champlain Overthrust), aquifer recharge area, location of rare plants and natural communities;
- Barber Hill (N3, R1): geological feature, aquifer recharge area, rare plant community;
- Mount Philo (N4): geological feature (Champlain Overthrust), exceptional views, aquifer recharge area, location of rare plants and natural communities, deer wintering area;
- Town Farm Bay and Thorp Brook (N5): unusual fossil evidence, wetland, rare animal and natural community; waterfowl area;
- Lewis Creek (N6): whitewater rapids, historic bridges; sport fishing, scenic stretches;
- Landfill (N7): geologic features (fossils, Champlain Sea Beach);
- Railway site (N8): fossils;
- McNeil Cove (N9): fossils;
- Monkton Cave (N10): unique geological feature;
- Scenic overlook (N11): panoramic view of Adirondack High Peaks and Champlain Valley;
- Garden Island (R4): rare plant community;
- Cedar Island (R3): rare plant community;
- Thompson's Point site (R5): rare plant community;
- Vermont Wildflower Farm (R2): rare plant community; and
- Williams Woods (R6): rare plants and significant natural community.

There are several parcels of land in the Town under public or private non-profit ownership as conservation reserves, or in private ownership with conservation easements in order to protect and steward their natural features with high public value. A map of these conserved areas is available in the Planning Office.

Conservation District

The purpose of a Conservation District is to protect features with high public value and recreation land that is in public ownership, under permanent conservation restriction, owned by not-for-profit conservation organizations, or privately-owned land with high need for protection (for example significant wetlands), or with potential hazards to the public. The extent and location of Conservation Districts will be reviewed and revised within the next three years, in light of information on wetlands updated in 1999. Conservation Districts now include the following areas:

1. Mt. Philo State Park
2. Pease Mountain
3. State Fishing Access on Converse Bay
4. Williams Woods
5. Whalley's Woods
6. Charlotte Park and Wildlife Refuge, and Scenic Overlook
7. Town Forest on Old Route 7
8. Thompson's Point outside the Shoreland District
9. Town Beach and Recreation Area
10. Town Canoe Launch on Lewis Creek
11. Mutton Hill Town Pound
12. Lawrence Conservation Easement
13. Sloop Island (owned by State), Pickett Island (private), and the Dean Islands (private)
14. Williams Point (private)
15. Significant wetlands (some on private land)
16. 100 feet on both sides of the high-water mark of named streams (some on private land)
17. Flood Hazard Areas as shown on the Federal Emergency Management Agency maps of the Federal Insurance Administration adopted in the Zoning Regulations (some on private land).

Biological Diversity

Biological diversity (or biodiversity) is broadly defined as the variety of living material at all levels, from the genetic diversity within individuals, to species, populations, communities, ecosystems, and landscapes. One-hundred-and-seventy-four nations have signed and ratified an international Convention on Biological Diversity. In so doing they have affirmed their stewardship responsibility to conserve the rich heritage of plant and animal life with which this planet is endowed.

Charlotte is rich in natural biodiversity, derived from our geography which includes the lake, the Champlain lowlands, some remnants of the Taconic Mountains and the foothills of the Green Mountains. It

includes significant wetland and stream species and communities, upland forests, meadows and other open land, some rare native plant species and natural communities identified by the Vermont Natural Heritage Program. We in Charlotte have economic, ecological and ethical reasons for conserving this biological wealth.

Our current strategy for conserving Charlotte's biological diversity is the following:

1. Protected Areas.

To maintain and expand a system of public and private protected areas where natural ecological processes are given reign, free from most human interference, yet commensurate with educational, recreational, and scientific use. This includes now such areas as Mount Philo State Park, Williams Woods (The Nature Conservancy), Pease Mountain Natural Area (University of Vermont), and under Charlotte's jurisdiction: Whalley Woods, Mutton Hill (Town Pound), Charlotte Park and Wildlife Refuge, the Plouffe Lane Natural Area (former Town Landfill), and part of Thompson's Point.

2. Agriculture.

Charlotte's policy of encouraging the maintenance of agricultural land use is set forth in this Plan (see Section 4.4.4). Charlotte is and should continue to be "farm friendly." While some farm consolidation may be inevitable, family farms are likely to be more nature-friendly. Large industrial type "factory farms" with most inputs imported instead of being geared to the carrying capacity of the land and community, are not a desirable direction for agriculture in Charlotte. Rather, Charlotte desires to continue its tradition of family farms and encourages biodiversity through the use of agro-biodiversity, crop diversification, "heritage" plants and animals, beekeeping and similar small-scale productive land use.

3. Forestry.

All forests are "working" forests, providing services such as erosion control, water quality improvement, carbon storage, air purification, etc. In forests being harvested, we encourage maintenance of productivity to meet reasonable human needs, while not impairing forests' role as wildlife habitat and providers of other ecological services. To this end the Town urges good silvicultural practice when harvests or stand improvement occurs, and discourages large clear cuts. Silvicultural guidelines are available from the U.S. Forest Service. The Vermont Family Forests Program is highly recommended for the woodlots of Charlotte. The Town encourages forest landowners to cooperatively band together their small holdings into units of larger size that could support professional forestry services and more rewarding marketing (e.g., Roscoe Road Neighborhood Pilot Project). Maple syrup and sugar production is a low-impact and sustainable "industry" in Charlotte. Wood is a renewable resource and a desirable heating fuel alternative to fossil fuel based energy. The Town encourages any log production to go to the support of small, local wood industry. Any new forest plantations should be established with species native to the Northeast only.

4. Hunting and Gathering.

The plan encourages hunting that harvests excessive wildlife populations, within the legal strictures of the State of Vermont. This needs to be balanced with the safety of local residents and the quiet

enjoyment of their property. The plan encourages sportsmen and landowners to collaborate in working out policies and practices for safe hunting and maintenance of healthy wildlife populations. Gathering of non-wood forest products should be carried out so as to avoid overharvesting and to promote their sustained production.

5. Alien Species.

Introduction of invasive alien species to either land or water can have serious adverse impacts on native biodiversity. Landowners are urged to use native Northeastern species in any roadside planting or reforestation. Anglers are urged not to introduce invasive alien species into our waterways. Where alien invasives have taken strong hold (e.g. purple loosestrife or buckthorn) landowners are encouraged to control or eradicate them since they are displacing our native species.

Maintaining our wild and agricultural biodiversity helps keep our terrestrial and aquatic ecosystems healthy and resilient. These ecosystems provide an impressive array of tangible and intangible benefits. Biological diversity is not only useful in terms of economic benefit, but there are strong aesthetic and ethical imperatives for its conservation.

4.4.6. Special Features

Special features of the Town of Charlotte include its significant open spaces, scenic views, vistas, and roads, archeological sites, historic features and areas, and the naturally dark night sky. The 1990 Town Plan Town Environment Committee, and other committees since then, listed the types of special features that contribute to the character of the Town and developed criteria for identifying and ranking these features. The committee used the following criteria:

- The visual aesthetics;
- Accessibility, both "passive" (driving) and "active" (skiing, hiking, etc.);
- Uniqueness of the site or resource;
- Usefulness to the Town:
- Representativeness of the Town; and
- Patterns of use, both past and present.

Significant features with high public value were documented through ranked lists by type and through photographic and map exhibits. The 2000 Town Plan augmented the inventory, although it still may not be complete. Many of the items on the lists are mentioned in other sections in the plan; these areas are given added value to the Town by their placement on these lists as well.

Views and Vistas[10]:

- Northwest to southwest from Mt. Philo State Park (V1);
- West off Mt. Philo Road, south of the base of Mt. Philo State Park (V2);
- West off Route 7, vicinity of the north end of Old Route 7 (V3)Town scenic overlook);

[10] Based on 1990 information (direction of view from location).

- East and north off Route 7, north of Nordic Farm (V4);
- West off Lake Road at the Town beach (V5);
- Southeast off Mt. Philo Road, north of Spear Street (V6);
- Southeast off lower Spear Street, north of the covered bridge (V7);
- Southeast at the intersection of Greenbush Rd. and Thompson's Pt. Rd. (V8);
- Guinea Road near the intersection with Bingham Brook Road (360 degrees) (V9);
- East and north on Spear Street, west of the covered bridge (V10);
- South off of Spear Street on the south side of Mt. Philo (V11);
- East on Hinesburg Road, near Dorset Street and Bean Road (V12);
- East off Mt. Philo Road, just north of One Mile Road (V13);
- West on Lake Road, descending towards Orchard Road (V14);
- East on Prindle Road between Spear Street and Bean Road(V15);
- North on Roscoe Road, vicinity of Lewis Creek Road (V16);
- Both sides of Spear Street, between Hinesburg Road and Prindle Road (V17);
- East on Ferry Road, near Lake Road (V18); and
- West on Garen Road at top of the hill (V19).

This information was updated in 1999 and shown on Map 13: Public Roads with High Scenic or Conservation Values.

Ubiquitous overhead utility lines for power, telephone and cable television have the impact of diminishing the Town's scenic vistas, views and general landscape quality. These are important services, but the vision for an aesthetically beautiful Charlotte includes the replacement of overhead lines with underground lines and requires the installation of new lines underground. It is the objective of the Town that all utilities will be underground.

The Charlotte Roadside Beautification Fund was created in 2006 with a generous endowment and the possibility of on-going matching funds from the William Rutter Jr. family. Under the leadership of the Town Tree Warden and an advisory committee appointed by Selectboard, this Fund will result in tree planting along public rights-of-way, starting with higher use areas, and will also encourage property owners to plant trees to beautify their land along public roads. (The Road Commissioner's advice will be included regarding how to avoid interference with road and utility maintenance and sight distance issues.)

Dark Night Sky

One of Charlotte's special features is its dark, rural night sky. While still relatively undisturbed, Charlotte's natural darkness at night, augmented by a brilliant array of stars, is beginning to be threatened by light pollution and glare. Light pollution is the upward and outward distribution of light projected directly from fixtures or reflected off the ground or other surfaces. Glare is direct light shining from a fixture that makes it difficult to see or causes discomfort. Light pollution, in particular, comes from the cumulative affect of individual exterior lights within the Town, as well as from development and associated night-lighting

outside of Town. Current and new residents of Charlotte are encouraged to shield fixtures to focus exterior light downward and/or use motion-sensitive lights.

Scenic Roads[11]

- Lewis Creek Road
- Roscoe Road
- Monkton Road (between Spear Street and Lewis Creek Road)

The 1995 Town Plan called for a survey to identify Charlotte's scenic roads. In 1998-99 an assessment of the Town's public roads was carried out by thirteen teams of trained volunteers under the guidance of the Tree Warden and Conservation Commission. Based on a check list of features for scenic and wildlife conservation value, each one-half mile segment was rated, and from these data a digitized map of the most scenic public roads in Charlotte, the most scenic viewpoints or vistas from the road, and areas of significant wildlife value along the roads was prepared. (See Map 13: Public Roads With High Scenic or Conservation Values). These may warrant Town designation as Charlotte Scenic Roads, nomination as State Scenic Roads, or special care by some other means.

Covered Bridges

- Quinlan Bridge, on Monkton Road
- Holmes Creek Bridge on Lake Road
- Rule Bridge on Roscoe Road

Forestlands

- Williams Woods (The Nature Conservancy)
- A. Johnson forest along Lewis Creek (A. Johnson Co. and Town of Charlotte)
- Pease Mountain (University of Vermont)
- Mount Philo (State of Vermont)
- Whalley's Woods (Town of Charlotte)
- Old Dog Pound on Mutton Hill (Town of Charlotte)
- Forested areas at Thompson's Point (Town of Charlotte)

Marshes/Wetlands

- South of Hinesburg Road, east of Baptists Corners (East Charlotte)
- Former cranberry bog, west of Bean Road and north of Prindle Road

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[11] As designated under Vermont Scenic Highway Law on 2/13/89 and 4/24/89. Note: these are the first three roads in Charlotte to be designated under the Vermont Scenic Highway Law. While these roads are significant to the Town, their presence on this list is not meant to imply that they are the only roads that are eligible for this status.

Working Farmlands[12]

- Titus Farm, Guinea Road
- Nordic Farm, Route 7
- Varney Farm, Route 7
- Charlotte Berry Farm, Route 7
- Foote Farm, Mt. Philo Road
- Marble's land, "Garrow" farm
- Mack Farm, Greenbush Road
- LaBerge Farm, Greenbush Road and Thompson's Point Road
- Hinsdale Farm, Spear Street Extension
- Stearns Farm, Spear Street Extension
- Bean Farm, Hinesburg Road
- Bean Farm, Bean Road
- Watson Farm, Dorset Street
- Horsford's Nursery, Greenbush Road and Route 7
- Windever Farm, State Park Road
- Gecewicz Farm, Spear Street Extension
- LaBerge Farm, Lime Kiln Road
- Vermont Land Trust property, Greenbush Road
- Burleigh Farm, Spear Street Extension
- Robert Titus Farm, Spear Street Extension
- Knowles Farm, Ferry Road
- Whalley Farm, Lake Road
- Golden Apple Orchard, Whalley Road
- Hall Farm, Hinesburg Road
- Miskell Farm, Greenbush Road
- Vogler Farm, Hinesburg Road
- Nichols Farm, Spear Street
- Garvey Farm, Baldwin Road
- Goss Farm, Prindle Road
- M. Hinsdale Farm, Hinesburg Road
- Sheldon Farm, Lake Road
- Kaplan Farm, Spear Street

[12] Farms that contribute to the agricultural character of the Town.

Meadows and Pastures[13]

- Former Dike Farm
- Sheehan Farm, Spear Street and Hinesburg Road
- Plouffe Farm, Carpenter Road
- Larson Farm, Lake Road
- Marshall Farm, Prindle Road
- Hutchins Farm, Carpenter Road
- Broadreach Farm, Lake Road
- Roland Aube Farm, Dorset Street
- Rose Aube Farm, Dorset Street
- Schofield Farm, Roscoe Road
- Former Town Poor Farm, Thompson's Point
- Graham property, Lake Road
- Claflin Farm, Route 7 and Greenbush Road
- Former Hanlon Farm, One Mile Road
- Deeds Farm, Lake Road
- Former Black Willow Farm, Lake Road and Thompson's Pt. Road
- Naud Farm, Lake Road
- Lavalette Farm, Greenbush Road

Villages

- West Charlotte (Charlotte Four Corners)
- Old Charlotte Center (Hinesburg Road at Church Hill Road)
- East Charlotte (Baptists Corners)
- Old settlement at Prindle Corners

Geological Sites[14]

- The cliffs east of Monkton Road on Morse's land
- Lewis Creek Falls near Roscoe-Quinlan Bridge
- Old gravel pit east of Dorset Street

Archaeological Sites

The following areas are of *known archaeological sensitivity*, according to the State Archaeologist:

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[13] In addition to the working farms above.

[14] In addition to those listed under Natural Areas.

The lands on either side of the following water bodies:

- Mud Hollow Brook
- Bingham Brook
- LaPlatte River
- Lewis Creek east of Scott Pond
- The Tavern at Wings Point

The following areas are of expected archaeological sensitivity, according to the State Archeologist:

The lands on either side of the following water bodies:

- Thorp Brook
- Kimball Brook
- Holmes Creek
- Pringle Brook
- McCabes Brook
- Lewis Creek, Scotts Pond and to the west

Conserved Areas

Map 18, entitled "Conserved and Public Land," shows the properties in Charlotte conserved as of September, 2007 to protect their features with high public value such as active agriculture, wildlife habitat, areas of significant natural communities, and scenic views etc.

Historic Resources

Charlotte has significant historic resources, including the villages, the summer camp communities, unique structures such as the covered bridges, sites such as the ferry landing, buildings which currently or formerly served for public uses, and homes, barns, and farmsteads. These resources represent the Town's heritage and contribute to the character and culture of the community.

During the 1970s, the Vermont Division for Historic Preservation conducted an inventory of the Town's historic resources. As a result of this inventory, 64 sites and/or districts have been placed on the State Historic Register. These sites have been mapped on the Cultural and Recreational Features Map. With the exception of the Thompson's Point Historic District, the historic districts identified on the Cultural and Recreational Features Map do not have any local regulatory purpose, but are identified as "districts" because the buildings are usually found in clusters. The Thompson's Point Historic District has a design review process which is implemented through the Charlotte Zoning Regulations.

The Town's historic districts include: (Map key indicated in parentheses)

- Baptist's Corners (H1): a historic business and social center of the Town around the intersection of Hinesburg Road and Spear Street which contains a unique concentration of Greek Revival style residences and public buildings, including two churches (one now a residence) and the Grange Hall.

- Old Route 7 Historic District (H2): former transportation center on the main stage road between Burlington and Vergennes providing services to travelers and now a residential district with two key buildings providing fine examples of Federal style architecture-the Rayta House and the Swenor House.
- Charlotte Center Historic District (H3): the geographic center of the Town and a focal point for early settlement where public buildings, such as the Congregational Church and the Meeting House, and businesses were established for the convenience of residents. The district contains buildings of distinctive architecture, dating from the 1780s to the 1900s, including examples of Federal, Greek Revival, and Queen Anne styles. This district is on the National Register of Historic Places.
- Four Corners Historic District (H4): the largest of the Town centers, its position between the ferry landing and the main stage road and its physical setting on a ridge with magnificent views of the lake and the Adirondack Mountains contributed to its settlement and early growth. Development was further stimulated by a railroad station half a mile west. By the 1880s the district contained a church, school, two stores, a shoe shop, blacksmith shop, and about 20 dwellings. The architecture consists of buildings constructed between 1811 and 1900 in Federal, Greek Revival, and Queen Anne styles.
- Cedar Beach Historic District (H5): the earliest resort area in Charlotte, started in the 1870s and 1880s and containing numerous examples of resort architecture of the period.
- Thompson's Point Historic District (H6): a significant concentration of 1880s and 1890s resort architecture located on the old Town poor farm. The architecture harmonizes with the setting, incorporating irregular plans and projecting gables or turrets. The district includes 33 cottages and their related outbuildings, garages, ice houses, boat houses and club house. Until 1924 the side wheel steamships, the Chateaugay and the Ticonderoga made scheduled stops at Thompson's Point and Cedar Beach.

Other significant historic resources in the Town include the residential properties listed on the State Historic Register; the public buildings, some of which today are used for private purposes; the covered bridges; and the farmhouses, barns and farm buildings that dot the landscape and contribute to the agricultural character of the Town. As part of the Town's heritage, it is important that these resources be protected and retained in their current locations.

There are several strategies for protecting these historic resources. The Town has specific provisions for the re-use of historic structures in the Land Use Regulations. Local historic districts and landmarks may also be designated under the Vermont Townscape Preservation Act [24 V.S.A. §4407(15)]. Through this designation, the Planning Commission can adopt either mandatory or voluntary criteria for reviewing projects involving historic structures or landscapes. Act 250 contains criteria for the protection of historic resources should a major development or subdivision be proposed which affects them.

The placement of sites and districts on the Vermont or National Historic Register may assist in protecting the sites if state or federal funding is involved in a development project, but otherwise the placement has no regulatory impact on the protection of the structures. However, the registers do contain valuable information on the sites and can be very helpful for educational purposes. Public understanding and appreciation of the significance of these resources can help in their protection.

The use of investment tax credits for income-producing historic properties that are on the National Register provide an incentive for protecting and using historic properties. The Vermont Division for Historic Preservation has information on this program.

The Charlotte Historical Society partnered with the Charlotte Community School during 1999-2000 to conduct an inventory of homes in Town. This may be able to be expanded to include historic barns and farm outbuildings. The Historical Society has brought Town attention to the importance of Charlotte's historic resources. It maintains a museum at the former Town Meeting House and sponsors townwide events at the museum. The Historical Society helped the Conservation Commission and the Charlotte Quinlan School Corporation to relocate and restore the old Quinlan School to the Town Green. The Society also published a report on the history of the Town's roads, and assisted with the nomination of the Charlotte Center Historic District to the National Register. Some significant individual historic sites and the remaining historic districts have yet to be nominated to the National Register.

4.5. The Lake and its Shoreline

The Town of Charlotte has approximately 14 miles of shoreline and seven islands in Lake Champlain. The shoreline varies from marshy wildlife areas to rocky cliffs and promontories, to stony and, more rarely, sandy beaches. It is cut by three drainage systems comprised of numerous brooks which drain the interior lands. Charlotte's shoreline on Lake Champlain is very beautiful, a source of pleasure to its residents, seasonal homeowners, and visitors and a priceless asset to the Town.

4.5.1. Scenic Beauty and Environmental Quality

The scenic beauty of the shoreline area is enhanced by the undisturbed natural shoreline and evolving pattern of working farm lands and shoreline communities. Changes in this landscape and ecology are occurring every year. This section will briefly discuss how the shore lands have evolved, describe some of the changes, and highlight some of the values Charlotte is working to preserve.

The present shape of the shoreline reflects the local geologic setting. Beginning with the deepest part of Lake Champlain, about 400 feet off McNeil Cove, the lake bottom quickly rises in the near shore areas along the points of and at the mouth of the many bays. These bays have continued to erode into the shorelines, as they have over the last ten thousand years, at varying rates depending on the resistance of the shoreline materials. The most resistant points of land are made of bedrock and typically rise 10 to 30 feet above the lake. Lesser resistant glacial tills support banks up to 15 feet and where in their natural state are mapped as eroding at moderate rates. Least resistant clays, silts and sands are found in the ends of many of the deeper bays and may have the highest erosion rates. These shorelines, where unprotected, continue to have significant losses of shore banks and their vegetation. The many streams which reach the lake have developed deltas with well vegetated wetland areas and may have more stable shorelines.

Historically the lake line area is thought to have been completely forested until the late 1700s. Subsequent agricultural practices led to the development of fields and orchards on the more tillable shore lands. Around the turn of the 20th century, summer homes became fashionable and many can still be seen along with at least two historic steamship docks at Cedar Beach and Thompson's Point. Today, continued development of the shoreline areas for year-round homes is occurring.

The environmental quality of the shoreline and lake are often adversely impacted by activities on the land, in streams and from other parts of the lake. A recent State report lists exotic species and nutrients as major problems facing Lake Champlain's waters.

Exotic species in Charlotte include zebra mussels, water chestnuts, Eurasian milfoil and purple loosestrife. While little can be done to control the spread of the non-native zebra mussels, actions can be taken to lessen the effects of the nuisance aquatic plants. Water chestnuts represent the greatest threat to the lakeshore environment and were mapped in McNeil Cove and Northern Converse Bay in the summer of 1998 as the northern most extent in Lake Champlain. Bays to the south of Charlotte are currently harvested mechanically in attempts to control the weeds which carpet the bays and reduce almost all uses of the lake. State contractors will likely be available to continue hand pulling water chestnut plants in Charlotte, either on annual visits to our shore line or as requested by individuals who have reported new areas of infestation. Eurasian milfoil and purple loosestrife can be hand-pulled without a permit. Purple loosestrife should not be planted as an ornamental flower as it spreads and replaces valuable wetland species. Those interested in learning more about identification and removal of these species can contact the Charlotte Conservation Commission.

Nutrients can accelerate the growth of aquatic weeds and in some cases carry pathogens to the lake. Nutrients may reach the lake from use of fertilizers at home and farms, and from animal wastes and poorly operating household septic systems. Continued work is needed to control excessive use of fertilizers both for home-lawn care and for agricultural activities. Steps taken to control erosion also help in reducing nutrient loading as many nutrients are bound to topsoil particles.

The significant named tributaries that discharge to the lake along the shoreline are Pringle Brook, which combines with Holmes Creek and discharges south of the Town beach, and Thorp Brook in Town Farm Bay. Other brooks, the LaPlatte River, and Lewis Creek discharge directly or indirectly into the lake but in adjacent Towns. Due to water current systems in the lake, these discharges could still impact water quality on the shoreline in Charlotte. Therefore, nutrients and waste products that discharge to water bodies anywhere in the Town have the potential for impacting the lake water quality.

In 1989, a complete inventory of shoreline conditions was mapped from a visual inspection. An updated inventory of shoreline conditions should be conducted in the next three years to help identify problem areas and prioritize areas in need of further protection measures. The fourteen miles of shoreline vary from steep cliffs, rock ledges, natural stone, slope, artificially filled stone, some sand, man made walls, wetland strips, and emergent vegetation. This inventory identified several areas as wetland management zones, including the mouth of Holmes Creek, McNeil Cove, Converse Bay by the fishing access, Converse Bay along its southeast shoreline, and Town Farm Bay west of Point Bay Marina to the southern edge of the Thorp Brook wetland area. Along most of the shoreline the nuisance aquatic plant, Eurasian milfoil, was observed.

The following is a summary of the 1989 inventory by region.

Hill's Point Region: Much of the natural scenic beauty of Hill's Point has been altered. There is still an undisturbed region at the extreme northern section where cliffs and natural stone landscapes still exist.

Town Recreational Area to Wings Point: South of the Town recreational area to Wings Point the landscape and shoreland have retained much of their scenic beauty. This is due in part to many steep cliffs that extend directly into the water or end with narrow natural stone and small sections of filled stone. The area also contains some large tracts of land in single ownership, one of which is protected by a 1,683-foot shoreline conservation easement held by the Lake Champlain Land Trust.

Wings Point: The west shore of Wings Point has segments of rock interfaces, small bays with natural stone, and cliffs. Subdivision and residential development has resulted in the cutting of trees in the Shoreline District to increase views for the new landowners.

McNeil Cove: This cove, from the jetty at the northwest entrance to the south cove, has many areas of emergent vegetation and valuable wetland. The wetland provides habitat for waterfowl and other birds, as well as wildlife and fish, and also affects water quality, shoreline stabilization, and recreational opportunity. These wetlands are presently impacted by the Lake Champlain Ferry dock and Fischers Landing. In the southern section recent development has resulted in clear-cutting of trees to the edge of the water.

Cedar Beach: The numerous trees surrounding and in front of the camps at Cedar Beach greatly reduces the adverse visual impact of development, and Cedar Beach retains much of its scenic beauty. Cedar Beach north cove areas has evidence of man-made modifications: cuts in natural stone cliffs, a small concrete pier, a concrete ramp, and stairways.

Converse Bay, North Cove: The northern portion of Converse Bay west of the fishing access to the rock ledge to the south forms a significant shallow cover wetland habitat with much emergent vegetation. Alterations along this shoreline and use of the fishing access has dramatically changed the appearance of this area.

Converse Bay, South Cove: This area has a significant shallow cove wetland habitat. The shoreline has been adversely altered in several locations by a concrete retaining wall and the destruction of cattails and bulrushes for boat docking facilities.

Thompson's Point: Although Thompson's Point is heavily developed, it has retained much of its scenic beauty. Camps for the most part are hidden by trees. The north-facing region and the point itself have very steep rock banks; access to the water is generally by stairways, some with high visual impact. On the south-facing side the banks are gradual.

Town Farm Bay: From the west emergent vegetation appears in Town Farm Bay, indicative of a wetland. This wetland has been altered and degraded by several clear cuts through the bulrush stands for individual docks. The south side of Williams Point forms a significant wetland habitat that extends to Thorp Brook.

The following values should be preserved through volunteer efforts, incentives and, where needed, regulatory actions to restore, maintain and enhance the scenic beauty and environmental quality of the shore lands.

1. Restore, maintain and enhance vegetated areas along the lake. It is noted that some limited development will continue to occur along the shore lands and continued efforts will be needed near existing homes and new development to minimize future impacts. In several areas of cleared shorelines, new plantings could add greatly to preserving the vegetated cover along the shore.
2. Encourage man-made structures to blend into the natural landscape. This applies to shoreline docks, stairs, and buildings in the shoreline area as well as new facilities beyond the 1,000-foot zoning boundary placed on exposed ridgelines closest to the lake.

3. Maintain reasonable control of lakeshore wetlands. Current zoning bylaws prohibit any docks within wetlands, and about 75% of the shoreline is mapped as wetlands. The Town should study the existing bylaws and consider making them more consistent with existing state wetland rules which contain appropriate restrictions in wetland. (See below)
4. Continue existing controls on commercial development relating to near-shore facilities such as boat yards, boat maintenance and ferry service. Controls are needed to maintain environmental quality and scenic beauty.
5. Encourage shoreline stabilization methods which can be vegetated and/or blend in with the natural surroundings in areas of highly erodent soils.

There are existing water-related environmental and zoning statutes designed to protect the scenic beauty and environmental quality of the lake and its shoreline. The Charlotte Shoreline Committee for the 2002 Town Plan reviewed these statutes and made an assessment of some of them with regard to their efficacy.

State Water Quality Standards: These standards regulate point discharges to the lake. Application of individual home septic tank effluent to farm fields is also regulated.

Agriculture Nonpoint Source Pollution Reduction Program: These standards apply to agricultural nonpoint sources of contamination.

State Environmental Protection Rules: Designed to protect public health from sewage disposal; direct and indirect sewage disposal systems need permits. The Town now administers the Wastewater System and Potable Water Supply Rules.

State Management of Lakes and Ponds: Regulates land below 95.5 feet mean sea level (MSL) only.

State Wetlands Rules: Regulates activities in wetlands.

Corps of Engineers: Regulates activities in or affecting navigable waters and associated wetlands below 98 feet MSL.

Charlotte Zoning: Shoreland district covers 1,000 feet inland from low water mark. It offers a good opportunity to protect scenic beauty, recreational opportunities and environment. Zoning Bylaw amendments to improve shoreline protection were added in the 1995 bylaw revisions and are adequate. The amendments removed deficiencies from the standards. Conditional uses were more clearly identified, setbacks from the shoreline for septic systems were established, height restrictions were added, special requirements for shoreline districts were added to protect shoreline vegetation, enhance erosion control and add more restrictions to shoreline wetlands. In addition, the bylaws improved language to preserve existing public access. In the past the Charlotte shoreline bylaws have not always been enforced, especially regarding cutting of vegetation, but resident awareness of the bylaws and enforcement is improving.

The State uses a special wetlands definition for lake settings. Charlotte bylaws uses a definition based on State Wetland Rules that the state does not apply to a lake setting. Under Charlotte's current definition, over 75% of the shoreline is wetland and Section 4.5, E, 5. of the bylaws prohibits docks, stairways, boat launches and other traditional shoreline uses in wetlands. It is probable that there are many non-conforming structures along the shoreline based on the existing wetland definition and bylaws. The Town should

amend the wetlands definition in the zoning bylaws for wetlands along the shoreline to match the definition in the State Wetland Rules for Lakes, Ponds, and Reservoirs (Section 3.2, b, (1)).

> *"b. Wetlands/Deepwater Habitat Boundary Criteria...Wetlands shall be distinguished from deepwater habitat by the following criteria: (1) Lakes, Ponds and Reservoirs: When adjacent to any lake, pond or reservoir that is a public water, a wetland's boundary shall extend to the maximum extent of a prevalence of surface, emergent, or woody wetland vegetation at any time during the growing season. For all other lakes, ponds, or reservoirs, a wetland boundary shall extend to a depth of two meters."*

The Town should also amend the bylaws to allow for removal of purple loosestrife, water chestnuts and Eurasian Watermilfoil which are considered non-native nuisance plants along the shoreline and in shoreline wetland areas.

4.5.2. Public Access to the Lake

There are 11 existing points of public access to the lake on the shoreline in Charlotte. These points of access vary in their accessibility and use potential due to roads, parking, fees, and owner preferences. The following is an inventory of these areas:

- Town Beach: Available for swimming, picnicking, and sail boarding. Adjacent ball field and tennis court. Parking available. Open to public. Fee charged.
- McNeil Cove Marina: Boat launch and mooring facilities available for a fee. Also boat storage and parking.
- McNeil Cove-Town: Use is limited by parking and available mooring space. The Town should explore means to find parking and make the launch useable on a limited basis for Charlotte residents.
- Cedar Beach: Townspeople's suggested right to use private pier at Cedar Beach requires clarification. A legal opinion sought by Cedar Beach Association determined that Cedar Beach Dock is not required to be open to the public.
- State Fishing Access on Converse Bay: State-owned boat launching site limited by statute to use for fishing purposes, but the launching of pleasure boats is generally permitted. Parking is limited. Used in winter for ice fishing and skating.
- Converse Bay South (Deer Point): Town access point; no parking available. Lack of clarification of adjacent leaseholders lot lines. Appropriate for mooring access and canoe launching. A bicycle path point of interest.
- Whiskey Bay-Thompson's Point: Town access point; no parking available but could be developed on adjacent Town land. Used extensively for ice fishing. Appropriate for controlled, pocket-sized park for swimming, picnicking, and ice fishing access. Will require stabilization of bank and walkway leading to the beach, provision of picnic tables and trash receptacles as well as monitoring and servicing by Town employees.
- Old Dock-Thompson's Point: Town access point; no parking immediately available but within short walking distance from proposed Whiskey Bay parking area.
- Gibb's Lot-Thompson's Point: Town access point; no parking available. Expansion of use would have adverse impact on adjacent leaseholders.

- Caretaker's Lot-Thompson's Point: Town access point, no parking immediately available but could be developed nearby at Whiskey Bay site. Potential use as limited boat launch facility.
- Lane's Lane-Thompson's Point: Town access point; no parking available but could be easily developed on adjacent Town land. Potential use for small boat launch facility and/or picnic area.
- Point Bay Marina (private): Individuals are permitted use of the ramps to launch or retrieve boats whenever they are not in use by Marina staff.

The current access to Lake Champlain for townspeople needs improvement in the future to meet the needs of the Town's growing population.

4.5.3. Mooring Management

Parts of the shoreline have experienced explosive growth in moorings for boats owned by both townspeople and the public at large. This situation has created the following problems:

- Location of moorings in areas unsuitable because of navigational concerns, extreme exposure, protection of wildlife, maintenance of natural areas, and protection of public swimming areas.
- Lack of a procedure to deal with the demand for mooring to assure good and reasonable access to boating on the lake for residents and the public.
- Parking problems to serve the users of the boat moorings
- Lack of designated anchorage areas for overnight use
- Concern for unreasonable use of the lakeshore by transient boaters

The Shoreline Committee has identified five areas where moorings may be designated and managed by the Town should the situation warrant:

- McNeil Cove
- Converse Bay, North
- Converse Bay, South
- Caretaker Access, Thompson's Point
- Lane's Lane, Point Bay Marina area on Thompson's Point

4.5.4. Thompson's Point

Since 1839 the Town has owned 230 acres of lakeshore, woods and meadowland on Thompson's Point. In 1874 the Town began leasing camp lots to individuals and, as a result, 120 camps were built on lakeshore lots averaging a half acre. The camps occupy 50 acres; the remaining 180 acres has been maintained for farming and woodland. A Poor Farm was operated on the point until the 1930s.

The soils are heavy clay and poorly drained. The interior land is rolling to gently sloping in all directions. The woods are a mixture of hardwoods and conifers. The lakeshore varies from steep rock cliffs with limited water access to gently sloping ledges and shale beaches and marshy land in Town Farm Bay.

Even though the camps are relatively close together, one has the feeling of privacy and open space at Thompson's Point, due to the large amount of undeveloped land in the center of the Point, dense woods, and the lake.

The camps themselves vary in size and value. Their style is representative of 1880s and 1890s resort architecture. The camps are well-placed within this landscape. Their design harmonizes with the setting, incorporating irregular plans and projecting gables or turrets. The camps located in an area from the tennis courts west and south back to the western part of Town Farm Bay are within the Thompson's Point Historic District, which is on the State Register of Historic Places.

Originally most of the camp owners were local residents. As of March 1999, 14% of leaseholders were residents; 36% reside in other Vermont towns; and 50% live out-of-state. Further, 22% of the leaseholders reside in Chittenden County. Although most camp owners are from out-of-state, many of them can trace ownership of their camps back through several generations of family to the original owners.

The meadowland is leased for agricultural purposes, and the forest is managed under guidelines recommended in 2000 by a Selectboard-appointed advisory committee.

New dwellings, whether seasonal or year-round, are not allowed. The soils have severe limitations for on-site sewage disposal, and therefore a community wastewater treatment system was permitted and constructed in 1994 as a “best fix” system to serve only the existing camps on Thompson's Point. Water supply comes from the lake for most camps. Many of the pipes run overland and are not suitable for winter use. Roads in the area have charm and character, although their narrow and tree-lined condition sometimes pose problems for motorists and emergency vehicles. To date, the general consensus is that improvements to the roads would diminish the character of the area.

The leases permit only seasonal use of the camps due to the limitations of soils, wastewater system permit conditions, water supply, and roads.

In 1984 a committee appointed by the Selectboard to study the relationship between the Town and the camp owners issued the following findings and recommendations:

- There is no need in the foreseeable future for increased public access to Thompson's Point
- The open space should be maintained in perpetuity.
- No additional lots should be leased.
- The seasonal-use-only rule should be strictly enforced.
- In 1983 the Town derived an income of $111,184 from Thompson's Point.
- The Town should retain ownership of Thompson's Point in its entirety.
- The Town should continue leasing lots to the camp owners.

The 1999 Lake and Shoreline Committee reviewed the report and updated Thompson's Point information. It found that seasonal use only with no further camp development continues to be appropriate. However, the Committee found that there is a need for increased and enhanced public access for Townspeople, as detailed in Section 4.5.2 above.

4.5.5. Cedar Beach

Cedar Beach is a summer colony founded as the Jolly Club by Burlington business men in 1873. Today there are 19 cottages in the Cedar Beach Association. Several cottages are owned by descendants of the original owners.

Originally the Cedar Beach Association had two boat houses, several ice houses, and its own electric company. The Association still operates a pump house for water distribution to members. It also operates a club house, tennis courts, dock, and trash pick-up service. The Association owns the land and approves all sales and rentals of cottages; it prohibits the use of camps for year-round occupancy.

The cottages were built in the 1870s and 1880s and are representative of resort architecture of the period. The cottages are in the Cedar Beach Historic District on the State Register of Historic Places.

Cedar Beach has some of the same limitations for expanded residential development as Thompson's Point. Roads are narrow and tree-lined; water supply is from the lake; and septic systems are on-site, in some cases on problem soils. Unlike Thompson's Point, however, portions of Cedar Beach have adequate soils for on-site sewage disposal. The Lake and Shoreline Committee has recommended that septic disposal regulation be routinely monitored in this area of the shoreline

4.5.6. Lake Champlain Islands

The Lake Champlain Islands are an important feature of Lake Champlain. They serve as significant wildlife habitat for nesting birds, recreation areas, and seasonal home sites, in addition to contributing to the scenic beauty of the lake. The Lake Champlain Islands in Charlotte include Sloop Island, Pickett Island, Garden Island, Cedar Island, and the Dean Islands. Sloop Island (less than 1 acre) is owned by the Vermont Agency of Natural Resources; it is a popular picnic, swimming and fishing site. Pickett Island (less than 1 acre) is in private ownership; a proposal for building on it was defeated several years ago. It is also a popular picnic and swimming site. Garden Island (25 acres), is in private ownership and has several camp lots and one large land holding. It is used primarily for nine seasonal homes. Cedar Island (2 acres) is in private ownership and has three dwellings on it. The Dean Islands (1 acre in total) are in private ownership; one island has a seasonal home; another a boathouse; and the third is undeveloped.

The islands are very vulnerable to human abuse and environmental degradation due to shallow soils, nesting sites for birds, and the prominence of the islands on the lake.

4.6. Community Facilities and Services

4.6.1. Burns Property

In 2000, the Town purchased 55 acres of the former Burns property at the south edge of the existing Charlotte village with the assistance of the Charlotte Land Trust, the Vermont Land Trust (VLT), and the Preservation Trust of Vermont (PTV). In 2002, the Selectboard appointed a committee (called the Burns Property Committee) to undertake a public planning process for the future use of this property as required by the funding agreement with the VLT and the PTV. This planning process was an extensive and broadly inclusive process that considered municipal and school needs, recreation and trails possibilities, affordable housing, conservation, and other identified community goals.

To assist with the planning process, the Burns Property Committee hired Otter Creek Engineering to analyze soils for wastewater disposal capacity and to delineate wetlands, and in 2004 the Committee hired Vermont Design Institute to assist with additional public facilitation and general design work. The Committee issued a report entitled "The Burns Parcel: Final Report on the Community Planning Process — May 2004 to February 2005" and the Committee chairwoman made a presentation at Town Meeting 2006.

Based on the discussion at the 2006 Town Meeting, the Selectboard re-charged the Committee with creating a master plan for the parcel. In the ensuing months, the Committee developed a master plan for the parcel as depicted on a plan prepared by Vermont Design Institute entitled "Master Plan for the Burns Parcel, Charlotte, Vermont" dated June 2006. The master plan included a cluster of affordable dwellings in the northwest corner, reserving the remainder of the meadow for future Town use (such as for a park or ball field), conserving the clayplain forest and wetland, continuing with the flea market until another more appropriate use is proposed, and allowing two primary trails through the parcel in east/west and north/south orientations.

The Selectboard put a advisory ballot-item at the November, 2006 election, which stated: "Should the Selectboard convey five acres in the northwest portion of the former Burns property to a non-profit housing organization for the development of up to nine affordable dwelling units, reserving the remainder of the 55 acre parcel for future Town use?" The article was approved with 207 in favor, 198 opposed.

As a result of this approval, in late November the Selectboard authorized the Champlain Housing Trust to apply for Sketch Plan Review for the development of up to nine affordable dwellings. The application was reviewed by the Planning Commission in January and February 2007. The Selectboard also hired Civil Engineering Associates to develop a master wastewater disposal plan on the parcel—this work was completed in February, 2007.

In the meantime, the Selectboard considered putting a binding article on the ballot for Town Meeting 2007, to convey five acres to an appropriate non-profit housing organization for the creation of affordable housing. The Selectboard decided to remove the article from the ballot, as the board felt that new information regarding the wastewater disposal master plan, as well as the as-yet uncompleted Sketch Plan Review, warranted additional time and study prior to a binding vote.

The Selectboard is currently reviewing the wastewater disposal master plan, and is considering how to plan for the best use of the septic capacity to further the goals of the village.

4.6.2. Schools and Child Care

Due to both its fiscal and social significance, education is perhaps the single most important community service provided by the Town of Charlotte. Socially, the education services have a critical impact on the lives of Charlotte's youth. In addition, the school provides a focus for community activities. In 1995 school expenditures were $4,704,162, which accounted for 79% of all municipal expenses. In 1999 fiscal year budget, expenditures for schools ($5,764,861), increased to 81.8% of total municipal expenses, representing a 22.5% increase over 1994-1995. In FY06 total expenditures were $8,908,560.

Charlotte Central School

Charlotte has one public school, Charlotte Central School, which provides education for kindergarten through eighth grade. It also serves as a place for large gatherings, such as Town Meeting. The school is centrally located on Hinesburg Road just west of the intersection with Mt. Philo Road. Charlotte Central School was constructed in 1949 and added to in 1969, 1987 and 1996. The 1987 improvement added a multi-purpose gym, five classrooms, a lab, and spaces for technical education, art, and living arts to the school. In 1996 a second story and a full size gym facility was added. There are 44 classrooms, a gym, cafeteria, and library within the building. Outside there is a playground and playing fields, which were improved in 2000, and provide recreational space for the entire Town

In previous years the Charlotte School Board projected that physical expansion and renovation projects would be necessary. Since then the Town has completed the most recent expansion; the School Board does not project a need for expansion in the near future. The capacity of the school is 620 students; in 2005 enrollment was 506. Over the past ten years, the highest enrollment was 535 students, which was in 1999. The School Board and Chittenden South Supervisory Union have forecasted that enrollment will continue to decline, reaching approximately 375 students in 2016.

Currently, there are 91 full-time and part time teachers and staff (67 Full Time Equivalent) employed at the school.

Table 12: Charlotte Central School Enrollment and Teaching Staff Trends

Year	Students	Teachers (FTE)	Year	Students	Teachers (FTE)	Year	Students	Teachers (FTE)
1980	435	25.0	**1990**	473	32.0	**2000**	529	49.11
1981	425	25.0	**1991**	467	32.9	**2001**	517	46.91
1982	392	24.0	**1992**	479	33.9	**2002**	533	47.4
1983	374	26.0	**1993**	488	34.2	**2003**	521	46.29
1984	350	26.0	**1994**	501	34.0	**2004**	521	47.26
1985	341	28.5	**1995**	498	35.6	**2005**	506	47.56
1986	369	27.9	**1996**	514	37.26			
1987	392	27.9	**1997**	514	37.1			
1988	425	30.7	**1998**	525	39.1			
1989	450	31.5	**1999**	535	42.71			

Source: Charlotte Central School, Chittenden South Supervisory Union, and VT Dep't of Education

Champlain Valley Union High School

High school students attend Champlain Valley Union High School (CVU) in Hinesburg along with students from Shelburne, Williston, St. George, and Hinesburg. CVU was built in 1962 and added to in 1979, 1983 and 2005. Site improvements were made in 1987 and 2005.

1,371 students were enrolled in the 2005-06 school year, 17% of which were from Charlotte. The Chittenden South Supervisory District estimates the 2007-08 enrollment to be 1,374 students, and then enrollment will start to decline, reaching 1,198 in 2012-13. In addition to CVU, high school age students may attend the Center for Technology in Essex or the Burlington Technical Center. CVU also provides educational opportunities for adults through the Access Program.

Child Care

Title 24 VSA Section 4302(13) states that towns' planning processes include the following goal: "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."

Existing Services

There are currently four known facilities that provide child care in Town, based on a 2005 inventory conducted by Child Care Resources (a consulting firm located in Williston) and supplied by Chittenden County Regional Planning Commission. The Deer Path School on Greenbush Road discontinued its operation in 2003.

The Charlotte Children's Center is located in the West Charlotte village, and is run as a not-for-profit organization. The Children's Center opened in 1984. It runs a daytime program for children between six weeks old to Kindergarten age, and an after-school program for Kindergarteners. It is licensed to serve 38 children. The program has positive relationships with the Senior Center, the Charlotte Fire and Rescue, the Library, and until its recent move to Shelburne, the Flying Pig Bookstore. Crossing Ferry Road from the Children's Center to the Library can be difficult because of the speed of car traffic. The cost of the program is relatively high (approximately $6,000/year) however the Center has attempted to implement a scholarship program. According to management (Kristin McClary, the Executive Director) the main limiting factor for accepting more children is wastewater disposal capacity. Maintenance of the building can be an issue, since the building is an older structure. Parking is not a limiting factor. The Center has not had a problem finding employees, most of whom are not from Charlotte.

The YMCA, which is also a not-for profit organization, uses the Charlotte Central School facility. It is a licensed child care program, and serves school-age children with after-school activities until 6 p.m. The program has a capacity for 50 children, but usually serves 20-25 children who tend to be from Kindergarten through third grade ages. A summer program is run in Shelburne, and an infant/toddler program is run in Burlington. Management (Marsha Faryniarz) has indicated that additional infant/toddler services are needed throughout the county, but it requires a higher ratio of staff to children (1 staff person to every 3 children) than higher ages, so is more expensive to run. A subsidy is provided by the state to families that meet income criteria, and the YMCA makes scholarships available to families who don't qualify for the state subsidy but still need some assistance. Except for additional infant/toddler services, management did not indicate that the Charlotte program has any particular needs. The program has not had a problem finding staff, most of whom are from Burlington.

The two other facilities are privately run for-profit businesses: Creative Explorer's Daycare is located on One Mile Road, and Kid Zone on Dorset Street near the Shelburne Town line.

Many parents who work in other towns use child care facilities that are closer to their places of employment, as this provides convenient visiting, drop off and pick up arrangements. Some employers provide child care as a means of attracting employees. Charlotte residents who work in the larger towns in Chittenden County and Addison County likely use child care services in those towns.

Land Use Regulations

It was intended that the Land Use Regulations (adopted March 7, 2006) were to allow a *Home Child Care* as "allowed by right (no permit needed)" in all zoning districts which allow residential uses (all but the Shoreland Seasonal Home Management District and the Conservation District), and as a permitted use (zoning permit and site plan approval needed) for facilities that are to serve more than seven children. Additionally, it was intended that a *Day Care Facility* be allowed as a permitted use in village districts and as a conditional use in the Rural and Shoreland Districts. These errors will be corrected in the next update to the Land Use Regulations.

4.6.3. Public Safety: Fire, Rescue and Police

Fire and Rescue

Public safety in the Town of Charlotte is provided by Charlotte Volunteer Fire and Rescue (an incorporated organization which is comprised of a fire department and rescue squad), the State Police, and occasionally the Town of Shelburne and the Chittenden County Sheriff.

The Town is fortunate to have dedicated, well-trained, and hardworking volunteers providing its fire and rescue services, who commit, in total, thousands of hours to the community for responding to emergencies and to training.

In 2007 there are 32 volunteers in the Fire Department. The Fire Department responds to fires, hazard conditions, mutual aid calls to neighboring departments, and false alarms. Assistance is also provided to the rescue squad. In addition the department is responsible for training its members, maintaining the facilities and equipment, fire prevention, and participation in community events.

The Rescue Squad provides Charlotte and neighboring towns with emergency medical services. The squad is responsible for responding to calls, training its members, and maintaining its equipment and facilities. Average response time of the squad is just under 10 minutes.

In 2007 there are 35 volunteers on the Rescue Squad, 14 paid per-diem members, one full-time paid staff member, and a paid part-time administrative assistant who is shared with the fire department. Five fire-fighters are also qualified to drive the ambulance. Paid Emergency Medical Technicians (EMTs) are on duty six days per week, 7 a.m. to 5 p.m. The Town expects to continue to rely on the volunteer fire department and rescue squad. CVFR may need to hire one or two additional paid firefighter/EMTs within five years. There is concern that with most working people who live in Charlotte employed outside of Town, as the Town grows, there will be too few people available to volunteer to respond to an emergency in adequate time during working hours (generally 8 a.m. to 6 p.m.). If local employment increases the number of Charlotte residents in the local Charlotte workforce, this would potentially increase the number of available volunteers to serve daytime fire and rescue call shifts, which would reduce the need for paid staff.

Table 13: Emergency Responses of Charlotte Volunteer Fire and Rescue

	Fire Department	Rescue Squad
1980	**73**	**90**
1987	**82**	**141**
1998	**106**	**270**
2006	**92**	**282**

Source: Town Annual Reports

In November 1998, the Town voters approved a $450,000 bond to finance the reconstruction of the fire station and the purchase of a new ambulance. During 2000-2001, the Fire Department and the Rescue Squad rebuilt the fire station now consisting of a four-bay station and a second building consisting of meeting and training rooms and enhanced facilities located on F5 just west of the Route 7 intersection. Charlotte Fire and Rescue has considered the need for a Fire-Rescue sub-station to be located on the east side of Town, preferably near the Spear Street-Hinesburg Road intersection to ensure adequate protection for this area.

Over the past two years, the Towns of Charlotte, Shelburne, and Hinesburg have met to discuss the feasibility of sharing rescue services. These discussion have been fruitful, and may well lead to arrangement that meets the needs of all towns. Potentially Ferrisburgh may also be interested in discussing the potential for sharing rescue coverage as well.

Police

The State Police provide police service to the Town, with the exception of dog complaints, which are handled by the Town's Animal Control Officer. The State Police currently have one officer assigned to the "South Patrol" which includes Charlotte, Huntington and St. George, although staffing has been reduced in the past few years. The Shelburne Police also respond to incidents in Charlotte. Both the State Police and Shelburne do not charge Charlotte for their service, although this may change in the future. The Town has also hired the Chittenden County Sheriff to enforce speed limits.

Speeding vehicles on local roads is an important safety issue that should be addressed in the near future. The Town has, on occasion, undertaken traffic studies to determine appropriate speeds, and adopted and updated a Traffic Ordinance to establish speed limits.

To obtain local police protection service the Town has four options in the near term: 1) employ our own police force; 2) establish a volunteer police department; 3) contract for police services with an adjoining town; or 4) enable the Town Constable to have law enforcement authority. Over the next five years it is not expected a full-time police department will be required.

4.6.4. Solid Waste Disposal

In response to the 1987 Vermont Solid Waste Bill, Act 78, the Town closed and capped its sanitary landfill located on 80 acres off Carpenter Road. At present, Charlotte is a member of the Chittenden Solid Waste District (CSWD) and is disposing of its solid waste through the Materials Recovery Facility (MRF) off

Redmond Road in Williston, which sells recyclables and transports other waste materials to an approved landfill outside of Chittenden County. The CSWD is in the process of siting a long-term regional landfill within Chittenden County to accommodate its member communities. Biosolids are collected privately and transported to the MRF where they are shipped to an approved composting facility outside of Vermont.

The Town anticipates continuing its membership with the CSWD to implement cost effective, regional solutions to the region's solid waste problems.

4.6.5. Cultural and Recreation Services

Cultural and recreation services are becoming an increasingly important Town service. Currently, the following public recreation facilities exist in the Town:

- Town beach and recreation area: swimming, picnic area, 3 tennis courts, bath house, ball field, and horseshoes, on Lake Road.
- Town canoe access to Lewis Creek
- Town scenic overlook on Route 7
- Six undeveloped Town accesses on Thompson's Point
- School playground, ice rink and playing fields
- State Fishing Access on Converse Bay
- Mt. Philo State Park, 163.2 acres
- Pease Mountain Natural Area, UVM
- Sloop Island, Vermont Fish and Game Department
- Charlotte Park and Wildlife Refuge
- Plouffe Lane Natural Area
- VAST snowmobile trails (organization membership or permission may be required)
- Little League baseball fields

Private recreation facilities include boat docks and mooring space at Fishers Landing and Point Bay Marina and three horse farms. Recreation programs are offered through the Town Recreation Committee, the Charlotte Pony Club, Charlotte Central School (Little League, Farm League, soccer, and basketball), and the YMCA (after school program and summer camp).

A new public library was constructed and gifted to the Town in 1998 by the Friends of the Charlotte Library and is located on Ferry Road on the Town Green, adjacent to the Town Hall. The little Quinlan School, a historic Charlotte one-room school house, is also located on the Town Green, and offers educational opportunities to schoolchildren and adults. The Charlotte Historical Society maintains the Charlotte Museum on Old Route 7 and hosts several events during the year. The Charlotte Senior Center opened in 2001, and offers an impressive array of social, cultural and recreational programs, which are geared to, but not limited to, participants over 50.

With the growing population, the demand for cultural and recreational services has been increasing. Both the type and amount of recreation facilities need to be expanded. As more land gets developed and posted

against trespassing, lands traditionally accessible to Town residents for hunting, fishing, hiking, riding, cross-country skiing, snowshoeing and snowmobiling are closed. The high cost of land, particularly along the shoreline, natural resource protection areas, soils and drainage constraints, and steep topography are affecting the ability of the Town to obtain new property for recreation facilities. Residential development also creates the demand for geographic distribution of recreation facilities; currently, recreation services are concentrated in the western section of Town.

Given these conditions, the following recreation needs have been identified:

- The development of an integrated trail network that links every sector of Town for pedestrian, and where appropriate, for bicycle and equestrian traffic. The Selectboard adopted the plan for this trail system in 1998. Maps of the adopted plan which show the proposed alignments are included in this Town Plan. Implementation of this system needs to proceed as a multi-year effort.
- Tennis court resurfacing, rafts and docks at the Town beach
- Playground equipment
- Sump pump at bath house
- Stairs and fence at Town beach
- Recreation area shelter for summer camp programs
- Improvements to school recreation facilities, including skating rink
- Lewis Creek picnic area

State statute allows the Town to adopt impact fees to fund capital expenses. A capital budget and program is required to be adopted prior to enacting impact fees, and the fees would be restricted to capital projects as defined in 24 VSA Chapter 131.

4.6.6. General Government

Local government in Charlotte is primarily a volunteer form of government. Volunteers serve as elected board members and on appointed commissions and committees. The Selectboard, Planning Commission, and Zoning Board of Adjustment, School Boards, Conservation Commission, Recreation Commission, Trails Committee, and Energy Task Force consist of volunteers.[15] The Town offices are in the Town Hall, relocated and newly constructed in 1994 in the West Charlotte Village on Ferry Road. The Town Hall, library, Post Office, Senior Center, and Fire and Rescue Station make up the core of Charlotte's Town Center.

Town employees include the Town Clerk (who is also the Town Treasurer), Assistant Clerk, Assistant to the Selectboard, Town Planner, Zoning Administrator (who is also Sewage Control Officer and Deputy Health Officer), Administrative Assistant to the Planning & Zoning Department, Senior Center Coordinator, Organized Sports Coordinator, and Fire and Rescue Administrative Assistant. The Town uses a consultant to review wastewater plans submitted for sewage and subdivision permits. The Town contracts annually for the services of a professional assessor to assist the Town Listers. The three Town Listers are paid on an hourly basis and reimbursed for mileage. The Town also contracts for legal services.

[15] The Selectboard's annual fee is excepted.

The position of Assistant to the Selectboard was created in 1998, and is currently salaried at 20 hours per week. The need for this position is a direct result of the growth of the Town and the increased demand for services as well as more complex and extensive governmental requirements. The current demands on the position indicate there may be a need to make this a full-time position in the near future.

4.6.7. Private Services: Sewage Disposal, Water Supply and Roads

Water supply and sewage disposal are private services in the Town of Charlotte. The Town also has a growing number of private roads due to the increase in subdivisions. The lack of both municipal sewage disposal and water supply systems has required property owners to meet their own needs for these services, primarily on site. There are also a few private community water supplies and sewage disposal systems serving developments. On-site sewage disposal systems are administered by the Town under the State Wastewater System and Potable Water Supply Rules).

Sewage Disposal

The severe limitations for on-site sewage disposal within the Town have resulted in some sharing of good sewage disposal sites among several dwelling units. These community systems may enable property that might otherwise be undevelopable due to steepness of grade, wetlands, poor soils, or other fragile environmental conditions to be developed. Therefore, they may encourage development in areas that the Town has stated are in need of protection. Alternatively, community systems may enable a parcel to be developed in a cluster pattern which would advance the protection of farmland or other critical resources.

Frequently these community septic systems involve pumps, gravity lines, force mains, and leaching fields or mound systems. Responsibility for the installation, operation, and maintenance of these facilities is shared by homeowners, according to homeowners association agreements approved by the Town. The systems must meet Town and state regulations.

Recently the Town has received proposals for locating these systems on parcels of land other than those proposed for subdivision. This situation has given rise to a new set of problems for the Town. It further promotes the development of otherwise undevelopable parcels, it raises the prospect of Town liability where lines cross Town roads, and it removes the facilities further from the site where the development is taking place thus scattering these facilities around the Town and expanding the area where failure can occur.

The continued proliferation of the systems around Town, particularly long force mains and off-site disposal facilities, represent a long-term liability to the Town. Through conditions of subdivision approvals the Town has stated that it will not be responsible for taking over these private systems in the event of their failure. However, the Town is ultimately responsible for meeting water quality standards within its borders. Should a system fail and environmental degradation occur, the Town may be forced to act. This could be costly to the Town if measures are not taken assure that landowners will be held responsible under such circumstances.

Poor soils and the lack of a municipal sewer system have been the primary reasons why Charlotte has maintained its small town rural character and open spaces. In the future Charlotte will not be protected from growth and development by its poor soils and limited septic capacity. Modern wastewater disposal system technology is making it feasible to dispose of wastewater on steep slopes and in areas where soils

were traditionally incapable of adequately processing wastewater (they did not “perc”). The Town must be proactive in its planning and zoning regulations to direct future growth and development to areas where it is appropriate to promote compact settlements and protect rural landscapes and undeveloped open space.

The Town buildings, consisting of the Town Hall, Library, Fire Station, and Senior Center are presently serviced by a Town owned and operated septic system for exclusive use by the foregoing buildings.

Water Supply

Three community water supply systems serve communities in the Town; Lynrick Acres, Mutton Hill, and Wildwood West. See map 10, Public Water Supply Source Protection Areas. A fourth system that serves 13 dwellings in the Ten Stones community off of Greenbush Road is not on the State's list of community systems.

The Champlain Water District (CWD), a regional water supply district, serves an area in the Town of Shelburne contiguous to the Town of Charlotte. Property owners in Charlotte in this area have requested that the Town allow them to extend the CWD district water lines to their properties. The Town has not agreed to this action because the location of such infrastructure is not planned for this area and the Town is not prepared to undertake the management responsibilities for this water system within its boundaries.

The impact of such a system on the Town's administration and on the land use plan for the Town must be considered in weighing this decision. The Town has no administrative staff that could be assigned for this purpose. Major infrastructure, such as a water supply system, creates pressure for development where the water line is located. Its presence lowers the cost of land development by removing the uncertainty and cost involved in drilling a well. Typically such infrastructure serves areas of communities where growth is to be encouraged. State statute recommends that infrastructure investment be targeted to growth areas. The areas of the Town contiguous to Shelburne and Hinesburg have significant natural resources that the Town is trying to protect; these are not appropriate growth areas for the Town.

Sufficient water supply in Charlotte must be considered not only for drinking and personal and business use, but also for fire protection. The Town adopted a Fire Protection Water Supply Plan for the entire Town in April 1997. In summary, the plan was prepared to ensure that sufficient water supply is available for fire protection. A map of water supply sites is shown on Map 10.

Private Roads

Private roads are often developed to serve new subdivisions. There are several issues related to such roads. It is the Town's policy to keep the roads private to save the Town from maintenance costs. In such instances homeowner association agreements are required to ensure that the homeowners will provide for road maintenance. However, despite these agreements homeowners may eventually request the Town to take over the roads, and the Town may find that the roads have not been adequately maintained, and that it will be costly to bring them up to standard. Another concern is that unmaintained roads may become inaccessible to emergency vehicles and fire trucks.

Under the Land Use Regulations these roads must be designed to meet Town specifications. In September 1997, the Town adopted Road Specifications in the Recommended Standards for Developments and

Homes. The challenge for enforcing these Standards is that there may be some situations, such as smaller developments near resource areas, when smaller roads may be preferable.

Private roads often terminate in cul-de-sacs which do not connect through to adjacent properties. This situation can make it difficult for the Town to develop efficient street patterns serving several parcels and thus economizing on the length of roads. The need for connected roads is especially a concern in the village areas.

4.6.8. Towers and Telecommunication Facilities

Introduction / Issues

Telecommunications towers and antennas providing broadcast and wireless communications services have proliferated over the last decade, and although it seemed that these facilities would someday be replaced by satellites, this appears not to be occurring anytime soon; therefore the proliferation of ground facilities is expected to continue in the foreseeable future.

While the existence of these services helps foster economic growth in our rural state, aesthetic issues and potential threats to human health and safety, such as radio frequency interference [RFI] and radio frequency radiation [RFR] - have appeared as concerns accompanying the new technologies. The Selectboard adopted an Interim Zoning Bylaw on March 22, 1999 to support the Town's ability to protect the health and well-being of its residents. These provisions have since been incorporated into the Land Use Regulations

Types of Telecommunications Facilities in Charlotte

Generally, technologies under consideration include: broadcast (AM to UHF) and public safety transmitters, two-way wireless (analog cellular and digital PCS systems) and satellite systems.

This section documents locations, uses, existing power (wattage or strength) and frequency for each facility.

1. A multi-use tower on Pease Mountain, owned by Charlotte Volunteer Fire and Rescue Services (CVFRS), houses the following:
    1. CVFRS's antennas and a facility licensed to Chittenden County Firefighters Association. These are classified as Fixed Base facilities. Fire and Rescue VHF-band signals are intermittent and of low wattage (between 50 and 100 watts output power using relatively low-gain antennas).
    2. A WIZN FM broadcast antenna (relatively high power, 50,000 watts horizontal and 50,000 watts vertical effective radiated power [ERP] continuously). WIZN FM has FCC licenses for low-power UHF auxiliary-use transmission and the tower has an auxiliary antenna for the main frequency; it is unknown whether, or how, WIZN FM utilizes these.
    3. Verizon cellular equipment with wattage much lower than the WIZN FM antenna (intermittent use of several channels of up to 2,000 watts ERP and at higher frequencies than FM, in the 800 MHz band).
2. A multi-use tower located in East Charlotte, formerly owned by AT&T and now owned by the American Tower Company. Applications during the past year have been approved for a

television station and a cellular service; additionally, the U.S. Coast Guard has indicated that it intends to locate an antenna on the tower.

3. The State tower facility on Mt. Philo which includes the Vermont Department of Public Safety UHF two-way facilities, 6 GHz microwave links and 900-MHz band transmitters for the Vermont Lottery Commission
4. Other equipment including:
    1. Privately-owned 2-way radio equipment, usually located in homes, industrial and public-sector 2-way radio equipment located at various licensee facilities, including businesses, government and agricultural locations
    2. TV antennas and satellite dishes, primarily having one-way (receiving) capacity only; greater use of satellite two-way (transmitting and receiving) facilities is likely in the future.

It should be noted that two-way wireless telecommunications companies consider placement of repeater systems to be proprietary, and the FCC is not required to notify Towns of permits that are granted to companies to place equipment in those Towns. There may be other, less visible transmitters in Town.

Authority to Regulate

Federal

The Telecommunications Act of 1996 implicitly preserves the Town's authority to regulate the placement, construction and modification of two-way wireless (cellular or PCS) facilities when those facilities fail to comply with FCC guidelines on the environmental effects of radio frequency emissions. Towns are pre-empted from setting more stringent standards than the FCC, however.

The Telecommunications Act of 1996 specifically preserves the Town's authority to regulate the placement, construction and modification of broadcast facilities at any time. Towns are not pre-empted from setting more stringent standards than the FCC's regarding the environmental effects of radio frequency emissions from broadcast transmissions (radio and television).

Those FCC guidelines regulate the maximum permissible exposure (MPE) of the thermal/heating effects of RFR on human tissue. They do not regulate the athermal/non-heating effects occurring from long-term, low-level exposure, nor do they regulate the effects of radio frequency interference (RFI) to business, medical or institutional equipment. The primary effects of radio frequency emissions are the signals themselves; secondary environmental effects (thermal, athermal and interference to medical equipment) are health and safety concerns to the Town and should be evaluated before facilities are sited or new uses are permitted.

The FCC claim of exclusive jurisdiction over RFI to business, medical and institutional equipment was challenged legally by a group of Charlotte residents, with support for clarification on this point of law from U.S. Senators Leahy and Jeffords and U.S. Representative Sanders ("Brief As Amicus Curae in Support of Plaintiffs-Appellants", January 13, 1999). Though the U.S. Supreme Court declined to hear this case, the same citizen group is acting as lead petitioner in a second court challenge which seeks to:

1. Overturn Federal pre-emptions regarding the local consideration of possible health effects of radio frequency/microwave (RF/MW) emissions;

2. Allow State and local zoning laws to apply to the siting of towers instead of federal rules that today override them; and

3. Clear the way for the funding of scientific studies on the biological effects of RF/MW radiation.

The entire Vermont Congressional Delegation, eight State legislators, and 68 Vermont communities have jointly filed a brief in support of this case.

State

Vermont's Act 250 provides for the review of proposed sitings and/or changes of use under the criteria for air (#1), municipal services (#6), aesthetics (#8) and Town and regional plans (#10).

Town

A Health Ordinance was enacted 5/27/98 by the Charlotte Selectboard acting as the Health Board. Finding that the WIZN transmission facility on Pease Mountain, "while compliant with FCC RFR standards, may nonetheless result in a significant, continuing public health risk," the ordinance requires: periodic measurement of RFR levels at the site within two kilometers of the site at two specific points in time; restriction of public access to the facility; and the undertaking of a "commissioned study regarding the non-heating biological effects of electromagnetic fields'" by a certain date.

In November 1998, the Town commenced work on improved ordinances, and imposed a six-month moratorium on the review of any applications for the siting of new, or changes of use to existing, telecommunications facilities. Interim Zoning Bylaws were adopted 3/22/99. Broadly, they require: 1) a 1,500-foot setback from residential and specified public land uses, 2) aesthetic considerations such as lighting, color, landscaping, and 3) approval of such facilities as conditional uses in all districts, making them subject to more detailed review.

The Future

Should a new legal precedent occur which allows for increased local jurisdiction over RFI and/or environmental/health effects of Personal Wireless Facilities, Charlotte's Zoning tools can and should be strengthened to provide residents full authority to guide the arrival of such technologies in the Town.

To borrow from the Town Plan of Fairlee, VT, future policy should both "enable economic opportunities through the use of telecommunications technology" and "support the enhancement and expansion of the telecommunications network when such facilities do not have significant adverse environmental, health, or aesthetic impacts" on the Town. Charlotte should work as well to minimize any adverse economic impact to existing businesses or homes.

4.6.9. Charlotte Senior Center

In 1998 the Town learned of a bequest by Charlotte resident, Walter Irish, of $500,000 for the purpose of constructing a senior center in Charlotte. Under the terms of the bequest, the Town had two years from notification of the gift (July 1998) to decide if it would accept the money. The Selectboard appointed a committee to coordinate a study to determine the feasibility of constructing the center using the bequest and to report on findings. The feasibility study was completed in January 1999 in preparation for Town Meeting 1999.

To prepare the feasibility study, focus group discussions were held to discuss location, management, type of building, programmatic structure and scope, and users of a senior center in Charlotte. There was consensus in these discussions that the Senior Center should be located in the West Village as close as possible to other facilities such as the library, Town hall, post office, and store. The group agreed that the management should be by a non-profit group or should be modeled on a system used for the library and that fund raising, including grants from the Town, will be a necessary part of the success of a center. There was consensus that a new building would be more feasible as opposed to renovating an existing structure.

Whether to accept the Irish bequest with the Town funding the operation of a senior center gained a unanimous advisory vote of approval (Article 9) at the 1999 Annual Town Meeting. During 2001, construction of the Senior Center began, after completion of investigations and Town input as to the design and location of the facility. In the fall of 2001, the Town took over ownership of the property, and responsibility for maintenance and operation. Construction was completed, and a Board of Directors was selected. The Board of Directors hired a part-time coordinator, who reports to both the Senior Center Board and the Selectboard. The Senior Center has become a very active, engaging and inclusive organization and community asset. It is now hard to imagine Charlotte without the Senior Center.

4.6.10. Cost of Government and Schools

The Town is dependent on the property tax for most of its revenues. This dependence has increased over the past few decades as a result of decreasing intergovernmental aid.

With the adoption of the State's Education Equalization Act (Act 60) the Town education tax has increased significantly. It is important to note, however, that Charlotte residents have consistently voted to spend more than the State minimum per-pupil-cost, and therefore, as required by the State funding formula, pay into the State education sharing pool. Furthermore, Town residents that qualify have received pre-bate payments from the State. In the coming year, tax bills will be adjusted to take into account income sensitivity.

Year-round residential properties represent the largest share of the Grand List, although the value of lakeshore properties have been increasing significantly more than those away from the lake. It should be noted, however, that year round residential properties require the greatest amount of Town services, and therefore cost the Town the most compared to commercial, seasonal, farm or open space properties.

Numerous studies have been conducted throughout the country and especially in New England showing that a Town's cost to serve a residential unit is far greater than the cost to serve a commercial property or conservation or farmland. Generally, school expenditures dominate Town budgets, and new homes often bring new school children. In most cases, these studies have been done to determine the difference in net cost between allowing a property to be developed for residential use and the cost of the Town purchasing the property for public open space or agricultural use.

American Farmland Trust reported that Cost of Community Service Studies conducted in more than 58 communities over the past decade show that residential land uses are a net drain on municipal coffers: it costs local governments more to provide services to homeowners than residential landowners pay in property taxes. For every dollar of tax revenue raised from residential landowners, the median cost to

provide public services to residential uses was $1.12 among these communities, compared to $.27 for commercial and industrial uses and $.33 for farm, forest and protected open space uses. [16]

In 1995-1996, AdHoc Associates (Deb Brighton) conducted a similar study (report dated 2/18/96) for Charlotte, analyzing the tax implications of funding a conservation plan in Charlotte ($.02 per $100 of assessed value for the Conservation Fund for next ten years). In summary, the study reported similar results. It was estimated that the fund would enable the Town to purchase approximately 1,125 acres outright.

The conservation plan affects Charlotte taxpayers in two ways: 1) the direct appropriation and 2) the reduction in the Grand List due to the reduction in taxable value of the properties once the development rights have been removed. The first impact amounts to a tax increase during the ten years in which the tax is collected, with the effect on annual property tax bill on a $250,000 property being about $54 in each of the ten years. At the end of the ten-year period, taxpayers continue to pay the taxes that the protected property no longer pays. The effect on the property tax bill on a $250,000 property would be about $8.

If the same 1,125 acres of land were developed, there could be as many as 225 houses, assuming five acres per house. Housing would add a considerable amount of value to the tax rolls, but would also entail substantial cost to the Town for municipal and education services. A typical $250,000 new house would cost the Town about $2,027 per year more than it would provide in revenues (including tax and non-tax revenues). A new house with the typical number of residents would need to be assessed at about $380,000 or more before it would pay for itself. [17]

In the long run, the cost of acquiring a property for conservation purposes is usually less expensive to taxpayers than residential development. When planning future budgets, the Town should consider these cost studies when contemplating choices between the costs of new residential development and the protection of land for conservation or farming purposes.

4.7. Transportation

The transportation system in Charlotte today includes several classes of roads, both paved and gravel, a ferry route, a limited use railroad, a bus route, segments of bicycle lanes, walking trails, seasonal snowmobile trails, and equestrian use of gravel roads and private properties. The transportation section of this Town Plan is intended to encourage multi-modal transportation, while acknowledging that the most extensive portion of the Town's transportation system was designed for use by automobiles.

In 1998 the Town, along with the other rural communities of Chittenden County, became a member of the Chittenden County Metropolitan Planning Organization (CCMPO). The CCMPO is the federally-mandated agency that plans and prioritizes the use of federal transportation funds. Highway projects using federal funds must generally be on the Federal Highway System, which in Charlotte includes U.S. Route 7,

[16] American Farmland Trust Fact Sheet: Cost of Community Services Studies, June 1998.

[17] Analysis of the Cost of the Proposed Conservation Fund in Charlotte, AdHoc Associates, Salisbury VT, 2/18/99.

Hinesburg Road and Church Hill Road. Also eligible for federal funds are bridges with spans greater than 20 feet, and most bicycle and pedestrian facilities.

4.7.1. Road System

An important element of the Town transportation system is the road system that provides for vehicular travel to all parts of Town and to the surrounding communities. The road system consists of a major regional arterial, Route 7, state-numbered Route F5 (Ferry Road), and the Town highway network.

Route 7

Route 7 is the major north-south arterial highway serving the western side of the State of Vermont between Massachusetts to the south and Canada to the north. It is the major route connecting the Town of Charlotte to the urban center of Burlington ten miles to the north and to the urban areas of Vergennes, Middlebury, and Rutland to the south.

Route 7 is a two-lane highway covering 6.6 miles within the Town; to the north within the City of South Burlington it widens to 4 and 5 lanes to accommodate the large traffic volume and multiple turning movements associated with development in that area. Within the Town, the surface width of the highway is 24 feet to 28 feet except at the intersection with F5 (Ferry Road) where it widens to 35 feet to accommodate turning lanes, and north of the intersection with F5 to accommodate a northbound climbing lane.

The average annual daily traffic (AADT) on Route 7, as measured just south of the intersection with Church Hill Road (Old Route 7), grew by 16%, or 3.8% a year, between 1980 and 1984. Between 1984 and 1988 the volume grew an additional 6.6%, however from 1988 to 1992 there was a decline in AADT of 8.8%; this may have been attributable to commuter traffic using Spear Street rather than Route 7. At a permanent traffic counter station located just north of the Church Hill Road/Route 7 intersection, the Vermont Agency of Transportation reported a 17.5% AADT volume increase from 1984 to 1988. From 1988 to 1993 the same station indicated a 4.7% decline in AADT counts. Between 1993 and 1998 the count at this station increased 9.6% with the 1998 AADT count at 11,000. The Chittenden County Metropolitan Planning Organization projects the average daily traffic will grow about 1.95% annually (compounded) over the next 20 years.

The Vermont Agency of Transportation (VTrans) has rated segments of Route 7 within Charlotte based on the average surface width, average roadway width, road conditions, safety, and service. The ratings range from 59.3 to 74.3, based on 1996 data. These ratings compare favorably to the 1991 ratings which were 44.1 to 56.2.

The section from Ferrisburgh to two miles south of Ferry Road has the lowest sufficiency rating, falling barely in the “poor” category (SR 60). This rating is influenced more by the condition and service components than the safety components.

Accidents on Route 7 within the Town are concentrated at the intersection with F5. The high number of accidents at that location has been of concern for many years. To date there has been no determination of the cause of so many accidents by the VTrans. They have made substantial improvements at the intersection in an effort to lower the accident rate. The former blinking yellow light was replaced by a full

traffic light; turning lanes were added; and, through traffic was better directed. There are several wide curb cuts just to the south on Route 7 serving a gas station, dairy bar, and warehouse.

The VTrans proposed widening Route 7 to four lanes for a distance of 2.9 miles starting about a half mile south of the intersection with F5. Considerable concern was expressed by Charlotte residents about the need for this project, its environmental impact, and its relation to longer range plans for improvements to the highway to the north and south of the Town. Of particular concern was the proposal for a bypass around the Village of Shelburne and its effect on Charlotte. The Agency has dropped the widening proposal and proposed rehabilitation of this portion of the highway instead by widening of the shoulders to eight feet, improving drainage, upgrading guard rails, and improving signage. The Agency has decided to prepare a long range plan for Route 7 and coordinate this plan with local and regional planning bodies.

It has been a policy of the Town of Charlotte for many years to maintain Route 7 as a major arterial through the Town. In part this policy reflects a concern that any major relocations, bypasses, or circumferential highways could have an adverse impact on the Town. To implement this policy the Town has strictly limited land uses along the highway. The Town has also instituted controls on curb cuts in the Land Use Regulations. To date these actions have been effective in maintaining the corridor as only a functioning major arterial and not as an access to numerous business and residences as is the case to the north and south.

Town Highways

The Town maintains 74.17 miles of highways of which 26.08 miles are Class 2 and 48.09 miles are Class 3. In addition, the Town has .37 miles of Class 4 highways. Many Town roads are used by bicyclists, pedestrians, and equestrians, in addition to motor vehicles.

Class 2 highways provide major routes of improved highways from town to town. Class 2 highways include Ferry Road, Church Hill Road, Hinesburg Road, Spear Street, and Mt. Philo Road. Class 2 highways are also called “major collectors” on the Federal Highway System. The sufficiency rating for these road segments is 57.0. Class 3 highways are all other highways that are maintained for travel in all seasons; some are paved and some are well-maintained gravel roadways. Class 4 highways are highways within the Town that are not maintained for year-round travel.

In 1998 the Vermont Legislature created the Class 2 Town Highway Rehabilitation Program. The purpose of the program is to fund reconstruction of Class 2 highways which are also part of the federal aid system and are classified as major collectors. In order to be eligible a road must have a sufficiency rating less than 50 and an AADT greater than 1,000. Should the sufficiency rating drop below 50 for this road the Hinesburg Road/Church Hill Road route, this program could be a source of funds for repair.

The Town contracts for its road maintenance and owns no equipment of its own. Highways are perennially the largest item within the Town (non-school) budget. If the Town were to take over road maintenance, there would be a severe fiscal impact on the Town to buy and maintain the necessary equipment, and a high operating expense for a Town road department.

A road inventory of Town road conditions has been completed. By using that evaluation the Town will be able to identify, in order of priority, the roads requiring rehabilitation.

The following planning issues related to Town highways need to be addressed:

- Whether to continue to provide Town highway services by contract or to create a Town Highway Department;
- How, when, or if at all, to expand the Town highway network;
- How to protect and enhance scenic qualities of designated scenic roads;
- How to ensure that all roads and driveways will be maintained to remain in conformance with Town standards; and
- How to program necessary road and bridge improvements and how to make these improvements while protecting special features of the Town's environment.

4.7.2. Railroad

The Vermont Railway maintains the state-owned railroad line that runs through Charlotte in a north-south direction west of and roughly parallel to Route 7. At one time passenger service was available to Charlotte and a railroad station was located at the intersection of the tracks with F5. For many years, however, the tracks were used for freight traffic only. Charlotte's commercial/light industrial zone is located contiguous to the railroad on F5 which offers businesses the potential for use of the rail siding, although former owners of Country Home Products, one of the businesses in this district, indicated that use of a railroad siding is only appropriate for specialized situations involving very heavy equipment, for which truck transport is not suitable.

A commuter rail service between Charlotte and Burlington was started in December 2000 after several years of planning for the primary reason of mitigating traffic congestion during the reconstruction of Route 7. There was some discussion regarding expanding the rail service to Middlebury because many people using the rail service were from south of Charlotte, and they drove to Charlotte and then took the train to points north. Additionally, because approximately 60% of Charlotte’s workforce commutes to communities along the rail line, the return of passenger rail service would be a great amenity to the Town and is strongly supported.

Although the rail service had higher ridership than was originally anticipated, service was discontinued in 2002 by order of Governor Douglas. There are currently no definite plans to reinstate the commuter service, although there is occasional passenger service for tourism and holiday events.

The introduction of Amtak passenger service into the Champlain Valley has also been discussed in recent years. Potential increased use of the railroad corridor should be coupled with increased safety improvements for all railroad crossings.

The past few years have seen an increase in usage of the rail siding in Charlotte for storing railcars. This storage may partially be the result of a phased relocation of the Burlington rail-yard. There is a possibility that the Burlington rail-yard may eventually be eliminated, as there are currently efforts underway to develop that yard for commercial and residential uses. Use of the siding as a de-facto railyard is not desired by many residents along the line, who are impacted by late-night moving of cars and scenery degradation; also, those whose property is divided by the railroad are sometimes unable to reach portions of their property, for example to maintain fields. The storage of railcars represents an intensification of an industrial use amidst primarily residential and agricultural uses, and is not desired by the Town.

4.7.3. Ferry Service

Ferry transportation between Vermont and New York has been operating in Charlotte since 1801. Today the Lake Champlain Transportation Company operates the ferry service between Charlotte and Essex, New York. During the summer months two ferries run providing service every half hour. The ferry serves tourists as well as commuters and people on business. It has historically operated from the spring through the late fall.

An extra ferry slip and an upgraded parking facility was added in 1998 which increased the ferry's capacity. More frequent ferry trips can run as a result of this expansion. Lake Champlain Transportation Corporation is running ferry service year-round, and is only forced to stop when the ice on the lake becomes impassible. Any future expansion of ferry service must address traffic safety, including pedestrian safety, and impacts on Charlotte's West Village.

The road serving the ferry, F5, is narrow, steep, and winding near the ferry dock. Ferry traffic on F5 is heavy especially in summer months. Parking contiguous to the ferry is very limited given the topography of the area. Soils are poor for on-site sewage disposal and sanitary facilities are currently provided by portable facilities. These conditions are a limiting factor for further expansion of the ferry operation.

4.7.4. Public Trails and By-Ways

An integrated trail system that links every sector of Town for pedestrian, bicycle, ski, and equestrian travel has been supported by a variety of community groups and planning documents for over 10 years. The Recreation Commission sponsored a study by LandWorks in 1990, and in 1998 a vision for an integrated trail system was created by LANDSCAPES with the assistance of the National Park Service. The resulting “trail vision maps” are included in the Town Plan as maps 15, 16 and 17, and show generally desirable routes, but not actual specific alignments. The actual alignments are to be determined as easements become possible either through donation or purchase.

Some trails have been constructed; in other areas, trail easements are in place, but the trails themselves have not yet been built. In some areas, easements still need to be secured. Implementation of this system will proceed as a multi-year effort and needs to be integrated with other planning activities in the Town. To provide leadership in this area, a Trails Committee was appointed by Selectboard in 2003, made up of representatives from several different committees and commissions, as well as the general public.

Acquisition of trail easements also takes place during the subdivision review process, in order to facilitate the linking of new and established neighborhoods throughout Town. Courts have generally upheld requirements by Planning Commissions that developers convey trail easements to the municipality when there is a clear relation between who will use the proposed development (residents or customers) and the trail network. Additionally, the Vermont legislature passed a law in 1998 that protects landowners who allow public trails on their property from liability for injuries to those who use the trail.

While the “Charlotte trail system” is generally considered to consist of town-owned easements and town land on which trails are sited, other trail organizations contribute to the overall trail network. In particular, the Vermont Area Snow Travelers (VAST) trails, which allow winter travel by snow machine and by nordic skiers, are also part of the “trail network.” Multi-use paths can serve a wide variety of the Town’s

and region's population, and therefore are encouraged; however it is recognized that some trails should be only for non-motorized uses.

4.7.5 Public Transportation

Since the commuter rail service to Burlington has been discontinued, public transportation in the foreseeable future will be in the form of bus service.

A bus service called the Middlebury Link Express (operated by CCTA for the Green Mountain Transit Agency) currently runs between Burlington and Middlebury, making two trips in both directions in the morning and in the evening. There is currently a stop with five leased parking spaces at Steve's Citgo on Route 7, and there is also a stop at Jimmo's Motel in north Ferrisburgh. Initially the service used the train station on Ferry Road as the stop in Charlotte, however this was felt to be too far from the bus' route along Route 7.

In May 2005, there were 29 boarders in the morning and 22 de-boarders in the evening. Charlotte riders represented 6.1 % of all riders for the month of May, 2005 (51 of 838).

During the summer of 2007, data indicates that Charlotte riders (as measured by those who either board or de-board at Steve's Citgo) represent 5% of passengers. Over the course of FY07, that would total approximately 690 trips either beginning or ending in Charlotte. Charlotte riders may also use the stop at Jimmo's Motel in north Ferrisburgh, which would be in addition to this figure.

4.7.6 Park & Ride

There is not currently a formally designated "park and ride" facility in Charlotte, although the train station parking lot and the Town Hall parking lot are used on an informal basis. As the Town explores ways to reduce energy consumption, and also as it further defines West Charlotte and East Charlotte villages, the creation of park and rides should be considered. Such facilities could also serve as "village parking" for businesses and other uses within the village, as well as a transit stop.

Currently, as a prerequisite to funding construction of a park and ride facility, the state requires either that the property is owned by the municipality or the state, or that it is subject to a long-term lease (usually 30 years). As new development and re-development occurs within the West Charlotte village, the designation of a site should be considered. It may also be appropriate to put potential sites on an Official Map (see 24 VSA 4421) if the Town adopts one—this would facilitate the reservation of land for such a facility, but would not obligate the Town to purchase it.

4.8. ENERGY

Overview

Title 24 Section 4382 (9) V.S.A. indicates that the Comprehensive Plan shall include 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, (and) a statement of policy on patterns and densities of land use likely to result in conservation of energy."

Although energy plans have been a required component of Comprehensive Plans for over 20 years, recent events have once again brought it to the forefront. These events include but are not limited to:

- Tropical Storm Irene and an overall acceptance of climate change and its impact on weather events,
- High and volatile cost of energy inputs,
- Increased awareness of the relationship between energy independence and a strong economy,
- Competing interests for land use and development and the siting of new installations,
- Recognition of the relationship between healthy communities, sustainable energy, and smart land use planning.

Inventory and Trends

According to the U.S. Department of Energy's Energy Information Agency (EIA), 60 percent of Vermont's energy use was met by petroleum-based fuels, 9.7 percent by natural gas and 32 percent, which includes nuclear energy and all renewable energy sources (hydro, biomass, wind and solar) accounted for the remaining energy supply in 2013.

Most of our energy is used by the transportation sector – 37 percent -- with an additional 32 percent used in the residential sector and 31 percent in the commercial / industrial sector(s).

The Vermont Agency of Transportation Profile outlines a series of objectives used to quantify the transportation's sectors progress in meeting the goals of the State Comprehensive Energy Plan. Vehicles powered by renewable energy, fuel economy, vehicle miles travelled, public transit and bicycle and pedestrian commuters are just some of the objectives that will be measured by the Agency.

In 1997, the Legislature enacted Act 20 "Residential Building Energy Standards" (RBES) and "Commercial Building Energy Standards" (CBES) which established basic building standards for new construction projects. In 2013, the Legislature enacted Act 89 which clarified the applicability of Energy Standards to mixed use buildings. RBES and CBES are based on International Energy Conservation Codes and include performance-based standards as well as some Vermont specific additions and exemptions. The

standards apply to most new construction in Charlotte and also apply to renovated portions of existing buildings and additions.

In 2011, the State of Vermont released a Comprehensive Energy Plan which set an ambitious goal of obtaining 90 percent of our total energy from renewable sources by 2050. To that end, the state has amended the 1998 Net Metering Law by expanding the permissible size limit per installation to 500 kW, simplifying the administration for net metering groups, allowing a registration process for photovoltaic (PV) systems 5 kW and under, increasing the overall net metering capacity cap per utility to 4 percent of the 1996 utility system peak or previous year's peak (whichever is higher), and creating a solar credit payment for all customers who have installed PV net metered systems. 2012 data from the Public Service Department indicate that net metering applications increased 4-fold between 2008 and 2012. Most applications were for PV installations and these increased from 140 applications to 603 applications.[18]

Currently Charlotte has 50 net-metering sites that generate up to 360 kW of electricity. Charlotte also has a larger PV installation that can generate up to 2.2 mW of electricity.[19]

4.9. Regional Issues and Coordination

4.9.1. Land Use in Adjacent Towns

Charlotte is surrounded by towns which have larger or more active commercial areas than does Charlotte. This contrast provides both potential problems and opportunities.

Shelburne

The Town of Shelburne, particularly on Route 7, is much more commercial than Charlotte. Within Shelburne's Rural 2 District directly contiguous to Charlotte, commercial and industrial uses are allowed, but sizable setbacks, open space, and clustering are required in order to protect the views of the Shelburne Village from the south along Route 7. The Town of Shelburne is also working to limit Route 7 accesses and eliminate existing access points wherever possible. A large parcel on Route 7 near the Town line has been permanently protected. Charlotte has consistently opposed the development or extension of public water and sewer lines into its boundaries and has opposed commercial zoning along Route 7 within the Town in order to maintain its function as a regional arterial. The goal and objectives of the Natural and Visual Resources and Land Conservation section of Shelburne's Town Plan (Vol. II, pp. 13 14) are consistent with Charlotte's goals for its shoreline.

18 Evaluation of Net Metering in Vermont, VT Public Service Department, 2013.
19 Vermont Energy Atlas, updated 7/1/2015.

Ferrisburgh

Ferrisburgh has a highway commercial district on Route 7 at the Charlotte Town line, which contrasts with Charlotte's Rural District designation over the line and Route 7 protection strategies. It is a specific policy of this plan that the southern portion of Charlotte near the Ferrisburgh border should remain rural and low intensity residential. Ferrisburgh has a conservation district along the shoreline and Lewis Creek at the Charlotte Town line. These districts are compatible with Charlotte's goals of protecting the shorelines of the lake and Lewis Creek.

Monkton

The Monkton Town Plan shows a Rural District near the Charlotte Town line. The purpose of this district appears to be consistent with Charlotte's Rural District. The Town Plan encourages cluster development and PRD techniques outside of the Village Center. Monkton seems to be looking closely at designating more specific land-use districts based on septic capacity. At present these districts are not designated on a map.

Monkton's Covered Bridge Road leads to Charlotte's Quinlan covered bridge; this road should be monitored for safety, as well as impacts to the historic covered bridge.

Hinesburg

The Hinesburg Town Plan shows an Agricultural-Rural District along the Charlotte Town boundary. The purposes of this district are consistent with Charlotte's Rural District. Both Towns have land trusts which have met to discuss common concerns, such as the protection of Lewis Creek which runs through both communities.

4.9.2. Regional Issues

Regional Planning

Regional planning in Chittenden County is shared between the Chittenden County Regional Planning Commission, which undertakes land-use planning, and the Metropolitan Planning Organization, which undertakes transportation planning. Charlotte is a member of both organizations and has a representative on both boards because regional issues can have a large impact on the Town in such areas as transportation, technical education, economic development, federal funding, and with many land use issues.

The Chittenden County Regional Plan, adopted on Aug. 28, 2006, sets the overall framework for land use planning in Chittenden County. The Charlotte Selectboard expressed concern about (and voted against) the proposed regional plan on the grounds that it does not promote, and could potentially be antagonistic to, Charlotte's goal of remaining a rural Town, by creating housing targets, encouraging higher housing densities, and unequivocally supporting improved electric transmission.

The fact that commercial services are available in neighboring Towns, and more extensive services are offered nearby in Burlington, South Burlington, Williston and Vergennes, renders the provision of such services in Charlotte as somewhat unnecessary and perhaps unlikely. Furthermore, Charlotte's recreational facilities such as Mount Philo State Park, the Town beach, the marinas, the Lake Champlain ferry and the Route 7 corridor, together with the Town's rural attributes, function as a regional resource. Recognizing

that Charlotte's farm fields and woodland patches contribute to these resources may warrant their protection through regional mechanisms such as regional off-site mitigation or other programs that may become possible with the approval of the Town.

Chittenden South Supervisory School District

Charlotte, along with Williston, Shelburne, Hinesburg, and St. George are members of Chittenden South Supervisory School District, and together support the Champlain Valley Union High School (CVU). The Williston Comprehensive Plan discusses the significant recent growth in Williston and how that will effect enrollment in its schools. This higher enrollment may affect the CVU tax rate, which residents from all CSSD Towns, including Charlotte, pay. Charlotte will need to work with Williston and the other members of CSSD to address CVU related issues as they arise.

A recently formed task force has begun looking into how the transportation needs and resources of CVU intersect with those of member Towns. This discussion has the potential for improving public transportation between Charlotte and neighboring communities, and is endorsed.

River Management

River corridor management plans are being developed for both Lewis Creek and the LaPlatte River. Lewis Creek Association and the LaPlatte Watershed Partnership are working with Hinesburg, Monkton, Charlotte and other towns to develop these plans.

Sharing of Rescue Services

Representatives from the Towns of Charlotte, Shelburne and Hinesburg have discussed sharing rescue services and vehicles, as discussed above in Section 4.6.3. The Town of Ferrisburgh may also be interested in discussing the potential for sharing rescue coverage as well.

5. CHARLOTTE TOMORROW

5.1. FUTURE PATTERN OF DEVELOPMENT

This section of the Plan lays out the policies and strategies which the Town hopes will accomplish the vision, goals and objectives described earlier. As was stated in the Introduction to the Plan, "policies" are meant to be used to review and guide development proposals, while "strategies" are meant to guide discussion, and will need further action to be enacted, for example by amending the Land Use Regulations or through the work of a Town committee.

Given the above distinction between policies and strategies, the use of "will" in this Charlotte Tomorrow section has specific meanings depending on whether the word is within a policy or strategy. If the word is within a policy, "will" is intended to mean the Town currently endorses the expressed policy, and will endeavor to implement it and/or enforce such policy. If the word "will" is within a strategy, it is intended to mean that the Town generally supports the concept and plans to explore its implementation, but until further action is taken, as noted above, the concept cannot be implemented or enforced.

5.1.1. General Policies and Strategies

General Policies

1. Charlotte supports landowners' rights to reasonable use of their property.
2. Areas of High Public Value (as defined herein) are important components of the quality of life and the environment in Charlotte.
3. Charlotte supports a land use plan which fosters a pattern of small, concentrated settlements in the village and hamlet areas, along with the preservation of agriculture and other areas of high public value. The Town will attempt to direct the majority of future growth into village areas and existing and new hamlets and clustered developments, so as to reinforce the historic pattern of compact settlements surrounded by rural, open land.
4. The Town will continue to support the coexistence of both residential housing and farming by clustering new housing. This is necessary for the future viability of farming in Charlotte.
5. Non-agricultural commercial services will primarily be located within or near the village areas. Locations for light industrial development will be provided in the Commercial/Light Industrial District within the West Charlotte Village. Home occupations are encouraged by the Town. Agriculturally related businesses may be allowed in conjunction with active farms.
6. Densities for proposed development will be reviewed with consideration of existing settlement patterns, distance to and availability of Town services, physical capability of the land for development, the presence of significant areas of high public value, the size of the parcel, and the need for affordable housing.
7. Areas of High Public Value will be avoided and protected from negative impacts of development where possible. When avoidance is not possible, impacts will be minimized and mitigated. When impacts are not able to be sufficiently minimized and/or mitigated, development may not be allowed, but such lands can contribute density for development outside of the Area of High Public Value, either on the same parcel or on other parcels.

8. In order to meet Town standards for the protection of large tracts of natural resources, such as agricultural land and wildlife habitat, and prevention of contamination of groundwater supplies, the percentage of required open space in subdivisions may increase as the prospective impact to Areas of High Public Value increases.
9. For developments that will create a large number of dwellings (in terms of what is typical for Charlotte), the Town may impose phasing mechanisms in order to minimize and/or mitigate impacts from the development on the Town's ability to provide services to all other residents in a manner that does not substantially increase costs to the Town for providing those services.
10. Consistent with several of the policies listed above, Charlotte will consider applying for Village Center Designation, an incentive-based program designed to preserve and enhance our historical settlement pattern.
11. The Town may consider design review for commercial uses in town-designated village areas.

General Strategies

1. In addition to yearly taxes, the Town could face major capital expenditures in the years ahead as the town grows. The importance of creating and updating a capital budget and program will be critical to anticipating these costs. These capital costs could be burdensome for property owners to absorb in a short time span.
2. Maintaining control of the Town's rate of growth is important. The number of units allowed annually should be dependent on an approved capital budget and program. Therefore, it is recommended that the Town study an annual cap on building permits for residential units and mandatory phasing of subdivision lots based on a capital budget and program and the yearly tax rate. The building cap should be implemented through regulatory procedures such as the Land Use Regulations.
3. Areas that are suitable for public uses, including public buildings, recreation areas, green paths, and Town roads will be identified through the use of the Official Map and evaluated during the development review process.

5.1.2. Land Use Policies and Strategies

The Town recognizes that there are areas of the Town with unique characteristics and opportunities and that each area requires special provisions for guiding development.

Village and Hamlet

Village and Hamlet Policies

1. The West Charlotte Village will be composed of the following zoning districts: the Village District, the Village Commercial District, and the Light Industrial/Commercial District. The East Charlotte Village will be composed of the following zoning districts: the Village District and the Village Commercial District.
2. The West Charlotte and East Charlotte Villages will provide for housing, commercial services and public buildings and facilities. Projects directing additional growth into the existing village areas should balance the overall clustering goals of the Town Plan with the existing character, charm and livability in these areas.
3. The preservation and reuse of existing buildings will be preferred and new buildings should fit in with the character of the existing villages, including scale and location of buildings.

4. Multifamily dwellings will be permitted within a structure (especially within existing structures in villages and hamlets) in keeping with local character and scale.
5. There is no minimum lot size within a PRD. The Planning Commission will consider the lot size to fit with the surrounding context, and ensure that open space is set aside to keep the overall density consistent with the Land Use Regulations.
6. The Town will encourage future growth in village areas, existing and new hamlets, and clustered developments to reinforce the historic pattern of compact settlements surrounded by rural, open land.
7. The Town supports a street network and connections between parcels in villages and hamlets to improve efficiency and connectivity.
8. Village areas will contain a mixture of uses and activities. The West Charlotte Village will continue to be the town center and will provide for public facilities, commercial services for residents; and housing. The East Charlotte Village at Baptist Corners will provide housing, commercial uses for residents, and some public facilities.
9. The purpose of the Village Commercial District is to offer residential uses and small scale retail, personal service and hospitality services, office space, public buildings and public facilities.
10. It is important that new development located in the villages provide for strong visual, vehicular, and pedestrian connections to the existing settlement and infrastructure.
11. One of the limiting factors for new commercial development is the traffic capacity of the existing roadways. In the West Charlotte Village area, the intersections of Route 7 and Ferry Road and Ferry Road and Greenbush Road are particular concerns. Therefore, new development must not unduly congest either of these intersections.
12. Under the Site Plan review process, the design of new buildings shall be compatible with the shape, siting, and design of existing buildings in the vicinity.

Village and Hamlet Strategies

1. The Town will sponsor a Town-wide groundwater and soils analysis, with a particular focus on the West Village Area, to identify potential community sewage disposal and drinking water supply sites. The study will also identify areas of limited groundwater capacity, and current and potential threats to continued groundwater quantity and quality.
2. A master plan for the East Charlotte Village will be developed through a participatory public process.
3. The Town should require the layout of streets within the village districts to be in accordance with an Official Map in order to foster the creation of interconnected streets and pedestrian ways.
4. The Town should consider establishing design guidelines for the existing village areas, which will be advisory only. The design guidelines could apply to site and building design and guide new development to protect the rural, historic character of the village areas. The guidelines could also allow for variability of designs and choices within the context of designs that are already there, and be flexible but effective in preserving Charlotte's historic, rural character.
5. Planned Unit Developments involving non-contiguous parcels should be allowed by the Land Use Regulations.

Historic Districts and Historic Buildings

Historic Districts and Historic Buildings Strategies

The Town should assemble an informational guideline for buildings and areas on the State of Vermont Division of Historic Preservation Historic Sites & Structures Survey, which will be advisory only, and will provide information to protect and enhance the historic character and resources of these buildings and areas (See Map 12).

Commercial /Light Industrial

Commercial/Light Industrial Policies

1. The existing Commercial/Light Industrial District in the West Charlotte village is adequate to meet the Town's current needs. Furthermore, Charlotte's commercial and industrial needs are primarily met by services provided in adjacent communities. Therefore, the Commercial/Light Industrial District on Route 7 and East Thompson's Point Road will be converted to Rural District.
2. It is the purpose of the Commercial/Light Industrial District to offer sites for the development of commercial and light industrial businesses with small to medium sized workforces and low water use that are compatible and consistent with the Town Plan. These uses must fit within the limitations of the soils for sewage disposal, water availability, and the constraints on the highway network to accommodate increases in traffic. Non-polluting, low impact businesses are encouraged in this district. Businesses should serve primarily local rather than regional needs.

Commercial/Light Industrial Strategies

Land use around the railroad station will provide the opportunity for living and working within close proximity to the commuter rail to minimize the overall level of vehicular traffic.

Rural Areas

Rural Areas Strategies

1. During development review, Areas of High Public Value will be identified and prioritized based on the qualities and relative values of each resource. This analysis will be site specific, but will also consider resources in a broader context as appropriate.
2. The Open Space and Conservation Action Plan (currently under development) will be consulted with regard to identifying parcels or portions of parcels for conservation/protection.

5.2. HOUSING

5.2.1. General Policies and Strategies

Housing Policies

1. Project densities will be determined on the basis of the physical site conditions, the existing pattern of development, the proximity of Town highways, Areas of High Public Value, and the future pattern of development desired by Charlotte residents.
2. It is the intent of the Town of Charlotte that housing be available for its residents at all stages of life and regardless of income. The Town, primarily through its Land Use Regulations, but also through

other incentives, will encourage the development of affordable housing to meet the needs of individuals and families who live and or work in Charlotte.

3. The development review process will strongly encourage designs which cluster develoment in a form and character suitable to their rural setting, economize on energy use, roads and other infrastructure, and protect Areas of High Public Value.

4. The Land Use Regulations adopted in March 2006 provide for the creation of PRDs and cluster housing designs as well as simultaneous conservation of contiguous and non-contiguous areas. The use of these tools will be strongly encouraged, and in most cases required, in development projects.

5.2.2. Affordable Housing Policies and Strategies

Affordable Housing Policies

1. The Town recognizes the need for safe, sanitary, energy efficient and affordable housing in locations convenient to services, and will seek solutions to address this need. Creating opportunities for affordable housing promotes the Town's goal of maintaining economic and social diversity in Charlotte.

2. Affordable housing created in the Town through density bonuses shall be perpetually affordable.

3. Sites for affordable housing shall be consistent with the Town land use plan. Such sites, particularly for affordable senior housing, should be encouraged primarily in village areas where moderate density housing is envisioned that is convenient to municipal, commercial, and transportation services. Affordable family and senior housing should also be allowed in rural settings.

4. The Town recognizes the importance of adaptive reuse of existing buildings as a means of providing affordable housing without the need to construct new buildings on limited land resources, as well as preserving structures which might otherwise fall in disrepair and be demolished. The Town will strongly encourage adaptive reuse as a means to provide affordable housing.

Affordable Housing Strategies

1. The Affordable/Senior Housing Committee, appointed by the Selectboard in 2002 has implemented many of the responsibilities it was charged with in the 2002 Town Plan revision (See Section 4.2.2). The Committee is charged with, but not limited to the following responsibilities;

   - Continue work in conjunction with affordable housing providers to identify specific sites for affordable housing in Charlotte.
   - Create a subcommittee to identify and research opportunities for conversion of existing structures in Charlotte for affordable housing.
   - Develop materials for applicants to the Planning Commission which summarize opportunities for affordable housing provided by the land use regulations.
   - Hold periodic public meetings to educate Charlotters on affordable housing issues.
   - Assess progress in meeting affordable and senior housing needs.

2. The Planning Commission will encourage applicants to consider units of affordable housing when presenting their subdivision proposals at Sketch Plan Review.

3. It is recommended the Selectboard waive permit fees for affordable housing lots or units.

4. The Charlotte Housing Trust Fund (approved at Town Meeting 2007) should be fully funded, and actively administered and publicized for a minimum of three years, and reassessed after this period for renewal.
5. Should the combined effects of the density provisions in the Land Use Regulations and the Charlotte Housing Trust Fund fail to produce adequate new affordable housing in the Town as determined by the needs assessment of September 2006, within three years, the Town should consider other tools to accomplish these goals.

5.3. Economic Development

5.3.1. General Policies

1. Home businesses are encouraged.
2. Commercial and light industrial development that offers quality employment, is non-polluting, small in scale, and has low demands for energy, water and sewer usage will be encouraged to locate in the West Charlotte village light industrial area.
3. Commercial development is encouraged in the West Charlotte and East Charlotte village areas, in accordance with other policies and strategies of the Town Plan.
4. Farm related businesses will be allowed to locate on farm properties as conditional uses.

5.3.2. General Strategies

1. Essential commercial services which meet Charlotte's residents such as a small grocery store, hardware store, pharmacy, and/or cafe/restaurant will be encouraged to locate within the existing village areas with a particular emphasis on the West Village/ Town Center area. The commercial uses within these areas will be small in scale and designed in a way that is compatible with existing village historic and rural character.
2. The production, processing, and marketing of food and fiber and other natural resources and agricultural products will be promoted as important industries in the Town. The local farmers' market should be expanded within the next two years to help create a market for these products.
3. Town regulations will attempt to ensure quality site planning and design of commercial and light industrial facilities through the establishment of Design Review standards for the Village Commercial and the Commercial/Light Industrial Districts.
4. Within the next two years, the Town should conduct a groundwater and wastewater capacity study for the Village and Commercial Districts and analyze the need for and feasibility of a local community water and wastewater system to serve these areas. If feasible, a community system would allow for greater densities in the Village areas and help to achieve the Town's goal of focusing growth in existing compact settlements
5. A wastewater allocation plan for the West Charlotte village should be developed. The plan would provide some allocation for failing residential systems, some allocation for new commercial and residential uses, and some allocation that is not committed.
6. A traffic study for the West Charlotte village should be undertaken.
7. The Town should explore obtaining an intern from an area college to be an advocate and permit liaison for economic and agricultural operations.

5.4. AGRICULTURE

5.4.1. General Policies

1. New residents and potential new residents should be aware of the importance of agriculture to the Town and should also recognize that agricultural practices may create conditions, including noise and odors, that can impact neighboring properties.

2. The Town will seek to protect the Town's agricultural soils for agricultural use in the following priorities:

   - High potential agricultural soils will be given priority for protection;
   - Medium potential agricultural soils will be protected where possible;
   - Low potential agricultural soil will be protected when they support an existing agricultural operation.

3. The community understands the importance of agriculture to the Town and recognizes that agricultural practices may create conditions, including noise and odors, that can impact their desired lifestyle. Neighbors will try to resolve any problems among themselves; however, it is understood that reasonable agricultural practices, which are defined by State policy, benefit farming operations and contribute to a working landscape, harmony with neighbors and community pride.

4. The Town supports the use of "Accepted Agricultural Practices" and encourages the use of "Best Agricultural Practices."

5. Land development or subdivisions on farms shall use the minimum amount of land possible for development purposes. In major subdivisions, land set aside for agricultural use shall be subject to permanent conservation restrictions held by the municipality, State of Vermont, and/or a qualified, non-profit organization. Co-holding of restrictions will be pursued wherever possible. Such easements or agreements shall specify the allowable uses of the restricted property, control further land subdivision, control the type and placement of structures and the location of roads, remove density, and achieve the maintenance of the restricted property as a viable agricultural unit. The restricted farmland may be held in common or individually as long as the goal of farmland preservation is met.

6. Where residential subdivisions and PRDs are proposed adjacent to farm operations or farm districts, reasonable setbacks may be required from the lot lines next to cropland for wells and residences under the subdivision regulations. Reasonable buffers between residences and cropland, including roads and pasture land, may be required. This requirement is designed to minimize conflicts between farm operations and residential uses, however mechanisms other than buffers may be permitted to achieve such goals.

7. Promoting sustainable, economically viable farming alternatives is important to the future of farming in Charlotte. Diverse agricultural enterprises, including dairying, hay production, livestock production, produce stands, and specialty farms such as wildflowers, nurseries, berries, orchards, and produce, will be encouraged.

8. Commercial farm stands will continue to be allowed as a Conditional Use in the Rural District. Conditional use standards shall include traffic safety considerations, especially for Route 7. Commercial farm stands are a permitted use in the commercial districts.

5.4.2. General Strategies

1. The Town will assist in making connections between outside resources such as the Extension Service and the State Department of Agriculture, Food and Markets to help provide maximum market information to farmers.
2. The continuation and use of existing programs that foster conservation and good management of agricultural lands will be encouraged.
3. The Charlotte Land Trust and other similar bodies will be supported in their efforts to provide technical assistance to develop land use plans for farm properties and to negotiate private, voluntary agreements for the protection and management of designated agricultural and natural resource lands.
4. The Land Use Regulations allow for farm related owner-operated businesses on farm property including but not limited to: direct-marketing, value added products such as cheese, farm equipment and supply operations, agricultural cooperatives, nurseries, and fence businesses, as conditional uses in the Rural District with consideration of the scale of the operation and the impact on the community.

5.4.3. Specific Agricultural Strategies

Agricultural Planning Areas Strategies

The Town will continue to pursue techniques that will implement the objectives of the Agricultural Planning Areas. This includes utilizing the Charlotte Land Trust, Vermont Land Trust and the Charlotte Conservation Commission where appropriate. Examples of techniques that may be appropriate are the purchase or donation of conservation easements, tax abatement, and through the land use regulations. Non-regulatory techniques should also be pursued in order to assist the landowners with implementing each area's objectives, which are listed below.

Area A-West Charlotte

The objective for this area is to retain the dairy operation base while encouraging diversification into orchards, berries, vegetables, and animals, and retaining open fields for agricultural use.

Area B-North Route 7 Corridor

The objective for this area is to maintain the scenic characteristic while promoting agricultural use. Possible techniques for this area include: establishing a setback where no additional buildings except farm buildings are allowed; siting buildings below the ridgeline; retaining contiguous farm parcels along Route 7; and continuing the traffic management provisions in effect.

Area C-Central Charlotte

The objective for this area is to retain contiguous farmland to provide a “critical mass” of agricultural operations, and to protect the area's scenic beauty.

Area D-East Charlotte

The management objective for this area is to protect open fields for agricultural uses.

Land Trust Strategies

The Town will continue to support the land trusts in their efforts to protect farmland and to make affordable farmland available to farmers. In particular, the Town encourages the Charlotte Land Trust to:

1. Provide technical assistance to farmers and other large property owners to maximize the preservation of farmland, natural resources and rural character;
2. Promote coordination with the Town through public outreach by the Land Trust; and
3. Assist farmers in planning for the disposition of their property in accordance with the Town Plan by helping farmers and other large property owners to prepare master plans for their properties to maximize farmland and natural resource protection.

Other Strategies

1. The Land Use Regulations adopted in 2006 provide a process for non-contiguous PRDs, and the Town strongly urges the use of this option to aid in the conservation/preservation of open lands.
2. The Town will provide information to existing and new farmers about Land Link Vermont.

5.5. Natural Resources

5.5.1. General Policies

1. Both larger (named) and smaller (unnamed) streams, the lakeshore, and flood-prone areas are to be protected by mandatory stream bank setbacks for development, including the building of structures, roadways and on-site sewage disposal systems. Vegetation removal will also be restricted in setback areas.
2. Buffer zones will be required around key natural resource areas to limit potentially damaging encroachment.
3. The Town highly values and strives to protect its natural resources, which include clean air, clean groundwater, clean surface water, healthy soil, biologically diverse natural communities, and the ecological functions that support life.
4. The Town will protect surface and ground water quality through the enforcement of the Vermont Water Supply and Wastewater Disposal Rules and other means available to the Town.
5. The Town will work with Town, county, state and federal agencies and citizen organizations to monitor, preserve and restore water quality in the Town.

5.5.2. General Strategies

1. Explore placing lands that are identified for natural resource protection in the Conservation District.
2. Continue updating the flood hazard area designations and regulations.
3. Promote a variety of techniques, including conservation easements, purchase, lease, and tax incentives, to restore, protect and preserve natural resources and protect ecological functions. The Charlotte Conservation Commission, other boards and commissions in the Town, the Charlotte Land Trust, the Lewis Creek Association, property owners and other similar groups will work together to find techniques that meet the goal of resource protection and conservation.

4. Continue $.02 of tax rate for the Conservation Fund which is used for purchasing land and/or development rights, and explore a fund dedicated to wildlife habitat protection.
5. Support the Charlotte Conservation Commission's role in: maintainimg databases and maps of natural resource information relevant to Charlotte; advising the Planning Commission and Selectboard on natural resource issues and development reviews; and promoting public understanding of local natural resources and ecological functions.
6. Continue to work with the Charlotte Land Trust, the Lake Champlain Land Trust, the Vermont Land Trust, the Nature Conservancy, and other similar groups seeking restoration and protection of significant natural resources through private and voluntary approaches.
7. Map seasonal streams in the Town to increase the overall understanding of the hydrological system in the Town.
8. Study groundwater resources and identify threats to groundwater quantity and quality in Town.
9. Maintain, update, and refine the information on natural resources on the Geographic Information System maps and databases prepared for the Town, Chittenden County Regional Planning, and elsewhere.
10. In conjunction with the Conservation Commission and Trails Committee, work to refine and implement the vision for a network of low-impact trails and byways which connect cultural and recreational areas while protecting natural resources in the Town.
11. With input from the Recreation Commission, the Conservation Commission, Charlotte Land Trust, the public, and entities capable of assisting in these goals, prepare within two years a Town-wide Open Space and Conservation Action Plan showing those areas which should be encouraged to remain open due to their high public value, and recommendations for achieving that goal. The open space plan may include farmland, important natural areas and specific natural resources, waterways, water-bodies, shoreland, forests, meadows, recreation areas and other important features and will seek to prioritize these. The Open Space and Conservation Action Plan will reflect the Town's commitment to promote long-term stewardship of areas with high public value, and it will provide a guide for local and regional land use decisions as well as conservation planning and initiatives.
12. Promote public and private stewardship and sustainable use of natural resources by supporting education and outreach programs of Conservation Commission, Recreation Committee, Lewis Creek Association, Charlotte Sustainable Living Network and other similarly qualified groups.
13. Complete the update to the Critical Wildlife Habitat Map.

5.5.3. Specific Natural Resources Policies and Strategies

Conservation District Policies

1. While the Conservation District is recognized as having important conservation values to be protected, certain existing or future public-recreation uses may be recognized as appropriate in the district. Therefore, public recreation uses may be allowed in the Conservation District as conditional uses, and the conditional use standards will enable such uses to occur only if compatible with the conservation values of the particular parcel.
2. Proposed uses in the Conservation District shall be referred to the Town Conservation Commission for review and recommendation.

Conservation District Strategies

A long range plan will be developed for the use of the Town-owned land on Thompson's Point that is in the Conservation District, based on the advisory committee's recommendations in 2000.

5.6. Special Features

5.6.1. General Policies

1. The Town will promote opportunities for the public to enjoy views and vistas identified in the Town Plan.
2. The Town's covered bridges are a significant part of the character of the community and its heritage. The Town will maintain its covered bridges as transportation facilities and will seek to protect these bridges from destruction or excessive or incompatible use.
3. Geological sites, natural areas, meadows and pastures identified as special features shall be protected through PRD clustering or other appropriate measures.
4. The visual quality of the Charlotte night sky shall be considered in reviewing development proposals.
5. Outdoor lighting will be designed and installed only as needed and in a manner that minimizes glare, light pollution, and impacts on neighboring properties. The Chittenden County Outdoor Lighting Guide, or a similar updated guide, will be used as a model.
6. The Town shall maintain the standards in the subdivision regulations that reference and provide protection of significant views and vistas, meadows and pastures outside the agricultural districts, geological sites, and natural areas.
7. The importance of the scenic qualities along the northern portion of Route 7 warrants the special treatment and protection provided by the Route 7 Scenic Overlay District.

5.6.2. General Strategies

1. Develop guidelines for maintaining the character of the historic districts and the protection of significant historic landmarks.
2. Explore the feasibility of establishing a scenic overlay district with criteria for protection of the viewsheds (as are shown on the map entitled "Roads with High Scenic and Conservation Values").
3. Facilitate the work of the Charlotte Beautification Fund, established in 2006 with an endowment from the William Rutter Jr. family, to enhance the scenic quality of public roads by planting trees in the public right-of-way and encouraging similar private efforts on adjacent private land.
4. Request State assistance with an inventory of historic barns and farm building clusters; promote voluntary nomination of these structures to the State Register of Historic Places as appropriate; promote nomination of the East and West Village State Historic Districts to the National Register of Historic Places. Request assistance from the Charlotte Historical Society on this project.
5. Work with the Agency of Transportation on its bridge repair program to seek the best measures to protect the covered bridges in the Town while maintaining their current use.

5.7. THE LAKE AND ITS SHORELINE

5.7.1. General Policies

1. The diversity and unique characteristics of the Lake Champlain shoreline will be considered and protected through limiting and managing proposed uses of the land and waters in this area.
2. In the Shoreland Seasonal Home Management District, seasonal housing may be maintained, managed, and altered in accordance with land capability and the scenic and historic character of the shoreline, but additional units will not be permitted in this area due to fragile environmental conditions, impervious surface conditions and lack of Town services.
3. Indirect discharges to surface waters will be minimized.
4. Public access to the shoreline and waters of Lake Champlain will be expanded in the Town.
5. Continue existing controls on commercial development near shore facilities such as boat yards, boat maintenance, and ferry service. Controls are needed to maintain environmental quality and scenic beauty.
6. Emergent vegetation in shoreline wetland areas, as delineated in the field, shall only be cut upon State conditional use approval, or in accordance with State regulations or policies.
7. Cutting vegetation, dredging, draining and filling in the Shoreland District, and Seasonal Home Management Area will be limited, in order to protect scenic beauty, and environmental qualities of the lake and shoreline, and to reduce runoff and bank instability.
8. Zoning regulations will continue to emphasize preserving vegetated cover along the shore to minimize visual impact and minimize erosion.

5.7.2. General Strategies

1. Advisory design standards will be established to encourage man-made structures to blend into the natural landscape, including buildings and facilities within or adjacent to the Shoreland District and visible from the lake.
2. Encourage shoreline stabilization methods which can be vegetated and/or blend in with the natural surroundings in areas of highly erodent soils.

5.7.3. Shoreland District Policies and Strategies

Shoreland District Policies

The existing Shoreland District covers all land within 1,000 feet of the low water mark of Lake Champlain except the portion of the Town-owned land on Thompson's Point that is leased for seasonal camps or is within the Conservation District. The Shoreland District protects the scenic beauty, environmental quality, and recreational opportunity of the lake and its shoreline.

5.7.4. Access Strategies

1. Within the next three years begin work on public access improvements including limited parking to Whiskey Bay, Lane's Lane, Thompson's Point Dock and McNeil Cove.
2. The ferry docking facilities at McNeil Cove will be maintained and protected from private boat traffic and facilities.

3. Rock foundations of the Old Dock should be stabilized and the larger concrete surface blocks leveled to save the dock from further deterioration. Such improvements will benefit Thompson Point lease holders as well as other Townspeople seeking to visit the area.

5.7.5. Mooring Management Strategies

1. Types of public boating interests and activities continue to change. The Selectboard will monitor the possible future need to establish Mooring Management Areas for the Lake Champlain shoreline. If the Town determines that it is necessary to control these mooring areas, the Town will apply to the Water Resources Board to delegate authority to the Town to manage these areas through a mooring management ordinance in accordance with 24 V.S.A. Chapter 59.
2. Areas requiring special attention include:
   - ❑ McNeil Cove
   - ❑ Converse Bay, North and South coves
   - ❑ Caretaker Access area, Thompson's Point
   - ❑ Point Bay Marina area, Thompson's Point

5.7.6. Water Quality Strategies

Water Quality Strategies

1. The Town will implement a monitoring protocol to sample shoreline sites for evidence of sewage contamination, identify pollutant sources, and require corrective action by owners. Runoff will be monitored and controlled in accordance with State policies and regulations. The Town will request assistance of the State of Vermont on this issue.
2. The Town will continue to monitor, preserve and restore water quality and stream equilibrium conditions throughout the Town on an as needed basis to maintain lake water quality.
3. Low impact development (LID) methods of stormwater management should be considered during development review, and potentially required if site circumstances warrant.
4. Stormwater management "best practices" should be applied to all development, regardless of whether a state stormwater permit is required.

5.8. Community Facilities and Services

5.8.1. General Policies

The Town will not develop a Town-wide municipal water supply or sewage disposal system nor will it permit the extension of water lines from the Champlain Water District within its boundaries at this time.

5.8.2. General Strategies

Based on the outcome of the groundwater/soils analysis study, and in consideration of the Town's goal of compact settlement in the village areas, the Town will analyze the feasibility of a municipal water and wastewater system limited to serving designated growth areas, such as the West Charlotte Village/Town Center. If constructed, the systems will correct existing failed systems and provide capacity for higher density in new and existing village areas. The advantage of the Town (rather than a private developer) constructing this type of system is that a local government entity has access to

0% or low interest loans from the State Agency of Natural Resources Safe Drinking Water Act Revolving Loan Fund to construct such a facility. In addition, the Town can maintain the system on a regular basis.

5.8.3. Specific Community Facilities and Services Policies and Strategies

"Burns Property" Strategies

1. Implement the Master Plan in accordance with the community's preference.
2. Plan for the best use of the wastewater capacity on the Burns property for existing and new uses in the West Charlotte village area.

Schools Policies

The Town will continue to work closely with the CVU and CCS School Boards to monitor the education needs of the Town's children and adults, and to plan future Town and school needs carefully to maximize the benefits of any taxpayer investment.

Child Care Strategies

1. The Town will make needed corrections in the Land Use Regulations as described in Section 4.6.2.
2. The Town will evaluate the availability of childcare in Charlotte, and see if there is a barrier to the provision of such care created by any Town policies.

5.8.4. Public Safety Policy and Strategies

Public Safety Policy

The Town will continue to support the Charlotte Volunteer Fire Department and Rescue Squad. Further major capital improvements for these departments will be programmed through the Fire and Rescue capital budget and program.

Public Safety Strategies

1. As appropriate, the Town will sponsor traffic studies for the purpose of establishing speed limits. If speed limits are enacted, the Town will arrange for their enforcement.
2. The Town will study the need for a Fire-Rescue sub-station for the east side of Town, and shall investigate the acquisition of property for this purpose.
3. The Town will explore strategies for adding fire ponds strategically located to assist in fire protection.
4. The Town will encourage a program to share fire and rescue resources with neighboring towns.
5. The Town will work to address issues cited in the Town's All Hazard Mitigation Plan.

5.8.5. Solid Waste Disposal Policies and Strategies

Solid Waste Disposal Policies

The Town will continue to participate in the Chittenden Solid Waste District (CSWD). Charlotte supports the CSWD's efforts to bring on-line a regional landfill to accommodate the solid waste disposal needs of the Town.

5.8.6. General Government Policy and Strategies

General Government Policy

The Town will remain primarily a volunteer form of government.

5.8.7. Culture and Recreation Policies and Strategies

Culture and Recreation Policies

1. Trails or sidewalks may be required during the subdivision process where such facilities would fit with the Town's trail and sidewalk network as expressed in this Plan, the Town's Trail Vision Map, or existing trails or trail easements.
2. Trails shall be designed and managed to be low-impact and to avoid undue negative environmental impacts. The network of trails and public by-ways should follow and/or incorporate the natural features of the landscape in their design.
3. Sites for recreation and shoreline access shall be encouraged and explored.

Culture and Recreation Strategies

1. The Town will continue to investigate and determine whether an impact fee ordinance should be adopted which would include a recreation fee. Upon adoption of an impact fee ordinance, all developers shall be required to contribute to a recreation fund.
2. The Town should continue to celebrate its diversity and volunteerism at events such as tours of historically or environmentally significant properties, farm tours, the Town Party, and other Town events.

5.8.8. Water Supply and Sewage Disposal Systems Policies and Strategies

Water Supply and Sewage Disposal Systems Policies

1. All subdivisions will be required to demonstrate there will be an adequate supply of potable water to serve their developments without adverse impact on existing water supplies or on a neighboring property's land use. Provisions will be made by the subdividers to share identified water sources among lot owners, where applicable.
2. The Town will continue its policy of not taking responsibility for community water supply and wastewater systems. Private community water supply and wastewater systems will be required to have adequate surety or legal agreements to protect the Town from having to assume and maintain such systems.
3. Provisions for maintenance of community systems by the homeowners, such as creation of a homeowners association and covenants, will be required. Land permits for the parcels will set forth the terms of maintenance. The Town will require the filing of an annual service contract for

community systems and an annual inspection report from a professional engineer ensuring that they are functioning properly.

4. Crossing of Town roads with private force mains or other water or sewer utility lines may be allowed, but only if the proposed development meets the goals and policies of this Town Plan, or to serve failed wastewater disposal systems for which no other feasible alternatives are available. A license agreement or similar legal document with the Selectboard will be required.
5. To protect community water supplies, land development shall be restricted within the source protection areas.
6. The Town supports water conservation.

Water Supply and Sewage Disposal Systems Strategies

1. A Town-wide study of groundwater and surface water will be undertaken to determine the availability of running water, potable water and wastewater capacity for existing and projected development in Town with a particular priority in the Villages. The Town should not consider municipally-owned community water and wastewater systems to serve any areas other than the two existing villages.
2. The Town will refine the standards for the creation, maintenance and repair of fire protection ponds and dry hydrants.

5.8.9. Private Roads Policy and Strategies

Private Roads Policy

1. The Town will continue its policy to keep development roads private.
2. The adopted Road Specifications in the Recommended Standards for Developments and Homes will be used in the subdivision process.

Private Roads Strategies

1. Over the next year, the Town will revise roadway and driveway standards into a more uniform regulation ensuring public safety vehicle access, yet allowing for some flexibility and considering impacts on community character and environmental features.
2. The Town policy of keeping development roads private may need to be reevaluated in village areas, where an interconnected road network is especially desired.

5.8.10. Towers and Telecommunications Facilities Policies and Strategies

Towers and Telecommunications Facilities Policies

1. The Town encourages the siting and/or relocating of transmitters away from occupied residences and other uses.
2. Transmitters should be sited to minimize the power needed to fulfill the owner's license.

5.8.11. Cost of Government Policies and Strategies

Cost of Government Policies

The Town will seek to maintain a constant effective tax rate (adjusted for reappraisal) which is consistent with the past and generally reflects the current rate of inflation over the next five years.

Cost of Government Strategies

The Planning Commission and Selectboard will create a capital budget, and the Selectboard will update the capital budget and program on a yearly basis. The program sets forth the capital expenditures the Town intends to make to accommodate the projected population growth of the Town. Development may be "phased in" in accordance with the capital program except for units or lots providing perpetually affordable housing which will be exempt from this requirement.

5.8.12. Utility Lines Policies and Strategies

Utility Lines Policies

1. New or replacement electrical, telephone, cable and other utility lines, shall be located underground. In particular, the Town seeks to protect public roads with high scenic value by placing utility transmission and distribution lines underground. Placing transmission and distribution lines underground reduces their negative impacts to the landscape, increases reliability, and potentially reduces long term maintenance costs.
2. The Town supports improvements to the power grid to adequately support existing uses and planned future growth. Such improvements must be compatible with other goals of this Town Plan, and existing uses and planned future growth must first be designed and constructed to maximize energy efficiency.
3. The Town strongly encourages the co-location of utility lines and infrastructure in existing rights of way in order to reduce long-term costs and impacts to scenery. New utility transmission and distribution line infrastructure must be located within existing rights of way unless the greater public good is better served by placing them elsewhere.
4. The Town requires underground utility lines feeding and within subdivisions.
5. Height of utility poles will not be increased if not necessitated by technical requirements, such as to avoid interference.

Utility Distribution Strategies

The Town will explore ways to encourage underground placement of utility distribution lines, including, installation of empty conduit during road construction and re-construction projects.

5.9. Transportation

5.9.1. General Policies

1. The function of Route 7 as the main north-south corridor in the Town and a regional arterial highway should be protected through the limitation of access points and the control of land use along the highway. The Route 7 corridor shall be protected as a scenic travel corridor.

2. Expansion of Route 7 to increase its capacity by the addition of new lanes shall only occur when the need has been clearly demonstrated, when all reasonable alternatives have been carefully examined, and when such improvements have been prepared within the context of the Chittenden County Long Range Transportation Plan for the Route 7 Corridor. Any improvements to the corridor shall make provisions to enable safe bicycle and pedestrian travel and crossings, including bicycle lanes on Route 7 itself.

3. Improvements to Route 7 shall not adversely affect agricultural lands. Historic structures within or along the right of way shall be protected.

4. Alternative regional arterial highways will not be considered within Town boundaries due to the potential for adverse impacts on agricultural lands and important environmental and natural resources, Town character and the disruption to existing land use patterns.

5. Town highways will be upgraded according to the Town capital budget and program. Improvements to Town highways required by new development and not programmed by the Town will be the responsibility of developers. Conversion of gravel roads to paved roads will be discouraged unless there are compelling reasons to make the change.

6. Improvements to the intersection of Route 7 and F5 are the responsibility of the State of Vermont. Though major improvements have been implemented, the Town, with the help of the State, will monitor this intersection to insure that safety problems are rectified. In addition, the Town will control land development in the vicinity to minimize traffic congestion and safety problems at this location. Pedestrian and bicycle safety will be given special attention when improvements are considered for this intersection.

7. The Town supports bicycle lanes on Route 7 (which is a State Highway) and other roadways in Charlotte as mapped by the CCMPO and the CCRPC.

8. Wide shoulders (for bicycles and pedestrians) will be incorporated in major improvements to Class 2 highways in the Town, and improvements to Class 3 highways shall also accommodate bicycles and pedestrians.

9. The Town will continue to be a member of the Chittenden County Metropolitan Planning Organization and actively participate on the Transportation Advisory Committee.

10. Railroad crossings on public roads in Town will be gated crossings with bicycle safe surfaces to ensure traffic, pedestrian and bicycle safety, and will include adequate mitigation of other adverse impacts from railroad activity.

11. The Town's covered bridges are a significant part of the character of the community and its heritage. The Town will maintain its covered bridges as transportation facilities and will seek to protect these bridges from damage, destruction or excessive or incompatible use.

12. The Town will consider adopting private roads for public ownership only in village areas in order to create a more efficient highway network and to promote compact development in the village areas.

13. Designated scenic roads will be maintained and only altered by the Town in accordance with "The Vermont Backroad," a 1974 manual prepared for the Scenery Preservation Council, the Agency of Transportation, and the Ottauquechee Regional Planning Commission. All improvements of other Town highways will be made as nearly as possible in conformance with the guidelines of this manual.

14. The Town is encouraging moderate densities and mixed uses in the two villages. This development pattern should promote the potential for pedestrian and bicycle access between homes, commercial services, and current or prospective public transportation services, including bus, rail, or other public service.

15. The Town supports re-starting commuter rail service or creating new light rail service to Charlotte.
16. The Town prohibits the long-term storage of rail cars in Town as this diminishes the scenic value of the rural character of the Town, creates safety hazards from the potential exposure of hazardous chemicals, and can invite vandalism, trespassing and unlawful conduct.
17. The Town supports the protection of public access and the creation of trails for recreational purposes and for non-automotive transportation. Towards these ends, the Town encourages the maintenance and development of trails on public property as well as expanding the trails network by obtaining easements over private property both during and outside of the development review process.
18. The Town supports the continuance of the VAST trail for winter recreational uses.
19. The Town believes that vehicle idling is wasteful of fossil fuel, and that unnecessary vehicle emissions contribute to air pollution and climate change.

5.9.2. General Strategies

1. The Town will review road and driveway standards and update as needed within the next year. All new or redeveloped development roads and driveways will be required to meet these standards. The standards will consider safety, accessibility for emergency vehicles, winter maintenance, community character, impact to existing resources, impact to visual quality, and provisions for bicyclists, pedestrians and equestrians.
2. New private developments shall be required to establish adequate maintenance funds or other mechanisms to ensure compliance with the Town road and driveway standards. Where necessary, the Town will reserve the right to make improvements where needed and charge the development directly for the repairs.
3. The Selectboard will review the need for a Capital Budget and Program every year, which could include transportation and stormwater control facilities, as well as structures and capital equipment.
4. The Town will work with the Chittenden County Metropolitan Planning Organization (MPO),Vermont Agency of Transportation, the Chittenden County Regional Planning Commission, and adjoining municipalities on studies of the Route 7 corridor to insure Town concerns are met and proposed improvements are consistent with the Town Plan.
5. The Town will improve pedestrian, bicycle and auto traffic safety throughout the Town, with specific attention in the West Village on Greenbush Road and Ferry Road. In the next year, accommodations for pedestrians will be made along Ferry Road between the Library and Greenbush Road.
6. The Town will explore the creation of park and ride lots in the West Charlotte and East Charlotte villages; these may also serve as transit stops.
7. The Town will develop plans to address erosion-prone town roads, such as Spear Street near the covered bridge, and along Mud Hollow Brook north of Carpenter Road.
8. The Town will explore tunnels under Route 7 or other safe pedestrian crossings between Ferry Road and Church Hill Road, and between the former Galbreath property and the Scenic Overlook/Charlotte Park and Wildlife Refuge.
9. The Town will embark on updating the trail vision maps to assist with the creation of a Town-wide trails network, and to assist with reviewing proposed developments.
10. The Town will study potential trail crossings of the railroad track.

5.10. ENERGY

The Town Plan seeks to guide local policy as it relates to energy use, supply and generation. Charlotte seeks to minimize energy use and greenhouse gas emissions within the Town while ensuring a secure energy future through conservation, improvements in efficiency and an increase in renewable energy use and production.

Key Planning Considerations:

1. The State of Vermont has promulgated a Comprehensive Energy Plan (CEP) that has set a statewide goal of a 90% renewable energy supply by 2050. This same plan has a goal of substantially improving the energy fitness of 25% of the state's housing stock by 2020.

2. Climate change and more frequent intense weather events have increased our focus on the link between energy planning and a secure future.

3. The average cost of energy inputs continues to rise with price fluctuations that are often volatile. Energy efficiency and conservation efforts such as improved insulation and weatherization of new and existing structures often have a dramatic impact on reducing fuel consumption and household bills.

4. There is a growing awareness of the complementary relationship between energy independence and a strong economy. Energy efficiency investments in Vermont continue to provide significant positive net impacts to the state's economy and the renewable energy sector continues to grow.

5. The lack of outreach in the siting of new installations and the process for public notice and involvement associated with these facilities often leads to drawn out permitting processes and local land use disputes.

6. According to the CEP, transportation fuel accounts for the largest portion (33.7%) of Vermont's total energy consumption and almost half (47%) of the state's greenhouse gas emissions.

Energy Policies

1. Facets of energy planning will be incorporated into all planning efforts most notably those related to healthy communities, sustainability, transportation and land use.

2. The Town, through its Energy Committee, will educate citizens (including other volunteer Boards and Committees) regarding energy related matters. This will include information on emerging technologies and policy discussions.

3. In keeping with the state energy plan, the Town will seek to minimize energy use in private, public and commercial buildings and work toward 'zero net energy' use in all sectors by 2050[20].

4. The Town will support the siting of appropriately scaled renewable energy

[20] A building that uses only as much energy as it produces through on-site renewable energy in a single year. Source: Efficiency Vermont.

resources in Charlotte that avoid or minimize impacts to Areas of High Public Value. To this end, the Town will seek opportunities for early involvement in the planning / permitting process and will encourage outreach to and among neighbors. The Town will actively encourage and support the development of renewable energy that compliments the working landscape and avoids dramatic impacts to the view sheds of the neighboring properties. Developers should practice a "good neighbor policy". The siting of projects should be done in such a manner that the project creates no greater burden on neighboring property owners or public infrastructure than it does on the property on which it is sited.

5. The Town will support efforts to reduce the use of greenhouse gas emitting transportation fuels and create opportunities for the increased use of high occupancy vehicles.

6. The town will support state legislation and regulations aimed at improving energy efficiency in buildings.

Energy Strategies

Renewable Energy

1. The Town Selectboard and Planning Commission will assess impacts to Areas of High Public Value from proposed energy projects and will participate in PSB proceedings if warranted.

2. The Town will review new projects using Site Plan Review Standards as identified in the Charlotte Land Use Regulations.

3. The Planning Commission and the Energy Committee will analyze town-owned lands for potential renewable energy generation projects. This analysis will include factors related to environmental constraints and aesthetic concerns as well as resource potential.

4. Charlotte will strive to generate 10% of its total energy needs through locally-produced renewable energy sources in Charlotte by 2020.

5. Sites planned for or intended to accommodate planned energy facility development, including the location of existing and planned commercial and net-metered generation facilities and utility corridors, are to be shown on site development and subdivision plans reviewed by the town.

6. Charlotte will support increased use of renewable energy by encouraging greater use of renewables among municipal buildings; supporting local production of biofuels, small-scale wind, solar, and other renewable electric generation by local residents and businesses.

Energy Efficiency in Structures

7. The Planning Commission will stress the importance of energy efficient design in the context of Subdivision and Site Plan design. Where applicable, the Zoning Board of Adjustment will do the same.
8. The Planning Commission will update the Outdoor Lighting Section of the Land Use Regulations to include specific energy efficiency standards for outdoor lighting.

9. The Town will aim for 25% of its residences to have undertaken energy audits and steps to improve their home energy efficiency by 2020.

Transportation

10. The Town will work with the Chittenden County Regional Planning Organization, the Chittenden County Transportation Authority and the Vermont Agency of Transportation in exploring opportunities for ridesharing, park-n-ride facilities, bus stops. bike and pedestrian amenities, and other measures to reduce energy consumption in transportation.

11. The Energy Committee will work with the elementary school to improve bus ridership and carpooling percentages and analyze the potential for use of biofuels or other means to reduce the environmental impact of school transportation.

12. The Town will support the implementation of bike lanes to accommodate bicycle commuters, where feasible.

Incentives and Partnerships

13. The Town will support local organizations in their efforts to implement efforts to meet the Town's energy efficiency, conservation, sustainability and production goals.

5.11. Regional Issues And Coordination

5.11.1. General Policies

Regional off-site mitigation may be an appropriate strategy to meet Charlotte's goals of protecting Areas of High Public Value including important farmland, unique natural areas, and critical wildlife areas, where it is in the interest of the Town to protect such areas.

6. TIMETABLE

6.1.1. Year 1

1. Implement the Burns Property Master Plan in accordance with the community's preference. (Community Facilities and Services-Burns Property Strategy #1)
2. Plan for the best use of wastewater capacity on the Burns property for existing and new uses in the West Charlotte village. (Community Facilities and Services-Burns Property Strategy #2)
3. Update road and driveway standards (Transportation Strategy #1)
4. Construct pedestrian accommodations on Ferry Road (Transportation Strategy #5)
5. Formally appoint the Energy Task Force; Research energy use and needs; Conduct energy audits; and Identify opportunities for waste to energy options (Energy Strategy #5)
6. Publicize and administer the Charlotte Housing Trust Fund (Affordable Housing Strategy #4)
7. Undertake a Town-wide groundwater/water supply analysis, particularly in West Village. (Village and Hamlet Strategy #1, Natural Resource Strategy #8, Water Supply and Sewage Disposal System Strategy #1)
8. Amend the Charlotte Land Use Regulations to be compatible with this Town Plan.

6.1.2. Year 2

1. Develop an Open Space and Conservation Action Plan (Natural Resource Strategy #1)
2. Update the flood hazard area designations and regulations protecting them. (Natural Resource Strategy #2)
3. Develop plans to address erosion-prone town roads (Transportation Strategy #17)
4. Undertake East Charlotte Village Master Plan (Village and Hamlet Strategy #2)

6.1.3. Year 3

1. Work on public access improvements, including limited parking, to Whiskey Bay, Lane's Lane, Thompson's Point Dock, and McNeil Cove (Shoreland District Access Strategy #1)
2. Should the combined effects of the density provisions in the Land Use Regulations and the Charlotte Housing Trust Fund fail to produce adequate new affordable housing in the Town as determined by the needs assessment of September 2006, within three years, the Town should consider other tools to accomplish these goals. (Affordable Housing Strategy #5)

6.1.4. Year 4

1. Comprehensive assessment of the Town Plan
2. Study the need for fire/rescue substation in East Charlotte (Community Facilities and Services-Public Safety Strategy #2)

6.1.5. Year 5

1. Complete Action Steps for Years 1-4 that are unfinished and evaluate efforts with respect to implementation of the 2008 Town Plan.

7. GLOSSARY

Affordable Housing

Housing is affordable when households with incomes below county median pay no more than 30% of their income on housing costs. Housing costs for renters are: rent and utilities (including heat, hot water, trash, and electric). Housing costs for homeowners are principal, interest, property taxes, and property insurance. (This definition shall change as the state's definition changes.)

Aquifer

A geologic formation of structure capable of yielding water in considerable quantity to wells or springs.

Areas of High Public Value

Land with any of the following attributes are considered Areas with High Public Value: active agricultural use; steep slopes (equal to or greater than 15%); flood hazard; surface waters; wetlands (including required setback and buffer); shoreland (including required setback and buffer); special natural areas (as identified in the Town Plan); critical wildlife habitat (as identified in the Town Plan or as field delineated); water supply source protection areas; historic districts; sites and structures (as listed in the Vermont State Historic Register); scenic views and vistas (as identified in the Town Plan); and conserved land.

Capital Budget

A list and description of the capital projects to be undertaken in the coming fiscal year, their estimated costs, and methods of financing.

Capital Program

A plan of capital projects proposed during the five years following the Capital Budget, including costs and methods of finance.

Capital Project

Construction resulting in physical betterment or improvement, or preliminary studies for such an improvement.

Cluster Development

A development design technique that concentrates buildings in specific areas on the site to allow the remaining land to be used for recreation, common open space, and preservation of environmentally sensitive features; sometimes referred to as planned residential development (PRD) or planned unit development (PUD).

Corridor

A narrow strip of land associated with the movement of people, wildlife, goods, services, and/or utilities in a right-of-way.

Fair Share

A proportionate amount. Used in the context of affordable housing in this document and the regional plan, indicating that each municipality within the region should provide the opportunity for accommodating a portion of the region's need for affordable housing.

Flood Hazard Area

An area that would be inundated in a flood of such severity that the flood would be statistically likely to occur once every 100 years.

Groundwater

Water found underground in porous rock strata and soils.

Hamlet

A settlement pattern characterized by a cluster of dwellings surrounded by and distinctive from open countryside, and typically oriented around a Town road or intersection. Hamlets are usually characterized by diversity in terms of building style and placement, lot size, and the number of dwelling-units per building. Hamlets can be of various sizes, and can include small-scale commercial uses. Section 8.4(C)(2) of the Charlotte Land Use Regulations includes a provision for creating hamlets as a type of development, however the term “hamlet” can also refer to settlements that are not approved under this provision of the Land Use Regulations.

Historical Resources

Those districts, sites, buildings, structures, and artifacts which have a significant relationship to events or conditions of the human past and which are human made.

Historic Site

Any site, structure, district or archaeological landmark that has been included in, or is eligible for inclusion in, the National Register of Historic Places and/or the Vermont Register of Historic Places, or which is established by testimony of the Vermont Advisory Council on Historic Preservation as being historically significant.

Level of Service

The operating conditions that a driver experiences while traveling on a particular street or highway, including frequency of stops, operating speed, travel time, and traffic density.

Natural Area

An area of land or water that has unusual or significant flora, fauna, geological, or similar features of scientific, ecological, or educational interest.

Natural Community

An association of living organisms, their physical habitat, the natural processes going on there, and the interactions between all of these. Maintenance of healthy natural communities promotes biological diversity and life-supporting ecological processes.

Official Town Map

A map adopted by a municipality showing the location and widths of the existing and proposed streets, trails, drainage ways, parks, schools, and other public facilities, as provided in Title 24 V.S.A. Chapter 117.

Open Space

Publicly and privately owned areas of land, including parks, natural areas and areas of very low density development. Open spaces are places in the outdoors which 1) provide people with a visual and/or other sensory connection to nature and the natural landscape; 2) support the function of healthy ecosystems; or 3) support recreation without conflicting with other designed uses or protection of fragile natural resources.

Planned Residential Development (PRD)

A residential development technique which, for the purpose of protecting open land or specified natural resources, allows a higher density on a portion of a subdivision, as specified in the zoning regulations and as permitted by Title 24 V.S.A. Section 4407(3).

Planned Unit Development (PUD)

Similar to Planned Residential Development, but includes non-residential uses.

Primary Agricultural Soils

Soils that have a high potential for growing food and forage crops, are sufficiently well drained, are well supplied with plant nutrients or highly responsive to the use of fertilizer, and have few limitations for cultivation.

Scenic Corridor

The area adjacent to a road that traverses landscape of high quality or provides access to significant scenic views.

Scenic Resources

Those visually pleasing landscapes including mountains, farms, ridge lines and shorelines, and the locations providing scenic vistas of those landscapes.

Service Population

The number of people that are potential recipients or in need of Town services, and is intended to included the census population, part time visitors, seasonal residents and people who pass through the Town.

Sprawl

A development pattern characterized by inefficient land use, which fragments areas of high public value and which negatively impacts the rural character of the Town.

Strip Development

A linear pattern of commercial, residential, or mixed use development along a roadway, often characterized by automobile oriented single-story structures with parking primarily in the front, and unshared curb-cuts.

Telecommunications Transmission and Receiving Equipment

Any piece of equipment or machinery intended or used to send and/or receive non-visible electromagnetic radiation for the purpose of communication.

Tower

Any support structure that is intended for use as a wireless telecommunications facility, and that structure's related improvements. Said structure may include telecommunications transmission and receiving equipment as a component of its design, or may be designed to support modular units of telecommunications transmission and receiving equipment.

Transfer of Development Rights (TDR)

As used herein, is to describe a program the objective of which is to encourage development in village areas and/or village clusters in lieu of rural areas by means which would include the removal of the right to develop from one property or a part of a property and allocating that right to another property or part of a property for the purpose of preserving open land.

Water Supply Source Protection Area

Areas designated by the Vermont Agency of Natural Resources to protect the quality of public water supplies.

Wetland

Areas inundated by surface or groundwater with a frequency sufficient to support vegetation or aquatic life that depends on saturated or seasonally saturated soil conditions for growth and reproduction (e.g., marshes, swamps, sloughs, wet meadows, river and lake overflows, and bogs). The presence of wetland soils is at times masked by agricultural activities such as draining or mowing.

APPENDIX A: 2006 PLANNING SURVEY RESULTS

1. How long have you lived in Charlotte?

Average: 20 years
Range: 74 years to 1 week

2. What brought you here?

1. Open spaces and natural beauty [13]
2. Lifestyle, rural quality of life [13]
3. House/residential property [11]
4. Job [9]
5. Location/near Burlington, Middlebury, Vergennes [7]
6. Schools [5]
7. Retirement [4]
8. Family [4]
9. Born/raised here [4]
10. Friends [3]
11. Waterfront property/Lake Champlain [2]
12. Good/tight zoning [2]
13. Went to UVM
14. Support for agriculture
15. Civic activism
16. Conservation mentality
17. Summered and vacationed here since childhood
18. Loved area and built house
19. Lyman Wood's pamphlet, "Where it is still nice to live in the USA"
20. Recreation opportunities
21. Wanderlust
22. Dirt roads
23. Low taxes (at the time)

3. What is your line of work?

1. Retired [20]
2. Self-employed
3. MD/stay at home parent
4. Clinical psychologist/artist
5. Artist/innkeeper
6. Homemaker/volunteer
7. Clerical/carpenter
8. Antiques dealer
9. Retail
10. Store clerk
11. Cashier
12. Teacher
13. Graphics
14. Journalist
15. Banking
16. Attorney
17. Law
18. Telecommunications
19. Computer tech
20. Engineer
21. Library
22. Lister
23. Architect
24. Nature advocate, conservation planner, community development agent
25. Planning/design
26. Municipal planner
27. Protected areas consulting
28. Consultant [2]
29. Manager, energy organization
30. Pipe fitter
31. Administrator of nonprofit organization
32. Business

4. Where (town or city) do you work?

1. Charlotte [19]
2. Burlington [3]
3. South Burlington
4. Williston
5. Essex
6. Berlin
7. Colchester
8. Shelburne
9. Morrisville
10. Richmond
11. All over [3]

5. Do you have a Home Occupation?

1. No [20]
2. Yes [15]

6. Where do you live (NW, SW, NE, SE)?

1. SW [15]
2. SE [14]
3. NW [8]
4. NE [8]
5. South central
6. East

7. Village, rural or shoreline?

1. Rural [40]
2. Village [6]
3. Shoreline [4]

8. What are the top three reasons why you live in Charlotte?

1. Open space, natural beauty, rural character, views, quiet [42]
2. Location, near activities/amenities/work [21]
3. Neighbors/sense of community/volunteer spirit [16]
4. Friends and family [14]
5. House [12]
6. Schools [10]
7. Lifestyle/like the town/it's home [6]
8. Lake Champlain/lakeshore [4]
9. Conservation minded/progressive town [4]
10. Born/raised here [4]
11. Charlotte Senior Center [2]
12. Ability to farm/ability to live from the land and eat primarily from this ecoregion [2]
13. Village center
14. Zoning
15. Property appreciates
16. Small town government
17. Mount Philo
18. Affordable when we bought
19. Low population
20. No reason to leave

9. Why do you think people leave Charlotte?

1. Can't afford to live here [28]
2. High property taxes [20]
3. Job changes [19]
4. No senior housing/need nursing care/to retire [5]
5. Family changes [5]
6. Get cash out of their house [4]
7. Changing character/losing rural character/becoming a suburb/getting too upscale [3]
8. Want more community/too rural/not enough action [3]
9. Commuter fatigue [2]
10. Just sick of it
11. Move to warmer climate [2]
12. Too political
13. Lack of local employment/quality high-paying jobs [2]

10. What are the three most important problems facing Charlotte?

1. Taxes [21]
2. Development pressure/sprawl [19]
3. Lack of affordable housing/staying affordable for working families [19]
4. Loss of farms/keep agriculture viable [15]
5. Disappearance of open land/maintaining rural character [11]
6. Retaining low density housing/minimizing development/controlling growth/limiting population [8]
7. Quality of education at CCS/cost of education/maintaining enrollment [9]
8. Convenience stores/lack of business base/no commercial tax base [4]
9. VELCO [4]
10. Lack of recreational facilities/trails/bike lanes [3]
11. Resource fragmentation/pollution [3]
12. Too many upper income families/trust fund babies/second homeowners [3]
13. Maintaining rural infrastructure/improving roads [3]
14. Excessive speeds on roadways [2]
15. No public transportation [2]
16. Maintain community involvement/sense of community/volunteerism [3]
17. Large landowners/developers [2]

18. Polarization between old and new residents
19. Helping village grow aesthetically, healthfully
20. Energy
21. No fire and rescue facility in East Charlotte
22. Too many people that won't accept the town as it is and want to change into the place they left
23. Too many complaining people out for themselves
24. Traditional development thinking and patterns which hinder rather than promote community interaction and support
25. More homogenous population
26. Lack of senior housing
27. Lack of infrastructure for increased self sufficiency in terms of food, energy, transportation
28. Inconsistent regulation enforcement
29. Need more aggressive enforcement of regulations
30. Protection/overprotection
31. Over regulation
32. Over conservation of land
33. Freedom

11. What do we have here that needs improvement?

1. Recreational facilities/beach/ trails/sidewalks/bike lanes [13]
2. Cost of living/taxes/affordability [5]
3. School [2]
4. Alternative transportation opportunities/public transit [2]
5. Clear plan for conservation/tools to limit development on rural land and wildlife habitat [2]
6. Stronger enforcement of zoning/stronger zoning [2]
7. No more 5-acre sprawl zoning
8. Open land not being utilized – it's ugly
9. Public access to conserved open spaces
10. Appreciation/commitment to all rural and/or open land. I recognize all that CLT has done, but there's more to do.
11. Development clustered in the two village areas
12. Control over fire and rescue
13. A lack of connection between "old timers" and "new" residents
14. The attitude of people towards community use of private land for the benefit of everyone and maintaining open spaces instead of seeking to maximize the development potential of land.
15. Farmers' market and community supported agriculture operations to give more people access to local food and fiber year around
16. Farming income
17. Need to restore volunteer spirit on a wider basis within town population
18. More whole town activities
19. More effort to encourage businesses
20. Shopping
21. Roads
22. Green Quonset hut and highway department buildings are ugly
23. Get rid of the WIZN tower
24. Too many utility lines and getting bigger
25. Energy
26. Things are pretty good
27. Willingness to change (it's not bad, it's inevitable, it's good)

12. What don't we have here that we really need?

1. Recreational facilities/trails/bike lanes/sidewalks [12]
2. Restaurant/café/bistro/tavern/pub/coffee shop [11]
3. Affordable housing/apartments/senior housing [7]
4. Public transportation/rail transit [5]
5. Village/town center [6]
6. Affordable taxes [2]
7. A grocery store [2]
8. Small businesses
9. Bank branch
10. Small motel
11. Pharmacy

12. Hardware store
13. Funeral parlor for proposed elderly housing
14. A green cemetery
15. High school
16. Theater for Charlotte Town Players
17. Town governance committed to the real preservation of the town
18. An enforcement officer with teeth to keep violators in line and to make sure zoning regulations are being enforced.
19. Often times the property rights of landowners are ignored for what is called "the good of the while town"
20. Zoning against boring, Greenbush Road type housing lots (neither rural or suburban)
21. Monies to fireproof the three covered bridges
22. Understanding how to live without over-consumption of land resources
23. More local, renewable energy
24. Means adjusted tax abatement for farmers
25. Keep out water system

13. Should new development be focused in specific areas?

1. Yes [21]
2. Yes, town/village centers, hamlets [12]
3. Yes, clustered
4. Uncertain [5]
5. No [8]
6. Into clusters. Not necessary to focus solely on villages.
7. Affordability
8. Business/manufacturing on Ferry Road
9. PRDs in rural areas with good farmland should not be allowed. The Stockbridge development is one of the few good developments.
10. I think it's important to not overdevelop Charlotte.

14. Should development be focused in the villages (East Charlotte and West Charlotte villages)

1. Yes [36]
2. Uncertain [3]
3. No [11]
4. Development created more cost to town (school, roads, etc.) More housing means more use of facilities and school and higher taxes to support them.
5. Zoning density in these areas should be reduced to 1 house per 1 ¼ acre if space and septic is available.
6. Maybe focused but not required
7. East Charlotte should stay rural as possible and the west village is already concentrated

15. Are there distinct neighborhoods in Charlotte?

1. Yes [33]
2. No [5]

16. If yes, what are they?

1. East and west villages [24]
2. Recent planned residential developments/subdivisions [5]
3. Thompson's Point [8]
4. Ten Stones [7]
5. Stockbridge Road [5]
6. Wildwood [4]
7. Hills Point [4]
8. Mt. Philo [3]
9. Route 7 [3]
10. Sheehan Green [3]
11. Lake area [2]
12. Mutton Hill [2]
13. Baptist Corners [2]
14. Spear Street Extension [2]
15. North Greenbush Road [2]
16. Where homes are densely spaced [2]
17. Common Pastures
18. Toad Road
19. Wing Neck
20. Popple Dungeon
21. Patenaude's palaces

17. Do you think new growth should be focused near these areas?

1. Yes [16]
2. Uncertain [6]
3. No [12]
4. East and west village areas [5]

18. Are there other areas that should be considered for concentrated growth?

1. No [18]
2. Town/village centers [4]
3. Route 7 [4]
4. Spear Street
5. Church Hill Road
6. Sheehan Green
7. At this point, it is easier to identify areas where concentrated growth should be actively discouraged, for example near large blocks of important wildlife habitat
8. Only with very environmentally considered programs (like the Green Ribbon Living project)
9. Maybe in a way that links west and east villages. We should talk about how many is too many
10. Uncertain [5]

19. What do you want Charlotte to be like in 20 years?

1. Not much different from today [15]
2. Rural character/open land/conserved land [14]
3. Working farms [12]
4. Village centers [7]
5. Recreational facilities/trails/bike lanes/sidewalks [6]
6. Small business/business in designated areas [5]
7. Local sustainability/self-sufficiency [4]
8. Sense of community/volunteerism/local government [4]
9. Cluster housing [4]
10. Less expensive/affordable [3]
11. Low density [2]
12. Homes out of sight
13. Increased tourism
14. Good schools
15. Lewis Creel waterway entirely protected with wide buffers
16. Improved infrastructure
17. Removal of the WIZN tower
18. A pleasant place to live
19. Growth is inevitable lets do it in original fashion
20. Different from the 19th century
21. I won't be living here

20. What to you want to add or change?

1. Trails/sidewalks/paths [4]
2. Affordable housing [4]
3. More services/businesses [3]
4. Restaurant/tavern [2]
5. Alternative energy (wind turbines, solar, cow power) [2]
6. Stop dotting houses throughout/housing that looks like it belongs in the landscape [2]
7. More density
8. Matrix plan streets in neighborhoods
9. Like it or not there will be more houses
10. Lower property taxes or more infrastructure for what we pay now.
11. Reduce the school budget
12. Reduce the fire/rescue budget
13. Cemetery
14. Enlarge library
15. Get rid of the WIZN tower
16. Don't want to add much. Change the attitude that we need more
17. Cessation of development on Spear Street
18. Design that fosters community
19. More open town meetings, timed for all
20. East and West Charlotte village should have a historical zoning designation and have new development conform to these historical parameters.
21. Encouragement of alternative energy sources through tax abatements

21. What do you want to preserve?

1. Farms/open land/rural character [25]
2. Vistas/views [5]

3. Remaining blocks of wildlife habitat and connections between them/wildlife [3]
4. Lake access/town beach [3]
5. Sense of community [2]
6. There is enough conserved land [2]
7. Water quality
8. Historic buildings
9. Around Mt. Philo
10. Thompson Point… the town's tourist advantage…and ag base
11. Everything except anti-property rights
12. Diverse population/income levels
13. Stop VELCO
14. Good planning, but growth. There is room for more people to enjoy this beautiful area.

22. What three things would you like to see happen in Charlotte in the next five years, in your neighborhood?

1. Recreational facilities/trails/ sidewalks/bike lanes/paths [7]
2. No more development [5]
3. Street trees [2]
4. Conservation of Kiley property [2]
5. Way to help and encourage agricultural use and preserve open land/more conserved land [2]
6. Affordable housing [2]
7. Keep it the way it is [2]
8. Less/slower traffic [2]
9. Lower taxes
10. An open and well-facilitated process for planning the future of East Charlotte Village area, and development of the tools needed to implement that vision.
11. A plan for development and preservation
12. French property conserved.
13. Establish Quichel farm
14. Titus farm made more viable as a farm
15. Restricted Stearns development
16. No through traffic at beach, close road
17. Cleaner Lewis Creek, fewer phosphates
18. Groundwater protection
19. Maintain rural character and open space
20. Group net metering of neighborhood scale, renewable energy
21. Enlarge library
22. Keep neighborhood events
23. Year-round community supported agriculture (CSA) enterprise and seasonal farmers' market
24. Pave Wings Point Road
25. Let the road go back to dirt
26. Do not put low-income housing west of Lane property
27. Ten Stones might grow in numbers with transfer of development rights, additional gardening, some energy production

23. In the town as a whole?

1. Recreation facilities/lake access/parks/ trails/sidewalks/bike lanes [11]
2. Keep town affordable [2]
3. More volunteerism [2]
4. More population/housing/stores [2]
5. Improved public transit
6. Less regulation
7. Close the current loopholes in leases and land use regulations which permit Thompson Point leasees to build/develop/clear out of historic character of that area
8. A team of environmental consultants on contract with the town to review and advise on environment impact assessment of subdivision applications and stewardship issues
9. Groundwater protection
10. Maintain rural character and open space
11. Smart stewardship.
12. Local economies growing in a non-intrusive way.
13. Safe way for walkers and bikers to cross Route 7
14. Traffic calming
15. No through traffic at beach
16. Incorporate low-income housing in East Charlotte development
17. High school ratio per teacher 20 to 1
18. Way to help and encourage agricultural use and preserve open land
19. More CSAs
20. Land being preserved

21. Not much, new faces in local government, improved recognition of tourism and ag as long as viable community industries
22. Keep VELCO out
23. No more developments
24. Limit growth
25. Little to no commercial development
26. Historical designation
27. Enlarge library
28. East Charlotte should have an accessory fire and rescue facility
29. Some small commerce
30. Better control (upgrading) of commercial development along Route 7
31. That is the problem. Everyone is trying to create this cutsie-pie Shangri-la that only serves the creators.
32. Peaceful coexistence

24. Should Charlotte consider changing town-wide five-acre zoning and create districts with different zoning densities?

1. Yes [18]
2. Yes, in village centers [5]
3. Yes, cluster development/trade development rights [3]
4. Yes, increase it
5. No [10]
6. No, use PUD & TDR to concentrate housing in desired spaces
7. No, but a few cheap apartments wouldn't hurt
8. No, but allow exemptions for specific uses
9. Uncertain [3]
10. We need areas with higher housing densities, but not sure if zoning is the best or only way to achieve this

25. Should the town adopt regulations to control ridgeline development?

1. Yes [22]
2. No [10]
3. Only for housing/buildings, wind turbines should be allowed. [5]
4. Not beyond maintaining 5-acre zoning [2]
5. Just limit road and driveway slope to 8%, no zig zags
6. Depends. I do approve of wind power.
7. No overhead power lines
8. Some control yes, but some RD is OK.
9. This is too general to really comment on other than to say that such regulations should be considered of the current land use regulations are not sufficient

26. Should the town consider limiting or restricting development in other areas?

1. Yes [19]
2. Uncertain [3]
3. No [8]
4. Scenic viewsheds and corridors [2]
5. No commercial development along Route 7 other than existing businesses/keep Route 7 open [2]
6. Rural, agrarian areas need to stay open and active
7. Lewis Creek should have ¼ to ½ mile buffer areas to allow sanctuary for wildlife
8. Only where water or sewerage capacity is inadequate
9. Should limit residential development to 5 acre spacing everywhere except in or adjacent to existing villages
10. Perhaps near Demeter Park
11. Property rights are important. Work with the landowner (voluntarily).
12. Remove wetlands in determining density/wetlands [2]
13. Take a good look at the actual land – does it want structures?
14. Shoreline

27. Should the town create an Open Space Plan which would help guide the Planning Commission and Charlotte Land Trust?

1. Yes [27]
2. Uncertain [5]

3. No [5]
4. Only in context of agriculture
5. Don't use outdated language and paradigm of "open space." More appropriate and easier to understand/justify is the language/paradigm of "natural or cultural features of high public value." Conservation Commission and Charlotte Land Trust have already done background work on this by pulling together the map of Natural and Cultural Features with High Public Value. This needs to be refined with the revised Critical Wildlife Habitat map and perhaps information on other features, and them PC/CCC/CTL should lead an open process of conservation planning and the development of a vision and conservation/stewardship plan.
6. The public should be allowed access to the open land. If land conservation means giving landowners a tax break, and permitting them the only access to the land, I am opposed.
7. We already have a lot of conserved land created voluntarily without regulation.
8. A list of resources (natural and otherwise) to be preserved should be created and used to aid in subdivision decision.
9. More use of maps of features of high public value is better than an "open space" map and plan. Greater use of critical wildlife habitat map and database.
10. Thought we had one. All open land will be owned by Hinsdale and Mack in 20 years – conserved or not.
11. Develop walking trails

28. Comments?

1. I think this is a very invasive survey asking personal questions in the intro that are irrelevant to municipal business. These questions are entirely inappropriate to the nature of the survey.
2. Thanks for putting this survey out.
3. Keep doing the same.
4. The questions seem to infer that "development" is a plus. Maybe not. Look at South Burlington and Williston.
5. Adamant about the historic design and development zoning for West Charlotte along with more density there. East Charlotte village should also have a more flexible but also a historic designation.
6. Town administrators should get a raise.
7. The town has done a great job with its public buildings – senior center, library, and town hall.
8. Too many out-of-staters
9. Find some way of getting rid of the attitude "my neighbor must not do anything I don't like."
10. Don't let aesthetics rule over practicality and necessity.
11. We can't afford any more. We have conserved enough land in Charlotte. How much is enough?
12. Land use planning must always take into account possible effects on property taxes.
13. Need more connecting walking/bicycling trails
14. The wildlife habitat map needs updating. There is continual change here and it needs to be recorded
15. We have a chance to preserve and restore a community that is walkable and sustaining, providing jobs, homes and products while maintaining out landscape and carrying on agricultural tradition. I hope we can do it
16. Allow wind power on ridgelines. Encourage more "tasteful" development to increase tax base and lower costs for others. Let's see our state representative encourage state government to lower taxes or provide more services
17. Force VELCO to bury power lines in Charlotte/don't let VELCO in [2]
18. Get rid of telecommunications towers [2]

19. Fire and rescue costs and expansion getting out of hand. Life cannot be risk free
20. What's up with the Old Lantern?
21. We should discuss the working landscape more
22. Hire someone to carefully create and present a town plan with soul. The one by Boyle and Associates was rather flat and did not show adequately how the street views might look at the village(s) grew. I believe that this is such a sensitive issue for most of the town's people that it will take some serious hand holding and beautiful pictures of what things will look like as we move into this 21st century to gain the trust and confidence that will finally allow some consensus around the future.
23. The town should work out a mechanism that permits landowners to donate the development rights of land to create more and perpetual open spaces. This can be done through many highly creative ways instead of relying upon Conservation Commissions and Land Trusts, etc. to purchase the development rights from land. Concurrently with the development rights being removed from the land, there should be property tax incentives (i.e. tax valuation reductions for the reduced value of the land itself) in order to provide continuing and further incentives in addition to the initial tax benefit that someone would get from making the donation of the development rights. Such a reduction in the assessed value of the land should also be applied to land that is already conserved.
24. All land conservation projects and all subdivisions should include mechanisms for providing trails and trail access throughout the town ultimately leading to an extensive trail network for the benefit of the community.
25. With more than 20% of the total land mass owned or controlled by two different people/entities, the town needs to seriously look at what will happen with such a large percentage of the land base. In particular, if either of these landholders stop farming and cash in on the land, or a portion thereof, what effect would that have on the total community.
26. Another area that needs to be dealt with is the town owned lands. These are underutilized for purposes of access to the town as a whole. The way the land is leased in Thompson's Point should be completely changed. The "renters" do not have a perpetual right to lease the land for such minimal amounts of money. The rents on these properties should be dramatically increased so that the town can benefit from the expenses associated with the land itself and the real economic benefit of ownership of these lands. If a private developer were to own this land, the rents would likely be ten times the amounts paid by the current pool of renters.