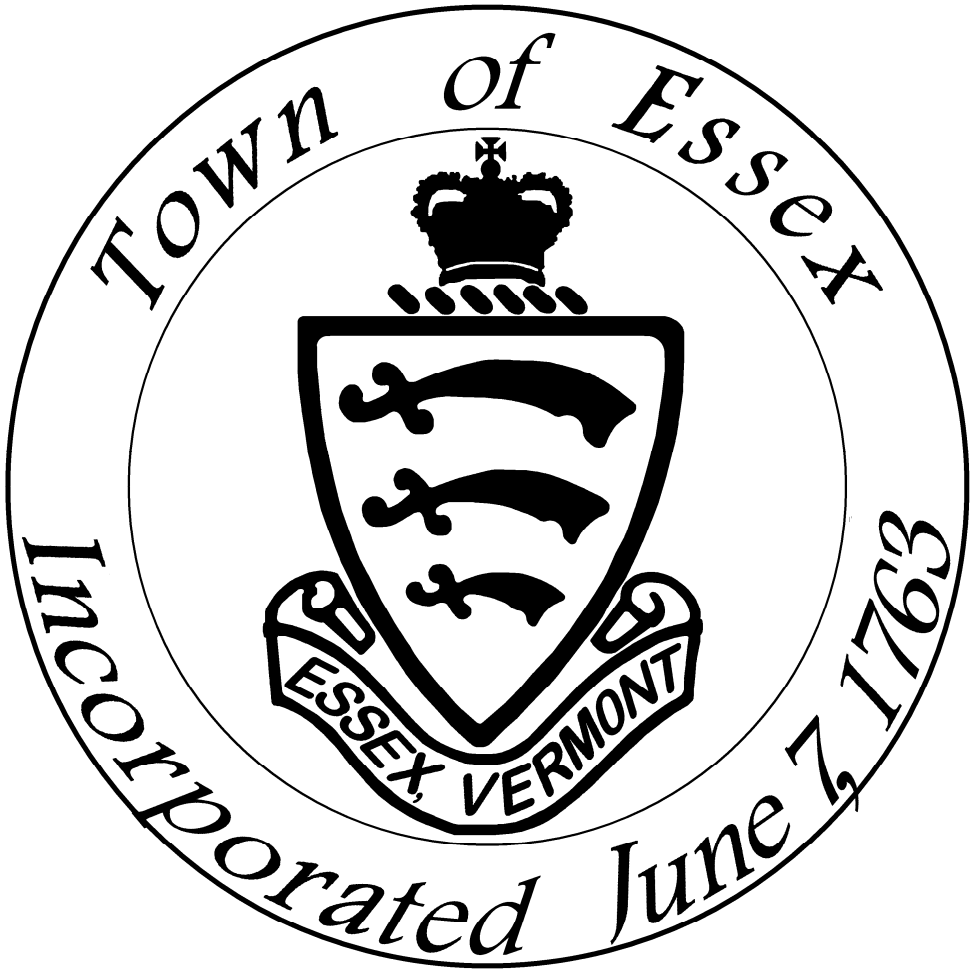
2011 Town Plan



Adopted March 1, 2011

By Essex Town Voters

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PREFACE

Growing Together Historically

Essex, including the Village of Essex Junction, is rich in history. From the first settlement at Page's Corner (Brigham Hill Road and Old Stage Road; circa 1784-1820) to the establishment of subsequent centers, including Butlers Corner (circa 1818-1822), the Center (i.e., Essex Center; circa 1820), Essex Junction (primarily at the height of the rail industry; circa 1850), and the new Town Center (adjacent to VT Route 15 and Old Stage Road), Essex has maintained a heritage and spirit of cooperation.[1]

Throughout Essex's history, the Village of Essex Junction played (and continues to play) a critical role as a hub of transportation and commerce due to its proximity to the Winooski River, rail lines and important roadways. The Town Center is being built around historic buildings that served as community gathering places in the early 1800's. This center will serve a sector of Essex's population presently not as well served as those residing nearer the Village Area. Together, as the Town grows, it is intended that the history books will indicate that the Village and the Town Center symbiotically served their constituency for the betterment of the whole community.

In addition, the history of Essex, including the Village of Essex Junction, is rooted in cooperation. Partnerships exemplifying Essex's collaboration in defining the community's superior quality of life include, but are not limited to, the following highlights:

1. Developing jointly the community's first comprehensive plan in 1967 that recognized two distinct centers;
2. Completing existing segments of the Circumferential Highway;
3. Providing community services including fire, Mutual Aid, law enforcement and rescue, and other governmental services;
4. Creating the Tri-Town Sewer District;
5. Planning and celebrating Essex's Bicentennial;
6. Envisioning a transportation path connecting Village and Town neighborhoods;
7. Purchasing the state's former Tree Farm Soccer facility such that ownership would be shared, half by the Town government, half by the Village government;
8. Weathering the '27 Flood; and
9. Working to locate and retain IBM, including passage of a related tax commitment by the voters.

[1] The History of the Town of Essex, edited by Bent, Frank R., Essex Publishing Co., Inc., Essex, VT. November 1963, pp. 35.

Village Centers and Community

Lewis Mumford praised New England communities for refusing *"to grow beyond the possibility of socializing and assimilating its members."* This plan underscores the notion that a community is linked to social cohesiveness. The essence of a small town lies in neighbors knowing one another as well as their teachers, local shop owners, and community leaders. Activities (e.g., shops, schools and offices) generally should be within walking distance. When growth takes a community beyond a small town size, the fraternity of small town life can be retained through neighborhood and village planning.[2]

Planning experts contend that populations of 8,000-10,000 need to be served by village centers providing a diversity of services. Essex believes that the community services offered by the Village well serve this threshold level of population for those residing in the Village Area. In addition, the Town believes the settled areas of Essex Center need similar service by another growth center – namely the Town Center off VT Route 15 at Butlers Corners. Combined, the Village and the Town Center provide Essex's nearly 20,000 residents with the necessary community offerings within a short drive or walking distance along with the mixture of local ingredients that define the Town's *"strong community bonds…and the fundamental physical elements that embody community."*[3]

CONTINUED COMMITMENT TO GROW TOGETHER

Reflecting upon its past and upon the future envisioned herein, the Town's community leaders believe that consensus-building in the present is good for all of Essex. This mutual gains approach needs to be continued by community leaders through donation of their expertise, time and enthusiasm.

Through the above reflection, Essex reminds itself that continuing collaboration with its citizens, whether they reside on Sawmill Road, Poplar Court or in any other areas of the community, will help build our Community. The bottom line: it's a commitment to doing what is best for Essex residents, businesses and visitors. Therefore, the Town recommits itself and offers itself to carry out its vision in the spirit of community, unity and indivisibility.

[2] Mackin, Anne and Krieger, Alex, A Design Primer for Cities and Towns, prepared for the Massachusetts Council on the Arts and Humanities. TDS Printing, Nashua, NH. September 1989, pp. 6. Note: the quotation from Lewis Mumford is taken from this source.

[3] Duany, Andres and Plater-Zyberk, Elizabeth, Towns and Town-Making Principles. Harvard University Graduate School of Design, Cambridge, MA. 1991, pp. 21.

INTRODUCTION TO THE PLAN

One of the most vital factors for orderly community growth, as well as resilience, is comprehensive planning. The development of a Town Plan is the process whereby a community seeks to understand where it has been – how past events have shaped it, where it is today – its assets and its problems, and where it is going – the extent of its future needs. It then develops a program that is sufficiently comprehensive to seek solutions to provide for future needs through the utilization of all its assets – human, natural and material.

The plan for the Town of Essex is its residents' vision of the Town's future. It is supported by plans, maps, studies and reports. It considers past trends and future potential, major problems that require solutions, and directions or policies that can be developed as guides to new growth. Taking all of the above into consideration, this plan attempts to visualize the long-range growth and sustainability of this community.

This plan, therefore, is a framework or guide for the Town as a whole to use in shaping its future course over a period of many years. As such, it must be sufficiently general to permit the filling in of such details as they may arise in future years. To serve over an extended period of time, the plan must be flexible. It must allow modifications and adjustment to all of its parts without unduly damaging its basic structure. The plan, above all, must be far-reaching. It must deal with all aspects of the community's growth, not just one small area.

Chapter 1 sets the stage for a discussion of the community's future by describing issues and opportunities, articulating the vision that Essex residents have for the future, and establishing general goals.

Chapter 2 includes a history of the Town, a description of the Town from a state and regional perspective, and a population profile.

Chapters 3 through 10 include the functional elements of the plan: Economic Development; Education; Housing; Community Facilities and Services; Recreation and Parks; Transportation; Natural Resources; and Aesthetic, Historic and Cultural Resources. Each element outlines the existing conditions, goals and objectives and policies of the plan.

Chapter 11, Land Use and Development, divides the Town into sub-areas to provide a location-specific means for addressing the unique set of circumstances found in the different regions of Essex. It also outlines policies and strategies to guide future land use patterns and describes land use districts which will ultimately be included in the Town's zoning regulations.

Chapter 12 is a description of the Town's government and fiscal condition.

Chapter 13 describes the energy sources relied upon by the residents of Essex. It recommends measures that the Town can take to improve energy efficiency in its own operations. It addresses measures which can be taken by the private sector for new construction, as well as the contributions which can be made through the utilization of renewable energy sources.

Finally, the last chapter, Chapter 14, describes the various tools and techniques available to implement the plan, identifies which tools are appropriate for the specific plan objectives, and presents the who, how, and when for implementing the plan.

Planning History – Through the Late 1980s

The Town of Essex has a long and progressive history of planning. In 1965, the Town, including the Village of Essex Junction, secured the services of professional planning consultants, Hans Klunder Associated of Hanover, New Hampshire. This firm, working with the Town and Village Planning Commissions, developed a comprehensive plan for the area which was adopted by the voters of the Town (which includes Village residents) in 1968. This same year, the Vermont Planning and Development Act (Title 24, Chapter 117) was put into effect by the state, encouraging municipalities to prepare a plan and stipulating certain requirements for their zoning regulations.

The so-called "Klunder Plan" provided an excellent foundation for the Town's planning efforts. Very few substantive changes have been made to the original land use districts over the years.

In 1970, a supplement to the 1967 comprehensive plan was prepared for both the Town and Village which reviewed the progress made in implementing the 1967 plan and outlined a strategy for continuing planning efforts. The need for this supplement was driven by both communities' concern over the rapid growth occurring during this time frame.

The Town and Village Planning Commissions drew up separate zoning regulations applicable to their respective areas to implement the intent of the comprehensive plan. These were adopted separately by the Selectboard and Trustees following public hearings in 1972.

A Natural Resources subcommittee of the joint Planning Commissions published a comprehensive study of area resources in 1972. Entitled "Proposal for a Quality Environment," the study considered planning for recreation areas, establishment of trail systems and conservation of natural resources in Essex. Portions of this study were incorporated in later updates of plans for the Town outside the Village, which were adopted in 1974 and 1977. It was not until 1978 that the more substantive recommendations were included. Many of these recommendations have been implemented by the Town, including the acquisition of Indian Brook Reservoir in 1986, the reservation of public trail easements throughout Saxon Hill Forest and the purchase or dedication of numerous community and neighborhood parks.

In 1977, the Town made a significant change to the zoning designation of the Saxon Hill Forest (also known as the Essex Junction Village Forest) from an Open Recreation zone to a Resource Preservation District-Industrial zone. This unique area was established to protect the natural attributes of the area for public enjoyment while allowing limited, well-planned industrial development on a minor portion of this large tract in harmony with the natural surroundings.

From 1977 to 1985, the adoption of an updated comprehensive plan was delayed due to the uncertainty of federal funding for a municipal sewer system and the establishment of a final alignment for the Circumferential Highway. An interim plan was adopted in 1984 with a permanent plan adopted in 1986. A subsequent amendment to the plan in 1987 established design control districts in Essex Center and Fort Ethan Allen.

Interim subdivision regulations were first adopted in 1976 and permanently adopted in 1979. These regulations remained in their original form until 1989 when changes were made to definitions.

1991 Town Plan and Recent Planning History

In the late 1980's, a major planning effort began in anticipation of a new Town Plan update.

The first step taken in the planning process was the collection and evaluation of background data. An analysis of existing conditions was undertaken via a series of studies and needs assessments during the 1988 to 1991 time frame.

These included:

- Public Safety Facility Needs Assessment Study, Rebanks Architects, Inc. May 1988
- Water System Capacity Study, Town of Essex Public Works Department, June 1988
- Sanitary Sewer System Capacity Study, Donald Hamlin Consulting Engineers, October 1988
- Parks and Recreation Needs Assessment and Capital Improvement Plan, Dubois & King, October 1989
- Open Lands Study, Humstone Squires Associates, July 1989
- Report of the Essex/Essex Junction Affordable Housing Task Force, March 1990
- Town Center Master Plan, Humstone Squires Associates, et. al, April 1991
- Highway Transportation Management Plan, Town of Essex Public Works Department, February 1991

These studies were incorporated by reference in the 1991 Town Plan.

The second step was to formulate the Planning Program. A joint meeting of the Planning Commission and the Board of Selectmen in October 1989 decided the framework for development of the plan.

The third step, the establishment of goals and objectives, began in April 1987 with a telephone survey of a representative sample of residents of the Village and the Town Outside the Village. A second mail survey was undertaken in January 1989 that focused specifically on recreation and parks, as part of a recreation and parks needs assessment. In an effort to generate interest in the preparation of the plan, a public forum was held in December of 1989. Approximately 150 residents attended and were asked to provide their thoughts on what the future should hold for Essex.

As a result of the December forum, 89 residents volunteered to serve on eight subcommittees that included Economic Development, Education, Housing, Land Use, Environmental Resource Protection, Recreation and Parks, Transportation, and Utilities, Facilities and Services. These subcommittees met over four months and submitted reports for Planning Commission review. In fall 1989, an Affordable Housing Committee was formed jointly with the Village of Essex Junction. This committee's work provided the foundation for the Housing subcommittee's report.

In September of 1990, all of the subcommittee reports were further refined and recommendations prioritized by three new committees – Land Use, Goals and Objectives, and Implementation. Committee membership included representatives from the Board of Selectmen, Planning Commission and citizen volunteers. The final recommendations of these committees were used to develop the plan and were the major source of its policies and strategies.

During the identification of community goals and objectives, it became evident that residents were extremely concerned about maintaining and enhancing an identifiable focal point for the Town. The Essex Center area of Town was mentioned time and again as providing a sense of community or identity which was important to preserve. Town officials decided to take a pro-active approach by obtaining the services of a professional consulting team to prepare a Town Center Plan for this particular area of Essex. The encouragement of a Town Center in this location was consistent with historical development of the community.

Four public workshops were held on the Town Center Master Plan to identify goals and objectives, obtain ideas on the design of the area, obtain a consensus on three alternative design concepts, and finally, respond to concerns about the final design.

The Town Plan received final approval and went into effect in November 1991.

In 1992, the Town changed the process by which it adopted Town Plans and amendments to provide for voter approval by Australian Ballot. A number of amendments to the Town Plan were also prepared for voter consideration in that year.

A number of these amendments were approved by the voters in 1993 and incorporated into the Town Plan. Major revisions to the zoning and subdivision regulations were approved in 1995 to implement the recommendations of the 1991 Town Plan as amended in 1993.

The 1996 Town Plan represented an update of the 1991 Town Plan as amended in 1993. With the exception of revisions to demographic and other data, no major changes were made. An area immediately north of the Town Center was revised to allow some commercial and medium density uses. This change was added to the zoning regulations in 1997.

Two long-standing planning policies were incorporated into regulations in 1998. Using information from a 1998 update to the Sewer System Capacity Study, the Selectboard adopted a Sewer Allocation Ordinance which replaced its Sewer Allocation Policy. This document was significant in outlining a boundary for the service area and continuing the Town's policy of restricting new sewer service to properties located within that boundary. Also, the Town's Residential Phasing Policy, which long had restricted the rate of residential growth, was officially included in the subdivision regulations.

In fall 1998, the Planning Commission adopted the following Mission Statement and Goals:

> "Mission Statement: Our purpose is to provide the planning tools and to make decisions that guide the growth and development of the Essex community toward improving the quality of life for its citizens.
>
> Goals:
>
> 1) Assist the community in developing a Town Plan that:
>   - balances the diverse demands of the present generation with anticipated future needs
>   - is supported by reasonable, understandable and fair regulations.
>
> 2) Administer a decision making process that:
>   - is based on the Town Plan and its supporting documents
>   - considers the best interest of the community at large."

The Planning Process – 2001 Town Plan

Planning has been a continuing process in Essex and sometimes overlaps from one Town Plan to the next. For example, adoption of an Indian Brook Management Plan, an important recommendation of earlier Town Plans, was just being completed as the 2001 Town Plan was being prepared. Other implementation efforts continued as the updated goals, objectives and strategies of the new plan were being developed.

The Town began the planning process for the 2001 Town Plan with the belief that most of the goals of the 1991 Town Plan were still appropriate. Development within the Town Center followed patterns recommended by the 1991 plan, and other public and private actions also were taking place in accordance with that plan. However, the Town also felt that the 10-year update in 2001 should be more complete than the 5-year update in 1996.

The first step was creation of new Town Plan committees, mirroring the successful effort from 1989 and 1990. After volunteers responded to a mailing from the Community Development Department,

six committees were formed in April 2000 – Land Use, Transportation and Public Facilities, Natural and Cultural Resources, Parks and Recreation, Housing, and Economic Development. Each committee was asked to review relevant sections of the 1996 plan and to recommend changes in light of current conditions in the Town. A list of major issues was compiled by the Community Development Department to assist the committees in their work.

Several public meetings were held during the spring and summer of 2000. A kick-off meeting in May oriented all committee members to the status of the 1996 Town Plan, major issues to be addressed, and the process for adopting a new plan. A public forum in June sought input from Essex residents regarding planning issues facing the Town. A joint committee meeting at the end of August allowed for discussion of issues that overlapped individual committee jurisdiction, notably land use policies at the urban/rural fringe.

Each of the six Town Plan committees met during the spring and fall of 2000 and produced a set of goals, objectives and strategies. A seventh committee, Trails, was added during this time and provided recommendations on trail mapping and related goals and objectives.

The findings of the committees were presented for public review at a public forum in November.

Work done by the committees and participation in the various public meetings represented a diligent planning effort by approximately 50 Town residents. In an attempt to gain input from a wider audience, planners conducted a survey of residents both of the Village of Essex Junction and the Town outside the Village. A six page survey – with questions on growth rates, general planning goals, open space, housing, commercial uses and transportation – was distributed to voters on election day in November. More than 1200 residents returned survey forms, an impressive return that suggested a strong interest in issues relating to growth and land use planning.

2006 Town Plan Update

Similar to the process used to update the Town Plan in 1996, the Planning Commission and the Selectboard opted to conduct a basic update for the 2006 Town Plan since the Town Center vision and related goals, policies, and objectives remain largely current and applicable. To that end, the Town carried out the following activity:

The Town, with the assistance of the Vermont Center for Rural Studies, conducted a citizen survey beginning with the March, 2004 Town Meeting and running through May, 2004 (refer to the survey results in Appendix A). Three public forums were also held to focus on the adequacy of the 2001 Town Plan's goals, policies, and objectives, supplement the results of the 2004 citizen survey, and consider the recommendations of an ad hoc citizen committee.

In addition, Town staff held meetings with other local planners in the region, staff from the Chittenden County Regional Planning Commission, and staff from the VT Department of Housing and Community Affairs, to collaborate on the goals and policies of other local plans, the regional plan, and plans of state agencies affecting land use.

The Town also used the services of the VT Center for Rural Studies to update the demographic and statistical tables in the plan, and hired planning consultant Michael Munson, AICP in collaboration with the firm Burnt Rock Inc., Associates in Community Planning, to assist with the update. The consultants' primary responsibilities were to make strategic revisions to the 2001 Town Plan, in consultation with the Planning Commission and staff, and incorporate recent key findings from the citizen outreach efforts and special studies undertaken by the Town in the past four years.

2011 Plan Update

The Planning Commission did not perform a comprehensive update of the 2006 Town Plan, finding that the general vision for the Town remained intact. No need was found to change the Future Land Use map or to review the main designated Planning Areas. More emphasis has been placed on implementing the goals and objectives of the 2006 Town Plan through an on-going series of amendments to the Zoning and Subdivision regulations. The regulations were amended in 2007, 2008 and 2010 for the following purposes: to incorporate a new residential phasing policy; to add riparian buffer zone regulations; to change the boundaries of the MXD-PUD zoning district; to make the documents more user-friendly, including substantially revising the development review process; to revise the Planned Unit Development (PUD) provisions; to consolidate and clarify enforcement procedures; to revise the Town's policy on residential density bonuses; to add regulations for telecommunications facilities; to revise exterior lighting requirements; and to add flood hazard area language to meet FEMA requirements, among other revisions.

The process for the 2011 Town Plan did involve a comprehensive statistical and data update, although information from the 2010 Census was not yet available. The Town contracted with the Chittenden County Regional Planning Commission for the statistical and data update work. All Town departments provided updated statistics, charts and tables to reflect changes in the intervening five years.

The Planning Commission conducted four public forums for the 2011 Town Plan and held a formal public hearing. The Selectboard also held a workshop and had multiple public hearings on the proposed revisions.

Coordination with Other Plans

A comprehensive effort was made as part of adoption of the 1991 Plan to ensure that the Town's planning efforts were consistent with those of neighboring towns. The 2006 Plan continued the planning directions that were found to be consistent 15 years earlier. In addition, several key areas of concern were addressed in greater detail in the 2001 Plan and were carried forward in the 2006 update. For example, updated trails maps were prepared after viewing regional maps that showed the location of trail connections in adjacent towns.

Through the years, Village planners have been consulted concerning issues of mutual concern, such as traffic and commercial development. Studies prepared for the Regional Planning Commission, such as the Economic and Demographic Forecast for Northwest Vermont and Chittenden County, 2000 to 2035 and beyond, were used in the preparation of population and housing projections for this plan. The Town also paid close attention to regional policies for growth centers and housing needs, but the Town retained its right as the primary entity responsible for land use policies in those areas.

Efforts have been made to ensure the 2011 Town Plan remains as consistent as possible with the Regional Plan, as well as with accompanying plans such as the Regional Open Space Plan.

The Town of Essex continues to participate in a number of regional and multi-community organizations. A complete list is included in Chapter 12, "Government and Finance."

1. THE VISION

Essex is a thriving community with continuing economic and residential growth while remaining largely true to its rural character. Growth is concentrated in a designated sewer core area and focused in the Town Center to encourage pedestrian-friendly development that is attractive to live in and a destination for goods and services for neighboring communities. Compact growth helps preserve open space for agricultural, recreational and conservation purposes, as well as reduce energy use for transportation. Improvements in infrastructure, public transportation and land use will positively influence traffic flow and volume, as well as energy use and conservation.

Definition of "Our Community"

What is Essex's identity? Perhaps unlike many communities of the past, it's not any one central place, industry, theme, or folktale. Rather, our community is the sum of its parts. It's our rich history inclusive of, but not limited to, the Allen forefathers and its Civil War heroes. It's the ability to support a thriving Town Center at Butlers Corner. It's the continuing success of the Essex High School athletes and scholars, the influence of IBM, and the bustle of the Champlain Valley Expo. It's unwavering support of the Circumferential Highway balanced with stewardship of our Town Common and natural resources. It's the enthusiasm families feel about Essex as a wonderful place to live due to an excellent school system and recreation opportunities. And, it's all the rest …

1.1 Purpose

The overall purpose of a Town Plan is to encourage the intentional distribution of population, employment opportunities, and other activities, and to protect residential, agricultural and other areas from undue concentrations of population and overcrowding of land and buildings, from traffic congestion, from inadequate parking and the invasion of through-traffic, and from the loss of peace, quiet and privacy.

Before a plan for our community can be developed, it is necessary to gain an understanding of the issues and opportunities confronting us globally as well as locally. As the assets and liabilities of the community are evaluated, a vision of what we want our community to become over the next five, 10 and 20 years begins to emerge. A statement of goals can then be prepared from the wishes, needs and hopes of the people of the community. All of these elements provide a framework for the rest of the plan.

1.2 Issues and Opportunities

Essex residents acknowledge that the global economy has an increasing influence on our local way of life. We watch as jobs move to places where workers accept much lower wages. We know that businesses have moved to warmer climates and areas with lower taxes and fewer labor laws. Economists tell us that dollars spent locally stay in the community up to three times more than those spent elsewhere, generating revenue to support the state through sales tax, as well as to grow and sustain local businesses. "Buy Local" may leap from a bumper sticker slogan to an economic imperative.

The Town should encourage the efficient use of energy resources. Essex would be wise to carefully examine strategies for the creation of a more sustainable and localized economy. As a community, we can explore ways to build resilience by meeting more of our basic needs through local farming, and industry, as well as renewable energy production.

An understanding of community issues, opportunities and aspirations requires public participation. The following is a summary of comments made during the adoption of the prior Town Plans and in response to the November 2000 and March 2004 Town Plan surveys.

Essex residents take pride in their community because of its many contrasts. They speak of Essex's semi-rural nature and open countryside despite the fact the Town of Essex is located in the most populated and one of the fastest growing counties in Vermont. Essex is attractive because of its nationally recognized school system, its recreational land and facilities, and as the home of an IBM manufacturing plant employing approximately 5,000 people. Its residents enjoy per capita incomes and average wages among the highest in the state. The Town is in the geographical center of Chittenden County and is within easy access of all cultural, recreational, and social activities of the Champlain Valley.

Essex residents express strong satisfaction with recent rates of growth and with the Town's growth policies. Yet the costs of growth are recognized. Some of the negative aspects of being a sub-regional center include traffic congestion, the loss of farmland and open space, increased taxes, and increased demands on municipal services and facilities. Specific issues identified are categorized into five main topics.

Open Space

The Town's natural infrastructure – its trail networks, scenic views, productive agricultural land, wetland, and wildlife habitat corridors – is also important to residents. Community members are concerned about the incremental loss of open space that comes with increased suburbanization. Developing measures to better preserve Essex's rural character and natural resources through more stringent development review standards, creation of an open space fund, and a land trust should be considered.

Essex has hills, valleys, forests, meadows, floodplains and spectacular views of distant mountains. Major roads follow the rivers and lowlands converging at the Five Corners in the Village of Essex Junction. More than three-quarters of the geographic area of Essex is rural with the development clustered in the Village, Essex Center, Sand Hill and Susie Wilson Road areas. Residents desire to retain the rural atmosphere through the protection of important features and those uses that keep lands open. Future growth should be sensitive to views. There is need for more trails providing better access to rivers and natural areas as well as providing linkage to key developed areas such as schools, shopping and business. Creation of an Open Space Fund will assist in the preservation of open land and compatible uses of that land.

Residents want to maintain and improve the quality of life in Essex. Air and water quality continue to improve and clean energy, recycling and solid waste reduction also must be promoted.

Cultural Facilities, Parks and Institutions

Essex residents have consistently expressed a desire to strengthen and enhance a sense of community. Cultural arts and activities are a key factor in reinforcing pride in one's community.

Efforts elevating community spirit include the opening of the Essex Free Library, restoration of Memorial Hall, and improvements to the Town Center.

The purchase of Indian Brook Reservoir placed an important natural resource in public hands for current and future generations to enjoy. Growing use of Indian Brook brings about a need for careful management of the park's resources. The unique RPD-I zoning of Saxon Hill Forest, which has been consistently observed since 1977 in accordance with the initial agreement, must be preserved so that the Town does not lose that precious resource. Cooperation with the Tree Farm Management Group and the Village in developing soccer fields at the Tree Farm property increases recreational opportunities for Town and Village residents.

Maintaining high quality schools is one of the highest priorities of Town residents. Recent additions have been made to Essex Town schools in response to residential growth. Management of the growth rate will help the Town manage the cost of providing educational services.

Residents support continued cooperation among Town and school officials and private groups to make land available for recreational use and to maintain recreational facilities.

Community Infrastructure

Essex has experienced considerable growth over the last 25 years. Town residents see a resulting increase in demand for services. They are concerned about traffic and road conditions. The Circumferential Highway is critical to alleviating traffic congestion and making Essex more accessible. However, residents also want to control development along the highway and at its interchanges. Rather than widen VT Route 15 and other highways, residents prefer use of more efficient intersections, expanded bus service, and construction of sidewalks and multi-use trails.

Housing

A mixture of housing available to all income levels is desirable. Given the aging population, elderly housing is an important need. Residents want housing to be close to services and envision mixed use development instead of segregated land uses. Residential development should not be wasteful in its use of undeveloped land. Rather than extend the growth area into the countryside, the Town's growth centers should be surrounded by open space. Finally, the rate of population and housing growth is a concern and the Town's growth control policies should be continued.

Economic Development

Residents are concerned about the Town's dependency on one major industry and the need to diversify our tax base. Streamlining the zoning and subdivision regulatory review processes is a goal. Residents also want future economic development activities to be in keeping with the Town's character and not to degrade the environment.

1.3 General Planning Goals

- Essex will work to ensure that the general public health, safety and welfare of its residents remain of primary importance as the community plans its future, given the expected local and global challenges ahead.

- The 20th century model of growth and development as detailed in prior plans will begin to give way in this and future plans to a 21st century model of self-sufficiency and resiliency for overcoming the challenges posed by peak oil and climate change.

- The Town will continue to accept a share of the region's growth but will balance this growth with the ability to provide services and facilities consistent with historical growth rates.

- Future development will be consistent with Essex's role as a sub-regional center with the scale of development supportable by a market derived from Essex and its surrounding communities. It is not intended that Essex become the dominant growth center for the county.

- The Town will continue as a good place in which people can live and work in the same community. Maintaining a strong economy, good-paying jobs, reasonable property taxes and diverse housing opportunities will allow people of all ages to stay in Essex and encourage others to locate in the Town.

- Economic growth will be diversified. Mixed commercial and residential development will occur in and around the Town Center. The extent of land and available infrastructure in and around Saxon Hill Industrial Park will be highly attractive for new and expanding business and industry. Employment opportunities will be available both in workplaces and at home and will be supported by changing information technology.

- The community will continue to emphasize high-quality education. Consistent provision of educational services will be facilitated by avoiding rapid change in student population. Educational facilities will be used extensively both during and after school hours by the community.

- The Town will address the housing needs of Essex's projected resident population, particularly low and moderate-income residents. More diverse housing opportunities will be available with a large majority of them being located in the Town's growth centers. Energy efficiency will be a major push, as will the use of locally-sourced building materials.

- The Town will continue to meet its basic responsibilities for providing adequate community services and facilities. A wide range of actions will include maintenance of existing facilities such as roads, managing the capacity of finite systems such as sewers, and incorporating new technology and information in areas such as storm water treatment.

- The future will provide varied modes of transportation with automobile use balanced by increased availability of public transit, sidewalks and multi-use trails. Mixed-use development patterns and home-based employment may help reduce traffic congestion. Changes in travel patterns and more efficient intersection designs will avoid the need to widen existing highways. Completion of the Circumferential Highway will allow local streets to return to their primary function of providing access instead of through-traffic.

- All future land use and development will proceed in a controlled, planned and balanced manner that will be harmonious with the natural and built environment. Development will

occur in growth centers in a compact manner as opposed to scattered development throughout the Town. Areas such as the Town Center will have a mix of commercial and residential development. Development form will be vertical, with taller buildings, as well as horizontal. These higher density areas will be accompanied by largely residential neighborhood growth centers. All the settled areas will have convenient access by non-motorized, multi-use trails to the surrounding open spaces, natural and recreational facilities as well as key developed areas such as schools, shopping and businesses.

- Important natural resources and open space will be protected as part of a more extensive open lands policy. Strong encouragement will be given to those who continue productive use of farm and forestland. Other undeveloped lands will allow Town residents to enjoy recreation and trail opportunities and will provide aesthetic benefits to the entire community. We recognize our duty to leave substantial land undeveloped for future generations.

- The establishment of Property-Assessed Clean Energy districts (known as PACE districts) will be encouraged.

- Energy conservation, energy efficiency, and ways to generate renewable energy will be given a high priority, given expected cost increases and the anticipated need for decreasing our greenhouse gas emissions.

- Safe and affordable childcare and early education for children from birth to age 12 will be available and will meet or exceed state and national learning standards. Current childcare and early education issues will be resolved through proper financing, adequate infrastructure, improved business assistance for providers, and heightened childcare work force development.

2. THE SETTING

2.1 Brief History of Essex

On June 7, 1763, the boundaries of the Town of Essex were set by charter as part of the New Hampshire grants by authority of King George II of England. Essex is one of the few Vermont towns whose boundaries have never been changed and whose original charter is still in existence. Other Vermont charters were returned to England during the Revolutionary War.

According to the charter, Essex is an area six miles square containing 23,040 acres, bound on the south by what was then known as the Onion River (now the Winooski River). Official acreage is now listed at 23,316 acres. This area was divided into 72 equal shares among 66 grantees with the famous Allen family receiving 49 of the original grants. The name Essex was chosen at the time of charter, but the reason for the choice is speculative.

In 1773, several men, including Ira and Ethan Allen, formed the Onion River Company in order to survey, purchase and promote settlement of lands. Permanent settlement did not begin until 1783, after the Revolutionary War when the first six settlers located their homes on Browns River Road between Weed Road (about four city blocks) toward Westford. By the following year, more and more families began arriving, drawn by the promise of land and of work with the Allen family's sawmills and lumber trade.

In 1786, the first Town Meeting was held and town taxes levied for the maintenance of roads. This first Town Meeting was held at what is now known as the Siegrist property on River Road. As time went on however, Town Meeting locations alternated between Page's Corners (in various taverns) and Essex Center.

From the earliest settlement to 1820 the hub of the Town's activities was at Page's Corners – the junction of Colonel Page Road and Old Stage Road which was the main route running north to St. Albans. During the embargo period starting in 1807, Page's Corners was much used by those engaged in illicit trade with Canada, since the four routes forked out nearby and offered escape from officials in pursuit. At its prime, Page's Corners consisted of four taverns, two stores, a post office (mail was transported on horseback once a week), a potash factory, a sawmill on Alder Brook, an iron works developed on Colonel Page Road and a wheelwright shop.

Between the years of 1805 and 1813, Essex Center began to develop. Frank Bent, in *The History of Essex* (1963) describes how Essex Center eventually became designated as the "center" for the Town.

It was the established custom of New England towns to have a town common or green. This place was generally purposed to bring those things of a communal nature to one central point, where it would be most convenient to all. It was not always possible to choose the geographical center of a locality because of physical terrain limitations. As exceptions to the general rule were allowed, political expedience or power entered into the settlement of the matter.

Essex grew without such a central point for a good number of years. Cattle were limited in number these first few years and common pasture was not found to be necessary. The dead were buried on the family land at the very first. By 1794 the Town felt the need of a common burial ground and so voted at that Town Meeting. Such a need brought the Town to the realization of setting out a

common as well. The common burial ground chosen was the cemetery adjacent to the former Fiske Grain Store, across VT Route 15 from the Essex Free Library, and is currently a commercial and residential building. As has been indicated earlier, the common and meeting house site were staked out on a piece of pasture on the Perry Towers Farms. This was the geographical center of the town. Soon objections were raised. First, there was no road to the location. Also, the location was surrounded by wet low land. As such it would not be suitable for a burial ground. Besides, a burial ground had already been started. Those at Page's Corners felt it should be located near where the present business center was situated. So the matter was laid on the table until September 1800. At this time the matter was brought to a head by a vote to build a much-needed meetinghouse within seventy rods of the existing stake laid out in 1794. At the March meeting in 1801 it was decided to abandon the original site. A new committee was created to 'stick the stake' in a new location and record the same at the county seat in Burlington. The present common was laid out and marked in a general nature. The whole matter rested on general consent for another two years. In the spring of 1803 the erection of the meetinghouse on the common began.

Although the meetinghouse was erected in 1803, town meetings were seldom held in it. As had been shown in the organization of the town, official meetings were held mainly at Page's Corners Tavern, in the Sam Buell Tavern or the Billie Bishop Butler Tavern (most recently known as the Merle Wood Country Store site). The freeman's meeting, held annually in September, was held in the meetinghouse regularly. This was the meeting at which the freemen of the town came and cast their vote for governor, and other state officers. Other than this meeting, the meetinghouse was strictly limited to church services for the townspeople.

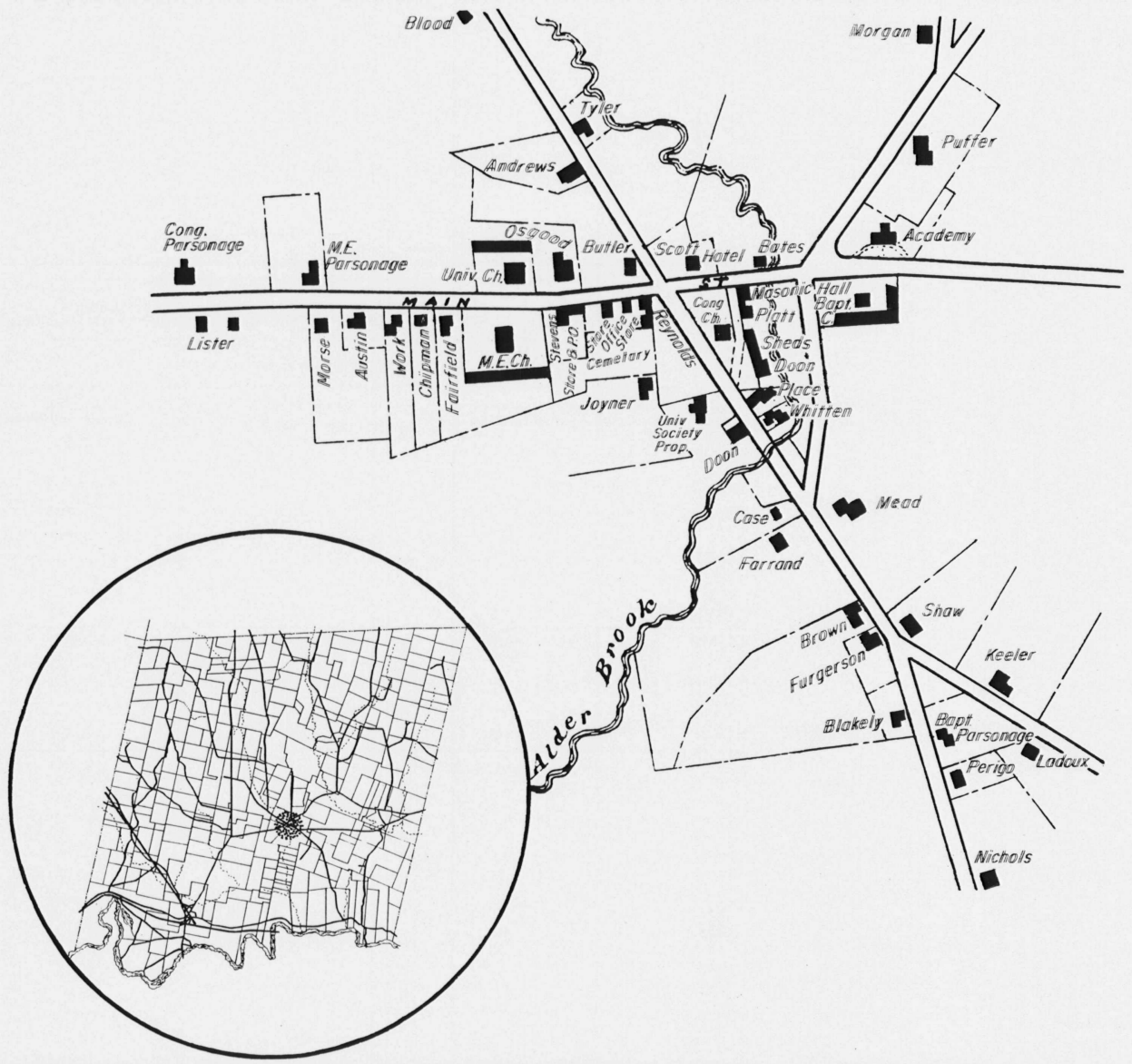
Various sources indicate that the "center" of Town even moved briefly to Butlers Corners from 1822 to 1826. The Town had previously voted in the year 1800 to erect a signpost for public notices and a pair of stocks for the punishment of criminals in the Butlers Corners area. A post office was also established at Butlers Corners in 1825. The Buell Tavern was located on the west side of Upper Main Street in this same area and was a noted stopping place for travelers between Johnson and Burlington. Roswell and William Butler built both the brick house and white clapboard structure on the east side of Upper Main Street. The white clapboard house was also operated as a tavern at one time. The story goes that Roswell Butler appealed to the Town fathers to establish the Town Center at Butlers Corners but they did not support this request.

Meanwhile in the southern part of town, called Hubbel's Falls, business and industry grew around a succession of dams and mills built and rebuilt across the Winooski River. The first was constructed for Ira Allen by Abram Stevens who later built the tavern in 1820 now known as Lincoln Hall.

In 1850 Hubbel's Falls was renamed Painesville, after Governor Paine who brought the railroad through Essex, but by 1862 the railroad station and surrounding area were known by everyone as Essex Junction. During this period, J. K. Drury came to Essex Junction from Milton and started the Drury Brick Yard, which operated until the late 1960s.

The railroad brought increasing business to the Junction. In its heyday, six lines converged here as 35 passenger trains passed through daily. As the population increased, the need for services grew, and in 1892 the General Assembly approved the incorporation of the Village of Essex Junction, an area of 3.8 square miles with approximately 1,131 inhabitants. In the remaining 32 square miles of the town lived 1,062 people.

FIGURE 2-1: Historic "Essex Center"
Source: Community Development Department



Gradually the many creameries in the Town were consolidated into the creameries in the Village since the railroad could carry the milk to the New York and Boston markets. Farmers in Essex Town made trips to Essex Junction every day to deliver milk and purchase grain and oats which were ground at the Johnson Mill. Cattle were shipped to the stock yards in the Village for shipment to market. The Town became a farming community and the Village was known as the prosperous center of industry.

In 1893, Fort Ethan Allen was built on land taken from the towns of Colchester and Essex as a permanent army post. Experience in the 17th and 18th centuries had shown that invaders gained easy access to our country through the St. Lawrence River and its tributaries. At the recommendation of Vermont Senator Redfield Proctor, Congress cleared the way for the establishment of this military post to protect the country from invaders from the north. Several gentlemen of Vermont offered 600 acres of land near Essex Junction without cost to the United States to be used for the fort. Originally, cavalry troops were housed at the fort, but through the years it has been used by many different military and civilian groups.

In 1952, the command of Fort Ethan Allen was formally transferred to the Air Force, and Fort Ethan Allen became Ethan Allen Air Force Base until the Air Force officially relinquished the base in 1961. Between 1962 and 1965, a number of private individuals and the University of Vermont acquired various properties in the Fort. The University received the property at no expense but had to keep it for 20 years for housing. Then the University would be free to dispose of it as it chose. In 1990, UVM sold a portion of its land holdings to the Vermont Housing Finance Agency for an affordable housing project. As part of this project, the Parade Grounds have been deeded to the Towns of Colchester and Essex. Currently, the Fort is being used by St. Michael's College, the University of Vermont, Vermont Highway Department, educational and private television stations and various private businesses.

The incorporated Village of Essex Center was established in 1951 primarily to provide a water system for its residents. A president and four trustees were responsible for the maintenance of the water supply, but in all other matters Essex Center was served by the Town of Essex and its residents were voters of the Town.

The Village of Essex Center began buying its water from the Champlain Water District in 1974, and the following year its residents voted to convey a reservoir property off Sand Hill Road to the Essex Town School District. The Village eventually merged its system with the Town Water Department which evolved with the advent of the Champlain Water District and rescinded their Charter in 1976.

In 1954, the Winooski woolen mills were suddenly shut down, leaving 1,900 persons jobless. To promote desperately needed new industry, the Greater Burlington Industrial Corporation (GBIC) was set up and financed by local towns. As a result of its efforts, International Business Machines (IBM) was encouraged to locate a plant in Essex Junction. In 1957, IBM opened its doors to 500 employees; it now employs approximately 6,000.

In 1964, the government of the Village of Essex Junction and the Town launched a detailed study to determine the advisability of merging into one government in order to economize and end unnecessary duplication of municipal departments. The question of merging the two governments as well as separation of the governments was voted on a number of times during the 1970's and early 1980's but was turned down each time. At the end of the century, Village residents voted to separate from the Town and residents of the Town outside of the Village supported consolidation of the two governments into one City of Essex Junction. The issue was sent to the Vermont

Legislature for resolution in 2000, but the Local Government Committee returned it for another attempt at local agreement.

In April 2005, a non-binding merger vote was held by Australian ballot. As a result of the affirmative vote (1,107 for, 275 against), the Town Selectboard and Village Board of Trustees appointed a joint task force charged with developing a charter for the merger of the two parts of the Town. Their plan of merger was voted on in November 2006. Merger passed in a town-wide vote (4,376 for, 4,167 against) as well as in a separate village vote (2,922 for, 1,085 against). Because the town-wide vote spread was smaller than the number of voters that appeared to have missed the question, which was on the reverse of the town ballot, as well as for other reasons, citizens petitioned successfully for a town-wide re-vote on the matter. In January of 2007, the current plan of merger was rejected (2,890 against, 2,699 for).

The population of Essex has grown rapidly in recent years. From an essential rural area, Essex has developed into a thriving residential and business community.

2.2 State And Regional Context

The Town of Essex is located in northwestern Vermont in the geographical center of Chittenden County. Chittenden County is the state's most populous county and is the home to the largest city in Vermont. Essex lies within easy access of the social, recreational and cultural amenities of the Champlain Valley as well as some of the more spectacular wilderness opportunities offered by the highest point of the Green Mountain range.

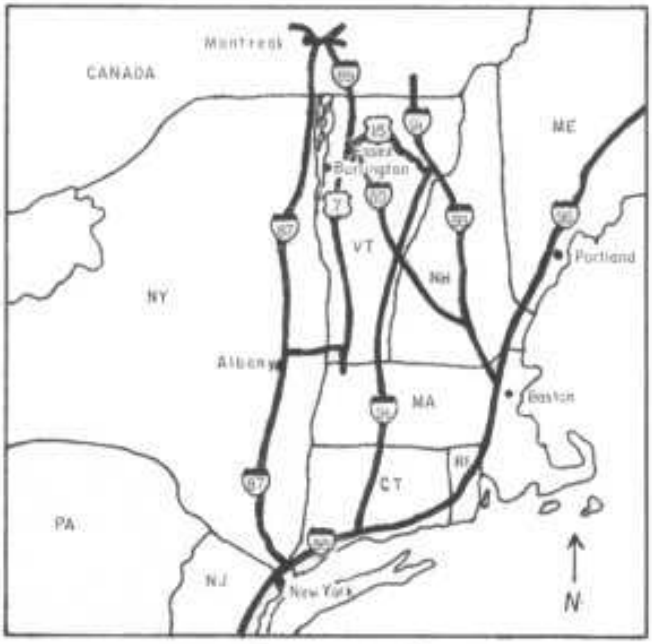
Essex is bounded to the west by Colchester, to the north by Westford and to the east by Jericho. To the south, the Winooski River runs the whole length of Essex and separates it from Williston. The Village of Essex Junction lies within the Town's boundaries and is located in the southwestern corner of the Town.

Because of its location, Essex is the second largest community in Vermont. Its population in 2009 is estimated at 19,779 in a county of 153,791 people. Essex (including Essex Junction) is the second largest community after the City of Burlington in Chittenden County. It is not only a regional employment center, but one having statewide significance as people commute from all of the surrounding counties to IBM, among the state's largest private employers.

Essex historically has been a hub of transportation as a Native American trail, post road, terminal freight point and ferry crossing for the Winooski River. All roads still lead to Essex with four state highways and a fifth under construction, rail, bus service and easy access to Interstate 89 all making it a point which must be traveled through to get to a destination. VT Route 15 is designated as federally significant because it provides a critical transportation route linking New York to Eastern Canada and Maine.

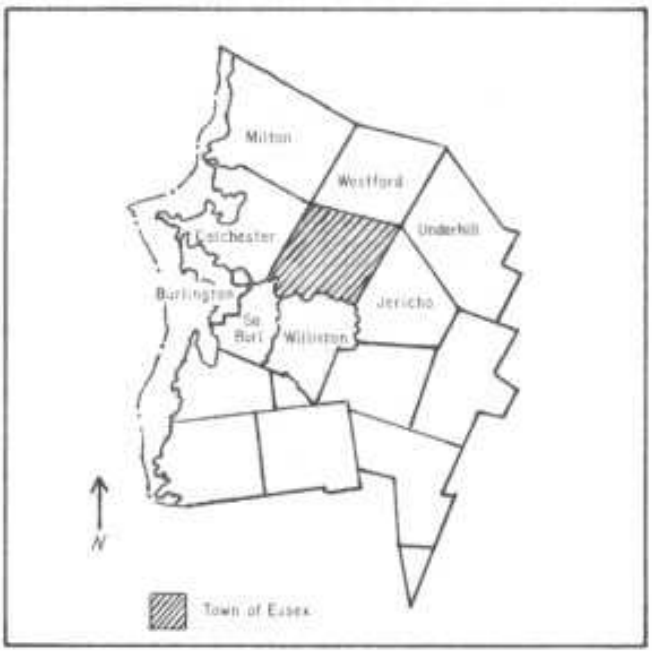
FIGURE 2-2: State and Regional Setting
Source: Community Development Department

Northeastern Accessibility



Major Transportation Network

State of Vermont



Chittenden County

Essex serves as both an employment center and a residential community with nearly 50 percent of the Town's employed work force working in the same community in which they live. It is also an important sub-regional retail and service center for the more rural communities in the county. The surrounding area utilizes the Essex Community Educational Center and the Center for Technology – Essex, a regional technical center and recreational facilities such as the Champlain Valley Exposition, the Educational Center's indoor skating rink, Saxon Hill, the Winooski and Browns Rivers, Indian Brook Reservoir and the VAST snowmobile trail system.

The Burlington Metropolitan Statistical Area, of which Essex is a part, underwent rapid growth over the past two decades, and Essex experienced a proportional share of that growth. As a result, the once quiet farm community has become a bustling, growing town, and the changes are expected to continue.

2.3 Population Profile

The US Census is considered to be the most accurate source of population data. According to the 2000 Census, the population of the Town of Essex (including the Village) was 18,626, which is an increase of 2,128 persons (or 212.8 persons per year) since 1990. This represents a continuation of the trend during the 1980's when the total Town increased by 2,106 persons (or 210.6 persons per year).

The 2008 Census reports estimate that the Town Outside the Village's population was 10,591, while the population of the Village was 9,058. Between 2000 and 2008 the population had increased by 1,023 people in the Town as a whole. Population figures for the state, the county and the Town from 1910 are shown in Table 2-1.

The Town as a whole experienced substantial growth during the last half of the 20th century. During the 1940s the Town gained an average of 87 persons per year. In the 1950s that growth rate increased to just more than 315 persons per year. This continued to increase to a peak in the 1960s of more than 385 persons per year, falling to 344 persons per year in the 70s, and leveling off at just more than 210 persons per year for the past two decades. For the 50 years prior to 2000, the Town averaged 293.9 new residents per year.

Through the 1950s, most growth occurred in the Village, but since then most has occurred in the Town Outside of the Village. Over that 50 year period, the Village has accommodated roughly 30 percent of the Town's growth.

Table 2-1
Population Trends, Town of Essex, 1910-2008

	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2008
Town	2,714	2,449	2,879	3,059	3,931	7,090	10,951	14,392	16,498	18,626	19,649
Village	1,245	1,410	1,621	1,901	2,741	5,340	6,511	7,033	8,396	8,591	9,058
Town Outside the Village	1,469	1,039	1,258	1,158	1,190	1,750	4,440	7,359	8,102	10,035	10,591
Chittenden County	44,742	41,373	47,467	52,094	62,567	74,425	99,151	115,515	131,761	146,571	152,782
State	355,956	352,428	359,611	359,231	377,747	389,811	444,732	511,456	562,758	608,827	621,270
Percent of Chittenden County											
Town	6.07	5.92	6.06	5.87	6.28	9.53	11.04	12.46	12.52	12.71	12.86
Village	2.78	3.41	3.41	3.65	4.38	7.18	6.57	6.09	6.37	5.86	5.93
Town Outside the Village	3.28	2.51	2.65	2.22	1.9	2.35	4.48	6.37	6.15	6.85	6.93
Average Absolute Growth (persons per year)											
Town	-	-26.5	43.0	18.0	87.2	315.9	386.1	344.1	210.6	212.8	102.3
Village	-	16.	21.1	28.0	84.0	259.9	117.1	52.2	136.3	19.5	46.7
Town Outside the Village	-	-43.0	21.9	-10.0	3.2	56.0	269.0	291.9	74.3	193.3	55.8
Chittenden County	-	-336.9	609.4	462.7	1,047.3	1,185.8	2,472.6	1,636.4	1,624.6	148.1	621.1
State	-	-349.8	718.3	-38.0	1,851.6	1,206.4	5,492.1	6,672.4	5,130.2	4,606.9	1,244.3

Source U.S. Census, 2008 U.S. Census Population Estimate, Vermont Indicators Online

Figure 2-3
Town of Essex Population Trends: 1910-2008

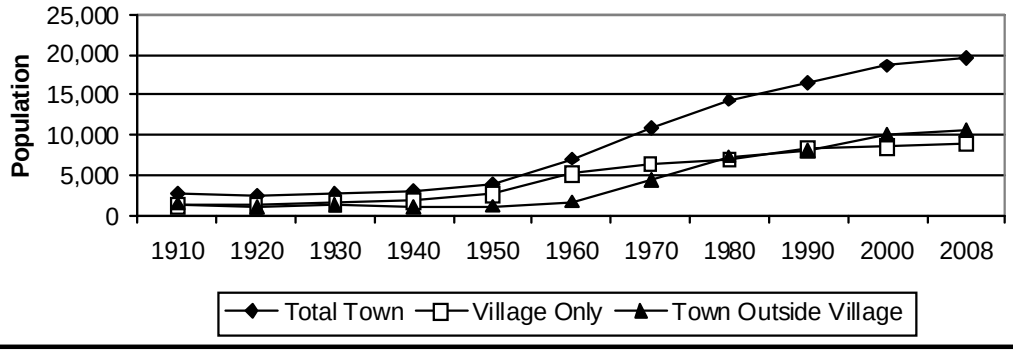


Figure 2-3 presents the data graphically for the Town of Essex and shows relatively linear trends over the long period. It is clear a major change occurred at about 1960 when population growth increased substantially. The major shift occurred in 1950, driven primarily by growth in the Village. From 1960 to 1980, growth in the Town outside the Village exceeded that of the Village. During the 1980s, both portions of the Town grew at about equal rates. During the 1990s, the growth rate of the Town outside the Village outpaced the Village.

The total population for the Town held constant at about six percent of the County's population until 1950 and then increased rapidly to 12.46 percent in 1980. The Town's percentage of County population continued to rise slowly to12.86 percent in 2008. The initial rise was due primarily to population growth in the Village. A Village high of 7.18 percent of County population was reached in 1960, but reduced availability of undeveloped land in the Village caused a steady decline since then. The Town outside of the Village reached its highest percentage of County population in 2008 with 6.85 percent.

In 1985, the Town outside of the Village adopted a residential phasing policy to manage the growth of the community in accordance with its ability to provide services and facilities. All new residential projects were phased to ensure that the annual increase in population did not exceed a rate of three percent of the 1985 population of 7,537, or 226 persons per year.

The phasing policy proved to be effective as actual population growth rose from 7,537 persons in 1985 to 10,035 persons in 2000. The overall increase was 2.2 percent, or 167 persons per year, well below the growth ceiling of 226 persons per year.

In 2008, the Town adopted a new residential phasing policy to maintain a population growth rate between 184 and 226 persons per year over the coming years. The mid-point of this range is 205 persons per year. Other objectives of the residential phasing policy were to maintain a continuing balance between population growth and the Town's ability to provide facilities and services; to establish a target of at least 80 percent of new housing within designated growth areas; and to reinforce other objectives of the Town Plan. At the time of the adoption of the 2011 Town Plan, the population growth rate had recently been well below the mid-point of 205 persons.

2.4 POPULATION FORECASTS

Updated census information was not available for this Town Plan update. As a result, an update of the Population Forecast section was not conducted.

3. ECONOMIC DEVELOPMENT

3.1 Introduction

"Economic Development" – an Essex Definition

Economic development is traditionally defined as, "the process of creating wealth through the mobilization of human, financial, natural resources, physical resources, and capital to generate marketable goods and services."

The mission of local economic development is broader than that. The ultimate goal is the creation of a local economy that is diverse, vibrant and sustainable. Initiatives must happen in coordination with the goals and desires of the community, with one eye always firmly affixed to the assurance of balance and harmony with the myriad dreams and realities of all residents of Essex.

A local economy that is diverse, sustainable, balanced and harmonic provides the quality of life the people of Essex have come to expect in a way that also inspires confidence in the community's present and future.

Existing Studies

Several relevant studies and plans already have been prepared for Essex and the Chittenden County region. These include the following:

- Essex Economic Development Vision and Plan – 2010.
- VT Route 15 Corridor Study – 2009.
- Essex Open Space Plan – 2008.
- Town Center and Susie Wilson Road Committee Reports – 2004.
- Chittenden County Strategic Economic Development Plan – June 2004.
- Susie Wilson Road Transit Oriented Development Plan – March 2006.
- Village of Essex Junction Comprehensive Plan – 2002 and 2007.
- Essex Town Plan – 2006.
- Master Plan & Economic Development Strategy for Essex Junction by RKG Associates – 2001.
- EBPA Board Retreat Summary of Findings – 2001.
- Burlington to Essex Rail Corridor Studies – 2001-2002.
- Lake Champlain Technical Academy Committee – October 2001.
- Toward a Clear Vision for the Future by Economic & Policy Resources, Inc. – 2001.
- Tree Farm Master Plan Study – 1999.
- CVE Master Plan and Regional Convention Center Studies – 1997.
- Local Development Corporation Study Committee Report – 1995.
- Assessment Report for Essex Junction by National Main Street Center – 1995.
- Essex Community Economic Development Planning Retreat to Develop a Blueprint for Action – 1993.
- Town Center Master Plan – 1991.

Business and Industry Inventory

Employment levels have had peaks and lulls from 10,719 employees in 1980 to 13,295 in 1990, a peak of 16,100 in 2001 and a decline to 13,269 employees in 2003. Belden Wire & Cable, with 175 employees, recently announced closure of their Essex plant. A list of the eight largest employers in Town in both 2004 and 2010 is presented in Table 3-1.

Table 3-1
EIGHT LARGEST EMPLOYERS IN ESSEX AND ESSEX JUNCTION, 2004

Employer	Product	Approximate Employees
1. IBM International Business Machines	Comp. Components	6,000
2. Essex Junction School District	Education	664
3. Essex Community Education Center	Education	350
4. Essex Town School District	Education	300
5. Hannaford Superstores	Grocery	178
6. U.S. Mail Processing Dist. Center	Mail	161
7. Huber & Suhner, Inc.	Wire and Cable	130
8. Belden Wire & Cable Company	Wire and Cable	123
EIGHT LARGEST EMPLOYERS IN ESSEX AND ESSEX JUNCTION, 2010		
Employer	**Product**	**Approximate Employees**
1. IBM International Business Machines	Comp Components	5,300
2. Essex Community Education Center	Education	358
3. Essex Town School District	Education	215
3. Essex Jct. School District	Education	215
4. Hannaford Superstores	Grocery	172
6. Autumn Harp	Cosmetics Packaging	160
7. Revision Eyewear	Eyewear Manufacturing	150
7. Sports and Fitness Edge	Fitness	150

Source: Data provided by each employer

Organizational Structures Working on Economic Development

There are many organizational structures working on economic development issues affecting the community. These organizations include:

- Essex Business and Professional Association (inactive at this time except to organize the Memorial Day Parade and as otherwise needed).
- Essex Economic Development Commission.
- Essex Community Enhancement Corporation.

- Village Downtown Steering Committee.
- Essex municipal staffs and legislative bodies.
- Champlain Valley Exposition Board of Directors.
- Greater Burlington Industrial Corporation.
- Lake Champlain Regional Chamber of Commerce.
- Vermont Convention Bureau.
- The Partnership Fund – Revolving Loan Fund.
- Tree Farm Management Group.
- Essex Energy Committee.

In the past there was the Essex Economic Development Network (consisting of representatives from the Village and the Town outside the Village, the Village Community Development Committee, and the Local Development Corporation Study Committee) and the Town employed an Economic Development Coordinator for two years.

3.2 The 2010 Economic Development and Vision Plan

Background

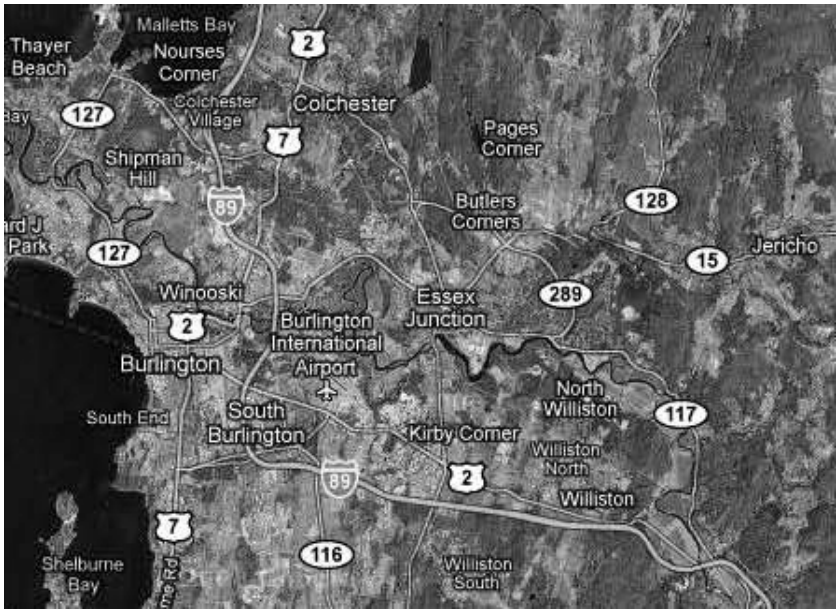
In 2009, the Town retained BBP & Associates, LLC and VHB Pioneer to prepare a new economic development plan. The previous economic development plan formed the basis for all of this chapter. The full 2010 Economic Development Vision and Plan is incorporated into the 2010 Town Plan by reference. This chapter now integrates much of the new research, conclusions and recommendations.

Essex offers a unique set of economic strengths as well as challenges. The Town boasts an excellent school system and recently opened county-wide vocational/technical center. Although IBM has long provided a large share of area employment, Essex also features thriving smaller businesses, particularly in the VT Route 15/Susie Wilson Road growth areas.

Some of the key challenges Essex has faced over the years include the need to further diversify industry and move away from an economy dominated by a single industry, as well as the desire to achieve transportation investments viewed as critical to future economic expansion (most notably, the Circumferential Highway, which was partially constructed but never completed).

It is important to the citizens of Essex to have an economic development vision supported by the community along with a clear path to achieve that vision. The development of this vision and action plan is timely given the current state of Vermont's economy, and the need to further diversify local industries in order to help Essex's economy stay resilient in an increasingly global marketplace. The Economic Development and Vision Plan identifies which industries to target for such diversification, and how to support their creation, expansion, and longevity in the community.

Figure 3-1 Essex and Vicinity



Source: 2010 Economic Development Vision and Plan

Study Purpose

Key goals of the study were to gain broad citizen support for the vision for Essex's economic future and identify a set of strategies to achieve that vision.

The study geographically encompasses both the Town of Essex and Village of Essex Junction, with the recognition that the economies of these communities are intertwined.

Study Tasks

To complete the Economic Development Vision and Plan, the consultant team undertook a series of key tasks which included technical analyses and public outreach to understand the local economy and potential opportunities.

These tasks included:

- Project Mobilization and Site Visit
- Communications and Public Participation Plan Strategy
- Economic Cluster Analysis
- Implementation Plan
- Final Report

These tasks resulted in the identification of a vision for economic development informed by the community, and a series of action items to work towards achieving this vision. Action items were developed in four topic areas: 1) Business Retention, Expansion and Attraction;

2) Land Use and Regulations; 3) Sites and Buildings for Economic Development; and 4) Transportation Investments.

The action plan includes identification of key strategies and approaches for economic development, including preliminary identification of success measures and benchmarks, milestones and deadlines, orders of magnitude cost of implementation, potential funding sources, and implementing entities.

Stakeholder Interviews and Community Outreach

The involvement of individual stakeholders and the community at large has been an important element of the process to complete the Economic Development Vision and Plan. In order to gain insight into the local economy, a series of individual stakeholder interviews was undertaken, along with a visioning workshop and survey open to the community.

Stakeholder interviews were undertaken with representatives of the following groups:

- Autumn Harp
- Bartlett Weaver & Associates
- Boston Consulting Group
- Champlain Regional Chamber of Commerce
- Champlain Valley Exposition
- EuroWest Companies (Essex Shoppes + Cinema, The Essex Resort and Spa)
- High Point Realty
- IBM
- Links at Lang Farm and Nursery
- Neagley & Chase Construction Company
- REM Development
- Saxon Hill Business Park
- Town of Essex Economic Development Committee
- Town of Essex
- University of Vermont College of Medicine
- Village of Essex Junction
- White and Burke Real Estate Advisors

A community visioning workshop was held in mid-November of 2009. More than 75 residents and others with businesses in the Town and Village participated in the workshop, and provided their thoughts on Essex's possible economic future.

In addition to the community workshop, an online survey on the Town's website allowed a number of residents of the Town and Village to provide insight into their "economic experience" in the community – in other words, their experience, perceptions, and hopes for living and working in and around Essex. More than 100 residents completed the online survey, with responses roughly evenly split between Town and Village residents.

3.3 Economic and Demographic Profile

Population

From an employer's perspective, the presence of a growing population is generally an asset. A population that is growing often brings with it an expanding labor force and, depending

on the type of business, an expanding base of customers. Essex has experienced positive trends in population in recent years.

- Essex added nearly 1,200 new residents from 2000 to 2009, increasing the total population from over more than 18,600 to nearly 19,800 residents (an average annual increase of 0.7 percent).

Table 3-2
Population in Comparison

	2000	2009*	Net Change 2000-2009	Annual Growth Rate
Essex	18,626	19,779	1,153	0.7%
Chittenden County	146,571	153,791	7,220	0.5%
Vermont	608,827	631,968	23,141	0.4%

* Estimate based on U.S. Census Data
Source: U.S. Census Bureau

Essex has surpassed surrounding areas in the rate of its growth in recent years, but like other areas of Vermont, has not experienced the same rates of growth as other areas of the nation.

- Essex has grown at an annual rate of 0.7 percent from 2000 to 2009, higher than that of surrounding Chittenden County (0.5 percent) and the state of Vermont (0.4 percent).
- Over the same time period, the nation as a whole experienced a growth rate of 1.1 percent, higher than the rate of growth in Essex.

Households

Essex has been adding households at a faster rate than it has been adding population.

- From 2000 to 2009, Essex added nearly 700 new households, increasing the total number of households from more than 7,000 to more than 7,700. The average annual rate of growth was 1.1 percent, higher than the 0.7 percent growth rate for population.
- Chittenden County also added households more rapidly than population (0.9 percent annual household growth compared to 0.5 percent annual population growth), adding more than 4,600 households from 2000 to 2009.
- Vermont added more than 18,000 households from 2000 to 2009 for an annual growth rate of 0.8 percent (higher than the population growth rate for the state of 0.4 percent over the same time period).

Table 3-3
HOUSEHOLDS IN COMPARISON

	2000	2009*	Net Change 2000-2009	Annual Growth Rate
Essex	7,013	7,710	697	1.1%
Chittenden County	56,452	61,072	4,620	0.9%
Vermont	240,634	258,698	4,604	0.8%

* Estimate based on U.S. Census Data
Source: U.S. Census Bureau

Essex has not only added households at a faster rate than population, but also added households at a faster rate than household growth in surrounding areas.

- Essex added households at a rate of 1.1 percent from 2000 to 2009, higher than that of surrounding Chittenden County (0.9 percent) and the state of Vermont (0.8 percent).
- While Essex lagged behind the nation in its rate of population growth, Essex added households at the same rate as the nation (1.1 percent).

Age Distribution

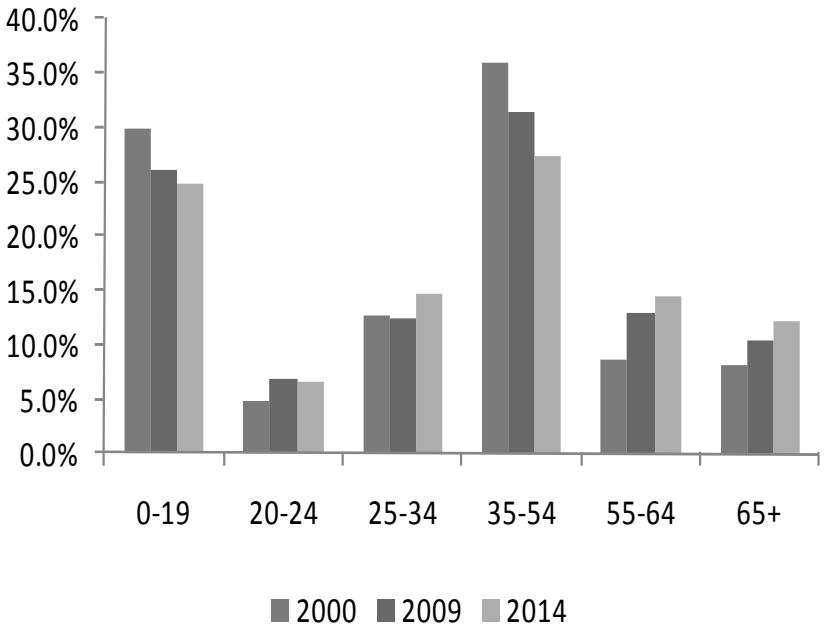
Trends in age distribution are an important aspect of population growth for economic development purposes. Employers are generally more interested in areas with growth in residents in their working years – typically 20 to 55. However, growth of non-working residents (children and teenagers, retirees and seniors) may be important to service and retail businesses that cater to specific demographics (such as health care providers).

In Essex, from 2000 to 2014, the following forecasted trends in age distribution are observed:

- Children and teenagers are decreasing.
- The proportion of younger residents in the 20-34 year age bracket is generally stable (neither decreasing nor increasing).
- Middle-age residents are decreasing, as fewer residents in the 35-54 year age-range are projected to live in Essex over the next five years.
- Retirees, empty nesters and seniors are increasing.

Overall, the population in Essex is aging, consistent with trends in the state of Vermont, and presenting an issue with respect to how the labor force will be sustained in the future.

Figure 3-2
Population by Age Group, 2000-2014



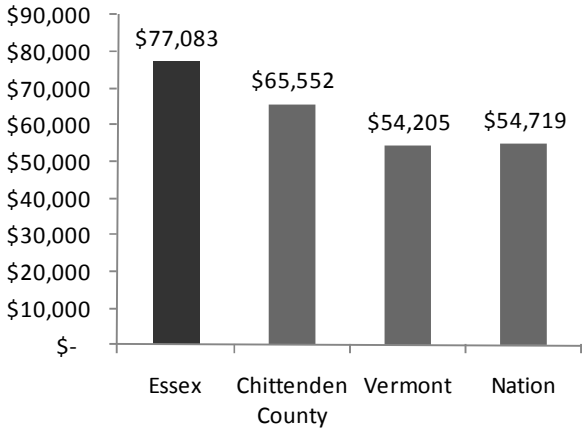
Source: U.S. Census Bureau

Income

Essex households, on average, earn more than those in the county, state and nation.

- In 2009, the median household income in Essex was approximately $77,000; more than $10,000 higher than the median of $65,000 in the county and more than $20,000 higher than the state and national medians.
- From an economic development perspective, relatively higher incomes in Essex could signal opportunities for expanded services that respond to area purchasing power.
- Retail establishments, restaurants, beauty and fitness providers, investment and financial advisors, and health care professionals are just a few of the many service-type establishments that often accompany higher-income populations.

Figure 3-3
Median Income: 2009



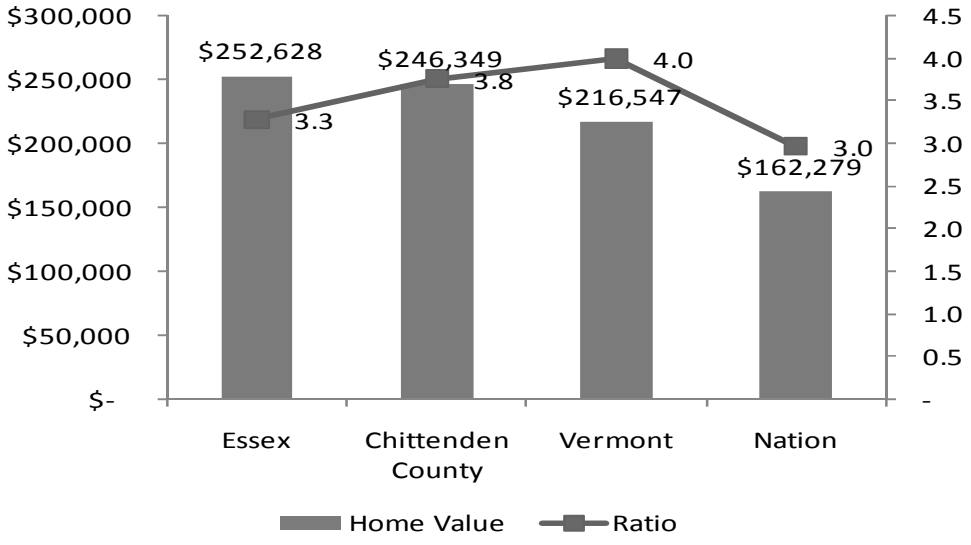
Source: U.S. Census Bureau

Cost of Living

Housing in Essex, though more expensive than homes in the county and state, on average is also slightly more affordable compared to incomes. In Essex, the average home assessed value in 2009 was approximately $250,000, or 3.3 times the median income. Housing was 3.8 and 4 times median income in the county and state, respectively.

However, compared to the nation, housing in Essex is slightly less affordable than the national average home – for which the housing value of $160,000 was 3 times median income.

Figure 3-4
Average Home Value and Ratio of Home Value to Income: 2009

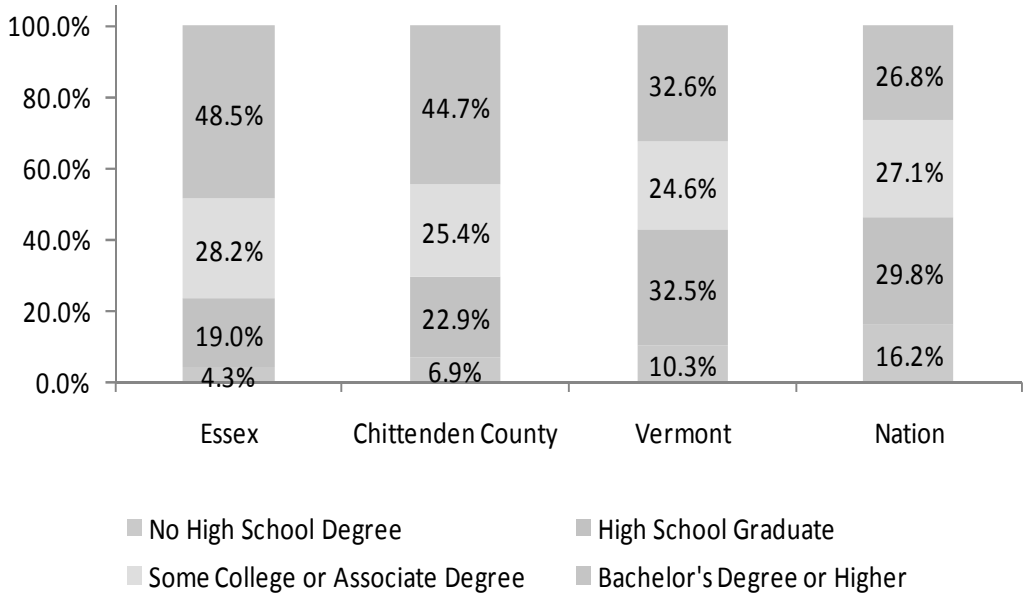


Source: U.S. Census Bureau

Educational Attainment

Essex residents are generally more educated than other residents in Chittenden County, Vermont and the nation. Nearly half of Essex residents hold a bachelor's degree or higher. Chittenden County's educational attainment is slightly lower, with 45 percent of residents holding a degree from a higher education institution. In contrast, approximately one-third of Vermont residents hold such degrees, while slightly more than a quarter of residents nationwide have obtained a bachelor's degree or higher.

Figure 3-5
Educational Attainment: 2009



Source: U.S. Census Bureau

The high educational attainment in Essex can likely be attributed, in part, to the presence of IBM, which has employed individuals with advanced degrees. Many of these highly-educated individuals – whether still working at IBM, employed elsewhere, or retired – reside in the community and present a unique competitive asset for economic development.

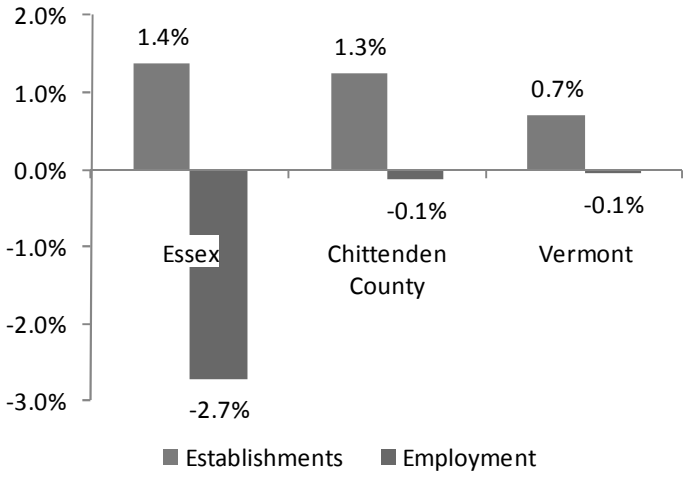
Employment

Trends in the growth of establishments and employment in Essex speak to the transformation of the local economy over time.

- In Essex, establishments grew over the past five years at a rate of 1.4 percent – slightly higher than in Chittenden County (1.3 percent) and double the growth rate in the state (0.7 percent).
- At the same time, employment decreased more rapidly in Essex, at an annual rate of 2.7 percent compared to a 0.1 percent annual decrease in the county and state.
- These trends, though counterintuitive, make sense when seen in light of the economic shift in Essex from an economy with a few large employers to one with more firms that employ fewer people per firm.

- This latter type of economy is more characteristic of the "new economy" often cited as the next frontier in economic development – an economy that relies more on small entrepreneurial activity than large, single employers.

Figure 3-6
Establishments and Employment: 2004-2009



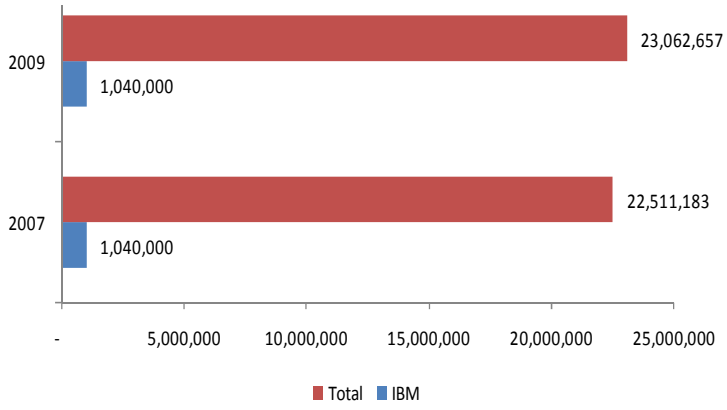
Source: Vermont Department of Labor

As a result of these trends, Essex's employers now include a mix of large manufacturers and smaller firms, in a variety of industries. The top manufacturers in Essex in 2010 include firms involved in everything from electronic equipment to industrial machinery to specialized software. These top firms include:

- IBM – electrical/electronic equipment
- Offset House – printing and publishing
- Lamell Lumber – lumber and wood products
- Foodscience Corporation – chemicals and allied products
- Flex-A-Seal, Inc. – industrial machinery
- Vermont Systems – recreation and parks software
- Sherwin Electric – electrical contractors
- Green Mountain Coffee Roasters
- Ask-intTAG – technology manufacturing
- Huber + Suhner – fiberoptics
- Napoli Group – McDonald's headquarters
- Haematologic Technologies – biomedical manufacturing
- Morse Hardwoods and Millwork – hardwood manufacturer
- Revision Eyewear – defense equipment
- Stewart Construction
- Vermont Systems – parks and recreation software
- Harmony Information Systems – medical software
- Autumn Harp – cosmetics manufacturing

Given the importance of IBM to Essex's economy over the past several decades, it is worthwhile to provide a brief overview of the role IBM now plays in Essex's grand list and overall employment mix. In 2009, IBM comprised less than 5 percent of the total combined grand list for Essex, and that figure shrinks as the Essex economy grows with other activities.

Figure 3-7
Grand List* for Essex: Total and IBM, 2007-2009

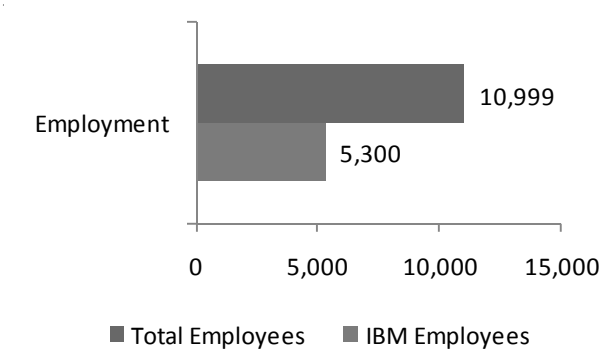


**The Grand List is a measure of real property value in Vermont*

Source: Town of Essex, 2007-2009

While IBM's proportion of the grand list is relatively small, IBM's share of employment in Essex is large; in 2009, IBM represented roughly half of all employment in Essex.

Figure 3-8



Source: Vermont Department of Labor, Vermont Public Radio, First Quarter 2009

Laborshed

While Essex residents primarily work in Essex, Burlington, and surrounding towns, those who work in Essex but reside outside its boundaries come from much farther distances, extending into numerous counties in Vermont. This relatively larger 'laborshed' highlights Essex's importance as an economic contributor to the state's economy.

Community Workshop

The community workshop in November 2009 highlighted some of the very difficult issues and choices that the Town faces in developing zoning, budgets, grant projects, and policies around economic development. The results of this workshop are contained in the full Economic Development and Vision Plan.

Survey Results

Following the community workshop, additional ways to boost public participation in the creation of the economic development report were sought. An unscientific survey, created and administered entirely online via a free web-based survey application, was the instrument eventually chosen. The survey asked residents of the Town and Village to answer questions related to their "economic experience" in Essex. The anonymous survey serves as an informational tool, but the limited number of responses does not serve as a complete representation of community attitudes and impressions of the Essex "economic experience."

Economic Development: Strengths and Weaknesses

Essex contains both assets for economic development as well as challenges toward achieving economic objectives. The perceived strengths and weaknesses were brought out in the Economic Development Vision and Plan development through a stakeholder interview process, through a community workshop, and through the community survey. They also were informed by the extensive description of assets and liabilities provided in Essex's Phase I: Economic Development Assets and Liabilities Review. Often-cited strengths and weaknesses are summarized in Table 3-4.

Table 3-4
STRENGTHS AND WEAKNESSES

Strengths	Weaknesses
Great Place to Live	Permitting Process
Great Place for Families	Transportation Access
Top-Notch Schools	Restrictive Zoning
Educated Labor Pool	Lack of Vision for Economic Development
Innovators (Patents)	Region is not Unified
Cachet of IBM	Retiring Population = Fewer Workers
Recreational Opportunities	Cost of Living is Expensive
Sewer & Water Capacity	Taxes are High
Available/Affordable Comm. Space	Power is Expensive
Civic Minded Population	Lack of $ Resources/Incentive Toolbox
Source: 2010 Economic Vision and Development Plan	

3.5 Industry Cluster Analysis

Overview

Given the broader economic downturn and uncertainty regarding the future mix of employment in Essex, there is a need to assess Essex's industry structure and consider how diversification of industries and employment may occur. Industry cluster analysis is an analytical method to help understand such opportunities. Such evaluation helps to bring stronger insight into industries that are already strong, those that are emerging, those that may be facing some challenges but are important retention targets, and those that may face limited prospects overall.

From the results of these evaluations, the performance of industries may be classified into four categories: strong performers; lagging performers; constrained performers; and poor performers. Then, industries can be further classified based on their potential as local targets, with five potential categories: current strengths; high priority retention targets; lower priority retention targets; emerging strengths; and prospects limited.

Table 3-5
LOCAL DEGREE OF SPECIALIZATION BY INDUSTRY, 2009
TOP 10 INDUSTRIES

Industry Cluster	Essex	Chittenden County
Miscellaneous manufacturing	3.29	2.28
Retail Trade	1.04	1.19
Other services, except public administration	0.80	0.88
Professional and technical services	0.73	1.18
Accommodation and food services	0.62	0.89
Construction	0.55	0.89
Arts, entertainment and recreation	0.50	1.04
Real estate and rental and leasing	0.36	0.82
Finance and insurance	0.35	0.79
Wholesale trade	0.35	0.78

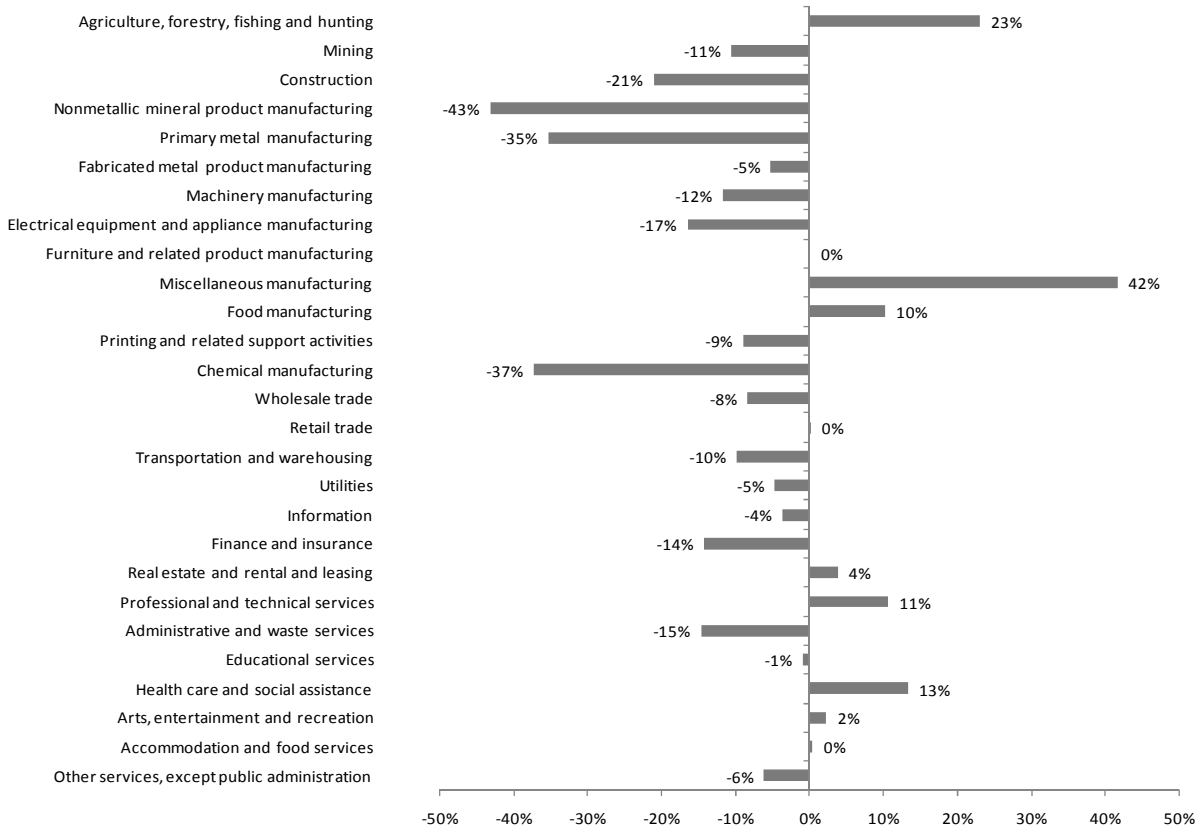
Source: 2010 Economic Vision and Development Plan
*Local degree of specialization expressed by location quotients
**Location quotients calculated based on employment in subject area compared to national employment
***Location quotients calculated using data from the Vermont Department of Labor
****Data was not available for all industries, as indicated by the "-"symbol

Industries adding jobs in the county include:

- Agriculture, forestry, fishing and hunting;
- Miscellaneous manufacturing;
- Food manufacturing;
- Real estate and rental and leasing activities;
- Professional and technical services;
- Health care and social assistance; and
- Arts, entertainment and recreation.

Further, a few industries are neither losing nor adding jobs; these include furniture and related product manufacturing, retail trade, and accommodation and food services.

Figure 3-9
Percentage Job Growth by Industry Cluster, Chittenden County, 2009

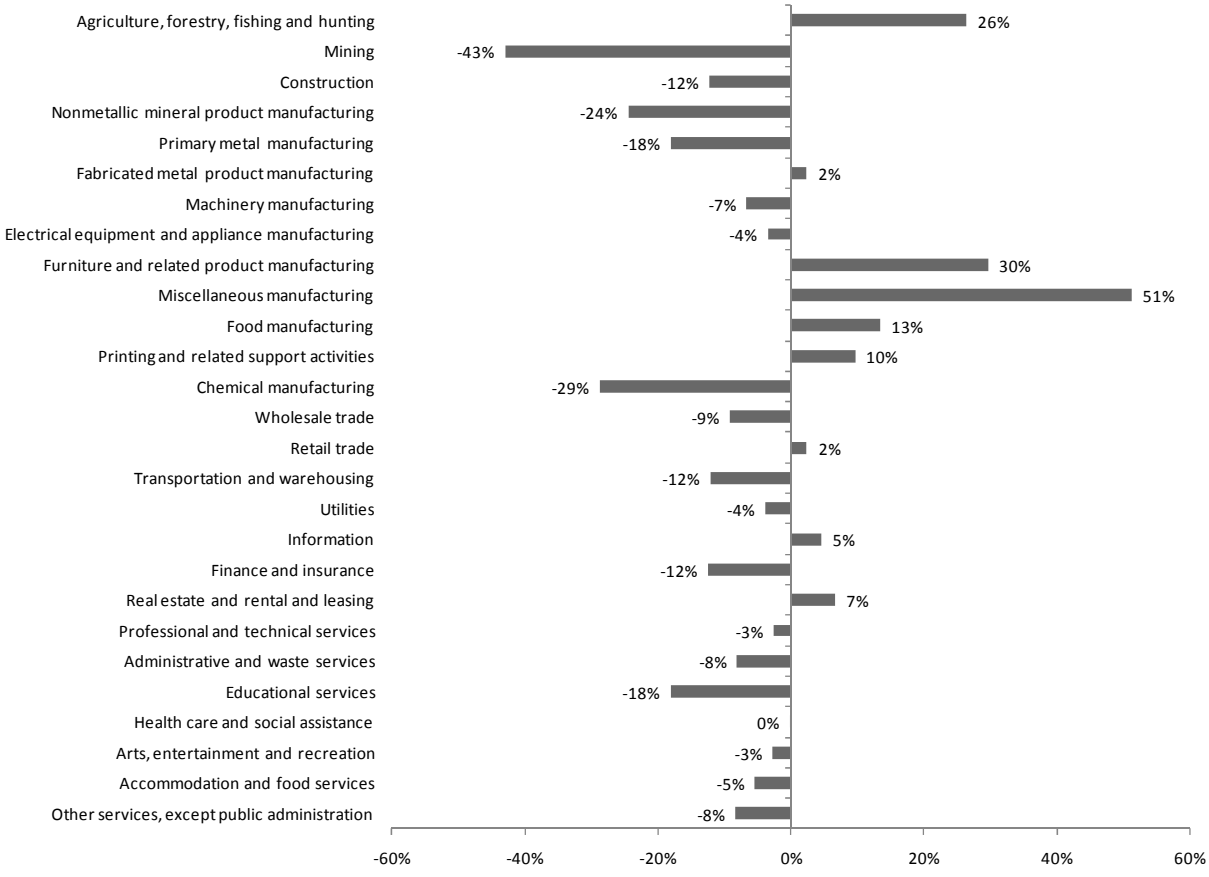


Source: Vermont Department of Labor, 2009

The following industries in Chittenden County are gaining competitive share relative to the nation:

- Agriculture, forestry, fishing and hunting;
- Fabricated metal product manufacturing;
- Furniture and related product manufacturing;
- Miscellaneous manufacturing;
- Food manufacturing;
- Printing and related support services;
- Retail trade;
- Information; and
- Real estate and rental and leasing.

Figure 3-10
Percentage Employment Change of Industry
Above Industry Employment Change in Nation



Source: Vermont Department of Labor, 2009

Mega-Clusters

Further grouping the clusters based on common themes – in essence, turning the clusters into mega-clusters is useful. The mega-clusters identified below include all of the potential targets listed above, as well as these other industries not covered for lack of data, yet considered potential targets.

- **Specialty manufacturers** include a variety of light manufacturers that span many fields, from niche consumer goods to those for business and for defense. Areas noted as potential opportunities for Essex in the Phase I Assets and Liabilities report, green enterprise and wood-product manufacturing, are included in this category.
- **High value-added professional services** include those services that cater to a customer base beyond Essex and Chittenden County (and are therefore dollar-importing industries). Many knowledge-based and design-oriented fields are included in this category.
- **Tourism, cultural heritage, agriculture and leisure** encompasses those industries that could draw travelers to the community, including agricultural resources, retailers and restaurants, and arts/entertainment/recreational amenities.
- **Community-related services** are those industries that support the local population and add to the area's overall livability. These industries may not necessarily have the dollar-importing characteristics of high value-added professional services, but provide services that enhance options and the quality of living in Essex. They also overlap in some cases with tourism and professional service industries, with a distinction made that some businesses within an industry are more locally serving (and therefore community-related services) while others serve clients and customers beyond local residents.

Top Strengths/Assets for Economic Development

- **Quality of Life:** Essex is a desirable place to live, particularly for families given the strong reputation of the local school system and area recreational opportunities. The community is also diverse socio-economically and civic-minded. Altogether, the quality of life in Essex is an important selling point for a business leader or entrepreneur looking to live near the workplace.
- **Human Capital:** The educational credentials of Essex residents are strong, not only in terms of degrees obtained but also in terms of patents. The education and innovation of local residents could provide the ingredients for entrepreneurial development.
- **Name Recognition of Existing Employers:** The presence of IBM gives Essex a certain cachet that enforces the perception that Essex can be home to a major employer. It also hints at the tremendous human capital available in Essex in terms of educated and innovative residents.
- **Capacity of Sewer and Water System and Commercial Space:** Compared to surrounding communities, Essex has a competitive advantage in terms of the capacity of the sewer and water system as well as commercial space, which is relatively more

affordable and available. This advantage will become more apparent as other communities approach build out limits.

Weaknesses/Constraints for Economic Development

- **Permitting and Zoning:** New development of industrial and commercial uses in Essex has been constrained by the difficulty of obtaining permits and of re-zoning (as few undeveloped properties are zoned for industrial and commercial activities).
- **Transportation Network:** Essex is at a disadvantage, with its distance to major highways such as I-89, though the rail network could offer an opportunity for expansion for freight-based industry.
- **High-Cost Area:** Essex is not an inexpensive place to do business or to live, with relatively high property and business taxes and power costs.
- **Aging of Population:** With many residents nearing retirement age, the replacement of workers to sustain the local labor force could be cause for concern for prospective employers.
- **Limited Economic Development Organization and Resources:** Essex has not historically had strong organization or resources for economic development. There has been a lack of financial resources and incentive programs available at the state level, and the Chittenden County region has not been unified in local efforts for economic development.

Based on this understanding of Essex's competitive situation, categorized as primary or secondary targets as illustrated in Table 3-6, which is followed by an explanation of how industries were categorized as either primary or secondary targets.

Table 3-6
INDUSTRY TARGETS FOR ESSEX

Industry	Primary	Secondary
Specialty Manufacturing		
Fabricated metal product manufacturing		✓
Machinery manufacturing		✓
Electrical equipment and appliance manufacturing		✓
Engineered electronics and electronic components		✓
Connector and insulated wire manufacturing		✓
Furniture and related product manufacturing	✓	
Miscellaneous manufacturing/niche consumer goods	✓	
Printing and related support activities	✓	
Food manufacturing	✓	
Specialty plastics		✓
Instrumentation/homeland security/defense	✓	
Green enterprise/research and development	✓	
Forestry-based manufacturing		✓
High Value-Added Professional Services		
Information	✓	
Finance and insurance	✓	
Professional and technical services	✓	
Software and gaming	✓	
Primary medical-biotechnology and other research	✓	
Specialized medical treatment services	✓	
Tourism, Cultural Heritage, Agriculture and Culinary Tourism		
Agriculture, forestry, fishing and hunting	✓	
Retail trade	✓	
Arts, entertainment and recreation	✓	
Community-Related Services		
Agriculture, forestry, fishing and hunting	✓	
Retail trade	✓	
Real estate, rental and leasing		✓
Educational services		✓
Health care and social assistance	✓	
Arts, entertainment and recreation	✓	

Source: 2010 Economic Vision and Development Plan

Community vision and goals for economic development must be taken into account when refining targets, since ultimately, the community – including key stakeholders in government, the private sector, and nonprofits – will be responsible for facilitating economic development. The community's vision for economic development includes the following:

- Green enterprise/research and development;
- Technology;
- Restaurants and culinary activities;
- Agriculture;
- Transportation;
- Professional services;
- Retail businesses;
- Manufacturing – small and medium-sized manufacturers;
- Tourism;
- Arts, entertainment and recreation – including outdoor art, artists and artisans (including writers), an enclosed concert hall or venue, continuing the fairgrounds, and bike lanes throughout town; and
- Accommodations.

In addition to the types of industries desired, the community has expressed the following goals related to economic development:

- Environmental conservation – clear skies, nature, and clean water.
- Government services – continued post offices in Essex Center and the Village.
- Housing – keeping and enhancing the mix and range of housing options.
- Civic engagement – enhancing community participation.
- Transportation – increasing the vitality and presence of the train station.
- Education – maintaining school quality.

The primary and secondary industry targets that have been identified complement the community's vision and goals, with the caveat that for specialty manufacturers, small to medium-sized operations will suit the community better than large plants.

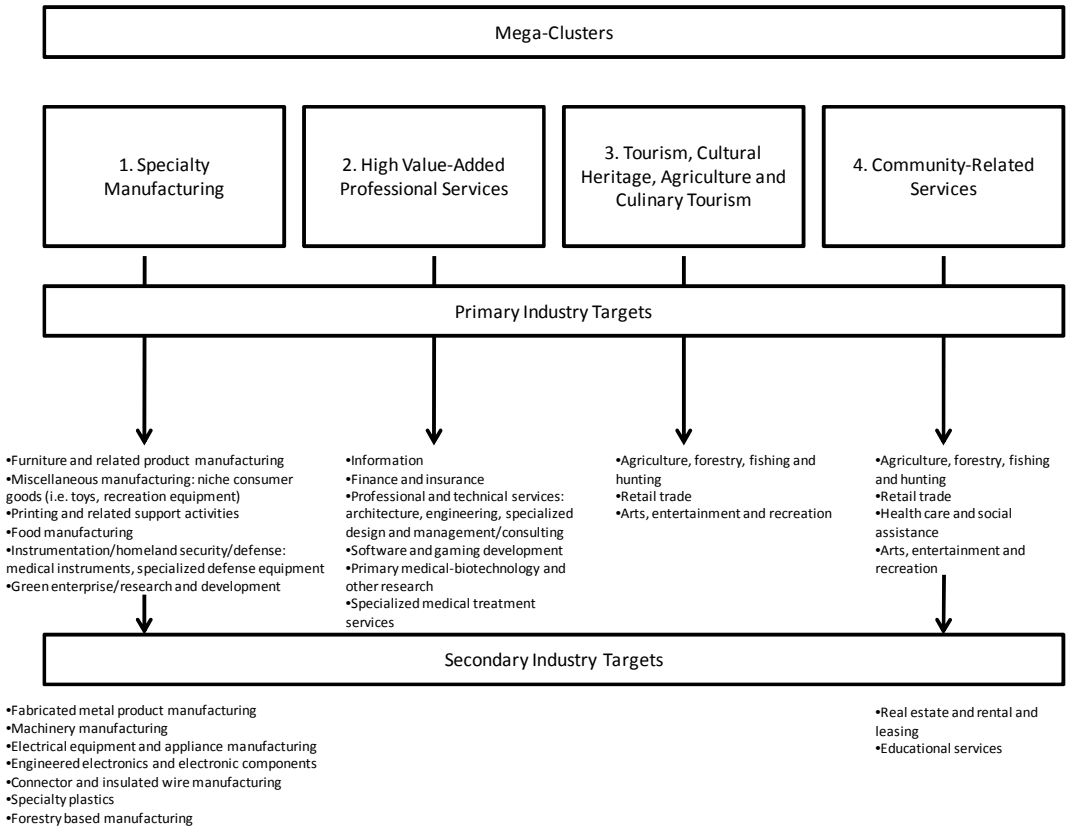
In a planning process separate from the Economic Development and Vision Plan, community members emphasized the desire to see "green" industries locate in Essex. The Town was encouraged to work with the Lake Champlain Chamber of Commerce/GBIC and others on ways to encourage affordable and renewable sources of energy. The link between land use, energy use and transportation should be recognized. The need for clean and renewable sources of energy for both business and residences has been stressed. The Essex Energy Committee is one of the organizations working on these issues for the Town.

Recommended Industry Targets

To summarize the results of the industry evaluation, the following primary and secondary industry targets are recommended for Essex, grouped by mega cluster, as seen in Figure 3-11.

Figure 3-11

Mega-Clusters and Industry Targets for Essex



Source: 2010 Economic Vision and Development Plan

The Essex Selectboard asked the Economic Development Committee (EDC) to review the Economic Development and Vision Plan: Essex, Vermont prepared by BBP and Associates, with a focus on the 13 implementation strategies. Many of the strategy recommendations are resource expansive and intertwined, and as a result, were prioritized by the EDC with the goal of maximizing the potential effectiveness of strategies within the human and fiscal resources available.

The following list shows the strategies ranked in priority order, from highest to lowest, as summarized and/or amended by the EDC:

1. **Major Roadway Improvements –** The Town is encouraged to engage actively in infrastructure improvement projects, such as completion of the Circ Highway, VT Route 15 corridor improvements, and VT Route 117 improvements, along with the Crescent Connector, (in the Village).
2. **Strategic Industrial Park Evaluation –** The evaluation, with regards to the Town's two industrial parks, should enable a better understanding of what is working, what is not, and what is next.
3. **Government Service Retention and Expansion –** The focus would be on the retention of current government services and the attraction and expansion of Federal and State

government services, along with the development and submittal of projects that may not be feasible without appropriations from other governmental sources.

4. **Regional Multi-Modal Improvements –** Multi-modal projects can improve both the economic climate and the quality of life in Essex, with a focus on local projects.
5. **Marketing Program –** A marketing program should define an Essex brand, modes to present that brand, and identify niches the Town seeks to occupy (such as outdoor recreation, "green businesses," food commerce, and technology).
6. **IBM Site Initiative –** Communications should be established and maintained with IBM that better enable local government and the community to understand site opportunities and future plans and challenges.
7. **Infill Development –** Infill should be facilitated where appropriate, with care taken to preserve the character of neighborhoods and surrounding areas.
8. **Business Visit/Assistance Team –** A pilot program should be established to test the value of reaching out to existing Town businesses on a regular basis.
9. **Business Development Data Center –** Collecting and updating data on business status and infrastructure is resource intensive, with the costs outweighing potential benefits.
10. **Freight Rail Service Expansion –** Further investments in freight rail infrastructure can have a positive effect the Town's ability to attract business, as well as providing opportunities for expanded passenger rail access and service.
11. **Local Education Resource Promotion –** Promoting the high caliber local school system should be incorporated into a marketing program.
12. **Transit-Oriented Development (TOD) –** The Town should remain vigilant in its search for TOD opportunities and flexible in its response.
13. **Green Entrepreneurial Center –** A low priority, given the estimated price ($5.3 million) to build a green incubator space.

The EDC believes housing, particularly affordable housing, is a critical component of an economic development strategy, though it was not included in or attached to any of the 13 implementation strategies identified by BBP and Associates.

3.6 Goals, Objectives, Strategies

Overview

The Essex Economic Development Implementation Plan is comprised of a series of short- and long-term strategies, grouped under key topic areas, meant to enhance prospects for industries locally. A series of high-priority action items related to this vision have been developed. They include several strategies from the 2006 Essex Town Plan that are still valid for implementation.

Goal 3.1: To promote sustainable, balanced economic development and job creation/retention for the benefit of the entire community.

Objective 3.1.1: Decide how economic development initiatives can be delivered most effectively for the Town.

Strategy 3.1.1.1: Identify an economic development entity for the Town and Village, recommended to be fulfilled through creation of a full-time staff position.

Objective 3.1.2: Develop and implement a program that is coordinated with other local, regional and state marketing efforts to raise awareness of Essex as a good business location.

Strategy 3.1.2.1: Establish a stronger working relationship with the state and regional economic groups, including the VT Economic Development Department and the Greater Burlington Industrial Corporation (GBIC), to enhance Essex's participation in state and regional marketing efforts. Ensure that state and regional representatives are aware of Essex's economic industry targets and key economic development initiatives underway.

Strategy 3.1.2.2: Create a local marketing committee to develop innovative marketing strategies that are coordinated with state and regional marketing efforts.

Strategy 3.1.2.3: Implement a variety of marking strategies, including but not necessarily limited to: printed material, the Internet (website, facebook page, weblinks on other related websites), ad campaigns, etc. Potential marketing themes will build upon the assets identified in this plan and consider the target industries as marketing audiences.

Strategy 3.1.2.4: Advocate for the creation of a regional marketing and economic development district (similar to New York's Empire District) with special taxing authority for economic development. The region could be defined as Chittenden County or broader to include Northwestern Vermont.

Objective 3.1.3: Work with existing manufacturers to identify and address common needs to help them implement new technologies and attract suppliers and services for increased efficiency.

Strategy 3.1:3.1: Target suppliers of existing manufacturers as part of business recruitment. Include testimonials from business retention and expansion visits to manufacturers as part of target recruitment campaigns.

Strategy 3.1.3.2: Target suppliers of existing manufacturers as part of business recruitment. Include testimonials from business retention and expansion visits to manufacturers as part of target recruitment campaigns.

Strategy 3.1.3.3: Establish and maintain a recording system to track business prospects as part of business recruitment. Collect information on: space requirements (building square feet, land acreage), number of employees, and reasons for choosing or not choosing Essex once site selection decisions have been made.

Strategy 3.1.3.4: Ensure that the needs and issues facing existing manufacturers in Essex are represented and addressed in regional economic development efforts by participating in the development of regional comprehensive economic development strategies (CEDS) as they are updated over time.

Objective 3.1.4: Work with all economic sectors and capitalize on our assets to diversify the Essex economy and promote Essex as a destination, using the target industry analysis provided in this plan as a guide.

Strategy 3.1.4.1: Incorporate the train station in tourism efforts, including targeting train users/visitors in tourism marketing efforts, and considering construction of a new train station that would serve as a gateway to the community.

Strategy 3.1.4.2: Support agriculturally-based tourism by ensuring local regulations allow for the development of wineries, agriculturally-related bed and breakfasts, and other agricultural operations.

Strategy 3.1.4.3: Given the community's interest in expanding the retail and restaurant sector, conduct a retail and restaurant market study that analyzes local spending patterns, retail sales leakage, and existing retail and restaurant businesses to determine the potential for new retail establishments and restaurants in Essex.

Strategy 3.1.4.4: As the number of retail and restaurant establishments in Essex grows, develop outdoor dining design guidelines and regulations.

Strategy 3.1.4.5: Develop a comprehensive biking and walking trail system that supports building Essex's image as a haven for wellness and healthy living.

Strategy 3.1.4.6: Retain government services that enhance quality of life and serve as employment anchors. Work with USPS to maintain a post office near Essex Shoppes and Cinema.

Strategy 3.1.4.7: Develop itineraries for visitors by themes and include as part of a marketing campaign. Potential themes could include but are not limited to: history; agriculture; wellness/health living; and the arts. Where feasible, prepare self-guided walking and/or biking tours for visitors.

Strategy 3.1.4.8: Maintain and enhance the role of the Expo in attracting visitors. Make sure that as Essex adds potential tourist stops, tourism itineraries are developed with consideration of visitors to the Expo (such as motorcycle and RV enthusiasts who visit the Expo).

Strategy 3.1.4.9: Build upon Essex's regional soccer facility by developing customized itineraries for tournament participants.

Objective 3.1.5: Build upon Essex's position as a multi-modal transportation center to improve and expand economic centers within the community.

Strategy 3.1.5.1: Support state and regional efforts to develop transportation links between Burlington, St. Albans, and Montpelier.

Strategy 3.1.5.2: Continue to develop transportation paths, including biking and walking trails.

Strategy 3.1.5.3: Explore a shuttle system between Village and Town centers (and public transportation linkages).

Strategy 3.1.5.4: Recognize that land use and transportation are linked. Remove any obstacles that might impede transit-oriented development (TOD) and explore alternative transit systems.

Strategy 3.1.5.5: Evaluate feasibility of rail system for shipping of finished products to support manufacturers (including green manufacturers) with links to existing underutilized manufacturing plants (spur rails already exist).

Objective 3.1.6: Foster a local environment that encourages the large number of talented individuals within the community to start their own businesses.

Strategy 3.1.6.1: Build partnerships with entrepreneurially-related groups in region to form an entrepreneur's support network, including, but not limited to: University of Vermont (including Office of Technology Commercialization and Vermont Experimental Program to Stimulate Competitive Research, or Vermont EPSCoR), Vermont Center for Emerging Technologies (a technology business incubator and provider of early stage company development), Fresh Tracks (venture capitalists), Vermont Technology Council, and Champlain College (Bring Your Own Business program). Use these partnerships to introduce Essex to entrepreneurially-minded groups and help them understand the types of industries Essex is targeting.

Strategy 3.1.6.2: Support the creation of a green entrepreneurial center, potentially to be housed at Saxon Hill Industrial Park.

Strategy 3.1.6.3: Encourage the development of a green energy source to help power the entrepreneurial center described under Strategy 3.1.6.2 (i.e. powered by biomass or solar).

Strategy 3.1.6.4: Encourage the use of green building features in the new entrepreneurial center.

Strategy 3.1.6.5: Focus on recruiting companies for the center that fall within the primary industries identified in the target industry analysis contained in this plan.

Strategy 3.1.6.6: Prepare case studies of successful entrepreneurial businesses in the community as well as in neighboring communities, and incorporate in marketing efforts to get prospective business owners thinking about their possibilities.

Strategy 3.1.6.7: Consider development of an arts and culture incubator (as a complement to, but different in focus to the green entrepreneurial center, which would focus on manufacturing and professional services) to attract more artists and artisans (including writers) to Essex.

Strategy 3.1.6.8: Support green and locally-owned businesses with a governmental green and local purchasing preference.

Objective 3.1.7: Promote workforce training.

Strategy 3.1.7.1: Support ongoing review and upgrade of the region's technical education system.

Strategy 3.1.7.2: Ensure that our Town's interests are represented on the regional Workforce Investment Board (WIB).

Strategy 3.1.7.3: Encourage coordination/cooperation with initiatives undertaken by the University of Vermont and other higher education institutions.

Strategy 3.1.7.4: Promote the Essex Community Education Center and the Center for Technology, Essex to prospective employers and businesses.

Strategy 3.1.7.5: Undertake a workforce training study to better understand: existing providers and programs; future workforce needs given target industries defined in

this plan; identification of gaps in programs as well as redundancy in programs; and recommendations for a more coordinated workforce training system.

Strategy 3.1.7.6: Support the creation of a young entrepreneur network.

Strategy 3.1.7.7: Form a public education advisory group that will serve as an advocate for the K-12 system in Essex.

Strategy 3.1.7.8: Build partnerships with local and regional workforce training providers, and convey the workforce needs of target industries to those groups.

Objective 3.1.8: Promote infrastructure readiness.

Strategy 3.1.8.1: Construct the Circumferential Highway and improvements to the VT Route 15 corridor.

Strategy 3.1.8.2: Evaluate Saxon Hill Industrial Park and Leo/Whitcomb Industrial Properties. Much of this industrially zoned property remains available for development. The Town should seek a better understanding as to what obstacles remain for this area to become more attractive to industrial users. Issues that should be examined further include: whether access to the Circumferential Highway via Allen Martin Parkway remains critical for future development and marketing of this area, whether the telecommunications infrastructure is adequate, and whether there are zoning and other regulatory issues that need to be resolved.

Strategy 3.1.8.3: Prepare an inventory of business related support infrastructure.

Strategy 3.1.8.4: Work with area real estate brokers and property managers to inventory business space, including occupied space as well as available space and vacant and underutilized sites. Publicize these sites through a site database, and incorporate in marketing efforts.

Strategy 3.1.8.5: Support further development of Essex's Town Center through infill development to accommodate office and retail space.

Strategy 3.1.8.6: Support further development of infill office and light commercial uses in the Susie Wilson Road corridor with transportation network improvements to manage traffic (funded through a special impact fee for the area).

Objective 3.1.9: Facilitate efficient state and local development review processes.

Strategy 3.1.9.1: Encourage staff participation in a development process facilitation task force to be convened by GBIC. As part of this process, consider the pros and cons of initiating a master-plan approval process for the Town's industrial sites as a means of expediting the approval process.

Strategy 3.1.9.2: Work with regional and state officials to provide proper training of local officials in the development review process.

Strategy 3.1.9.3: Identify developer concerns with regulations and address these issues while protecting the Town residents' interests.

Strategy 3.1.9.4: Consider simplifying the process of development in the Town of Essex by introducing a form-based code. Such a code would eliminate the current code requirements of minimum lot sizes and minimum setbacks.

Strategy 3.1.9.5: Consider offering special fast-track permit review and/or reducing requirements for selected industries, such as green and locally-owned businesses.

Strategy 3.1.9.6: Consider the creation of a Development Review Board.

Objective 3.1.10: Expand access to affordable capital.

Strategy 3.1.10.1: Continue to participate in The Partnership Fund – a revolving loan fund established to provide start up and working capital for businesses.

Strategy 3.1.10.2: Increase businesses' awareness of available capital by publicizing information on state financial incentives. Such publication should include, but not be limited to, descriptions of tax credits available from the Vermont Economic Progress Council, financing programs available from the Vermont Economic Development Authority, and angel investment programs available through both Fresh Tracks Capital, LP and the Vermont Venture Network.

Objective 3.1.11: Support business development and retention programs.

Strategy 3.1.11.1: Cooperate with others locally and integrate local efforts with those of the region and state, recognizing that we are not competing with one another but rather with the global market and thus must work together to attract and retain businesses in the region. Local officials that could have a role in business development and retention efforts include the Town Manager, Assistant Town Manager, Selectboard members, and/or Economic Development Commission members.

Strategy 3.1.11.2: Coordinate with GBIC on a program to visit Essex businesses. Create a quick action response team to handle issues raised by existing and prospective businesses.

Strategy 3.1.12.3: Work with existing businesses on zoning and subdivision bylaw changes that strive to enhance competitiveness.

Strategy 3.1.11.4: Work with GBIC on attracting new businesses to the region and to Essex in particular by staying involved in economic development planning efforts and ensuring Essex representation on the GBIC Board.

Strategy 3.1.11.5: If GBIC obtains US EDA approval of the Comprehensive Economic Development Strategy (CEDS), try to obtain funding from US EDA to undertake any other needed infrastructure improvements.

Strategy 3.1.11.6: Work with the Lake Champlain Regional Chamber of Commerce/GBIC and others on legislative and regulatory efforts to make the state more business friendly. Among the issues that need to be addressed include stormwater permitting issues, land use permit reform, and additional legislation to encourage growth center development and redevelopment.

Strategy 3.1.11.7: Work with area businesses and regional entities to develop marketing materials on Essex and create an ambassador program to promote the Essex area and the region.

Objective 3.1.12: Inventory and enhance Essex's tools for economic development.

Strategy 3.1.12.1: Ensure that the Town has an up-to-date tax stabilization policy.

Strategy 3.1.12.2: Promote The Partnership Fund (i.e., the fund's existing purpose along with examining ways to enhance the fund).

Strategy 3.1.12.3: Work with GBIC and private developers to ensure pre-permitted sites exist for economic development in Essex.

Strategy 3.1.12.4: Work to complete construction of the Circumferential Highway and VT Route 15 corridor improvements and to ensure that other infrastructure needed for economic development is adequate.

Strategy 3.1.12.5: Work with the Lake Champlain Regional Chamber of Commerce/GBIC and others on legislative and regulatory improvement efforts to make the state more business friendly.

Strategy 3.1.12.6: Investigate the feasibility of creating a tax increment financing district to support the development of a green entrepreneurial center.

Strategy 3.1.12.7: Establish a job creation and attraction incentive program tied to business recruitment and expansion efforts.

Strategy 3.1.12.8: Prepare an inventory of available local, regional and state tools for economic development, and incorporate in marketing efforts (including websites). Provide area realtors and brokers with information on the toolbox.

4. EDUCATION

Planning decisions on the location, type and amount of future growth can have significant implications for educational services. Because education represents a large portion of local expenditures, we must closely coordinate planning decisions with the school districts to avoid adverse fiscal impacts on the Town.

4.1 Existing Conditions

The Town of Essex is fortunate to be located within easy commuting distance to numerous colleges in Chittenden County. These include the University of Vermont, Champlain College, St. Michael's College and Community College of Vermont. Numerous and varied opportunities for adult education are also offered by area high schools and other private entities. High quality education for all children in the Town of Essex is one of the most significant and basic services that Essex must provide.

The Town of Essex outside the Village is served by the Essex Town School District which serves kindergarten through the eighth grade. An Early Essential Education preschool program is also provided by the district. High school students of both the Village of Essex Junction and the Town outside the Village are served by the Essex Community Education Center Union District #46. This district, formed in 1995, administers the former Essex Junction Education Center. Currently Essex Town students comprise 56 percent of the Union High School's total enrollment and Essex Town pays 54 percent of net operating costs.

The Essex Town School District has existed as a separate entity since 1978. Prior to 1978, the Essex Town School District was part of the Chittenden Central School District. The Town School District is governed by an elected School Board composed of five members. The Board's primary functions include establishing policies to govern School District operations, preparing the annual budget, representing community interests, and maintaining quality educational services. The Town School budget is voted on annually by Australian ballot on the second Tuesday of April.

In 2009, the Essex Town School District had approximately 215 employees, about half of which were certified teachers. Many staff members have published in nationally distributed periodicals, have been sought as consultants by other schools and have been called upon to give presentations at state, regional and national conventions. In addition, many staff members serve on state and national commissions. Realtors in Chittenden County continually indicate that the quality of schools is a primary reason people move to Essex.

There were a total of 2,631 Essex Town students as of October 2010 in kindergarten through grade 12. The Essex Town School District has three school buildings within the Town: Essex Elementary school (grades K-2); Founders Memorial School (grade 3-5); and Essex Middle School (grades 6-8). The majority of Essex Town high school students (grades 9-12) attend Essex Educational Center. A more detailed description of each facility follows with the locations of same shown on Map 1, Community Facilities.

Essex Elementary School – Located on Bixby Hill Road, this facility has a 58,300 square foot building on a 13-acre site. The original building, known as the Essex Classical Institute, was torn

down in 1971 because it was structurally unsound. The Institute still owns a 10-acre site on the south side of Browns River Road but allows the Town School District to use the property. The school building was expanded in 1982 and 1990. This facility currently has 30 classrooms, a gym, cafeteria and kitchen, a learning center and two large common rooms which can be used for larger assemblies. There are approximately 69 full-time staff members.

Founders Memorial School – This is a 68,200 square foot building originally built in 1979 and added to in 1990. It has 27 classrooms, a computer lab, a gym, cafeteria and kitchen, and a learning center. There are approximately 62 full-time staff members.

Essex Middle School – This 82,700 square foot facility was built in 1970 off Founders Road on a 100 acre site shared with the Founders Memorial School. It has 31 classrooms, one computer lab, a gym, cafeteria and kitchen, a family consumer science lab, an industrial arts lab and a learning center. In 1999, the citizens approved additions, upgrades and renovations to the 30-year old building. There are approximately 71 full time staff members.

Other support facilities for the School District include a 2,000 square foot bus garage and an administration building. A 78-acre tract of land adjacent to the Founders Road site has been acquired to add to the present campus land area for future expansion needs.

Essex Community Educational Center – Located in the Village of Essex Junction is a 273,431 square foot building on a 99.1-acre site. It was built in 1970 (244,945 square feet) with an addition in 2000 (24,485 square. feet) and includes a lighted track, football field, tennis courts, indoor ice skating rink, gymnasium, 715 seat auditorium and several meeting rooms. The facility contains a high school and a recently renovated regional technical center, called the Center for Technology - Essex. There are approximately 347 full-time staff members and approximately 109 classrooms.

The cost of educating a student for one school year in FY08 was an average of $13,847 for all (K-12) students in the Town, which is slightly more than the state average of $12,034.

Table 4-1 shows the capacity of each school, present enrollment and the percent of capacity. A school's capacity is determined by a number of interrelated and frequently changing variables such as federal and state program mandates, teachers' union contract provisions and the School Board's own philosophy such as pupil/teacher ratios. Based on enrollment projections as of October 2000 and completion of Essex Middle School construction in July 2001, the Essex Town School District does not anticipate the need for additional classroom space until sometime after the 2011 Town Plan is adopted. Prior to that time, decisions regarding the restructuring of the grades within each building will need to be made.

At the high school level, study continues concerning the establishment of an independent comprehensive technical academy and workforce development center to serve youth and adult learners in Chittenden County. The establishment of this technical academy will have a space impact on the Essex Educational Community Center. Accordingly, future addition/expansion plans are linked to the outcome of that process.

Table 4-1
Town of Essex School Facilities Capacity Analysis 2009

	Capacity	FY 2009 Enrollment	Percent of Capacity
Essex Elementary School	525	422	80.4%
Founders Memorial School	500	398	79.6%
Essex Middle School	590	438	74.2%
Essex Community Education Center	1,680	1,373	81.7%

Sources: VT Dept. of Education School Data and Reports

Although population in the Town outside the Village grew by 24 percent between 1990 and 2008, the total number of school enrollments increased at a rate of 31 percent as can be seen in Table 4-2 and Figure 4-1, depicting enrollment, housing and population change between 1980 and 2000. (Housing figures have not been updated since the 2000 Census.) In the 1990s, with the relative resurgence of single-family home construction compared to the construction of multi-family units, school enrollments increased, albeit at a rate below the growth in housing and overall population growth. This trend in increasing school enrollments has continued into the 2000s, increasing at an even a greater rate than the overall population growth.

The extent to which out-of-town tuition students impact enrollment at the Community Education Center is also noteworthy. In the early 1990's, 15 percent of the total enrollment was comprised of tuition students. The percentage rose to 21 percent by 2006 and has now fallen back to slightly more than 15 percent. Tuition students are generally considered to have a positive impact on the school funding, and provide greater opportunities for expanded curriculum than might otherwise be possible with a smaller student body.

Two competing factors are likely to keep school populations relatively stable during the second decade of the 2000s. Declining numbers of women of child-bearing age will lower fertility rates and the resulting number of children that are born in Essex. In contrast, in-migration will continue to cause the number of children entering school in kindergarten and beyond to be greater than the number of Essex births.

The Town of Essex and Essex Town School District have enjoyed a cooperative relationship in monitoring and mitigating the impacts of the Town's growth on the school system. Some of these efforts include:

- The adoption of a residential phasing policy to control the rate of growth in accordance with what the schools can accommodate.
- The adoption of school impact fees to assist in the acquisition or construction of new school facilities. These fees were phased out in 2010 because of the decline in school enrollment.
- Cooperation in the annual updating of a computerized enrollment and population growth projection model.
- Acquisition of land for school facility expansion needs from the Forestdale Heights residential subdivision.

Other planning considerations that pertain to schools include student transportation (school bus pickups, non-motorized, multi-use trails, scattered development) availability and location of recreational activities, and future school sites.

TABLE 4-2
SCHOOL ENROLLMENT FIGURES BY GRADE: 1990-2009

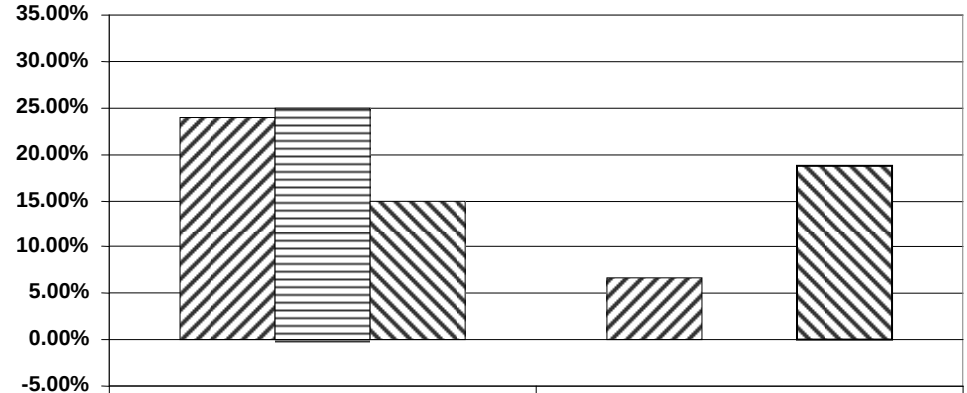
	Grade Level															
Fiscal Year	**K**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total K-8**	**9**	**10**	**11**	**12**	**Total 9-12**	**Total K-12**
1990	135	153	141	137	155	128	155	130	137	1271	134	136	133	129	532	1803
1991	129	147	151	148	146	156	136	152	129	1294	136	143	131	140	550	1844
1992	145	143	155	156	149	148	170	145	156	1367	141	138	149	133	561	1928
1993	146	151	142	163	164	153	152	183	146	1400	171	132	144	155	602	2002
1994	146	160	145	145	180	167	166	150	184	1443	146	164	141	154	605	2048
1995	169	144	163	147	145	182	160	164	140	1414	176	146	154	130	606	2020
1996	133	173	160	162	151	159	190	161	168	1457	150	175	145	152	622	2079
1997	144	148	182	159	172	152	160	194	156	1467	168	142	176	149	635	2102
1998	112	152	163	189	161	181	162	170	191	1481	162	164	143	169	638	2119
1999	162	132	149	167	203	171	173	162	173	1492	187	160	167	145	659	2151
2000	140	158	123	158	168	192	171	178	160	1448	166	185	155	164	670	2118
2001	148	139	168	128	169	171	188	168	183	1462	166	167	195	150	678	2140
2002	128	146	141	167	134	173	171	199	175	1434	179	188	166	192	725	2159
2003	122	128	152	143	165	134	184	174	206	1408	185	189	181	168	723	2131
2004	127	126	140	143	145	164	141	179	173	1338	172	205	184	169	729	2067
2005	114	132	125	138	143	146	167	133	181	1279	369	404	407	353	1533	2812
2006	138	115	133	129	137	147	146	166	137	1248	395	344	414	390	1543	2791
2007	119	140	112	128	133	138	153	145	162	1230	362	367	360	384	1473	2703
2008	135	118	147	115	129	130	137	156	152	1219	319	338	383	351	1391	2610
2009	126	138	120	147	117	134	132	144	162	1220	350	311	340	371	1372	2592

Source: Essex Town School District Superintendent's Office, Chittenden Central Supervisory Union Superintendent's Office, and VT Department of Education

Figures taken at the beginning of the school year

Figure 4-1

TOWN (OUTSIDE THE VILLAGE) PERCENT CHANGE IN POPULATION, HOUSING & ENROLLMENT 1990-2008*



	1990-2000	2000-2008
Total Population	19.27%	5.26%
Total Housing Units	25.01%	*
k-12 Enrollment	14.9%	18.85

Source: US Census Bureau
* Housing figures have not been updated since the 2000 Census

4.2 Goals, Objectives and Strategies

Goal 4.1: School facilities will be expanded or downsized in accordance with the planned growth of the community.

Objective 4.1.1: Maintain residential growth at a level consistent with the Town's fiscal capacity to accommodate that growth.

Strategy 4.1.1.1: The Town's residential phasing program, last updated in 2008, should be regularly reviewed in light of changing household sizes, number and type of permits issued for new housing units, and school capacity and enrollment figures.

Objective 4.1.2: Plan for long-term capital needs in a timely manner to avoid uneven peaks and valleys in expenditures and tax rates, and to identify alternative revenue sources.

Strategy 4.1.2.1: The School District should provide a list of all school capital needs for inclusion in the Town's five-year capital budget and program.

Strategy 4.1.2.2: Impact fees should be appropriately calculated to reflect the costs of providing educational services to new development.

Goal 4.2: School facilities will be integrated with and serve the entire community.

Objective 4.2.1: Prepare a master plan to ensure the effective and appropriate use of school property.

Objective 4.2.2: Improve vehicular, bicycle and pedestrian connections between schools and residential neighborhoods.

Objective 4.2.3: Encourage the development of educational resources such as natural areas, museums, multi-use trails, etc., throughout the Town.

Objective 4.2.4: Encourage community participation and use of educational facilities in future design of school facilities.

Goal 4.3: School facilities in the Town of Essex will reflect the Town's philosophy of education.

Objective 4.3.1: Ensure that the *Essex Design for Learning* serves as a guide for the design and use of K-8 school facilities in the Town School District.

Goal 4.4: The School Districts will communicate, cooperate and coordinate planning efforts with other municipal entities.

Objective 4.4.1: Continue a cooperative effort among the Town Planning Commission and School Board to coordinate development with educational facilities. Future cooperative efforts should include:

Strategy 4.4.1.1: Prepare an annual report of classroom space needs versus enrollment trends.

Strategy 4.4.1.2: Develop a trail system connecting schools to neighborhoods, parks, natural areas, and commercial centers.

Strategy 4.4.1.3: Assist in the development of a master plan for any future expansion of the school facilities, should the need for such expansion arise.

Objective 4.4.2: Initiate a cooperative effort between the Town government and school district to prepare a five-year capital budget and program for the entire Town.

Objective 4.4.3: Hold periodic meetings among the Selectboard, Planning Commission and School Board to discuss issues of common concern. Issues may include:

- Expansion plans and future school sites or consolidation plans
- Transportation routes and alternatives such as trails and mass transit
- Population and school enrollment projections based on residential development trends
- Utilization of facilities for community and service organizations
- Substance abuse education
- Bulk purchasing
- Energy efficiency, conservation, generation of renewable energy
- Alternative taxing methods, etc.

5. HOUSING

The availability and quality of housing are important determinants of a community's quality of life. A priority of this plan is to ensure the availability of high quality and energy efficient housing to all segments of the community.

5.1 Existing Conditions

Housing Profile

The 2010 Census data was not available for the 2011 Town Plan update. Efforts were made to obtain interim data, where possible. However, the 2000 census data was relied upon in various sections of this chapter. In 2000, census data indicated there were 7170 dwelling units in the Town of Essex, an increase of 13.6 percent (860 dwellings) since 1990. Research done in conjunction with the 2010 Essex Economic Development and Vision Plan indicates that from 2000 to 2009, Essex added nearly 700 new households, increasing the total from more than 7,000 to more than 7,700. This continued to reflect a slowing since the decades of the 1970's and 1980's when the Town experienced an increase of 57.8 percent (1,764 dwellings) and 31 percent (1,493 dwellings), respectively. Housing count data through 2000 for the Town of Essex are shown in Table 5-1 and Figure 5-1.

Town-generated information suggests that the Essex housing stock has grown by 3.4 percent since the 2000 US Census. From 2000 through 2004, 242 building permits were issued in the Town outside the Village. In the same time period, 136 building permits were issued in the Village.

Trends in housing growth have been similar to those described for population. Prior to 1960, most new housing in the Town occurred in the Village. Between 1960 and 1980, most new development occurred in the area outside of the Village. Between 1980 and 1990, the two areas of the Town experienced roughly similar amounts of residential development. After 1990, most new development again occurred in the area outside of the Village. Updated figures for trends in housing growth are contained in the 2008 Essex Open Space Plan and are included in Chapter 11, Land Use and Development. It is anticipated that the Town outside of the Village will continue to receive a greater share of new housing as the Village nears build-out.

Since 1960, housing in the total Town increased from about 8.7 percent of the county housing stock to about 12.2 percent. From 1990 to 2000, the share of housing in the Village dropped from 6.5 to 5.9 percent, indicating that housing in the Town outside the Village accounted for an increasing share of the county's housing stock.

Table 5-1
COMPARISON OF TOTAL HOUSING UNITS: 1960-2000

	YEAR					
	1960	1970	1980	1990	2000	Average Housing Units Per Year 1990-2000
Essex Town	450	1,196	2,279	2,935	3,669	73.4
Essex Jct. Village	1,494	1,857	2,544	3,375	3,501	12.6
Both Village and Town	1,944	3,053	4,826	6,310	7,170	86.0
Colchester	652	3,088	4,566	5,922	6,727	80.5
South Burlington	273	2,879	3,972	5,437	6,498	106.1
Williston	400	908	1,284	1,874	3,036	116.2
Chittenden Co.	22,464	30,664	41,339	52,095	58,864	676.9
Vermont	136,307	165,063	223,198	271,214	294,382	2316.8
PERCENT OF CHITTENDEN COUNTY						
Both Essex Village and Town	8.65	9.96	11.67	12.11	12.18	-
Colchester	2.90	10.07	11.05	11.37	11.43	-
South Burlington	1.22	9.39	9.61	10.44	11.04	-
Williston	1.78	2.96	3.11	3.60	5.16	-

Source: 2000 U.S. Census Bureau

Research done for the 2010 Essex Economic Development and Vision Plan indicate that Essex added households at a rate of 1.1 percent from 2000 to 2009, greater than that of surrounding Chittenden County (0.9 percent and the State of Vermont (0.8 percent).

As in the Village, available land in the Town outside the Village is becoming scarcer. One likely result is a decrease in construction of single-family homes and an increase in multi-family housing. This direction in new housing would continue recent trends of declining household size. Figure 5-2 shows that the average number of persons per dwelling unit for the total Town declined from 3.65 in 1960 to 2.62 in 2000. The pattern is similar for dwellings in the Village and in the Town outside the Village, although the average persons per dwelling unit is smaller in the Village. The decrease in the number of persons per dwelling unit is consistent with the increase in the proportion of dwellings in multiple unit structures which has occurred in recent decades. It is likely that these

trends have continued since 1990, but the incompatibility of housing and population data sources makes it difficult to evaluate current persons per dwelling unit sizes.

Figure 5-1
TREND IN DWELING UNITS 1960-2000
Source: US Census

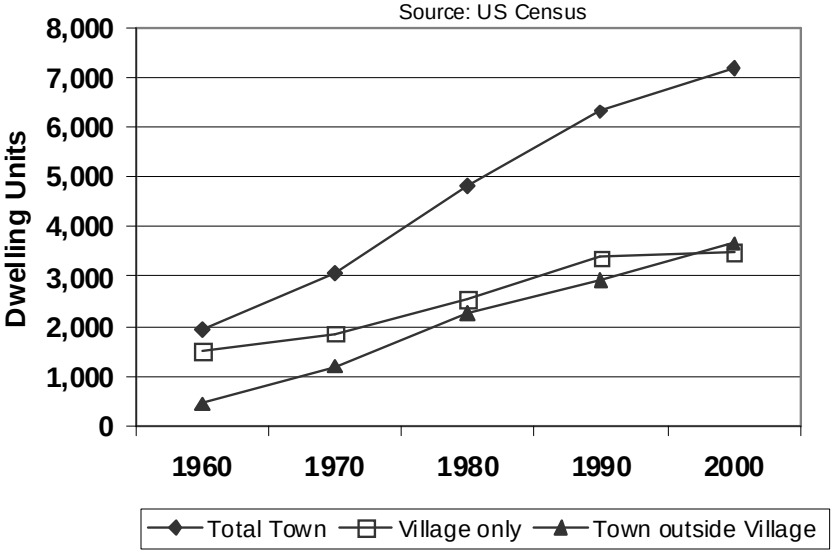
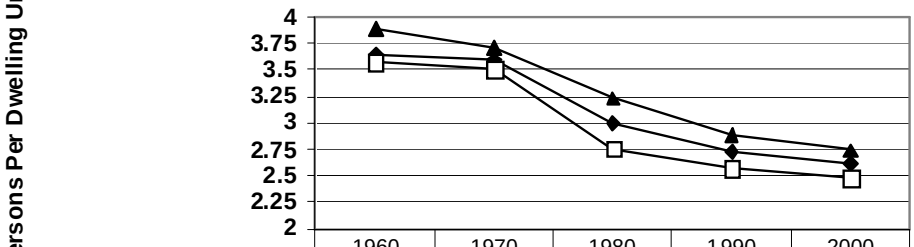


Figure 5-2:
TRENDS IN PERSONS PER DWELLING UNIT, 1960-2000
Source: US Census



	1960	1970	1980	1990	2000
Total Town	3.65	3.59	2.99	2.73	2.62
Village Only	3.57	3.51	2.76	2.57	2.48
Town Outside Village	3.89	3.71	3.23	2.89	2.74

Residential Development Phasing

The Town phases its residential developments by establishing the number of units which can be built annually. In 2008, the Town approved a Residential Development Phasing policy with an aim for growth not to exceed 205 people per year. The number of people per year is derived from an Estimated Population Equivalent (EPE) based on one person per bedroom.

Prior to the current phasing policy, the policy in existence ~~that~~ had a target (ceiling) of 88 average annual dwelling units. Figure 5-3 illustrates the extent to which the total number of approved units has remained under the previous annual phasing limit. Figure 5-4 illustrates, under the current phasing policy, how the number has continued to remain under the phasing limit.

Figure 5-3
RESIDENTIAL PHASING ALLOCATION, 1986-2007

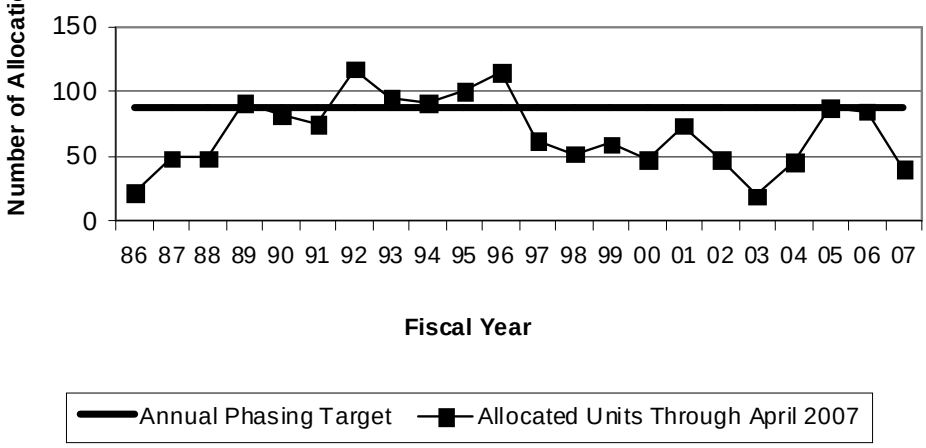
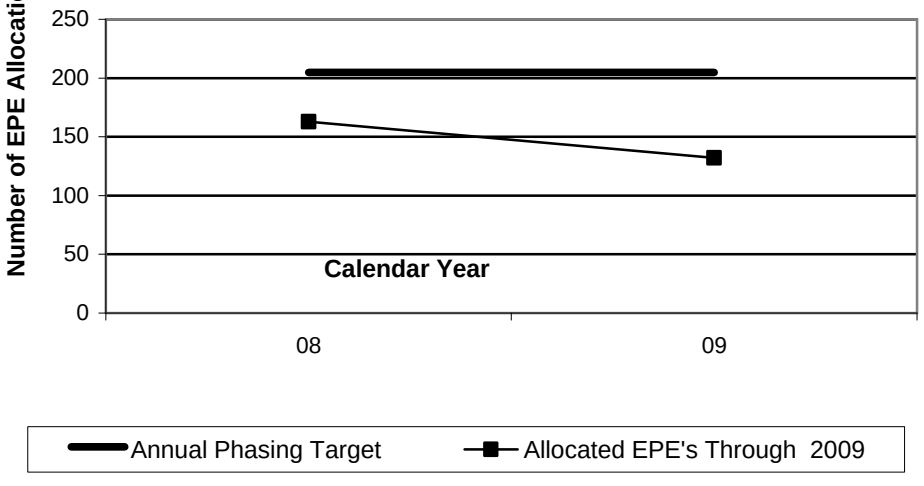


Figure 5-4
RESIDENTIAL PHASING ALLOCATION, 2008-2009



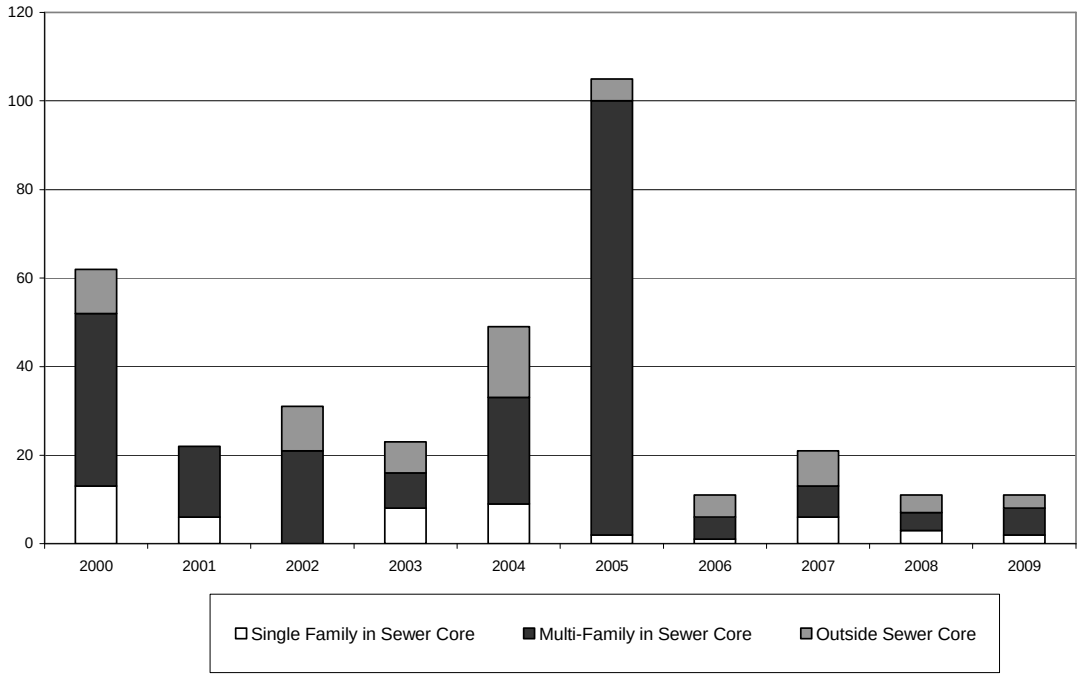
Source: Community Development Department

The Town's Residential Development Phasing Policy also encourages certain housing locations and types. One goal is that phasing allocations shall attempt to achieve at least 80 percent of housing growth on municipal sewer. In pursuit of that goal, a maximum of 20

units for any single project per year may be approved within the Sewer Core area while only five units for any single project per year may be approved outside that area.

Annual building permits in the Town outside the Village have been tracked according to residential phasing. Figure 5-5 indicates the number and percentage of building permits issued for single-family and multi-family units inside and outside of the sewer core.

Figure 5-5
Zoning Permits In and Outside the Sewer Core



Source: Community Development Department

Housing Forecasts

In Chapter 2 it was shown that expected population growth for the entire Town of Essex would range between 264 and 323 persons per year, and that 70 percent of that would probably occur in the Town outside the Village. Based on the 2000 average of 2.76 persons per dwelling unit for the Town outside of the Village, this range corresponds to between 67.7 and 82.5 new dwellings per year in the Town outside of the Village. However, persons per dwelling unit will vary, due both to changing demographics throughout the area and to the type of housing that is built in Essex.

Single-family homes comprised 91 percent of all dwellings in Essex in 1967. Yet recent construction has been quite different. Of 242 building permits issued from 2000 through 2004 for new homes in the Town outside the Village, 62 percent were for condominiums/townhouses. With smaller land parcels remaining within the sewer core, the trend toward dwelling units with fewer people per unit is likely to continue. Thus, the

Town's residential phasing policy must be refined to adjust the annual total dwelling unit maximum based on the size and type of units being constructed.

The Town plans its housing policies with population targets and land use goals in mind. The majority, 80 percent or more, of new housing should be located within the sewer core area. With limited available land, higher densities and taller buildings will help achieve a pattern of compact development. Finally, the overall growth rate should be similar to recent historic patterns so that the Town's ability to provide services at a reasonable cost will not be overburdened.

Affordable Housing

Affordable housing is a major issue in Vermont and across the nation. The Town of Essex created an Affordable Housing Task Force in cooperation with the Village of Essex Junction. The findings and recommendations of this committee were presented in great detail in *Report of the Essex/Essex Junction Affordable Housing Task Force*, March 1990.

The work of the Affordable Housing Task Force in 1990 has not been updated in more than 20 years and the Task Force is no longer active. The Town should take steps to appoint a new ad-hoc housing task force to address housing of all types and for all income levels, including affordable housing as defined in the Zoning Regulations.

In 2004 the Chittenden County Regional Planning Commission released recommendations from its Housing Targets Task Force which contained recommended housing targets for all Chittenden County communities. The targets have not been updated at the time of this plan update. While the Town of Essex has raised questions about the methodology used in that analysis, it is useful to note that the recommended target for all of the Town of Essex (1,170 units in ten years) is within four percent of the number of units needed to accommodate the projected town wide growth set forth in Chapter 2 of 264-323 persons per year, assuming the town-wide average persons per dwelling unit from 2000 as set forth in Figure 5-2. If the 70/30 split between Town and Village suggested in Chapter 2 is applied to the recommended town-wide housing targets, the target for the Town outside of the Village would be 819 units, or an average of 81.9 per year during the ten year period. This target is lower than the Town's current phasing limit, and generally consistent with the growth rate set forth in Chapter 2.

The report of the Affordable Housing Task Force also recommended that each town aim to achieve 10 percent of its total housing target as affordable housing, and another10 percent as moderate income housing (i.e. affordable to households having incomes between 80 percent and 120 percent of the SMA's median household income.

The Zoning Regulations were amended in 2008 to increase the density bonuses to allow for affordable housing projects as Planned Unit Development-Residential (PUD-R) in various zoning districts throughout Town.

It is recommended that the proposed ad hoc housing task force consider this information, along with all other available input, as it works to develop a housing policy and strategy for the Town.

5.2 Goals, Objectives and Strategies

Goal 5.1: Address the housing needs of Essex's projected low and moderate income and senior population.

Objective 5.1.1: Appoint an ad-hoc housing task force to gather appropriate information, assess need, develop target goals, and prepare and make recommendation to the Selectboard for all types of housing and for all income levels including affordable and senior housing. Designate a staff person to assist the efforts of the Task Force. The Task Force may consider, among others, specific approaches described under other goals and objectives in this Chapter to achieve desired housing objectives.

Strategy 5.1.1.1: Review all available data describing housing in Essex.

Strategy 5.1.1.2: Review approaches taken or recommended in other communities.

Strategy 5.1.1.3: Establish long-term (i.e. 5 year and 10 year) targets for construction of new housing of various degrees of affordability, including affordable housing as defined above.

Strategy 5.1.1.4: Inventory publicly owned lands and other vacant parcels to determine their feasibility as sites for affordable housing.

Strategy 5.1.1.5: Maintain an inventory of the existing housing stock. Update information on the amount, type and cost of housing being constructed to assist in monitoring progress towards affordable housing targets.

Strategy 5.1.1.6: Develop recommendations for meeting the specified housing targets, which may include but are not limited to the recommendations below.

Objective 5.1.2: Preserve the existing stock of affordable housing.

Strategy 5.1.2.1: Work with a land trust or other housing entity to acquire existing affordable properties that might be sold and priced out of the affordable range.

Strategy 5.1.2.2: Consider tax stabilization for rental units having long-term affordability restrictions.

Objective 5.1.3: Adopt zoning regulations and related policies that will encourage development of new affordable housing in Essex.

Strategy 5.1.3.1: Encourage development of energy efficient affordable housing in mixed income residential neighborhoods.

Strategy 5.1.3.2: Consider use of expedited phasing, sewer allocations, improved sewer access within the core, reduction or waiver of impact fees, inclusionary zoning, and/or more flexible development standards if needed to bring about affordable housing.

Objective 5.1.4: Allocate public and private resources and promote programs to assist the development of housing of all types and for all income levels including affordable and senior housing.

Strategy 5.1.4.1: Provide incentives such as density bonuses or shared infrastructure costs to encourage and allow builders to develop affordable housing. Request regional and state participation in these efforts.

Strategy 5.1.4.2: Remain an active partner to private or non-profit housing developers seeking available tax credits.

Objective 5.1.5: Contribute to regional efforts addressing homelessness.

Goal 5.2: Encourage a reasonable diversity of housing types and choices between rental and ownership in a variety of locations suitable for residential development and convenient to employment centers, shopping facilities, schools and public transportation.

Objective 5.2.1: Encourage a mixture of housing suitable for all income levels.

Strategy 5.2.1.1: Provide incentives for affordable housing as in Goal 1, but allow opportunities for new housing that will serve moderate and higher income levels.

Strategy 5.2.1.2: Encourage diversity of housing types within the same residential neighborhood or development, perhaps through revised planned development provisions.

Strategy 5.2.1.3: Investigate ways to increase available residential density in Mixed Use and High Density districts. Consider use of standards other than density per acre for multi-unit buildings to encourage greater unit density.

Strategy 5.2.1.4: Encourage mixed uses with housing integrated into existing and new commercial districts.

Strategy 5.2.1.5: Increase flexibility in the use of "accessory apartments." Allow a property to qualify if the owner lives in either the larger or smaller apartment.

Objective 5.2.2: Preserve the existing stock of rental housing.

Objective 5.2.3: Encourage the location of housing at suitable locations adjacent to commercial centers where employment and public transportation exists.

Strategy 5.2.3.1: Continue encouragement of residential units as part of commercial projects in districts such as MXD, MXD-C, R-B and CTR where they already are permitted.

Strategy 5.2.3.2: Encourage an appropriate mix of residential and commercial uses.

Goal 5.3: Encourage housing development of designs and in locations that promote and enhance existing neighborhood centers and preserve the Town's more rural areas and character.

Objective 5.3.1: Promote higher density cluster development in and around the Town Center, Susie Wilson Road and portions of Essex Center.

Strategy 5.3.1.1: As in strategies for affordable housing, investigate the promotion of standards other than density per acre for multi-unit buildings in order to encourage greater unit density.

Objective 5.3.2: Establish a target of at least 80 percent of new housing development to take place within designated growth areas as opposed to more rural areas.

Strategy 5.3.2.1: Continue to use zoning and subdivision regulations to encourage development within the Town's designated sewer service boundary. Modest adjustments to the boundary line may be considered as long as a clear division between growth areas and rural areas is maintained.

Strategy 5.3.2.2: If sewer capacity becomes available for reallocation, the first priority should be the support of higher residential densities within the sewer core.

Objective 5.3.3: Residential areas should be connected via trails, sidewalks and roads to facilitate a sense of community and movement between neighborhoods, schools, shopping and workplaces.

Objective 5.3.4: Continue to adopt zoning and subdivision regulations and related policies to preserve the Town's more rural areas and character.

Strategy 5.3.4.1: Provide incentives for use of Planned Unit Development Residential (PUD-Rs) when land is subdivided. Establish building sites that will provide compatibility with rural character and will protect all significant features as shown on Map 17.

Strategy 5.3.4.2: Preserve historic buildings. Encourage additional uses in barns to help preserve those structures.

Goal 5.4: Promote sufficient housing to meet the specific needs of Essex's elderly population.

Objective 5.4.1: Encourage provision of elderly housing to serve the needs of senior citizens of all income levels.

Strategy 5.4.1.1: Continue to encourage development of a variety of housing types to satisfy diverse needs – such as single-level homes for independent seniors, housing units equipped for handicap access or designated to allow future adaptation to handicap use, and multi-level care facilities.

Objective 5.4.2: Adopt zoning regulations and related policies that will encourage development of new elderly housing.

Strategy 5.4.2.1: Encourage the development of accessory apartments to enable elders to remain in their homes or to reside in family members' homes.

Strategy 5.4.2.2: Reduce parking requirements to reflect actual demand in elderly housing projects.

Objective 5.4.3: Pursue policies that will enhance housing affordability for elderly residents.

Goal 5.5: Promote construction/renovation of housing that is energy-efficient, uses renewable sources of energy, and outputs a minimal carbon footprint.

Objective 5.5.1: Encourage property developers/owners to strive for energy-efficient housing construction and renovation.

6. COMMUNITY SERVICES AND FACILITIES

Community facilities and services are provided by the Town or other quasi-public entities for the health, benefit, safety, and enjoyment of the general public. They include police and fire protection, rescue services, utilities, solid waste disposal, library services, public water supply and wastewater disposal systems. Careful planning is essential for community facilities and services if they are to meet local goals for future growth and sustainability. If the facilities are at capacity, further development may strain them, causing financial burdens and environmental problems. If facilities are inadequate, they may prevent the Town from adequately meeting existing needs or accommodating desirable growth. The following is an inventory of the services and facilities available in Essex and an evaluation of their ability to meet future needs. Map 1, *Community Facilities*, identifies the locations of the municipal facilities discussed in this chapter.

6.1 Solid Waste

The Town of Essex formerly operated a municipal landfill off VT Route 2A. By law, the landfill was closed. The closed landfill remains on the list of active Comprehensive Environmental Response Compensation and Liability Information System (CERCIS) sites (EPA Superfund sites) with a low rank priority relative to its potential to be a risk to the general public. The site – which operates under an Administrative Closure Order issued in November, 1992, and in effect until 2013 – is tested twice yearly and will be monitored for the foreseeable future. The Town is a member of the Chittenden Solid Waste District (CSWD) which handles disposal of the Town's solid waste. The former municipal landfill is now serving as a transfer station for the district with drop-off and storage facilities.

CSWD continues to pursue a lined landfill site within Chittenden County for long term disposal of solid waste. The district's preferred site is located in Williston, but in the past a second potential site in Essex has been discussed. The Town firmly believes that the RPD-I District and the abutting I-1 District are an inappropriate location for a regional landfill. The Town is unalterably opposed to a landfill in these districts.

6.2 Stormwater

Essex has no central stormwater system serving the entire town, but rather a collection of independent culverts, catch basin systems with interconnected pipes and some stormwater detention basins. Not including road cross culverts or soil discharge systems, there are more than 195 separate catch basin/piped discharge stormwater systems, and more than 1,400 catch basins, 400 of which are either state or privately owned. The Public Works Department maintains all culverts and catch basins within the public right-of-way, as well as those permitted systems specifically accepted by the Town. In almost all cases, the detention ponds and stormwater discharge permits have been issued by the state to developers or homeowner's associations.

The Environmental Protection Agency published a Final Rule (64CFR68722) titled Stormwater Phase II that requires certain designated urban core areas including Essex to develop and implement a comprehensive stormwater management program. The Town has been issued a National Pollutant Discharge Elimination System (NPDES) Phase II stormwater permit (#3-9014), which was extended in 2008 that is intended to:

- Reduce the discharge of pollutants to the maximum extent possible (MEP),
- Protect water quality, and
- Satisfy the appropriate water quality requirements of the Federal Clean Water Act.

To accomplish these goals, the Phase II permit defines that a small stormwater management program of Municipal Separate Storm Sewer Systems (MS4) must contain six elements to be implemented in concert. They are:

1. **Public Education and Outreach**

   Distributing educational materials and performing outreach to inform citizens about the impacts polluted stormwater runoff discharges can have on water quality.

2. **Public Participation/Involvement**

   Providing opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives on a stormwater management panel.

3. **Illicit Discharge Detection and Elimination**

   Developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system (includes developing a system map and informing the community about hazards associated with illegal discharges and improper disposal of waste).

4. **Construction Site Runoff Control**

   Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acres of land (controls could include silt fences and temporary stormwater detention ponds).

5. **Post-Construction Runoff Control**

   Developing, implementing, and enforcing a program to address discharges of post-construction stormwater runoff from new development and redevelopment areas. Applicable controls could include preventative actions such as protecting sensitive areas (e.g., wetlands) or the use of structural measures such as grassed swales or porous pavement.

6. **Pollution Prevention/Good Housekeeping**

   Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations. This program must include municipal staff training on pollution prevention measures and techniques (e.g., regular street sweeping, reduction in the use of pesticides or street salt, or frequent catch-basin cleaning).

In April 2003, a stormwater management plan was adopted by the Selectboard. The plan helps to manage the following activities through:

1. Requiring new developments to create natural usable vegetated depressions through grading which act as retention basins during peak storm events and reduce the need for stormwater retention lagoons.
2. Requiring outfalls from new or replacement storm drainage systems to incorporate natural or man-made methods of energy dissipation to reduce erosion and siltation in downstream elements.
3. Exploring creative alternatives to open stormwater lagoons.
4. Reducing the size of large stormwater collection systems by breaking the system into smaller components involving less runoff in each component.
5. Requiring new developments to provide a more comprehensive and complete erosion control plan, temporary and permanent, prior to project approval.
6. Encouraging the use of subsurface infiltration dispersal systems where suitable soils are available and where technically feasible.
7. Identifying existing areas that are deficient in storm drainage collection and allocating funds to correct these deficiencies.
8. Establishing a maintenance fund to provide for the repair and replacement of storm drainage collection system components and ancillary equipment.
9. Encouraging practices that limit or reduce erosion.
10. Encouraging maintenance practices for streets and parking areas that include regular sweeping and collection of surface materials.
11. Providing subsurface drainage systems, such as under-drains, in areas where existing infrastructure damage has been identified as being caused by groundwater.
12. Establishing procedures for the identification of illegal cross connection with the sanitary sewer and utilizing these procedures to detect and eliminate these connections.

The Town will be required in the future to provide specific stormwater system improvements at a number of locations that have yet to be designated. As the Vermont Agency of Natural Resources completes its watershed studies and prepares "pollutant load" limits, permits will be issued to construct treatment systems of some form where none exist today. Primary emphasis will be placed on improving the water quality in the Town's two impaired watersheds – Sunderland Brook and Indian Brook.

6.3 Sanitary Sewer

In the 1970s, the Town of Essex completed a study and design of a sanitary sewage collection system to eliminate multiple point sources of pollution that existed throughout the Town. It was determined that the most economical means to treat the wastewater was through an upgraded sewage treatment plant located on Cascade Street in the Village of Essex Junction. To accomplish this goal, the Town of Essex, the Town of Williston and the Village of Essex Junction formulated an agreement which identified methods to allocate costs for the construction of a secondary treatment

facility large enough to handle the anticipated sanitary sewage flows from all three communities. Sanitary sewage flows from the main IBM plant were not included in the agreement since IBM operates its own separate treatment facility.

Each community estimated their potential growth over the next 20 years and what areas would be connected to the sewer and arrived at the following distribution of the plant's treatment capacity:

Essex Junction	1,220,000	gallons per day (gpd)
Town of Essex	1,100,000	gallons per day (gpd)
Town of Williston	530,000	gallons per day (gpd)
TOTAL PLANT CAPACITY	2,750,000	gallons per day (gpd)

The Town constructed the new sewer system in 1984, using state and federal grants which defrayed about 85 percent of the total cost of the system. The primary purpose of these grants was to abate existing pollution of the surface waters of the state. The total Town share of the construction of sewers, plus a share in the capacity of the Village sewage treatment plant was $1,740,000. This cost was paid back by only the users of the system and the debt was retired in 2005.

Under the original design for the system, the first-year flow was estimated to be 240,000 gallons per day (gpd) from initial users, 235,000 gpd from existing users who would not connect during the initial connection period, and 525,000 gpd from potential future growth. Zoning regulations in effect at the time of the design were used to calculate density and sanitary sewage flows from underdeveloped land.

Table 6-1 shows the average daily flows since the construction of the system in 1984. It was assumed 38,000 gpd would be added to the system every year over a 20-year period. Since 1986, the average flow added per year has been 19,421 gpd. In 1998, three events occurred which had significant impact on the municipal wastewater system and future growth within the sewer core area.

Event #1: The Town of Essex agreed to participate in the upgrade of the Village Wastewater Treatment Facility, based on a need for increased capacity in Williston. An equalization basin was added with automated flow control at the five major pump stations in the three communities, which directly discharge to the treatment facility. This resulted in more total capacity with the following distribution:

Village of Essex Junction	1,220,000 gpd
Town of Essex	1,100,000 gpd
Town of Williston	780,000 gpd
	3,100,000 gpd

Event #2: The Town contracted with Donald L. Hamlin Consulting Engineers and Land Planner David Spitz to prepare a report entitled "Sanitary Sewer System Capacity Study Update" and an "Allocation Study". This report studied the existing sewer core area and using current zoning identified a revised sewer core boundary as well as available capacity. In February 2003, Hamlin updated the December 1998 report. The updated report estimates sewage flow in 2008 will be 753,310 gpd and full build-out could occur in 2023. At that time, the wastewater treatment use would be exceeded by about 125,810 gpd. Also, the report identified physical improvements that must be made to the system to carry out the 2023 "full build-out model."

Event # 3: Based upon the results of the December 1998 sewer study, the Selectboard adopted a Sewer Allocation Policy and established the policy as Chapter 10.18 of the Town Ordinances. This ordinance governs the future allocation of reserve capacity. It creates a category of developable land entitled category "B", which provides for future service by municipal sewers but creates additional requirements for consideration of service to these areas. This was done in an attempt to limit the growth to the 1,100,000 gallons of available capacity. In addition, due to the February 2003 study update, the Selectboard amended the Sewer Use and Sewer Allocation Ordinances, accordingly.

Table 6-1
ESSEX TOWN SEWER FLOW HISTORY (1990-2008)

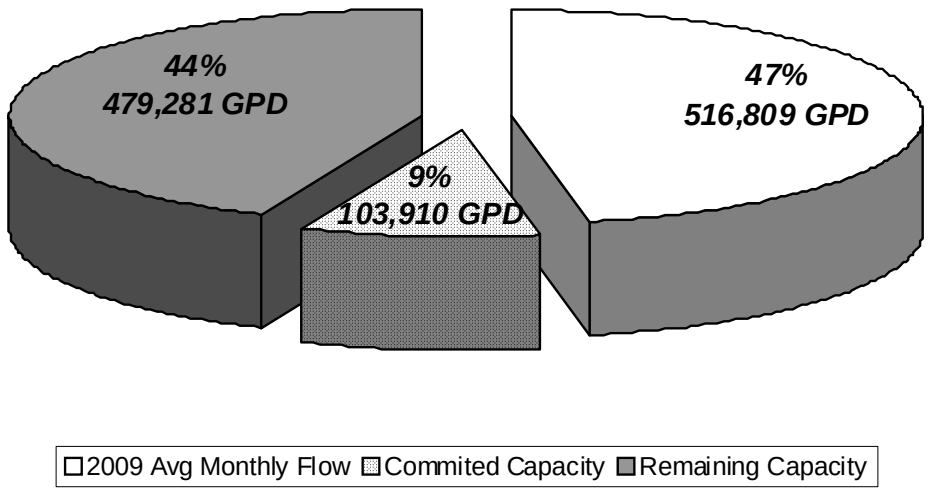
Period	AVG. FLOW Gallon/Day	Yearly Change	Percent Change
Jan 90 to Dec 90	431,276	76,898	22
Jan 91 to Dec 91	459,541	28,265	6.50
Jan 92 to Dec 92	437,234	-22,307	-5
Jan 93 to Dec 93	464,477	27,243	6
Jan 94 to Dec 94	484,299	19,822	4
Jan 95 to Dec 95	488,022	3,723	1
Jan 96 to Dec 96	532,108	44,086	9
Jan 97 to Dec 97	502,176	-29,932	-6
Jan 98 to Dec 98	567,763	65,587	13
Jan 99 to Dec 99	507,095	-60,668	-11
Jan 00 to Dec 00	537,933	30,838	6.10
Jan 01 to Dec 01	487,200	-50,733	-9.40
Jan 02 to Dec 02	532,056	44,856	9.20
Jan 03 to Dec 03	540,658	8,602	1.60
Jan 04 to Dec 04	589,883	+49,225	9.10
Jan 05 to Dec 05	579,498	-10,385	-1.76
Jan 06 to Dec 06	624,004	44,506	7.68
Jan 07to Dec 07	559,056	-64,948	-10.41
Jan 08 to Dec 08	532,310	-26,755	-4.79

Source: Essex Public Works Department

Town sewage flows are currently averaging 616,809 gpd or almost 47 percent of the Town's new allocated treatment capacity. This is a decrease of more than 73,000 gpd during the past four years. This is due in part to new, more accurate flow metering methods and the decrease in industrial flows from the Town, as shown in Figure 6-1. In September, 2005, 44,000 gpd was approved for projects that are either in the process of connecting to the system, have yet to be built, or comprise existing

buildings within the sewer service area that will connect to the system in the future. This figure does not include projects that have not received final permits from the Town. Subtracting the 103,910 gpd from the remaining 583,191 gpd leaves approximately 479,281 gpd for new users in the sewer core. If this capacity were allocated on an equal basis each year at the same rate at which capacity was used per year from 1986 to 2003, the reserve capacity would be adequate for an estimated 15-20 years, as shown in Figure 6-2. Planning for additional capacity should begin in the 2018-2020 time period.

Figure 6-1
Essex Town Sanitary Sewer
Treatment Capacity
(1,100,000 GPD)



Source: Essex Public Works Department

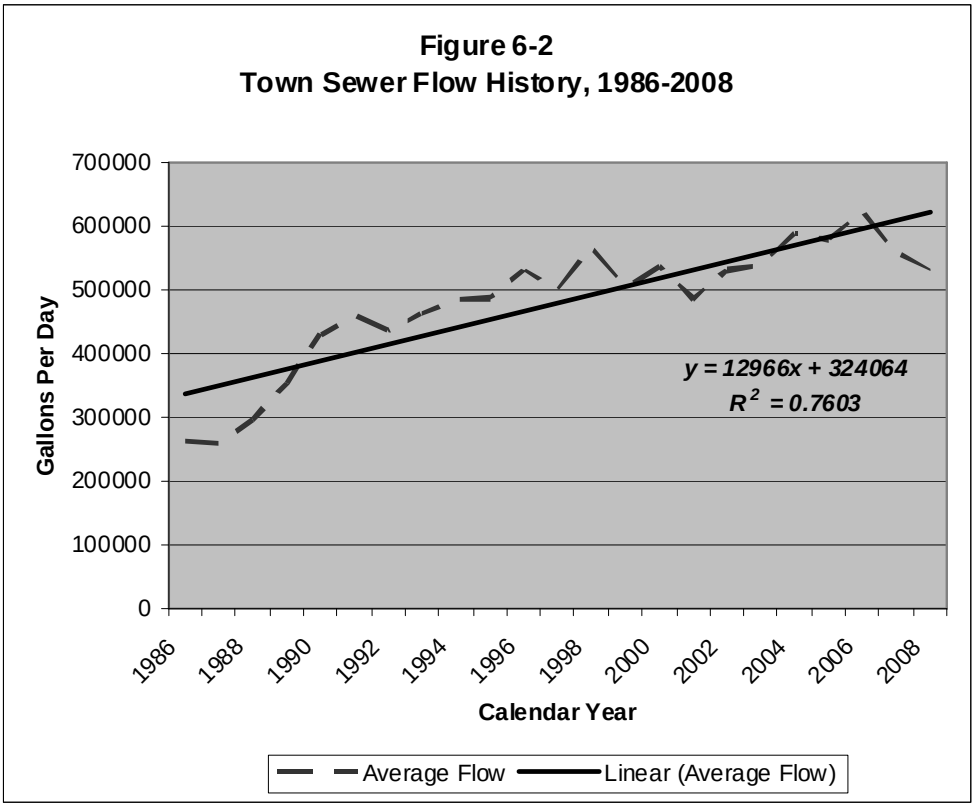
Past Town Plans note areas needing sewers due to the experience with on-site septic system failures. The Wildwood Drive area of Pinewood Development was connected to municipal sewer in the fall of 2000. The other areas still forecast for a future need for municipal sewer are:

1. Pinecrest/Painesville/Pioneer Acres residential area (on-site failures)
2. Kellogg/Susie Wilson Road (expansion to promote economic development)
3. River Road near Sand Hill Road (north side, some housing units)
4. Cemetery Road

The plan to proceed with the extension of municipal sewer service to Blair Road, portions of Pinecrest from Susie Wilson Road to Pioneer, Pioneer from Pinecrest to Ira Allen Drive, and Ira Allen Drive is currently on hold for an indefinite period. This area has been identified as containing

a high percentage of small lots and a history of septic system problems. The design for this project was completed in 2007. The project has been shelved by the Selectboard due to insufficient funding.

Figure 6-2
Town Sewer Flow History, 1986-2008



Source: Essex Public Works Department

The 2003 Hamlin Study identified sections of the sewer system that needed to be upgraded to transmit the flow to the Village wastewater treatment plant to carry out the 2008 build-out model. These improvements included replacing the three pumps in the Alder Brook Pump Station with new variable speed pumps. The Alder Brook Pump Station was upgraded during the second half of 2009.

The other 13 pump stations have adequate capacity through 2008 and beyond. Future issues regarding management of the system include:

1. The need to begin updating the sanitary Sewer System Capacity Study in the 2010/2011 timeframe.
2. The need to amend the Sewer Use and Allocation Ordinances as appropriate based upon the results of the 2007 Sewer Study update.

Because Town residents in the sewer core are billed for their household's water use, to save them money- and to save energy- the Town may wish to encourage the use of water-saving devices, such as low-flow toilets and shower heads, front loading washing machines, and grey water systems.

6.4 Water

The Town of Essex operates a distribution system of waterlines, fed with water supplied by the Champlain Water District. Within the area outside the Village, there are two principal service areas. There are more customers on the Town water system than the Town wastewater system. Table 6-2 provides the history of water usage back to 1998.

Table 6-2
ESSEX TOWN WATER USAGE HISTORY (1998-2008)

Period	Avg. Gallons Used Per Day	Percent Change From Previous Year
Jan 1998 - June 1998	824,881	1.9%
July 1998 - Dec 1998	779,676	-7.5%
Jan 1999 - June 1999	816,071	-1.1%
July 1999 - Dec 1999	846,708	8.6%
Jan 2000 - June 2000	768,542	-5.8%
July 2000 - Dec 2000	842,407	- .5%
Jan 2001 - June 2001	849,641	10.6%
July 2001 - Dec 2001	923,013	9.6%
Jan 2002 - June 2002	813,448	-4.3%
July 2002 - Dec 2002	951,594	3.1%
Jan 2003 - June 2003	883,722	8.6%
July 2003 - Dec 2003	965,242	1.4%
Jan 2004 - June 2004	819,402	-15%
July 2004 - Dec 2004	830,872	1.3%
Jan 2005 - June 2005	779,754	-6.15%
July 2005 - Dec 2005	907,260	14.05%
Jan 2006 - June 2006	774,446	-14.63%
July 2006 - Dec 2006	881,431	13.81%
Jan 2007- June 2007	717,333	-18.62%
July2007 - Dec 2007	773,407	7.82%
Jan 2008 - June 2008	724,568	-6.32%
July 2008 - Dec 2008	795.502	9.79%

Source: Essex Public Works Department

The low service area lies below the elevation of the Essex Junction storage tanks, with overflow at 508 feet USGS. It consists of Fort Ethan Allen, Susie Wilson Road, Pinecrest, Kellogg, VT Route 2A – generally those areas in the west end of Town. The highest elevation served in the low service

area is approximately 420 feet USGS, resulting in a static pressure at the high point of 38 pounds per square inch (psi). The area served within this low pressure zone also includes the City of Winooski and portions of the Town of Colchester.

The high service area is in the eastern and northern portions of Town. It is between the elevation of the Essex Junction storage tank (elevation 468 feet.) and the two Essex Town storage tanks (elevation 640 feet). The Town has 500,000 gallons in storage in the tank on Bixby Hill and 680,000 gallons in storage in the Saxon Hill Tank. Static pressure ranges from more than 110 psi along River Road to 43 psi at the high point near Butlers Corners.

Within the existing water system, a number of areas have been identified for expenditure of capital funds. The two most significant categories are: (1) insufficient pipe size to accommodate the fire demand and (2) dead-end lines that need to be looped (connected) to improve water quality, pressure and the ability to have a line break without disruption of service. Several loop connections have been completed including Gardenside Lane, Kellogg Road, Butlers Corner/VT Route 15, and lower Sand Hill Road to VT Route 117 upgrades.

Future water projects that would complete "loops" are:

1. Pinecrest to the Village boundary on VT. Route 2A (future)
2. Douglas Road to Willoughby Drive (future)

There is another category of potential projects that could prove to be very costly. In the late 1960s and early 1970s, the Town water system went through a period of rapid expansion. The pipe used during this period was coated asbestos-cement. This pipe is subject to shear failure when the ground shifts because of its lack of tensile strength. In some areas, it has also "softened" due to constant exposure to a high water table. At present, there is no plan to systematically replace this piping; it is likely to become a capital need in the time frame from 2010 to 2020.

Future needs which must be addressed include:

- Actively participate in the Champlain Water District operation planning process through the Town's CWD representative.
- Upgrade current water usage metering system with radio transmitting meter registers.
- Utilize the "Watercad" software recently obtained and model the Town's water system to:
  a) determine reasonable limits of service area
  b) deficient pipe line sizes
  c) low fire flow protection areas
  d) refine a capital investment program
- Replace all asbestos cement waterlines and unlined cast iron pipe now in use. This replacement should be phased and coordinated with other infrastructure repairs or improvements.
- Perform leakage detection tests.
- Maintain records of reported private water system failures or contamination to be used in the evaluation of these areas. If a municipal water extension is required to serve such an area, the project shall be funded by those benefiting from the extension.

- The Town of Colchester is in immediate need of additional water to support its development activities. Their estimated long term need is approximately 600,000 gpd. To meet its water needs, the Town of Colchester considered expanding its water storage facility either at the present location on Water Tower Hill or possibly at a site in Essex off Gardenside Lane by the Essex Landfill. An agreement was proposed between the two utilities on cost sharing and reserve capacity at the proposed tank. Essex currently does not foresee the need for more capacity now or in the near future. The Town of Colchester is currently planning on increasing the size of its present tank on Water Tower Hill. It may be determined at a future date that additional capacity is required but until then the joint Colchester – Town Project near the Town Landfill has been tabled.

Because Town residents in the sewer core are billed by the Champlain Water District for their household's water use, to save them money – and to save energy – the Town may wish to encourage the use of water-saving devices, such as low-flow toilets and shower heads, front loading washing machines, and grey water systems.

6.5 Police

The Town of Essex Police Department was formed in 1980 to serve both the Town of Essex and the Village of Essex Junction. The Department is overseen by the Police Chief who is appointed by the Town Manager. In 2005, the department had 26.2 sworn officers, four (4) full-time dispatchers, two (2) other full-time civilian employees and a complement of part-time dispatchers. The officer to population ratio in Essex is 1.3 officers per 1,000 residents. The national average is 2.1 officers per 1,000 residents. Neighboring communities of Burlington (2.4), Colchester (1.6), South Burlington (2.2), Williston (1.4) and Winooski (2.3) presently average 2.0 officers per 1,000 residents.

A major thrust is being made to provide a proactive approach to deter crime by forming partnerships within the community. Programs such as Business Watch, Neighborhood Watch, robbery seminars, neighborhood meetings and Project Northland, a youth drug & alcohol education program, have been initiated to establish these partnerships.

In addition, the Essex Community Justice Center (CJC) has been growing in its capacity to address low-level crime and conflict since its inception in 2003. The CJC is a community organization where citizens can work together to prevent crime, resolve conflicts, and render justice in areas that are most important to them. It is a means for the community to take responsibility for its quality of life by collaboratively using the principles of restorative justice.

The demand for police services, patrol, motor vehicle enforcement, bicycle safety training, investigative, crime prevention and court preparation has stretched the department's resources to the limit. Furthermore, the present police facility at 81 Main Street is inadequate. The staff is currently housed in 2,050 square feet on two floors shared with the Town's administrative offices. A portion of a building at 8 Essex Way is also being utilized by the department to house its detective division due to crowded conditions at 81 Main Street.

To summarize, the following issues need to be addressed for the Police Department within the next five years:

1. Adequate police facilities to house the entire department in one location.

2. Increased electronic capability to manage records and enhance emergency communication.
3. Increased staffing to address the crime rate and the increase in traffic.
4. Greater community participation in problem solving to reduce crime and its consequences.

6.6 Fire

Prior to 1973, the fire department for the Village of Essex Junction handled all calls for the Village and Town. Then in 1973 the Town of Essex Fire Department was established. This department has 24 volunteer firefighters and three dispatchers under the direction of a chief who is appointed by the Town Manager. Its fire station is on Sand Hill Road in Essex Center, adjacent to the Town Public Works Garage.

The Town Fire Department has developed mutual aid relationships with neighboring communities including Essex Junction, Westford, and Williston Fire Departments. The four departments continue to train together, participate in joint purchases, share common dispatch and radio frequencies and support each other's communities in an automatic mutual aid system and specialized response teams.

The fire station for the Town outside the Village was built in 1973 with additions in 1977 and 2002. It has a gross floor area of over 7,100 square feet (versus the original 2,850 square feet in 1973). The garage space is currently at maximum capacity with six vehicles and one trailer presently stored in three drive-through double bays. The addition in 2002 added not only one double garage bay, but also a large classroom that has become the Town's Emergency Operations Center during major incidents. The classroom is open to community events including scout meetings, hunter education classes, and a variety of programs through the Recreation Department.

From July 1, 2008 through June 30, 2009, the Essex Fire Department responded to 797 calls (including 290 medical responses, 118 car accidents, and 122 fire alarms).

The Essex Fire Department averages about 800 calls for service each year, which includes medical first response to ambulance calls in the Town of Essex and parts of Westford. The fire department has a close working relationship with Essex Rescue that includes training and equipment supply.

The Essex Fire Department assists residents with fire prevention information, programs and intervention. Continuing efforts include two open house events for the public each year, National Fire Prevention Week where they go into the schools and daycares teaching about fire safety, and the Juvenile Fire Setter Program.

In 2009, the Department began the Bureau of Life Safety whereby three members accompany the state Fire Marshal in conducting building inspection and assist with plan reviews within the Town. The focus of this program is on education and safety, and not punitive.

Staffing remains a constant need, especially during the weekdays when nearly all members are regularly employed. With the growing Fire Department responsibilities and mandated staffing requirements for emergency responses, the Town may have to hire a full-time administrator to oversee the department.

In addition, a greater number of land development permits have been issued for relatively taller buildings. The Town currently relies on the Village and other surrounding communities for an aerial device (i.e. ladder truck or tower truck) for fire protection in order to comply with the National Fire Protection Association (NFPA), International Standards Organization (ISO) and Occupational

Safety and Health Administration (OSHA). An analysis is needed to assess the capital needs and determine whether the Town should adopt building codes in order to maintain life safety in this community.

6.7 Rescue

Essex Rescue, Inc. was organized in 1971 as a professionally trained, volunteer ambulance service. Service is provided by approximately 50 volunteers to individuals requiring emergency medical treatment and transportation from Essex, Westford, Jericho, and Underhill. With a goal of providing emergency services 24 hours a day for 365 days a year, Essex Rescue has hired one full-time and one part-time employee to assist the otherwise all volunteer staff.

Approximately 10 percent of Essex Rescue's operating funds are donated by the towns it serves with the rest coming from fund drives and private donations. A new Subscription Plan allows a family to pay an annual fee to avoid a bill for services.

Essex Rescue, Inc. operates out of a facility near the Essex Community Educational Center. The building is owned by Essex Rescue Inc., with no outstanding notes at this time, and is on leased land with a 99-year lease, which expires in 2070. Recently expanded, the members see no need for a new building for the foreseeable future.

6.8 Essex Free Library

The Essex Free Library is an integral part of historic Essex Center. The original timber Essex Congregational Church was built in 1804 and subsequently, a brick structure was constructed on the foundation following a disastrous fire in 1838. During the early to mid-1900s the building was used by a succession of small church congregations and for other community purposes. As the building continued to structurally deteriorate, it was finally abandoned in 1985. In 1987, Town of Essex voters approved a bond for the restoration of the former Congregational Church located on the Town Common at the corner of VT Routes 15 and 128 as a new home for the Essex Free Library. That relocation was completed in February 1989.

Patron Information:

The Essex Free Library primarily serves the area of Essex outside the Village of Essex Junction, which enjoys the fine services of the Brownell Library. The two libraries complement each other by ensuring that there is a library open in Essex every weekday evening and on Saturdays year-round. Many area residents use both libraries interchangeably depending on the day, item availability and their errand route. Library cards, issued every two years to Town residents, are known as HOMECARDS. These may be used at any of the libraries in Chittenden County, except the Fletcher Free Library in Burlington. As of September 2009, 6,956 Essex residents had updated cards from this library. More than a thousand patrons from Westford, Cambridge, Jericho and Underhill also use the library as they shop in and drive through Essex.

Building Layout:

The Essex Free Library offers service to the community in 6,000 air-conditioned square feet of collection space on three floors, all of which are accessible using either stairs or the grade level elevator at the rear of the building. While books for all ages continue to be the most utilized

collections, an attractive and active collection of DVDs and books on CD are becoming increasingly popular. The three-sided mezzanine houses Science Fiction and Young Adult materials in all formats, Biographies, Paperback Fiction and Graphic Novels. In addition, there are several tables for studying and couches for quiet reading in this lofty area. The Main Floor contains the Non-Fiction and Fiction collections, the Periodical and the AV alcoves. There is a display cabinet for patron collections and themed displays of new and topical books appear regularly on the spacious window sills. The Children's Room, which houses materials in every format for youngsters from birth through grade 5, provides a lively and inviting space on the lower level.

Collection Information:

As of September of 2009, the library housed 35,484 items for use by the public of which nearly 9,000 items are located in the Children's Room. These items circulated 110,231 times in 2009, which indicates 30 to 35 percent are in circulation at any given time. Inter-Library Loan is routinely offered to Essex patrons for titles not available in this collection. During 2009, the library borrowed 264 titles for Essex patrons and loaned 1,970 items to 285 other libraries in Vermont.

Program Information:

A small activity room with space for story-time, special programs, craft classes and meetings adjoins the Children's Room. This space is also available to the public for small meetings anytime the library is open. Programs are offered throughout the school year for toddlers, pre-schoolers and their parents or caregivers. The Summer Reading Program is designed to be a fun and popular way to continue good reading habits throughout the summer months with its variety of special programs and clever incentives. An adult book discussion, which follows a new theme each year, meets monthly at noon. Copies of each title are made available for participants during the month leading up to the discussion. Reading discussion groups throughout the state are supported by this growing collection of multiple copy sets, funded by the Library Board of Trustees. The Main Reading Room is used for larger programs. Each year the library invites a Vermont author to visit either to discuss a book or introduce a new publication. Other programs of local interest for adults are offered throughout the year, especially during "cabin fever" time.

Organization:

The library is staffed by a full-time director who reports to the Town Manager and is overseen by the Library Board of Trustees, which is appointed by the Essex Town Selectboard. The Trustees are committed to the long-term viability of the library and future potential of the facility. The Friends of the Library and the Trustees of the Library host two fund-raisers each year. The proceeds of these events are used to enhance programs and meet un-budgeted expenses when needed. The director manages a staff of three full-time and two part-time persons. Two staff persons are available in the public service areas of the two circulation desks at all times with at least one other person providing collection support

Technology Status:

The library has had an automated circulation system since 1996. The catalog can be accessed on-line and while visiting the library at any one of the five public Online Public Access Catalogs (OPACs). These public workstations are located on all three floors with access to both the internet and word processing and are linked to a networked printer. The library also participates in the Green Mountain Consortium's "Listen Up Vermont," which allows downloading of books and language programs. "Vermont On Line" offers access to newspaper and periodical databases with thousands of full-text articles. A link is provided to all these offerings on the library's web page. The library is

committed to meeting the technology needs of its patrons wherever feasible financially and logistically.

Overall Status:

Despite its relatively small staff and collection, the Essex Free Library continues to offer patrons a welcoming environment and a fresh and active collection. The library's high turnover rate indicates that the collection is well used and well attuned to the many and varied curiosities and expectations of the borrowing community. The entire Essex Community and neighbors from towns nearby are fortunate to have two recently renovated and vibrant libraries located in the primary population centers at the crossroads of the Four Corners and the Five Corners.

6.9 Memorial Hall

Memorial Hall was built as the Town Hall and dedicated in 1871 to the men of Essex who died fighting the Civil War. When the Town government moved to the Village of Essex Junction, Memorial Hall served as a location for indoor basketball games and a variety of other functions, eventually becoming the home of the Essex Community Players. Despite the many interior improvements made to the building by the Essex Community Players, the overall condition of Memorial Hall continued to deteriorate. The building was closed in 1985 due to concerns with its structural integrity. However, in 1986 during the low point in the building's history, it was found eligible for inclusion in the National Register of Historic Places. In the late 1980s the Selectboard appointed a committee to study the building and determine what improvements were needed. As a result of the committee's work, a bond was authorized by the Town's voters to pay for some basic improvements to make the building safe for use.

A more in-depth assessment of Memorial Hall renovation and restoration needs and possible uses was completed in 1995 by the Selectboard-appointed Memorial Hall Study Committee. The Committee concluded that an ongoing Memorial Hall Committee or Oversight Board should be established that would:

- initiate fund-raising activities that would result in the development of a Memorial Hall Fund;
- organize and conduct volunteer work sessions to undertake certain improvements to the building;
- promote the use of Memorial Hall and offer recommendations to the Selectboard regarding scheduling and use.

The committee also recommended that:

- an effort should be made to increase public awareness of the existing problems with Memorial Hall as well as the potential uses for it;
- a consultant should be hired to develop detailed cost estimates regarding building improvements (A space-use study was completed by Black River Design in December, 2003, which outlined why the second and third floor spaces could no longer be used and provided both short and long term solutions for improving the facility. Because of the preliminary cost estimates, no action has been taken to secure funding for the improvements) ;

- the Town should undertake the cost of some of the improvements as part of both the operating and capital budgets.

In addition to structural deficiencies, parking is limited at the site. The Town did, however, provide an additional 13 spaces in 2003 when an adjacent building was torn down, although the lack of adequate parking remains an issue. The building was updated with a new furnace and shed in 2008.

At the current time, Memorial Hall is actively used by the Essex Community Players, the Essex Parks and Recreation Department for pre-school and adult evening classes, and is available for rent by Essex residents and other groups.

6.10 Municipal Office Building

The Town's administrative offices occupy 10,380 square feet in three separate office buildings. The largest building, located at 81 Main Street, provides 8,000 square feet for the Town Manager's office, Parks & Recreation, Community Development, Real Estate Assessment, Finance, Town Clerk, and Police Departments. The Police Department occupies 1,770 square feet leaving 5,450 square feet for the Town's customers and administrative staff members. Meeting space is limited to 575 square feet, resulting in individuals having to stand in hallways during Selectboard, Planning Commission, and Zoning Board of Adjustment meetings when there are more than 20 people in attendance.

Other than the addition of two detached temporary storage sheds, the municipal building has not been expanded since the building was renovated for occupancy by the Town administration and Police Department in 1983. To meet the needs of servicing a growing community without building expansion, the Public Works Department moved to Essex Center in 1989 and the Police detectives moved to 7 Towers Road in 1991 (now renting space in another location).

A short- and long-term plan to address the facilities needs of the Town was presented by the Town of Essex Facilities Needs Committee in 1994. The report concluded that some of the Town's facilities – the 81 Main Street and 7 Towers Road buildings – needed immediate attention while others did not. In response to the report, the Selectboard recommended purchase of land in the Town Center for construction of a new municipal building. However, voters rejected that option in March 1998.

Facing continuing need for improved and expanded office facilities, the Town administration prepared a memorandum in November 2000 outlining upgrade options and a strategic plan. A number of goals were identified:

- Reduce costs and eliminate redundant costs associated with operating and maintaining several satellite offices and buildings.
- Correct deferred building maintenance.
- Consolidate facilities and personnel to improve morale and improve internal communications.
- Create acceptable storage space.
- Add space to improve current operations, efficiencies and productivity in addition to accommodating need for more personnel.
- Improve ADA accessibility.

- Improve access to records and services.
- Provide a comprehensive, long-term solution.

Additional needs identified include lack of meeting space and sufficient parking to accommodate large meetings or the public during tax payment times.

The most recent attempt to solve the space limitation issues at 81 Main Street was a 2004 proposal to build a new 16,000 square foot building on leased land on the southwest corner of Essex Way and VT Route 289 that would have housed the Town Manager's office, Parks and Recreation, Real Estate Assessment, Community Development, Town Clerk, Finance, and Public Works Departments. With renovations the Police Department would have occupied the entirety of 81 Main Street allowing the detectives to move out of space leased by the Town. The voters rejected that proposal in November 2004.

6.11 Public Works Department

The Public Works Department moved to the old Essex Free Library building in 1989 to provide better accessibility to the Public Works Garage located off Sand Hill Road and to free space at 81 Main Street. The office space on the Town Common consists of 700 square feet and provides office space for three employees.

The Public Works Garage off Sand Hill Road is a 10,000 square foot facility which houses the Town's snow plows, heavy equipment, and maintenance equipment. There is an existing need for additional space to house this equipment.

The following are the major changes/improvements to Town buildings from 2006-2010:

Table 6-3
MUNICIPAL OFFICE BUILDING CHANGES/IMPROVEMENTS 2006-2010

BUILDING	CHANGES/IMPROVMENTS
81 Main Street	1) Addition of Communications Facility for the Police Department 2) New Secure Control Access Doors (Town and Police) 3) Removal of old asbestos flooring and installation of new floors in entry vestibule 4) Installation of energy efficient lighting throughout the building
Memorial Hall	1) Energy retrofit (building insulation) in cooperation with VT Gas 2) New rear building handicapped entry 3) Construction of storage addition at rear of the building 4) Removal of stored materials from 3rd floor; use of adjacent 7 Towers Road building by Essex Players to replace lost space
Powell Museum	Energy retrofit (building insulation) in cooperation with VT Gas
Fire Station	1) New high efficiency heating furnace with federal energy grant 2) Improved computer connectivity to other departments
Highway garage complex	1) Energy retrofit (building insulation) in cooperation with VT Gas 2) Added storage (doubling capacity of indoor salt storage) 3) Added space for equipment storage (cold storage) 4) Addition of interior meeting room 5) Energy efficient lighting retrofit 6) Metal-frame/cloth cold storage structure for road grader 7) Improved computer connectivity to other departments 8) Improvements to onsite stormwater collection and treatment systems 9) Office upgrade (air quality and space) for Supt. and Mechanic 10) Increased clean office space for water/sewer/recreation employees 11) Addition of covered area for Senior Bus (building overhang extension)
Public Works Offices	1) New roof, windows and siding on north face to eliminate mildew and building rot 2) Installation of energy efficient lighting throughout the building 3) Installation of energy efficient windows
Library	1) Installation of new energy-efficient furnace 2) Installation of new energy efficient lighting
Source: Essex Public Works Department	

6.12 Childcare Facilities

The availability of adequate child care facilities for working parents is widely considered a critical ingredient of a healthy community. Not only is childcare an essential part of a community's social infrastructure, support for such facilities is increasingly considered an important economic development strategy.

Childcare facilities are regulated by the Vermont Department of Social and Rehabilitation Services. Providers operating out of private homes who care for not more than six pre-school children from two or more families, in addition to not more than four school age children for four or fewer hours each day, must be registered with the state.

According to the 2000 U.S. Census, 1,407 Essex residents (Town and Village) are less than five years of age, and 2,101 are between six and 12 years of age. Updated childcare figures were not available at the time of the writing of the 2011 Town Plan. The Census does not provide an estimate of the

number of Essex children whose parents require childcare. As of October 2004, there were 22 licensed facilities (including school-based programs) and 25 registered homes providing care for children in the Town of Essex. These facilities have a combined capacity to serve 780 children with full-day childcare, 47 children in part-day pre-school, and 220 students in afterschool programs operated by the Town school system. Vacancy rates vary from 5 percent to 20 percent depending on the program, with the greatest demand being for infant care.

Other than the use of the afterschool program, the Town is not involved in providing childcare to local residents. No change in this policy is anticipated; although there are several actions that the Town can undertake to encourage the establishment and operation of private facilities in the community and eliminate potential unnecessary regulatory barriers.

6.13 Telecommunications Facilities

Essex is generally well served by modern telecommunications services and facilities. Cellular phone service is available throughout most of Essex through several providers, and broad-band internet access is available through Fairpoint Communications. Comcast provides both cable television and broadband access to properties within the Village and adjacent neighborhoods. Cable service is not available, however, to more rural parts of the community.

No widespread wireless internet access has been developed in the community, although recent discussions have focused on whether such service could be developed in higher density areas, such as the Village and Fort Ethan Allen. Such access – whether through a public or private initiative, could provide economic development opportunities within the service area(s) and should be encouraged.

6.14 Goals, Objectives and Strategies

Goal 6.1: Promote policies for efficient and environmentally sound solid waste disposal.

Objective 6.1.1: Continue to work with the Chittenden Solid Waste District to promote regional solid waste programs.

Strategy 6.1.1.1: Encourage regional efforts to locate solid waste and hazardous waste disposal facilities, whether inside or outside of the county.

Strategy 6.1.1.2: Continue to expand efforts to encourage reuse and recycling.

Objective 6.1.2: At the Town level, promote public education, awareness and participation.

Goal 6.2: Provide adequate public facilities that will support the goals of this plan including compact, land efficient development in designated growth areas.

Objective 6.2.1: Provide for build-out within existing service areas before expanding to other areas.

Strategy 6.2.1.1: Evaluate and implement water and sewer service areas to be consistent with this Town Plan. Prohibit extensions beyond the boundary of the existing sewer core.

Strategy 6.2.1.2: Include within utility service areas those locations where substantial deficiencies exist and other alternatives are not reasonable. Maintain records of reported

subsurface disposal system failures and low well yields to assist in the determination of need.

Objective 6.2.2: Ensure future availability of water, sewer and stormwater systems for Town users.

Strategy 6.2.2.1: Determine available system capacities and pursue allocation policies that will support reasonable growth rates over a number of years.

Strategy 6.2.2.2: Discourage the use of the Town's capacity by other entities for other than short-term use.

Objective 6.2.3: Locate, design and maintain Town utilities, services and facilities in keeping with the character of the Town and in conformance with Town development goals.

Strategy 6.2.3.1: Locate a future Town office building in the Town's designated growth areas to enhance and stimulate business already located there.

Strategy 6.2.3.2: Provide Town services in central locations to facilitate efficient delivery to the area served.

Strategy 6.2.3.3: Locate public safety services away from known hazards including hazardous material transportation routes and areas of excessive traffic congestion.

Goal 6.3: Provide public and private facilities utilizing prudent and reasonable technology in a manner least detrimental to public health and the environment.

Objective 6.3.1: Maintain the existing municipal water and sanitary systems to anticipate and plan for future repairs and replacement.

Strategy 6.3.1.1: Maintain computerized models of water and sanitary systems to anticipate and plan for future repairs and replacement.

Strategy 6.3.1.2: Ensure that new and existing systems are structurally sound and meet the Town's Public Works Specifications.

Objective 6.3.2: Ensure that newly proposed subsurface disposal systems are not detrimental to public health or the environment.

Strategy 6.3.2.1: Require construction of new systems in accordance with state Environmental Protection Rules.

Strategy 6.3.2.2: Provide educational resources for the users of existing subsurface disposal systems.

Objective 6.3.3: Limit construction of new community wastewater disposal systems.

Strategy 6.3.3.1: Require developers and owners of private community systems to provide assurance of the correct installation, maintenance and operation of the system as a requirement of subdivision approval. The Town shall not bear any financial responsibility of liability for the installation, maintenance and operation of private community sewage disposal systems.

Objective 6.3.4: Encourage water conservation methods and technology via the use of water-saving devices, such as low-flow toilets and shower heads, front-loading washing machines, and hygienic grey water systems.

Goal 6.4: Maintain a quality level of service and facilities without creating an undue financial burden on the Town.

Objective 6.4.1: Ensure that users and new development contribute their proportion of costs for infrastructure improvements and maintenance.

Strategy 6.4.1.1: Continue to require that new developers pay the entire cost of new infrastructure to serve their developments.

Strategy 6.4.1.2: Evaluate deficiencies in existing systems that will be made worse by expanded use, and require new developments to pay their fair share of the cost of addressing those deficiencies.

Objective 6.4.2: Promote the efficient expenditure of public funds on infrastructure improvements through continued annual adoption of a capital improvement plan and budget.

Goal 6.5: Assure that adequate telecommunications, wireless and cable television services are maintained and allowed to enhance appropriately within the Town of Essex to satisfy public and private sectors and municipal communication needs.

Objective 6.5.1: Coordinate with the telecommunications, wireless and cable television providers relative to growth trends and municipal-initiated construction projects.

Objective 6.5.2: Support expansion of the telecommunication and wireless network, primarily within public rights-of-way, as necessary to support appropriate growth and upgrading of telecommunication and wireless services.

Objective 6.5.3: Allow expansion of cable television services as public demand dictates.

Objective 6.5.4: Encourage underground utilities where feasible.

Objective 6.5.5: Ensure that the siting of new infrastructure is consistent with an attractive rural environment.

Objective 6.5.6: Learn from the FCC and others about emerging technologies and their cost/benefits to Essex.

Objective 6.5.7: Ensure local regulation adequately promotes, but sufficiently regulates, such facilities.

Objective 6.5.8: Research whether the Town should go "wireless."

Goal 6.6: Maintain a quality level of police, fire and administrative services.

Objective 6.6.1: Expand services as the Town grows in accordance with demonstrated need based upon its population demand and type of development.

Objective 6.6.2: Ensure adequate facilities (i.e. buildings and equipment) for services to provide those services in the efficient and timely manner expected by residents and others.

Objective 6.6.3: Preserve the safety and security of the citizens.

Objective 6.6.4: Foster the cooperation of the county, state, and adjoining communities in the delivery of public services.

Goal 6.7: Ensure public safety for Essex Town residents and visitors and minimize public liability.

Objective 6.7.1: Minimize the risk of falling limbs and trees in public right-of-way and on Town property.

Strategy 6.7.1.1: Conduct a *Hazard Tree Assessment* to identify trees that pose a risk to public safety and property and to determine what action (pruning or tree removal) is necessary to reduce this risk. The Hazard Tree Assessment can be done in conjunction with a Public Tree Inventory.

Strategy 6.7.1.2: Budget regularly for tree maintenance needs.

Strategy 6.7.1.3: Seek alternative funding for essential tree care. The Urban and Community Forestry Program is an important source of information about available grant money.

Objective 6.7.2: Collaborate with first response agencies (police, fire, rescue, emergency public works operations) to ascertain what community facilities and services are safe from "external" tampering and are planned and coordinated in a fashion that protects the general safety of the public at-large.

Strategy 6.7.2.1: The Essex Safety Committee should meet to develop/update a local emergency management plan related to the Town's community facilities and services.

Strategy 6.7.2.2: The Essex Safety Committee should encourage the local Emergency Plan Committee to update the Emergency Management Plan.

Strategy 6.7.2.3: Coordinate with other local, regional, and state entities to address pre-disaster planning (e.g., administrative tasks to ensure FEMA funding once a disaster strikes.

Goal 6.8: Carry out a stormwater program with attention to the parameters of fiscal constraint, a northern New England climate, realism, and practicality.

Objective 6.8.1: Develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants to the "maximum extent practicable," protect and preserve water quality, and satisfy the appropriate water quality requirements of the Clean Water Act.

Strategy 6.8.1.1: Update the Town's 2003 Stormwater Management Plan, as appropriate, and carry-out strategies adopted in that plan.

Strategy 6.8.1.2: Continue to comply with the requirements of the NDPES Phase II Permit, state stormwater initiatives, and other required permits and approvals.

Strategy 6.8.1.3: Continue to participate with the state stormwater collaborative.

Strategy 6.8.1.4: Prevent additional segments of the Town's waterways from becoming "impaired" and work toward removing the current two designations from the state list of impaired waterways.

Strategy 6.8.1.5: Adopt a stormwater ordinance to address erosion control, elicit discharges, stormwater management plans, and stormwater operations.

Strategy 6.8.1.6: Encourage rain gardens as a way to address stormwater run off.

Goal 6.9: To ensure the availability of safe and affordable childcare and to integrate consideration of childcare issues – including childcare financing, infrastructure, business assistance for childcare providers, and childcare workforce development - into the local planning process.

Objective 6.9.1: Recognize the importance of adequate and affordable childcare services to Essex residents and those who work in Essex.

Strategy 6.9.1.1: Periodically update the assessment of childcare needs and the availability of child care services in Essex[1].

Objective 6.9.2: Enable the provision of childcare services in a variety of settings from small home day-care facilities to larger day-care centers.

Strategy 6.9.2.1: Review the zoning bylaws to ensure that childcare facilities are allowed in all appropriate locations, and to minimize other regulatory obstacles to the provision of childcare services.

Objective 6.9.3: Facilitate the creation, expansion, or continuation of childcare services in appropriate locations in Essex.

Strategy 6.9.3.1: Continue the after-school program for elementary school students.

Strategy 6.9.3.2: Encourage the school district and appropriate childcare providers to explore the state Average Daily Membership (ADM) reimbursement for pre-school services.

Strategy 6.9.3.3: Encourage the Town's larger employers to provide childcare services for their employees.

[1] The most recent assessment was done in October 2004 by Child Care Resources, located in Williston, Vermont.

7. PARKS AND RECREATION

Recreation planning involves the coordination of public and private endeavors to provide a variety of leisure opportunities in suitable locations, which adequately meet the needs of the present and future community population. It involves program management as well as park development. More recently, the concept of recreation planning has been expanded to include all aspects of making a community a more desirable place to live.

This chapter inventories existing passive and active recreation amenities, identifies standards for the provision of recreation facilities, and sets forth short- and long-term objectives for meeting future needs.

7.1 Parks and Recreation Department

In 1971, a summer playground program was developed at the Essex Middle and Elementary Schools. The 1971 Town Report states that contributions were made to the Boy's Baseball League. The skating rink at Foster Road and Sand Hill Road was in operation. The usual contribution was made of $7,500 to the Essex Junction swimming pool from the $15,000 allotted in the budget for Recreation. In 1972, a part-time Recreation Department was created. Community recreation needs continued to develop, and a full-time Parks and Recreation Department was created in 1979.

As of 2010, the Parks and Recreation Department had responsibility for six areas of service: Recreation; Park Maintenance and Development; the Essex Senior Citizen Bus; Sand Hill Park Pool; Cemetery Maintenance; and the Extended School Program. The Town Parks and Recreation Department provides recreational opportunities for all Town residents, inclusive of the Village. However, the Department only maintains those facilities that are located in the Town outside the Village. The Village of Essex Junction also has a full-time Recreation Department, which maintains all of the parks within the Village. Both Town and Village Recreation Departments strive to provide programs that complement each other.

7.2 2008 Essex Open Space Plan

The 2008 Essex Open Space Plan, incorporated herein, defines public and private outdoor recreation areas (parks, recreation fields, trail corridors, golf courses) as a type of open space. The plan notes that up until the 1970s, local residents relied largely on the generosity of private landowners to access land for hunting, fishing, hiking and other traditional outdoor pursuits. As Essex developed from a rural to an increasingly suburban community, many large private holdings were subdivided for commercial and residential use and then developed or posted, barring continued public access. Fragmented ownership has made the process of gaining access to land for recreation increasingly difficult and expensive.

Since the 1970s the Town of Essex has actively acquired land and easements for public uses, with ongoing community support. Updates from the 2008 Essex Open Space Plan, regarding the Town's public and private recreation areas have been made to this chapter.

7.3 National Parks Classification System

An understanding of how the Town's parks are classified is necessary as a prelude to the inventory. Parks can be classified in a way that acknowledges service areas of varying sizes, the travel time it takes to reach the park, the means of access, and different levels of design and management. The practical aspect of park classification is that the classification of a facility implies a commitment of resources to develop and manage it to an adequate level. The following is a classification system adapted from the National Recreation and Parks Association (NRPA) that describes the types of parks that serve residents of the Town outside the Village.

Community Parks – The community park is the largest of the various types of parks in the classification system. Typically at least 10 to 25 acres in size, this is generally a ride-to park. The community park should possess diverse environmental features such as a pond, some open space, and a forest. It should also be suited for intense recreational activities, and should have facilities for people of all ages. Such facilities might include a baseball or softball diamond, a basketball court, a tennis court, an ice skating rink, playground equipment, shuffleboard courts, a picnic area, and an outdoor nature study area.

Neighborhood Parks – Neighborhood parks provide passive and active recreation opportunities specifically suited to the population of the neighborhood the park is intended to serve. For example, a neighborhood park that serves a single-family residential area might consist of a softball field, playground equipment, and a picnic area. In contrast, a neighborhood park suitable for a condominium project with few children might contain a tennis court and a basketball court. A neighborhood park is smaller than a community park, ranging in size from one acre to about 15 acres. These spaces are often associated with an elementary school and are pedestrian-oriented.

Mini-Parks – A mini-park is a very specialized recreation space that is usually an acre or less in size. The mini-park provides recreational opportunities for a very concentrated and limited population, and may guarantee a reservation of green space within subdivisions. It usually serves a radius of several blocks and is almost exclusively accessed by pedestrians. Mini-parks should be low-maintenance facilities.

A common type of mini-park is the tot lot, which provides playground equipment for children living within a concentrated neighborhood area. A mini-park designed for senior citizens would contain horseshoes and/or a shuffleboard court in addition to walking and sitting areas.

Natural Areas – Natural areas offer the potential for multi-purpose recreational use for the entire community. These sites contain significant natural features such as forests, bodies of water and high elevations. These areas can be used for conservation purposes or, with proper management and use, can provide varied recreational opportunities without damaging the natural qualities of the site.

7.4 Inventory and Analysis of Town Recreation Facilities

A variety of public and private parcels are available for recreational use in the Town outside the Village. These sites are listed in Table 7-1 by classification, and their locations may be viewed on Map 4, *Parks and Recreation*.

Table 7-1
RECREATION AREAS INVENTORY, TOWN OF ESSEX OUTSIDE THE VILLAGE 2010

Classification	Site Name	Map Key[1]	Acreage
Public Neighborhood Areas			
	Myers Park	11	1.00
	Pinewood Park	22	7.42
	Pioneer Park	23	0.18
	Saxon Hallow Park	28	1.29
	TOTAL	-	**9.89**
Community Public Parks/Play Areas			
	Essex Elementary School[2]	2	2.00
	Essex Middle School[3]	7	10.00
	Prairie Fields- Essex Middle School[4]	4	8.00
	Fort Ethan Allen Parade Grounds[5]	6	13.97
	Foster Road Park	7	9.00
	Founders Memorial School[6]	8	2.00
	Pearl Street Park	20	13.20
	Sand Hill Park	24	23.75
	Tree Farm[7]	25	99.10
	TOTAL	-	**181.02**
Public Natural Areas			
	Essex Elementary School- Open Space	1	8.59
	Forestdale Natural Area	5	21.77
	Indian Brook Conservation Area	9	575.00
	Lamell Natural Area	10	4.60
	Lussier Property (Private, deeded trails only)	35	
	Mathieu Town Forest	14	76.30
	Myers Natural Area	17	5.70
	Saxon Hill (E.J. School District)	26	89.61
	Saxon Hill Forest (Private, deeded trails)	27	-
	Shillingford Crossing	29	6.82
	Whitcomb Meadows	31	2.98
	TOTAL	-	**791.37**

Public Undeveloped Open Space			
	Land Farm Parcel I	34	7.50
	Lang Farm Parcel H	13	7.50
	Lang Farm Parcel H	12	34.72
	Meadows Edge Parcel	15	37.46
	Painesville Manor Parcel	19	5.50
	Petrie Parcel	21	6.20
	Skyline Parcel	30	6.70
	TOTAL	-	**105.58**
Public Miscellaneous Space			
	Essex Free Library	3	0.64
	Memorial Hall	16	0.12
Regionally-owned Spaces			
	Colchester Pond Natural Area (WVPD)	33	127.21
	Overlook Park (WVPD)	18	5.00
	Woodside Park (WVPD)	32	57.80
	TOTAL	-	**190.01**
Private Sites			
	Essex Country Club	-	-
	Family Fun Center	-	-
	Links at Lang Farm	-	-
	Racquets Edge Health/Fitness Centers	-	-

Source: Essex Recreation Department and Community Development Department

*Acreage information taken from the 2006 Essex Town Plan, when available
[1]Site numbers correspond to locations on Town Parks and Recreation Inventory Map (2009) and Map 4, *Parks and Recreation.*
[2]Of the 11.95 acre parcel, an estimated two acres are used for recreational purposes.
[3]OF the 52.64 acre parcel, an estimated 10 acres are used for recreational purposes.
[4]Approximately 8 acres of on the Essex Middle School parcel are developed into recreational fields.
[5]This parcel is part of a 20 acre parcel managed cooperatively with the Town of Colchester.
[6]Of the 38.06 parcel, an estimated 2 acres are used for recreational purposes.
[7]This parcel of land was deed to the Town Essex and Village of Essex Junction by the state on June 30, 1998 for a period of 10 years, with the option for renewal for two (2) additional terms.
[8]Acreage not included in "TOTAL" because public access is to the trails only.

An analysis of the adequacy of the Town's recreation facilities was performed in 2004 in association with an update of the Town's recreation impact fee program. The analysis included an inventory of major existing recreation facilities in the Town outside the Village (Table 7-2) and considered recreation needs through year 2010 based on random sample survey of Town residents (from the list of registered voters – see Table 7-3). A detailed analysis of the adequacy of existing facilities is available in the Parks and Recreation Department.

TABLE 7-2: INVENTORY OF RECREATION FACILITIES, DECEMBER 2009

	Regulation Ballfields	Youth/ Softball Fields	Run. Track	Trails	Soccer Fields	Multi Purpose Field	Tennis Courts	Basketball Courts	Playgrounds	Pool/Beach	Ice Rink – Indoor/Out.	Picnic Shelter	Restrooms/ Portalets(P)	Snack/Conc.	Picnic Tables	Boat Access	Camping	Golf	Batting Cages	Parking
Public Recreation Sites:																				
Essex Elementary School				Y		1			1											Y
Essex Middle School & Prairie Fields						2.5							1(P)							Y
FEA Parade Grounds			1		4		2		1			1	1(P)		5					Y
Forestdale Natural Area				Y																
Foster Road Park	1	5	1		5*	1							1#	1#	2					Y
Founders Memorial School						1			1											Y
Essex High School			1				3				1(in)									Y
Indian Brook Conservation Area				Y						1			2		1	1	1**			Y
Lamell Natural Area				Y																
Myers Park						1		1***	1***						1					
Lussier Property (trails only)				Y																
Mathieu Town Forest				Y																
Myers Natural Area				Y												1				
Pearl Street Park		1			1*		2	1	1						2					Y
Pinewood Park						1		0.5	1											
Pioneer Park								0.5												
Sand Hill Park				Y		1	2	0.5(2)	1	1		1	1#		8					Y
Saxon Hollow Park								0.5	1											
Saxon Hill Forest (trails only)				Y																

TABLE 7-2: INVENTORY OF RECREATION FACILITIES, DECEMBER 2009

	Regulation Ballfields	Youth/ Softball Fields	Run. Track	Trails	Soccer Fields	Multi Purpose Field	Tennis Courts	Basketball Courts	Playgrounds	Pool/Beach	Ice Rick – Indoor/Out.	Picnic Shelter	Restrooms/ Portalets(P)	Snack/Conc.	Picnic Tables	Boat Access	Camping	Golf	Batting Cages	Parking
Shillingford Crossing				Y																
Tree Farm				Y	12								1							Y
Whitcomb Meadows				Y																
WVPD – Colchester Pond Natural Area				Y																
WVPD – Overlook Park															6					Y
WVPD – Woodside Park				Y												1				Y
TOTAL	**1**	**6**	**3**	**--**	**6+**	**8.5**	**9**	**4.5**	**8**	**2**	**2**	**2**	**5**	**1**	**31**	**3**	**1**	**--**	**--**	**--**
Private Recreation Sites:																				
Essex Country Club													Y	Y				Y		Y
Family Fun & Entertainment Center													Y	Y				Y	Y	Y
Links at Lang Farm													Y	Y				Y		Y
Racquet's Edge Health/Community Fitness Center			Y				Y	Y	Y	Y			Y					Y	Y	Y

Source: Essex Recreation Department and Community Development Department
Notes:
* Soccer fields overlap with ballfields.

** There are 3 primitive campsites available.

Open only during scheduled activities.

In its annual evaluation of recreation projects to be undertaken, the Parks and Recreation Department uses two criteria – the condition of existing equipment and need based on the 2004-2010 Recreation Needs Assessment. Priority is given to upgrading existing parks where equipment no longer meets current safety standards. Development of projects where funding is not available is deferred to later years.

Projects recommended at the time this plan is being updated, not necessarily in priority order, are listed in Table 7-3. An updated Recreation Needs Assessment is scheduled for 2011.

Table 7-3
2004-2010 RECREATION NEEDS ASSESSMENT RECOMMENDATIONS

Administration:	• Purchase software allowing on-line registrations and credit card payments. Online registration and credit card payment is available. 35 percent of registrations occur online. • Hire FTE (½ with P&R and ½ with DPW). Budget priorities have not allowed hiring of this staff. • Developed manual including policies, rules and regulations, and operational procedures. • Conduct resident survey every 5 years in collaboration with update to the Town Plan and Recreational Needs Assessment.
Programs:	• Establish a recreation program fund. A program fund proposed in 2005 and 2010 budgets. • Program offerings be coordinated with those of the Essex Junction Recreation and Parks Department. (Ongoing)
Facilities:	• Develop a list of bicycle/pedestrian path projects recommended for completion between 2004-10. The Trails Committee is working with the Public Works Director to develop a priorities list for future projects. • Develop a strategy to educate residents on the location of all public recreation lands available to them. Trails and Recreation maps are available online and at the Town office. • Town staff continue to actively participate in the public/private collaborative effort to develop the former Tree Farm into a regional soccer facility. The Town has a representative on Tree Farm Management Board that oversees the management of the soccer facility. • Continue to place a high priority on finding a skatepark site. A skatepark was built at Maple Street Park in 2008. • Budget additional funding for the Sand Hill Sprayground to build a facility sized to accommodate the current level of use and evaluate its filtration system. A sprayground opened in June 2010. • Complete Foster Road Park and Founders Athletic Fields as planned. To begin in FYE 2012 • Study the feasibility for a community recreation center. A study has been put on hold while police and municipal building issue are resolved. • Evaluate the need for a dog park. A Dog Park Committee has been developed and potential sites are being explored. • Formally adopt a capital equipment program (CEP) to address long-term recreation vehicle and equipment needs. (Completed) • Consider whether maintenance of park vehicles, equipment, and the Senior Bus should be conducted by the Public Works Department. Not feasible with current staffing. • Ensure better compliance with ADA and plan for any needed modifications. Future playgrounds will be handicapped accessible. • Better assess the need for an Essex Tree Board including whether such responsibility needs to be committee-based or could be assigned to an existing Town department. The idea of a Tree Board was proposed to the Selectboard and at the time the decision was made that there was not a need for a Tree Board.

Source: Essex Recreation Department

As part of past recreation planning efforts, the Town Plan Parks and Recreation Committee met with representatives of baseball, softball, soccer, lacrosse and other recreation programs. A common theme expressed by participants was that recreation programs in Essex benefit from a high level of youth participation and adult assistance. Recreation providers noted competing needs for available fields and scheduling difficulties. Requests were made both for more fields and greater Town involvement in field maintenance.

7.5 Natural Areas in Essex

The following is a description of natural areas located in the Town outside of the Village, which offer diverse recreation potential. These areas are illustrated on Map 14, *Significant Natural Areas*.

Private Conservation Areas

Saxon Hill Forest

This 743-acre forest offers the potential for carrying out all aspects of sound multi-use forest management. Resources in the forest include four reservoir areas, 12 miles of cross-country ski trails, numerous species of wild flowers and a proliferation of red, scotch and white pine trees. In 1977, the Forest was designated a Resource Preservation District-Industrial, and it was envisioned that limited industrial development in certain parts of the Forest would be compatible with its natural resources. Only 90 acres of the forest are under public ownership. The Essex Junction School District retained the top of Saxon Hill and the lands immediately east of Saxon Hill Road. In FYE 2005, the Town arranged a 25-year lease agreement with the Essex Junction School District allowing the 90-acre parcel to be used for outdoor non-motorized recreation, conservation, and school activities. The Town has worked with a non-profit group to develop a network of mountain bike trails within the 90 acre parcel. The remaining undeveloped portion predominately is owned by Forestdale Heights, Inc., a private development firm.

Protection of the trees is perhaps the primary means of preserving the amenities the forest offers. The trees enhance the recreational value of the trails and significantly contribute to the aesthetics of the area. Proper forest management techniques need to include harvesting for long-term forest growth. For these reasons, development within the forest should continue to consist of broad belts of trees and large contiguous blocks of forest. In addition, air pollutants for certain industrial processes which might be harmful to tree species should be restricted or prohibited.

The recreational potential of this area has been underutilized. Delineation between industrial and resource preservation uses has been completed by the Planning Commission, including delineation of some non-motorized, multi-use trails.

The Town possesses a network of trail easements within Saxon Hill Forest, which are designated by deed for use by residents and the Town of Essex for pedestrian and non-motorized access to Forest lands. If these trails are disturbed by construction of new industrial buildings, they are relocated by the developer.

The 12 miles of existing dirt roads in the forest serve a variety of purposes, depending upon the season. These trails are used for cross-country skiing and snowmobiling in the winter and hiking and bridle paths in the summer. Because recreational trails would generally be incompatible with roads and driveways in an industrial or commercial setting, they should be located separately. In certain instances, limited crossings may be necessary.

Public Conservation Areas

Indian Brook Reservoir

This approximately 575-acre tract of land lies in the northwestern portion of the Town and contains the 50-acre reservoir, which bears its name. The reservoir provided the public water supply of the Village of Essex Junction until 1973 when that municipality joined the Champlain Water District. The entire parcel was sold in 1977 to a private owner. In 1986, a dream that was held by many residents of Essex became a reality. A bond vote in the amount of $750,000 for the purchase of the property, dam repairs and necessary property improvements passed overwhelmingly. The Town received a donation of $16,000 from the Nature Conservancy toward the purchase price of $435,000.

Renovations to Indian Brook Reservoir took place during 1988. Gates at the dam were in need of repair, which necessitated the lowering of water in the reservoir. No major structural damage was found but small cracks were repaired. Site improvements included upgrading parking lots and roads, establishing a boat launch and picnic site, razing the old water treatment plant and erecting a park sign and trail head markers.

With increasing use of Indian Brook Town Park, the Town has focused on management practices for the facility. All users of the park are required to purchase a permit from the Parks and Recreation Department. An attendant is stationed at the entrance to the park during summer months to ensure that users have the required permit. In the year 2000 the Town approved a detailed management plan for the park, prepared by the Conservation Commission. One major issue has been the spread of Eurasian Milfoil in the reservoir. The Town on an ongoing basis is exploring measures to mitigate the milfoil problem. Another issue has been beavers damming tributaries. While the Town had trapped beavers in the past, beaver baffles have been used on a trial basis since 2008. The Town has contracted with the Vermont Youth Conservation Corps in past summers to maintain the trail system. Finally, an effort by the Winooski Valley Park District to acquire lands around Colchester Pond has resulted in the acquisition of property that will allow a trail link between the two areas.

Winooski River Access and Park

A river-front park open to the public is located in the extreme southwest corner of Essex, between VT Route 15 and the Winooski River. Formerly part of Fort Ethan Allen, 68 Acres was acquired from the U.S. Government in 1973. This area was reduced to 58 acres, when 10 acres formerly dedicated to an old Army firing range was subdivided out and committed to the state for the Woodside Juvenile Rehabilitation Center. The remaining 58 acre property has been deeded over to the Winooski Valley Park District.

This park offers the only public access in the Town of Essex outside the Village to the Winooski River, which forms the entire southern boundary of the tract. Improvements include an access road and a launching ramp for small boats. The potential for development of active recreational facilities is limited because of spring flooding, during which the river temporarily claims some of the lower lands.

This area – which is easily accessible to residents of the western part of Town – is best suited for picnicking, fishing, canoeing, hiking and camping. An additional fishing access along the Winooski River in the vicinity of VT Route 117 in the Town outside the Village is desirable.

The Winooski Valley Park District was awarded a grant in 1985 from the Land and Water Conservation Fund for a scenic overlook off VT Route 15 in the vicinity of 68 Acres. Improvements include a small parking area and picnic tables.

Town School District Forest

The Town School District owns a 30-acre forested parcel contiguous to other school properties in Essex Center. This tract contains a small reservoir, which was originally used as a public water supply for the former Village of Essex Center. Founders Road, a private road owned by the School District, traverses this area and provides access to the Founders School and the Middle School.

This area is best suited for passive recreation, primarily because of steep gullies within its boundaries. The potential for picnicking could be enhanced by the addition of picnic tables and similar accessories.

Town Forest

The Town Forest, donated by Robert Mathieu, covers 76 acres in Essex Center between Sunset Drive and Birchwood Manor. Additional acreage adjacent to the Lang Farm has also been acquired by the Town. One of the most valuable resources on this property is Alder Brook and its associated tributaries and marshlands. The forest includes one small open area with the balance in hemlock, white pine, and related species. The area contains many steep ridges and deep gullies and is best suited for fishing, hiking and similar activities. A rough trail has been cut by the Boy Scouts.

There is presently a trail connection from Sand Hill Park to the Town Forest. Other trail connections to VT Route 15, the school property and the Lang Farm should be developed.

Tree Farm Recreational Facility

The 99-acre Tree Farm Facility, which until 1995 operated as a state tree nursery, was purchased by the Town of Essex in 2010. Formerly, the property was leased to the Town and the Village of Essex for recreational uses. The property was developed and managed by the Tree Farm Management Group, a non-profit organization, as a regional soccer facility.

Alder Brook

Alder Brook flows through the Town of Essex from Westford to the Winooski River. The southern portion of Alder Brook, located south of VT Route 15, is in an area where residential development will be concentrated during the next few decades. This creates a dual challenge: to prevent erosion on the steep slopes flanking the brook and to coordinate the recreational potential of Alder Brook with existing and proposed residential development.

The subdivision regulations presently prohibit construction on banks adjacent to bodies of water except where a road or utility is necessary. Revised subdivision and zoning regulations should include specifications for a suitable buffer strip along Alder Brook in which no construction may occur.

As proposed residential development abutting Alder Brook goes through the subdivision approval process, the Town should consider acquisition of the most sensitive areas and incorporating a greenway/trail system in the vicinity of Alder Brook. Prior to construction of the Circumferential

Highway, a very heavily used trail system connected the Middle School to residential development located in areas including and adjacent to Pinewood Manor.

Browns River

Browns River flows northwesterly through the Town of Essex from Jericho to Westford. As the largest contiguous tract of open land in Essex, the Browns River basin is a keystone to the future economic viability of agriculture in Essex, and is critical to the open/rural element of the Town's character. Therefore, in keeping with the priorities outlined elsewhere in the plan, it is important that the continuation of agricultural land use in this area be encouraged. The other important resource use contribution of the Browns River Valley is for non-organized recreation such as snowmobiling, walking, horseback riding trails and fishing. Currently, land use is relatively stable due to restrictive floodplain zoning and the fact that ownership is in the hands of a few people. However, it must be recognized that the large landownership pattern also brings with it a degree of vulnerability to drastic future change as situations or priorities change for even a single landowner (e.g., amending town subdivision regulations could enable adverse change to the area's existing character). Also, stream bank instability is a concern and should be taken into consideration as land use patterns may change.

Currently, there are undeveloped public accesses to this river, in addition to potential access at each bridge, including parcels owned by the Town. At least one of the Town-owned parcels should be studied for locating a public canoe launch. This open land should be kept accessible because of the fishing and recreational potential of this resource. Therefore, any future development should include public access to Browns River.

7.6 Recreation Impact Fees and Park Land Dedication

Following a 2004 analysis of the adequacy of the Town's recreation facilities, by Burnt Rock Inc. in association with Michael Munson the Selectboard adopted a new recreation impact fee. The impact fee is charged to all new residential units and is intended to pay for recreational facilities that are needed to support growth in the Town. The fee is based on an inventory of existing facilities, the anticipated rate of population growth, and the additional facilities that will be needed in response to that growth. Funds raised from impact fees may be used for recreation expenses that are identified in the Town's Capital Budget.

In lieu of payment of an impact fee, the Planning Commission may require as part of subdivision approval that a developer dedicate land suitably located or reserved for public open space, park land or other recreational purposes. Sites reserved for recreation purposes should have suitable public access. While some of the reserved land may remain as undeveloped open space, at least some of the areas should be suitable for development for active recreational use. When necessary to provide level terrain for tennis courts, ball fields or similar facilities, sites should be graded by the developer.

7.7 Recreation Programs

The mission of the Town of Essex Parks and Recreation Department is to advance parks and recreation efforts that enhance the quality of life for the community of Essex. The Department

continues to offer programs to meet community needs and interests including: *Physical Fitness, Wellness, Hobbies, Personal Growth and Sense of Community*. Some of the listed benefits of these programs are building family unity, teaching vital life skills, elevating personal growth, providing space to enjoy nature, expanding knowledge and feeling great.

The department also promotes community wide events, including the Easter Egg Hunt, Halloween Celebration, Winter Carnival, and the Youth Fishing Derby.

The department continues to work with a number of volunteer boards that administer and run various youth sports organizations throughout Essex. Each organization is guided by the goal of providing a safe, fun atmosphere through which skill development is taught. Without the dedication and tireless effort of these volunteers, Essex would not enjoy such diverse and successful youth sports programs. Those programs include Babe Ruth Baseball, Essex Youth Football, Essex Youth Lacrosse, Essex Youth Soccer, Little League Baseball and Softball.

Future goals of the Parks and Recreation Department are to improve service to the community by expanding the number and variety of programs offered and by undertaking cooperative efforts with other organizations and associations.

7.8 Goals, Objectives and Strategies

Goal 7.1: The Town will facilitate recreational and non-motorized transportation options by further developing and maintaining viable trails.

Objective 7.1.1: Enhance the trail system (hiking, biking, cross-country skiing, snowmobiling, and/or horseback riding) in the Town. Link residential neighborhoods to natural areas, schools, parks, recreation facilities, community centers, other neighborhoods, and neighboring municipalities.

Strategy 7.1.1.1: Identify and secure trail connections across and along the Circumferential Highway and Allen Martin Parkway rights-of-way from Pinewood Manor, Lang Farm and Forestdale to schools and the Town Forest.

Strategy 7.1.1.2: Secure rights-of-way and encourage trail construction within corridors identified on Maps 7, 8, 9, 10, and 11.

Strategy 7.1.1.3: Develop and upgrade trails with an emphasis on access, improved signage and adequate parking.

Strategy 7.1.1.4: Encourage a routine maintenance and supervision plan for the public trail system and encourage users to assist in such efforts.

Strategy 7.1.1.5: Maintain a trail guide that maps out the Essex trail network, with access points and policies for use. Continue posting trail signs with handouts for trail users.

Strategy 7.1.1.6: Secure rights-of-way to encourage development of neighborhood trails systems in existing and future residential neighborhoods.

Strategy 7.1.1.7: Map secured trail easements, rights-of-way, etc. whether or not built upon to help in trail planning and linkage.

Objective 7.1.2: Work with Local Motion, to link the multi-use trail system to neighboring towns to expand recreational opportunities and provide safe options for traveling to areas outside of Essex via non-motorized vehicle routes.

Strategy 7.1.2.1: Work with adjoining municipalities, the CCRPC and the CCMPO to facilitate a county-wide path system.

Strategy 7.1.2.2: Collaborate with the Winooski Valley Park District to provide linkage improvements to areas between Indian Brook Park and Colchester Pond.

Objective 7.1.3: Provide adequate and safe opportunities to travel as a pedestrian or bicyclist, both for recreation and transportation purposes, within the Town of Essex.

Strategy 7.1.3.1: Inventory major arterials without sidewalks and prioritize development of new sidewalks along those arterials.

Strategy 7.1.3.2: Provide marked pedestrian crossings, with signals where appropriate, at major intersections.

Strategy 7.1.3.3: Work with the Planning Commission to ensure that new developments are designed and constructed with adequate sidewalks and pathways and have the necessary easements.

Strategy 7.1.3.4: Prioritize bicycle and pedestrian safety when designing or improving road intersections.

Strategy 7.1.3.5: Install traffic calming and other traffic control devices to enhance bicycle and pedestrian safety.

Strategy 7.1.3.6: Work towards the development of transportation-oriented bicycle and pedestrian paths along all major (arterial) highways.

Goal 7.2: The Town will increase the amount of recreational space, both indoor and outdoor, available to groups and individuals within the Essex community.

Objective 7.2.1: Increase indoor recreational opportunities, especially needed during the long winter months, by maximizing the amount of indoor space available to Essex residents.

Strategy 7.2.1.1: Improve coordination and cooperation within the Essex Town School District to make fullest possible use of public schools.

Strategy 7.2.1.2: Encourage more effective use of existing indoor public facilities such as Memorial Hall and the Essex Free Library.

Strategy 7.2.1.3: Encourage private and nonprofit groups (such as churches and service organizations) to make their facilities available for recreational use by Essex residents.

Strategy 7.2.1.4: Study the feasibility of building a community center to provide space for a senior center, an indoor playground for toddlers and preschoolers, and meeting space (especially daytime) for special interest organizations.

Objective 7.2.2: Increase outdoor recreational opportunities by increasing the amount of level field space available to Essex residents involved in team sports.

Strategy 7.2.2.1: Subject to fiscal capability, construct indoor recreation facilities identified in the 2004-2010 Recreation Needs Assessment.

Strategy 7.2.2.2: Acquire land within Essex that can be converted to multi-use fields. Adequate field space is critically limited at the current time. This constraint restricts the type and number of sporting activities that can take place during the outdoor non-winter season, and will only become more acute as the Essex population increases.

Objective 7.2.3: Pursue establishment of a land acquisition and preservation program in tandem with Strategy 9.2.1.1.

Goal 7.3: The vibrancy of the Essex community will be improved by increasing citizen involvement in all aspects of recreation.

Objective 7.3.1: Garner the support of talented and interested individuals in the planning and coordination of recreational activities in Essex, thus capitalizing on the enthusiasm and expertise of Essex residents on behalf of the community at large.

Strategy 7.3.1.1: Encourage the Parks and Recreation Director to continue to act as a facilitator for nonprofit recreational programs run by volunteers. The director's support as an advocate and liaison will enable program volunteers to focus more directly on other important aspects of their mission.

Strategy 7.3.1.2: Create a Council for the Arts to initiate and facilitate opportunities for Essex citizens of all ages to participate in theater, dance, music, and the visual arts.

Strategy 7.3.1.3: Encourage ad-hoc committees (such as Extended School Program, Little League, soccer, children's programs) to support the work of the Parks and Recreation Director.

Strategy 7.3.1.4: Create an Essex Tree Board to work with the Town Tree Warden to educate and assist local residents in planning and maintenance of trees, landscaping, and natural areas. Residents also can participate in the care of public landscaped areas via "Citizen Pruners" and "Adopt an Island" programs.

Objective 7.3.2: Increase public awareness and use of the vast array of recreational amenities (conventional and natural) and programs available to Essex residents.

Strategy 7.3.2.1: Regularly identify Essex parks and trails in the Recreation Guide sent to residents.

Strategy 7.3.2.2: When necessary, update the guide that specifically maps out the Essex off-road trail network and identifies access points and policies for use.

Strategy 7.3.2.3: Improve signage for Essex Town parks, trails, and parking to create greater familiarity with their existence and location.

Strategy 7.3.2.4: Publish in the Essex Recreation Guide the names and phone numbers of contact persons for sports and recreational activities not formally administered by the Town of Essex. In this way the Town can facilitate residents' involvement in a greater variety of endeavors while assisting volunteer, nonprofit programs with publicity.

Objective 7.3.3: Increase citizen involvement in recreational programs by sustaining a wide variety of program options, so that residents of all ages, abilities, and interests have an opportunity to participate in healthy pastime activities.

Strategy 7.3.3.1: Solicit the input of residents via surveys, Essex Reporter ads, and course evaluation forms to discern the effectiveness of the content, timing, location, and structure of Essex programs meeting individual needs.

Goal 7.4: The Town will continue to improve management of its existing recreational facilities and programs.

Objective 7.4.1: Improve the maintenance of Essex parks and fields.

Strategy 7.4.1.1: Increase the maintenance budget and staff to more adequately care for athletic fields including such activities as fertilizing and liming playing fields, fence repair, etc. The intense scheduling of playing fields, due to the shortage of flat space, has taxed Essex field facilities to a degree that requires more oversight and management.

Strategy 7.4.1.2: Explore the concept of impact fee assessment to new commercial and industrial development.

Strategy 7.4.1.3: Enlist the help of recreation user groups to help maintain the facilities they use.

Objective 7.4.2: Improve the facilities at each of the parks or fields owned currently or acquired in the future by the Town of Essex.

Strategy 7.4.2.1: Prepare a master plan to assess the assets and needs of each park or field in the Essex inventory, then prioritize improvements.

Strategy 7.4.2.2: Improve the number and/or quality of such amenities as picnic tables, benches, trash/recycling receptacles, playground equipment, covered outdoor meeting areas, lighting (especially for fields, tennis courts, and basketball courts), bleachers, backstops and goals, fences, equipment storage barns, attractive landscaping, and irrigation (for grass athletic fields which endure intense use).

Strategy 7.4.2.3: Update the Indian Brook Management Plan every five years.

Strategy 7.4.2.4: Develop a Trail Maintenance and Management Plan for Indian Brook.

Objective 7.4.3: Develop and maintain more trails in parks and natural areas in Essex.

Strategy 7.4.3.1: Apply for state and federal funds to develop and maintain trails.

Strategy 7.4.3.2: Encourage active public involvement in trail construction and maintenance.

Strategy 7.4.3.3: Continue volunteer trail work day events and Trail-Keeper program.

Objective 7.4.4: Work with experts to determine when and how wood might be harvested, as fossil fuel prices escalate. Set guidelines as to who could gather the wood, whether it would be sold by the Town for pelletization, etc.

Objective 7.4.5: Maximize coordination with the Village Recreation Department to provide a full range of recreational opportunities in an efficient and cost effective manner.

Strategy 7.4.5.1: Explore options for improving coordination with the Village Recreation department, including the potential for merging the Town and Village Departments into a single entity, regardless of whether a full merger between the Town and Village occurs.

8. TRANSPORTATION

The quick, energy-efficient, and safe movement of people, goods and services both within and between towns is needed to maintain the vitality of the community. Public highways will continue to be the primary method of transportation for the foreseeable future in Essex. The primary challenges facing the community are:

1. To adequately fund the maintenance of existing roads, paths and trails;
2. To improve and increase the availability of alternative transportation modes such as paths, sidewalks, trails and public transportation;
3. To provide incentives for residents and non-resident commuters to use transportation modes that produce fewer greenhouse gases; and
4. To accommodate the regional traffic impacts through transportation improvements that do not significantly alter the character of the community.

8.1 Existing Conditions

Highways

The Town of Essex is a regional transportation hub with four state highways (Routes 2A, 15, 117, 128) – and a fifth partially completed one (Route 289) – running through the community. As a result, a significant amount of traffic volume is due to commuters traveling from outlying areas through Essex to Burlington, South Burlington, Winooski, Colchester and Williston. The lack of services and places of employment in the more rural communities of Jericho, Underhill, Cambridge and Westford also cause Essex to become a destination to many people for many purposes. Major trip generators located in Essex include IBM, the Saxon Hill Industrial Park, the Town Center and Eurowest developments, the Essex Community Educational Center, Essex Town School District schools, the Village Central Business District, businesses and industries in the Susie Wilson Road area and the Essex Square Shopping Center (Center Road).

The increase in traffic volume has been incremental in nature with no one development or source having a major impact on the system, thereby making the allocation of improvement costs difficult. The Town has implemented and revised a Highway Transportation Management Plan (August 2009), which includes a description of the function of each road in the network, an inventory of road conditions, and recommended improvements. Improvements are being made according to this plan as funding allows. This plan is incorporated into the 2011 Town Plan by reference.

Functional Classification

A proven method to accomplish better allocation of scarce resources and to provide for improved road transportation services is the development and use of a functional road classification system. Road travel can be separated into a hierarchy of movement, with access being at one end of the scale and movement at the other. One example of a road meant principally for access would be a cul-de-sac. Conversely, a limited access highway or expressway represents a facility built primarily for movement with little or no local access. Conflicts and congestion occur when roads and intersections designed for one function are used for other functions. Therefore, future land use

decisions should take into consideration the function of nearby roads so that development is not inconsistent with same.

Map 5, *Existing Transportation by Road Classification*, and Table 8-1 show functional classifications for existing and proposed Town roads. The map also includes the state's classification of the Town road network. Each road in Essex has a dual designation – a functional class for planning and design purposes and a state aid class for funding. A general description of the functional classifications follows.

TABLE 8-1
TOTAL TOWN ROADWAY MILEAGE BY CLASSIFICATION – 2009

Town Roadway Classification	Total Miles	Percent of Total Town Roadway Miles
Limited Access Expressways	8.233	8.21%
Primary Arterial Roads	14.849	14.8%
Secondary Arterial Roads (Paved)	10.43	10.40%
Class 3 Collector Roads (Paved)	16.54	16.49%
Class 3 Collector Roads (Gravel Sections)	15.95	15.90%
Class 3 Minor Roads (Paved)	23.49	23.41%
Class 3 Minor Roads (Gravel Sections)	7.44	7.42%
Unimproved Class 4 Roads	3.4	3.37%
Total	100.332	100%

Source: Essex Town Highway Transportation Management Plan-2009

Limited Access (Expressway) Roads

The primary purpose of a limited access road is movement of traffic through the community to major destinations in the region. The design emphasis is on higher speeds (generally 45 to 55 mph), prohibition of parking, substantial distance between intersections and limited or no access rights by individuals. Designated limited access roads in Essex are the Circumferential Highway and the Susie Wilson Connector Road, extending from Kellogg Road to VT Route 2A (see Table 8-2).

TABLE 8-2
TOWN LIMITED ACCESS EXPRESSWAYS

Road Name	Length (miles)
VT Rte. 289 (Circumferential Highway) (state)	7.463 (including all ramps)
Susie Wilson Bypass (Town)	.77 (classified as Class 2 for state aid)
Total miles	8.2% of total*

Source: Essex Town Highway Transportation Management Plan-2009
*In 1990, the percentage was 3 percent

Major (Arterial) Roads

These roads are used primarily as connections between communities and carry a heavy volume of traffic. Major roads also connect traffic from the expressways to neighborhoods, shopping centers and employment centers. Their characteristics include higher operating speeds (40 to 45 mph in the

off-peak and 30 to 35 mph in the peak hour) and good levels of service. Movement is the primary function with a secondary function of land access. Major roads are not, however, intended to be used as access into identifiable residential neighborhoods. Access management is an essential component to preserve capacity. Signalized intersections should be spaced far enough apart (1/4 to 1/2 mile) to permit efficient two-way movement of traffic between intersections. Traffic lights should be synchronized, or "smart" wherever possible, so that traffic isn't unnecessarily stopped or idled. Park and ride opportunities should be provided on the major roads within close proximity of Town boundaries. The Town has further refined the definition of major arterials by designating state highways as primary arterials and Town highways as secondary arterials (see Tables 8-3 and 8-4).

TABLE 8-3
TOWN PRIMARY ARTERIAL ROADS

Road Name	Length (miles)
VT Route 15 (State Highway)	5.436
VT Route 2A (State Highway)	1.807
VT Route 117 (State Highway)	3.204
VT Route 128 (State Highway)	4.402
Total miles	14.8 percent of total

Source: Essex Town Highway Transportation Management Plan-2009
*In 1990, primary arterials were 17 percent of the total

TABLE 8-4
TOWN SECONDARY ARTERIAL ROADS (PAVED)

Road Name	Town Highway Number	Class	Length (miles)
Allen Martin Dr.	8	2	.93
Allen Martin Parkway	735	3	.37
Essex Way (VT Rte 15 to Circ Hwy.)	7	2	.46
Kellogg Road	5	2	.55
No. Williston Road	1	2	.34
Old Stage Road	2	2	4.0
Pinecrest Drive	6	2	1.00
Sandhill Road	4	2	2.29
Susie Wilson Rd (VT Rte 15 to Kellogg)	3	2	.49
Total miles			10.4 percent of total*

Source: Essex Town Highway Transportation Management Plan-2009
*In 1990, the percentage was 12 percent

Collector Roads

The primary function of a collector road is to distribute traffic between minor (local) streets and the major (arterial) road system. A secondary function is land access and a tertiary function is to handle inter-neighborhood traffic movement. In general, collectors should penetrate but should not have continuity through residential areas (i.e., through traffic should be discouraged). Operating speeds should be between 25 and 30 mph. With slower speeds and more expected turning movements, closer spacing for driveways and intersections can be used than on major streets.

Essex has a number of rural paved and unpaved roads which function primarily as interconnections with neighboring communities but which are classified as collectors instead of arterials because they do not carry high traffic volumes (see Tables 8-5 and 8-6).

TABLE 8-5
TOWN CLASS 3 COLLECTOR ROADS (GRAVEL SECTIONS)

Road Name	Town Highway Number	Length (miles)
Brigham Hill Road	36	2.06
Curve Hill Road	26	.20
Chapin Road	26	2.53
Discovery Road	21	.50
Indian Brook Road	30	1.25
Lost Nation Road	27	2.80
Lamore Road	23	1.15
Old Pump Road	59	1.04
Osgood Hill Road	51	2.46
Pettingill Road	44	.76
Sleepy Hollow Road	60	1.20
Total miles		15.95- 15.9% of Total

Source: Essex Town Highway Transportation Management Plan-2009

TABLE 8-6
TOWN CLASS 3 COLLECTOR ROADS (PAVED)

Road Name	Town Highway Number	Length (miles)
Abare Avenue	9	.21
Billie Butler Drive	772	.07
Bixby Hill Road (paved section)	714	.20
Blair Road	6	.15
Brigham Hill Road (paved section)	36	.89
Cabot Drive	749	.27
Carmichael Street	796	.12
Chapin Road	42	1.00
Clover Drive	754	.57
Craftsbury Court	751	.29
Essex Way (p)	731	.54
Ethan Allen Avenue	3	.25
Foster Road	742	.55
Gauthier Drive	121	.60
Gentes Road	24	.91
Greenbriar Drive	776	.72
Greenfield Road-part	717	.54
Greenfield Road Ext	779	.05
Hickory Lane	737	.07
Irene Avenue	798	.43
Iris Street	715	.08
Lamore Road	23	.07
LaSalle Road	736	.06
Laurel Drive	Private	.06
Londonderry Road	702	.20
Old Colchester Road	20	.50
Partridge Drive	797	.04
Pinewood Drive	757	.44
Pioneer Street	11	.43
Richard Street	724	.10
Saxon Hill Road (paved section)	66	.17
Saxon Hollow Road	756	.42
Saybrook Road	753	.31
Suffolk Lane	105	.23
Susie Wilson Road-part	132	.22
Tanglewood Drive	744	.58
Thompson Drive	777	.29
Towers Road	710 +41	1.57
Valleyview Drive	765	.65
Weed Road	63	1.5
Willoughby Road	758	.19
Total miles		**16.0- 16.5% of total**

Source: Essex Town Highway Transportation Management Plan-2009

Minor (Local) Roads

A minor road is commonly referred to as a local road, because its principal purpose is land access. The speed limit is low, usually 25 mph. Movement is not a primary function of this class of road and, therefore, trip ends are short and volumes low. On-street residential parking is permitted, where streets are sufficiently wide to allow it. Greater protection needs to be afforded to vulnerable users, including children, the disabled, and the elderly. The streets also have to be designed to accommodate convenient and efficient deliveries, emergency access, maintenance services and where densities justify, public transit services.

Because there are a significant number of minor roads, a complete list has not been provided. Expressways, Major, Collector, and Unimproved roads have been identified and, therefore, by exclusion all other existing roads are considered minor. The length of the minor roads (paved) is 23.49 miles (23.4 percent of the total) and the length of minor roads is 7.4 miles (7.4 percent of total).

Unimproved Roads

This is the only functional category that is consistent with the state Aid Classification System (Class 4). A Class 4 Town highway receives no state aid and the Town is not required to keep it in good and sufficient repair year round. A Class IV Town highway "may be maintained to the extent required by the necessity of the Town, the public good and the convenience of the inhabitants" (see Table 8-7).

TABLE 8-7
TOWN UNIMPROVED CLASS 4 ROADS

Road Name	Town Highway Number	Length (miles)
Extension of Landfill Access Road	18	0.22
Extension of McGee Road	29	0.2
Extension of Brigham Hill Lane	33	0.15
Extension of Hanley Lane	53	0.55
West Sleepy Hollow Road	60	1.95
Extension of Saxon Hill Road	66	0.08
Water Tank Road off Bixby Hill	716	0.2
Extension of Fern Hollow	748	0.05
Total miles		3.4 miles- (3.4% of total)

Source: Essex Town Highway Transportation Management Plan-2009

Conflicts in Functional Classification

Many of the existing transportation problems occur because of conflicts within or between functional classes of roads:

1. An arterial being used to provide direct access to residences via driveways, numerous residential streets or curb cuts for business. This conflict occurs along most of the Town's arterials with the exception of those most recently constructed, Allen Martin Drive and Essex Way. As an example, VT Route 15 in the Essex Center area has residential and business uses with driveways every 75 to 100 feet. Numerous complaints about street access and the volume of traffic are received from residents and businesses along VT Route 15.

2. A collector road or local street being used by through traffic. This conflict occurs along Pinecrest Drive, Brigham Hill Road and Weed Road. Pinecrest Drive is being used by through traffic trying to avoid congestion at the Five Corners in the Village. Weed Road provides a short cut by running parallel to other more heavily traveled roads.
3. Roads that are inadequate structurally being used to meet a higher functional requirement (gravel roads acting as collectors). Some examples of this conflict included Osgood Hill, Brigham Hill, Indian Brook, Lost Nation, Discovery, Lamore, Old Stage and Sand Hill Roads.
4. Existing roads, which have not been designed to meet functional requirements but have principally evolved from older routes of travel (poor sight distances, sharp curves). The fourth type of problem is evidenced by Old Stage Road, Lamore Road, Lost Nation Road and Weed Road.
5. Intersections that have become choke points because of inadequate designs to accommodate the movement needs mandated by the functional classes of intersecting roads. There are a number of intersections that clearly fail to meet the movement needs, including pedestrian, in Essex. Much progress has been made in the past five years resolving intersection problems as outlined in the 2009 Transportation Management Plan. However, many intersections are still in need of improvement for both local access and to move the regional traffic more quickly through the corridors during peak hours. Several intersections that are in need of improvement are presently in the design phase for future construction. These include:
    a. VT Route 15/Sand Hill Road (signalization needed)
    b. VT Route 117/Sand Hill Road

2006 Town Plan Areas of Concern

- The Susie Wilson corridor from VT Route 15 to Kellogg Road, due to high peak hour traffic, limited pedestrian crossings and busier access points with peak hour level-of-service F.
- The VT Route 15 corridor in Essex Center due to high peak hour traffic volumes, limited pedestrian paths, walks and crossings, and peak hour access problems at non-signalized locations.
- The Sand Hill Road/VT Route 117 intersection due to poor level-of-service during peak hours and steep approach grades. A signal is scheduled for installation for the summer of 2011.
- Lack of neighborhood pedestrian interconnectivity and pedestrian/bicycle facilities interconnecting with adjacent communities, businesses and recreation areas.
- Increased traffic and demands on the Town's 23 miles of gravel roads due to land use changes within and outside the community.
- More rapid deterioration of existing road infrastructure due to higher traffic volumes and loads; the deterioration is occurring more quickly than the Town's resources can correct the deficiencies.
- Delays in completion of other segments of the Circumferential Highway, creating demands on local roads that would be reduced significantly with the construction of this expressway.

The 2006 Town Plan, in addition to the specific problem areas identified above, raised several concerns affecting a significant portion of the entire road network:

1. Due to heavy loads, high traffic volumes and insufficient repair monies, it is estimated that 19 percent of existing paved roads need total reconstruction, 20 percent some form of rehabilitation and another 20 percent preventive maintenance to forestall the need for reconstruction.
2. Gravel roads account for approximately one-third of the Town's total highway mileage and many roads need repairs and some roads may ultimately need paving.

Current Areas of Concern

Based on the January 2009 Transportation Management Plan for Essex, the 2006 areas of concern have been reduced significantly. Some new ones have arisen. These additional concerns include several intersection improvements which will likely be costly, and will require a long lead time and coordination and approval from the Vermont Agency of Transportation. These include:

- Construction of a new traffic signal at the VT Route 15/Sand Hill Road intersection to include a pedestrian crossing of VT Route 15 (presently in project scoping); and
- Installation of a bypass lane in VT Route 117 and a new traffic signal at the VT Route 117/Sand Hill intersection (scheduled for 2010 construction);
- Structural improvements to the Gentes Road Bridge (in scoping); and
- Further changes to the Susie Wilson Road/Kellogg Road intersection to improve levels of service.

All of the above problems require a significant infusion of dollars to bring the existing road network up to a reasonable standard of performance. This is a major element of the Town's capital construction program.

Public Transit

The primary means of public transportation serving the Town outside the Village is bus transit provided by the Chittenden County Transportation Authority (CCTA). The CCTA operates a network of transit routes in Burlington, Winooski, South Burlington, Shelburne, Essex, Williston and Milton. Additionally, commuter routes are operated between Burlington and Montpelier, Middlebury, and St. Albans. The CCTA FY09 system-wide ridership was 2,514,462, an increase of 12.6 percent over the previous year. Downtown Burlington, where most CCTA bus routes begin and end,, is the heart of the CCTA system.

CCTA currently operates three routes in Essex – the Essex Junction route, the Essex Center route, and the Williston route. These are shown on Map 6, *Existing Transportation by Alternative Modes*. On the average weekday in FY09, these routes accounted for 379 boardings and 290 de-boardings in Essex/Essex Junction.

Essex Junction Route – The Essex Junction route operates between Essex and Burlington, including service through Winooski, Monday through Saturday. In February 2008, CCTA implemented 15-minute peak hour weekday service on the Essex Junction route. The service expansion provides a bus every 15 minutes between 6:00-9:00 AM and 3:00-6:00 PM on weekdays along the entire length of the route and represents a doubling of service frequency during the peak commuting times. Since implementing the 15-minute peak hour service, the Essex Junction route has become CCTA's highest ridership route, carrying 444,782 passengers in FY09, a 27 percent increase from the previous year. Riders coming from or going to Essex constitute 23 percent of the weekday and 35 percent of the Saturday ridership on the Essex Junction route.

Essex Center Route – The Essex Center route is a local route, which circulates between the Village and Essex Center along VT Routes 15 and 117, beginning and ending at the Amtrak station. The route operates every half hour from approximately 6:00 – 9:30 AM and 1:00 – 6:00 PM, Monday through Friday. In FY09, the Essex Center route carried 27,611 passengers, an increase of 14 percent from the previous year.

Williston Route – The Williston route operates between South Burlington and Essex via Taft Corners in Williston. The route alternates between running every 30 and 60 minutes, Monday through Saturday. In FY09, the Williston route carried 81,878 passengers, an increase of 3.5 percent over the previous year. Riders coming from or going to Essex on the Williston route constitute 30 percent of the weekday ridership on the route.

CCTA maintains a 64-bus fleet to support its transit operations, including buses ranging in size from 29-feet to 41-feet. All CCTA buses are equipped with bicycle racks that can accommodate two bikes at a time. As of March, 2010, CCTA has five shelters in Essex and Essex Junction in order to offer passengers a more comfortable waiting area.

A second means of public transportation in the Town is the Senior Bus. The Senior Bus, funded by the Town as part of the Parks and Recreation Department budget, provides free transportation to senior citizens. In 1984, the Town acquired a van specifically for use within the Senior Bus program. A second van was put into service in 2005. This has been an extremely popular and successful service and should be provided with continuing support.

Sidewalks

Sidewalks serve the very important function of minimizing conflict between pedestrian and vehicular traffic. Sidewalks provide maximum safety for children playing on their block and protect children walking to and from school bus pick up locations and neighborhood parks. They also provide a place for residents to walk to and from shopping centers, jobs, parks and bus stops. Map 6 includes an inventory of all sidewalks in Essex.

The Town requires all developers to install sidewalks. Generally the Subdivision Regulations call for sidewalks on both sides of arterial streets, on one or both sides of collector streets and on one side of minor roads.

Trails and Paths

Sidewalks and multi-use paths provide for movement between local destinations without use of the automobile or public transit. Five-foot wide sidewalks are appropriate for pedestrian use, but paved eight-foot or 10-foot wide multi-use paths provide use by bicyclists and pedestrians.

To facilitate the construction of trails in appropriate locations, the Planning Commission should require that a 20-foot right of way along property frontages be deeded to the Town as part of the subdivision and site plan approval process. Paths constructed along Allen Martin Parkway, Allen Martin Drive and Sand Hill Road were deeded in the development process. In some instances, the Planning Commission requires a deeded 20-foot right of way to establish a trail network that does not follow the roadways. Federal funding requirements for multi-use trails accept a minimum 15-foot width for a right-of-way but recommend 20 feet. Federal funding for paths designated for bicycle traffic requires grades of less than 8 percent.

Regional Transportation Facilities

Essex is located within five miles of the Burlington International Airport. The airport is a U.S. Customs Port of Entry for airplanes entering the U.S. from abroad and is also an approved foreign trade zone.

Daily freight and passenger service is provided by New England Central Railroad, Vermont Railway and Amtrak. The train station, located in the Village of Essex Junction, is a twice a day stop for Amtrak's "Vermonter" with service from St. Albans to New York City.

Four Lake Champlain ports offer ferry service which carries autos and passengers between Vermont and New York.

Greyhound – Vermont Transit bus lines connect from Burlington to New York, Massachusetts, New Hampshire and Canada.

8.2 Proposed Improvements

The Town of Essex has several major transportation improvement and construction projects which are depicted on Map 7, *Proposed Transportation Improvements*. A general description follows.

Circumferential Highway (Vermont 289)

The Circumferential Highway has been proposed as a solution to traffic problems in the Greater Burlington area for more than 30 years. This regional highway will connect to Interstate 89 and VT Route 127 in Colchester and will follow an easterly route through Colchester, Essex and will eventually connect to Interstate 89 in Williston. The major objectives of this highway are to:

1. Relieve the necessity for all traffic to pass through Five Corners in Essex Junction by offering an alternate arterial route to circumvent this busy intersection.
2. Reduce traffic congestion on most arterials and collector streets.
3. Improve existing air quality problems.
4. Provide better accessibility by providing alternative routes, which in turn will enhance the delivery of public safety services and contribute to the economic vitality of the community.
5. Improve safety for pedestrians and bicyclists by reducing traffic volumes on arterial, collector and local roads.
6. Direct and focus development in a manner that promotes designated growth centers and furthers local, regional and state land use plans and policies.

The CCMPO Metropolitan Transportation Plan demonstrates that completion of the Circumferential Highway to I-89 on both ends and eventually to VT Route 127 is a critical link within the county's transportation network. It will provide traffic congestion relief not only within the immediately affected Towns of Essex, Williston, and Colchester, but also in the Winooski and Burlington area. The opportunity for decreased transit time and direct transit service (Burlington to Essex Center and return) is greatly enhanced with the completion of the Circumferential Highway. Construction of the remaining portion will redistribute traffic within the county and provide better access opportunities for commercial and industrial areas. Therefore, the Town should work with state officials to complete the entire highway.

For the Circumferential Highway to better achieve its objectives, other transportation improvements will need to be instituted simultaneously. These include:

1. Completion of the remaining segments of the Circumferential Highway in Williston and Colchester.
2. Park and ride access on VT Route 15 (completed) and VT Route 2A (in progress).
3. Extension of public transportation to serve the park and ride lots.
4. Pedestrian and bicycle access along or across portions of the highway.
5. Controls on land development at major intersections with VT Route 15, VT Route 117 and VT Route 2A.

Allen Martin Parkway

The Allen Martin Parkway is a limited access roadway planned to connect Sand Hill Road near the intersection of Allen Martin Drive to the Circumferential Highway at some future date. Together with the Circumferential Highway, Allen Martin Parkway will provide access to VT Route 117 and IBM for Jericho, Underhill and Cambridge residents and alleviate congestion and associated air quality problems at Sand Hill Road, River Road and the four corners intersection in Essex Center. In addition, the relocation of VT Route 15 traffic onto the Circumferential Highway and Allen Martin Parkway will allow the Town's road network to return to its proper functional classification and reduce traffic and land use conflicts.

The Allen Martin Parkway may also serve as a secondary public access to the Essex Town School system (located on Founders Road) to facilitate the efficient handling of school traffic and to reduce Sand Hill Road, River Road and VT Route 15 traffic congestion.

The Allen Martin Parkway will remain a part of the Town's long range transportation plan, but no further action will be taken at this time to move the project into design or construction. Plans may proceed for construction of a trail within the existing right-of-way with sufficient room left available for possible future road construction.

Susie Wilson Road

Significant progress has been made during the past five years in the Susie Wilson Road corridor. This includes:

- Improvements to the Susie Wilson Road/VT Route 15 intersection including revising the lane configuration to two right turns and one left turn off Susie Wilson Road.
- Installation of new signals and pedestrian controls at Susie Wilson Road and Lowe's/Susie Wilson Road and Pine Crest Drive and Susie Wilson Road and David Drive.
- Construction of new turn lanes in the corridor.
- Changes in signal timing to optimize traffic movement.

Future work may include:

- Conversion of the traffic signal at VT Route 15 and Susie Wilson Road to a variable-turn middle lane on the Susie Wilson Road approach. This will enable the AM peak hour traffic flow to utilize two right turns and the PM peak hour traffic flow to use two left lanes.

- Construction of an access lane from the Bagel Store parking lot to David Drive so existing left turns from the complex can utilize the new David Drive signal. This will reduce or eliminate many accidents at this location.
- Potential future changes to the Susie Wilson Road/David Drive intersection.
- Future changes to the Susie Wilson Road/Kellogg Road intersection, including changes to the geometry, additional detectors, and creating a jug-handle turnaround onto Blair Road.
- A potential future connector to the new traffic signal under construction at the East Gate of Fort Ethan Allen Avenue in order to provide alternative access for local businesses.
- A potential future connector between Ewing Drive and the Lowe's parking lot.

Town Center Roads

The Town Center Master Plan (Humstone Squires Assoc. et.al, 1991) set forth a proposed conceptual street network for specific areas such as Butlers Corners/Lang Farm, an area identified in the Town Center Master Plan as being bound on three sides by Old Stage Road, Towers Road and VT Route 15, and historic Essex Center. More detailed maps of this network are included in that plan. Actual development plans may result in some deviation from the specific recommendations made in the Town Center Master Plan.

Saxon Hill Road

The extension of Saxon Hill Road would provide an important connection from VT Route 15 to VT Route 117 as well as access to several industrial areas and the Saxon Hill Forest. There are no active plans to do this at the present time.

Village Connector Road

To the extent practicable, the Town and Village should work toward connecting their road systems. These connections would relieve congestion on major arterials by providing alternative routes, in addition to improving traffic mobility, emergency vehicle response times, and maintenance efficiency. The connection of neighborhoods such as Countryside and the Lang Farm developments would also have the effect of increasing ridership on the Chittenden County Transportation Authority's bus route. Presently, the bus route has a low volume to Essex Center because of the lack of population base along VT Route 15.

Development Connector Roads

Multiple accesses to subdivisions epitomize the concept of transportation alternatives and greatly influence the efficiency of the subdivision layout as well as the major road network for all of the same reasons given in the above section. The Planning Commission encourages the provision of alternatives by requiring residential developments to provide a second access in addition to dedicating rights-of-way for future road connections to adjoining parcels. Dead-end roads and cul-de-sacs are discouraged due to their high cost of maintenance and inefficient traffic movements.

Sidewalks/Bicycle Paths/Trails

Adequate pedestrian and bicycle access to existing business districts enhances marketability, encourages use of public transit, reduces vehicular traffic and ensures greater safety. Sidewalks, multi-use paths, and trails that connect neighborhoods to shopping, schools, and recreation areas encourage usage because they are safe and convenient.

Sidewalks, bicycle paths, and trails are designed to:

- Promote a sense of community.
- Link neighborhoods to schools, jobs, shopping centers, and parks.
- Provide safe commuter routes for the purpose of reducing traffic on the road system, thereby reducing fossil use and reducing greenhouse gas emissions.
- Use historic corridors, such as old railroad beds.
- Offer scenic cross-country routes.
- Facilitate fitness, recreation, and motorless transportation opportunities.
- Coordinate usage among various trail users.
- Connect Essex to a regional greenway system that links Chittenden County municipalities to important destination points.

In 2000, the Selectboard chartered a Trails Committee with the mission to identify and oversee the development of sidewalks, bicycle paths, and trails. The maps of this proposed network are included on Maps 7, 8, 9, 10, and 11.

Recreation & Leisure Services Consultants, with help from the Vermont Center for Rural Studies, published in September 2004 the *Recreation Needs Assessment 2004-10* for the Town. Among its findings was a strong community desire to create more bicycle/pedestrian paths and walking/hiking/X-C ski trails. More than 70 percent of survey respondents approve of trails creation and ranked it number 1 and number 2 priorities for new recreation facilities in Essex. The report recommends the building of 11 new bicycle and pedestrian paths, and includes a description of the proposed path, including its route and detailed cost estimates. Table 8-9 lists these recommendations and the initial cost estimates.

Table 8-9
BICYCLE AND PEDESTRIAN PATH RECOMMENDATIONS FROM THE 2006 TOWN PLAN

Path Segment	Length	Estimated Cost
VT Route 15 (near McDonald's to connect two existing segments)	52 feet	$9,500
Butlers Corner/Old Stage Road	670 feet	Completed
VT Route 15 (Sand Hill Road to VT Route 128/Towers Road)	1,450 feet	Completed
Old Stage Village/Heritage Estates trail	1,800 feet	Abandoned due to wetlands
VT Route 15 (Circ to Family Fun/Entertainment Center)	300 feet	$56,000
VT Route 15 (Saybrook to VT Route 128)	3,050 feet	Partially completed, $300,000 to finish
VT Route 2A (Old Colchester Road to Pinecrest)	1,250 feet	$250,500
Pinecrest Road (VT Route 2A to Sufolk Lane)	850 feet	$158,000
Essex Way to Foster Road/Essex Middle School	6,000/8,300 feet	$1,245,000
Foster Rd to Allen Martin Parkway	3,600/4,200 feet	$630,000
VT Route 15 from 5 Corners to St. Michaels College	2.9 miles	$3,136,000

Improving pedestrian and bicycle use through the construction of sidewalks and bicycle paths for access to the Susie Wilson Road area and Essex Center, Butlers Corner, and Lang Farm area continues to be a priority. The Town should actively acquire sufficient rights-of-way and construct a multi-use trail network along or near VT Route 2A, VT Route 15, Old Stage Road/Towers Road, VT Route 117, Susie Wilson Road, Pinecrest Drive, and the Circumferential Highway.

Future trail development is envisioned within the less populated areas of the Town. Examples are land areas in the northwest and northeast areas of Essex, in the Mathieu Town Forest, and in the RPD-I District (Saxon Hill area).

Maps 7, 8, 9, 10, and 11 provide an overview of Horseback, Cross Country Ski, Footpath, Bicycle, and Snowmobile networks. These maps are conceptual maps of a proposed public trail system for Essex.

Sidewalk, bicycle path, and trail development is dependent on land availability, ownership, and public rights-of-way. The Planning Commission captures rights-of-way for transportation and recreation trails as opportunities arise during the land development review process. In this way, the proposed network of trails is developed in Essex.

Several path projects are planned for construction in the near future. Approximately 1,100 feet of a six-foot wide concrete walkway between Sunset Drive and Towers Road is under construction in 2010. This path will provide an important link between the library, schools, recreational facilities and residential areas. The ultimate goal is for this path to link the Circumferential Highway at VT Route 15 to Sand Hill Road on the south side of VT Route 15. It is anticipated that the path will be funded through a combination of private developer improvements, municipal funds and state and federal grants.

8.3 Goals, Objectives and Strategies

Goal 8.1: Provide multiple modes of transportation that are safe, economical, convenient and sustainable.

Objective 8.1.1: Conduct studies that view all modes in a consistent, cost-appropriate manner.

Strategy 8.1.1.1: Promote energy-saving, emission-reducing modes of transport.

Goal 8.2: Existing transportation systems shall be appropriately maintained and managed.

Objective 8.2.1: Ensure that management plans and financial expenditures for road reconstruction or improvements are consistent with the functional class system.

Strategy 8.2.1.1: Give priority for funds to resolve structural infrastructure problems to the higher class of roads, such as majors or collectors.

Strategy 8.2.1.2: Repair minor roads to reasonably accommodate local access.

Strategy 8.2.1.3: Establish minimum structural and physical standards for each class of road. The higher movement classes, because of loads and speeds, will require greater depths of base and sub-base, thicker wearing surfaces, greater curve radii, lesser slopes, greater sight distances (speed consideration) and the like. Through the Town's inventory and analysis, existing roads which do not meet the functional class standards can now be identified and programmed for upgrade.

Objective 8.2.2: Regularly update the Highway Transportation Management Plan to prioritize and phase road reconstruction and improvements.

Strategy 8.2.2.1: Inventory and analyze all existing roads and identify upgrades in accordance with the road's functional classification.

Strategy 8.2.2.2: Coordinate the Highway Transportation Management Plan with the Town's Capital Budget and Program.

Strategy 8.2.2.3: Use a combination of public funds, developer contributions and road impact fees in funding roadway improvements (including amending the Town's Impact Fee Ordinance to incorporate a transportation impact fee).

Objective 8.2.3: Choose recommendations from the Susie Wilson Road Capacity Study, Access Management Study and Corridor Improvement Plan for improving traffic flow and safety and begin steps to implement those recommendations.

Objective 8.2.4: Maintain commitments to existing public transit services.

Strategy 8.2.4.1: Maintain CCTA service with regular schedules on long-established routes. Continuity of this service will provide transportation assurances to people without cars- as well as those who seek to save energy and reduce emissions- whether existing residents or those seeking to live in Essex. However, alternative funding mechanisms from the local property tax should be examined.

Strategy 8.2.4.2: Continue provision of existing services such as the Senior Bus.

Strategy 8.2.4.3: Encourage combined use of CCTA, Senior Bus, school buses and other transit services as part of an integrated, all ages, all access bus system and work to ensure schedules are appropriate for a majority of residents.

Objective 8.2.5: Maintain a minimum acceptable level of service across the spectrum of transportation modes – vehicular, public transit, bicycle and pedestrian.

Goal 8.3: Provide a variety of additions to the transportation system in accordance with demands placed by additional residential and non-residential growth.

Objective 8.3.1: Undertake aggressive efforts to ensure the construction of the Circumferential Highway from end to end. Completion of the Circumferential Highway will provide traffic congestion relief not only within the immediately affected Towns of Essex, Williston, and Colchester, but also in the Winooski and Burlington areas. Benefits include the opportunity for direct transit service from Essex Center to Burlington, and better access opportunities for commercial and industrial uses.

Strategy 8.3.1.1: Work with Town legislators, the CCMPO, and state officials to finalize funding for the next phase of the highway connecting to I-89 in Williston.

Strategy 8.3.1.2: Continue to focus on the long-range benefits of the highway, as identified in the CCMPO Metropolitan Transportation Plan.

Objective 8.3.2: Provide only new roadways and upgrades to existing roadways that improve safety, alleviate traffic congestion, reduce air pollution, and eliminate conflicts in roadway functions and increase accessibility.

Strategy 8.3.2.1: Include priorities and funding sources for new roadways and upgrades as part of the Highway Transportation Management Plan.

Strategy 8.3.2.2: Evaluate all new and existing intersections for modern roundabout design.

Strategy 8.3.2.3: Review the Town's Public Works specifications to ensure that standards for new and upgraded road construction are consistent with the functional classes.

Strategy 8.3.2.4: Evaluate Town requirements for residential streets to determine if the widths of rights-of-way and traveled surfaces are appropriate.

Strategy 8.3.2.5: Do not allow new privately owned and maintained roads, unless such roads are built to Town specifications.

Objective 8.3.3: Encourage a variety of public transportation alternatives.

Strategy 8.3.3.1: Explore options with CCMPO and CCTA for improving service from existing transit providers. Explore connections to the main CCTA bus routes including use of school buses and a feeder system of smaller buses. Pursue improvements to the existing bus service including better signage with schedules, construction of shelters, bus pull-offs, more reliable and shorter transit times, and linkages between neighborhoods that would enhance access to public transit routes.

Strategy 8.3.3.2: Develop incentives to ride-share, van pool, or car pool. Some ways to enhance their use are:

- Increase the movement capability on those routes designated for these services through intersection improvements, signal optimization, etc.;
- Provide adequate new parking facilities at key locations (see Map 6, *Proposed Transportation Improvements*) and make use of unused parking spaces at under-utilized shopping centers and other commercial locations for car and van pools;
- Co-locate multi-modal transportation hubs, so bus and possibly rail service meet at a common location, with adequate parking and safe bicycle and pedestrian access. The location should be adjacent to either a limited access or major roadway, such as the intersections of Circumferential Highway with VT Route 2A and VT Route 117, with good capability to move high volumes of vehicles to and from the location;
- Satellite parking areas on major roads should tie into the common hub and have smaller vans and/or buses to move people along the links;
- Identify sites for park and ride facilities and obtain funds for purchase of land in anticipation of future need;
- Provide financial incentive to encourage use.

Strategy 8.3.3.3: Require the installation of bicycle racks as a condition of approval of new commercial and multi-family residential developments.

Strategy 8.3.3.4: Seek state and federal grant funding for trail and pathway projects, including the Transportation Enhancement program, the Vermont Recreation Trails grant program, the Vermont Youth Conservation Corps, and others.

Objective 8.3.4: Create a network of non-motorized, multi-use trails to connect residences to schools, work places, shopping centers and recreational areas.

Strategy 8.3.4.1: Aggressively seek implementation of its non-motorized, multi-use trail priorities, as identified on Maps 6, 7, 8, 9, 10, and 11.

Strategy 8.3.4.2: Integrate the Town's non-motorized, multi-use trail plan with similar plans prepared by CCMPO (Pedestrian Policy and Sidewalk Plan), CCRPC and by abutting towns. The Town's trail system should be linked to other Chittenden County towns through a system of linear parks.

Strategy 8.3.4.3: Encourage new construction or major reconstruction of roads and highways to include provision of non-motorized, multi-use trails or areas solely for use by pedestrian or other non-motorized means of transportation.

Strategy 8.3.4.4: Encourage future development projects, roadway improvements and new roads to include non-motorized, multi-use trails, crosswalks and crossing signals.

Strategy 8.3.4.5: The Trails Committee should oversee development and maintenance of the trail system. The Trails Committee can assist in:

- solving problems of financing, support, and maintenance of trails,
- reviewing development applications,
- working with landowners to secure trail easements, and
- identifying trail corridors to be integrated in a public trail network.

Strategy 8.3.4.6: Implement, through the Planning Commission, policies that allow a formal review process for sidewalk, bicycle path, and trail development as it may pertain to new land development.

Goal 8.4: Transportation systems shall be integrated with land use policy.

Objective 8.4.1: Maintain and enhance the character of Essex by discouraging strip development and improving roadside aesthetics.

Strategy 8.4.1.1: Improve the aesthetics of the state and local street network by encouraging planting of street trees, placing utilities underground and limiting strip development via an access management plan and design review methods.

Strategy 8.4.1.2: Locate parking lots behind buildings or ensure that they are screened from view from public roadways.

Strategy 8.4.1.3: Ensure that walkways are separated from roadways by green strips except in the Town Center where walkways abutting curbs are appropriate.

Strategy 8.4.1.4: Implement special features and scenic road designations for unique road settings such as those identified in Appendix F, Scenic Resources.

Objective 8.4.2: Control secondary-impacts resulting from the Circumferential Highway.

Strategy 8.4.2.1: Enact zoning provisions that will control the type and extent of development permitted at highway interchanges.

Strategy 8.4.2.2: The existing Circumferential Highway corridor in Essex has wide scenic vistas and limited development. New development on abutting properties should minimize adverse visual impacts to this corridor.

Objective 8.4.3: Integrate consideration of transit service and facilities with the land use planning and review process.

Strategy 8.4.3.1: Adopt zoning amendments that allow multiple use development in areas that can support the increased infrastructure use and limit development in areas with limited access to multiple transportation modes.

Strategy 8.4.3.2: Encourage mixed uses and more intensive development of the areas designated for growth which, in turn, should be designed to be pedestrian-friendly and serviced easily by public transit.

Strategy 8.4.3.3: Integrate transit considerations in street design, timing of traffic lights, location of stop signs, and parking policies.

Strategy 8.4.3.4: Provide appropriately located pickup and drop-off facilities for buses and pedestrians.

Objective 8.4.4: Control development in rural areas on lots without minimum required public road frontage or on newly created public roads. As development pressures increase and the more densely settled areas of the Town reach capacity, the demand for lots in the rural portions of the Town will escalate. New lots should be permitted only on existing public roads or on new roads that are compatible with the Town's land use objectives for rural areas.

Strategy 8.4.4.1: Continue the existing Town restriction against the subdivision of lots without public frontage.

Strategy 8.4.4.2: Permit the development of new roads in rural districts only when designed as part of a Planned Unit Development – Residential. Such roads must be found to be part of a subdivision layout that will do more to enhance rural character and protect significant features.

Objective 8.4.5: Encourage the development of shared parking facilities between various land uses.

Objective 8.4.6: Ensure that land use, zoning and the functional classes of roads are correctly matched so that permitted development does not overwhelm available or proposed transportation facilities.

Strategy 8.4.6.1: Evaluate road classifications and land use so both elements are consistent.

Strategy 8.4.6.2: Check accuracy of trip generation estimates by observing actual traffic volumes of completed projects. Require developers of phased projects to do interim traffic counts and to adjust traffic impact reports if volumes differ significantly from original estimates.

Strategy 8.4.6.3: Identify traffic improvements required not only at affected intersections, but on approach roads to the planned development. Pursue allocation of improvement costs to the responsible parties.

Objective 8.4.7: Continue to require alternative accesses and connections between developments. Second accesses to residential subdivisions provide for transportation alternatives, less congestion on major roads, emergency access, more efficient maintenance, and busing of school children.

Strategy 8.4.7.1: Continue to require the provision of a second access for residential subdivisions consisting of 50 dwellings or more as a condition of subdivision approval.

Strategy 8.4.7.2: Continue to require developers whose property is adjacent to developable land to dedicate rights-of-way for future road and trail connections to these vacant

parcels as a condition of subdivision or site plan approval. Connections between developments should be designed to protect the character of the neighborhood.

Goal 8.5: Determine appropriate financing methods for transportation improvements.

Objective 8.5.1: Continue to adopt a Capital Plan that includes a life-cycle analysis for each capital project.

Strategy 8.5.1.1: Explore reasonable funding streams and devise a system plan and project program that fits the fiscal constraint.

Strategy 8.5.1.2: Include forecasts of system depreciation in the plan.

Objective 8.5.2: Ensure that new development contributes its proportionate share of costs for transportation improvements and maintenance.

Strategy 8.5.2.1: Require, as part of the subdivision review process, developers to analyze their on-site and off-site transportation impacts and to construct all improvements required as a result of those impacts.

Strategy 8.5.2.2: Establish a transportation impact fee based on traffic improvement zones and a transportation system analysis.

Objective 8.5.3: Promote the efficient expenditure of public funds on transportation improvements through regular update to the capital budget and program.

Objective 8.5.4: Adopt an official map which includes the proposed roadway and trail network and examine funding opportunities to construct same.

Goal 8.6: Monitor, evaluate and implement transportation management practices.

Objective 8.6.1: Establish a system to obtain annual reports of key traffic counts and accident data.

Objective 8.6.2: Create an overall Town traffic model in order to assess the impacts of development proposals and to determine the percent of contribution to traffic improvements.

Objective 8.6.3: Monitor impacts resulting from the Circumferential Highway.

Objective 8.6.4: Monitor transportation systems' environmental impacts.

Goal 8.7: Continue collaboration with CCMPO, CCTA, SSTA, VTrans and other entities impacting Essex's transportation system.

Objective 8.7.1: Take measures to implement the goals of Act 200 which call for a coordinated, comprehensive planning process and policy framework to guide decisions by local governments, regional planning commissions and state agencies. Develop common goals with respect to energy efficient transportation systems and work to implement them at all levels.

9. NATURAL RESOURCES

Among the most fundamental elements of a Town Plan is a description of natural resources. If we seek to protect our natural resources and provide a high quality of life for the citizens of Essex, we must develop a Town Plan based on the capabilities of the land. This section provides an overview of Essex's natural features. Included are descriptions of the Town's topography and slope, geology, soils, water resources, farm and forestlands, and natural areas.

9.1 Topography and Slope

Topography refers to the shape of the land, its ups and downs, hills, ridges and plateaus. Slope refers to the gradient or steepness of the land. In a community context, these features impose a natural order on the land that, in turn, influences the pattern of existing and future land use.

Table 9-1
MAJOR TOPOGRAPHIC FEATURES

Feature	Elevation in Feet
Cilley Hill/Sawmill Road	1330
Brigham Hill	1032
Saxon Hill	807
Bixby Hill	666
Winooski River at 68 Acres area	170

Source: 2006 Essex Town Plan

Essex has an extremely varied topography. The flood plains of the Winooski River, and Browns River and Alder Brook represent the flat areas of Town, while the outflow of Alder Brook has predominantly steep slopes in excess of 20 percent. The northeast quadrant of Town is marked by high rolling hills with a few areas of severe slope, as is the northwest portion of Town around Brigham Hill. Topography is expressed as elevation – the height of land above sea level. Elevations within Essex range from 170 feet in the southwestern part of the Town to 1330 feet in the northeastern corner of the Town. Major topographic features in Essex are listed in Table 9-1 above and are visible on Map 12, *Contours*.

The percent of slope is determined from the number of feet of vertical rise over 100 feet of horizontal distance. Slope conditions determine the feasibility of land use, the steeper the slope, the greater the restraints upon building in a particular area. Map 14, *Slope*, has grouped the degree of slope in Essex into three categories. Generally slopes of 0 to 3 percent are suitable for almost all types of construction but may require drainage improvements; 3 to 10 percent are most desirable for construction since they provide a minimum of restrictions; 10 to 15 percent are suitable for low density housing on large lots with some consideration for erosion control and runoff; 15 to 20 percent is where construction becomes very costly and erosion and runoff problems are likely – these slopes are unsuitable for most on-site sewage disposal systems, therefore development should

be discouraged; and more than 20 percent is where all construction should be avoided because of the likelihood of environmental damage.

9.2 Geology

Geology, the study of the earth's crust, is the basis of all else in the landscape. The underlying strata determine the topography, soil types, availability of water, vegetation and to some extent, a community's economic base if it is valuable for commercial extraction. The Town of Essex is composed of land forms and soils molded and deposited by glaciers that traversed the area and the ancient lakes and seas that covered the low lands of the Town. Geologic materials consist of two categories: bedrock and surficial materials.

Bedrock – Essex is underlain by a variety of rock types, but these are dominated by a mixture of lightly metamorphosed rocks originally sedimentary in nature (Refer to Map 15, *Bedrock Geology*). Principal among them are quartzite, slate, schist, dolomite and limestone marble. The rocks date from the Early Cambrian to the Early Ordovician eras. In approximately the eastern two-thirds of the Town, the rocks are of the Underhill Formation, primarily schist and slates. To the west (roughly west of VT Route 2A) the rocks are dolomite and limestone.

Metamorphic rock is, as a general rule, hard and stable. According to the Vermont State Geological Survey, there are no known mineral deposits in Essex, but the rock, sand, and gravel are all capable of being mined/quarried. Thus, the Town should plan for and be better prepared to regulate such activity.

The only noteworthy feature regarding bedrock in Essex is the existence of two thrust faults running southeast to northwest through the southwestern quadrant of Town, near Lost Nation and Colchester Roads. There is no recorded mention of movement along these faults so seismic danger is minimal. Below the fault, however, is a deep layer of very porous carbonate which allows ready movement of water and facilitates the aquifer recharge process. At present, this porous layer of carbonate is protected by the upper impervious plate and/or a substantial layer of surficial material.

Surficial Materials – In much of Essex, bedrock is buried by unconsolidated materials directly or indirectly related to the Ice Age glacier. In the uplands, generally above 500-600 feet in elevation, glacial till predominates; whereas below this level there are extensive areas of sand and gravel formed in ancient lakes in the area. In many places, the sands and gravel are underlain by clays and/or till. Gravel deposits are located in some places at the 500-600 foot level, generally at the base of hills. According to a map prepared in 1961 by the Vermont Department of Highways, noteworthy sand and gravel deposits in the Town of Essex include:

1. Northern part of Osgood Hill Road
2. Weed Road and Sleepy Hollow Road
3. Intersection of Brigham Hill Road and Brigham Hill Lane
4. Northern part of Alder Brook
5. Intersection of Lamore and Lost Nation Roads
6. VT Route 2A corridor south
7. Southeastern quadrant of the Town of Essex

It should be noted that some of these deposits are located in environmentally sensitive areas.

9.3 Soils

All soils in the Town of Essex have been mapped and typed by the U.S. Department of Agriculture Natural Resources Conservation Service (formerly Soil Conservation Service). Soil types indicate the physical capability of the land to handle development and the resource production potential of the land. Unfavorable soil types for development typically contain the following properties: excessive slopes, shallow depth to bedrock, wet soils, unstable soils, and erodible soils. Map 13, *Soils*, shows where certain general soil associations predominate. The soils in association groups 8 and 9 are level, deep and well-drained and are well suited or have slight limitations for on-site septic disposal. The soil association groups 4, 5, 6, 7, 13, 14, and 15 have generally severe limitations due to the unfavorable characteristics described above which inhibit the absorption of septic effluent. This map shows only the general soils pattern for Essex. More detailed information is available from the soil survey maps and interpretations from the Natural Resource Conservation Service report.

9.4 Groundwater

Groundwater is water below the earth's surface which has come from precipitation that does not evaporate or run off the land and which infiltrates into the soil and bedrock to recharge the supply. Information about the quality and supply of groundwater is important to decisions regarding site evaluation for development. It is also critical that the Town have a means of monitoring those factors for the purpose of protection from contamination and depletion. Currently, the information available to the Town is limited and efforts should be undertaken to map those areas having high groundwater potential in order to ensure their protection.

9.5 Surface Waters

Surface waters include rivers and brooks, lakes and ponds, areas subject to flooding and wetlands. These water resources are important from a range of perspectives, including public health and safety, recreation, wildlife diversity, visual sensitivity, and environmental quality. Water resources are distributed throughout the Town, and influence the distribution and conservation of many open land resources. These areas are included on Map 16, *Water Resources*, and were considered in the Town's "Open Lands Study" prepared in 1989. Among other regulated techniques, buffers regularly should be used to help protect surface waters from undue adverse land development.

In 2008, the Essex Zoning Regulations were amended to include requirements for the protection of surface waters and wetlands. The buffer requirements are intended to retain and protect heavily vegetated areas of native species that border streams, lakes, ponds and wetlands in Essex in order to reduce impacts from flooding and stormwater run-off, to prevent soil erosion, to protect wildlife, fish habitat and ecological diversity, and maintain water quality. The buffer requirements specify that buffers along streams must be at least 50 feet in width. Shoreland buffer zones must be at least 100 feet in width, and wetland buffers zones must be at least 100 feet for Class I wetlands and 50 feet for Class II wetlands.

Rivers and Brooks – The Town of Essex is drained by three watersheds – the Winooski and Lamoille River Basins and a small area drained by Indian Brook and Sunderland Brook, which drain directly to Lake Champlain. The Browns River and Abbey Brook drain the northeast section of the Town and flow into the Lamoille River, while Alder Brook drains into the Winooski River. The

Vermont Agency of Natural Resources established a water quality classification system which specifies (1) water quality goals to be attained where actual water quality is lower than the standard or (2) the minimum standard to be maintained where actual water quality is higher. Virtually all of the waterways in Essex have been classified as Class B, suitable for drinking with filtration and disinfection; irrigation and other agricultural uses; swimming and recreation. The exceptions are two waterways classified as A2: A tributary of the Alder Brook between Founders Road and Butternut Court, and a tributary in the Pinewood area that includes the reservoir at Valley View Road[1]. The Winooski River is classified as Class B, with special Management Zones immediately below the IBM treatment plant and the Tri-Town treatment plant in Essex Junction.

Flood Hazard Areas and Floodways – A Flood Hazard Area (a.k.a. 100 year floodplain) has a one percent probability of flooding in any given year. A floodway is the channel of a river or other water course and the adjacent land area that must be reserved to discharge the 100-year floods without accumulatively increasing the water surface elevation more than one foot and is the most hazardous section of a flood hazard area. Both of these areas have been identified on the Flood Insurance Rate Maps prepared by the Federal Insurance Administration and approved in 2010. The Zoning Regulations were updated in 2010 to reflect new requirements by FEMA in the flood hazard area. These areas include the Winooski River, Alder Brook, Browns River, and Indian Brook. The Town has also established a Floodplain zone (C2) along all of the Town waterways not included in the federal mapping. The C2 zone requires a minimum setback from all stream banks and prohibits development within that setback.

9.6 Natural Heritage Element Inventory and Assessment for the Town of Essex, Vermont

In 2007 Arrowwood Environmental performed a Natural Heritage Element Inventory and Assessment in conjunction with the 2008 Essex Open Space Plan. The Inventory and Assessment is incorporated in the 2011 Town Plan by reference. It included the following tasks: 1) an inventory and mapping of critical habitat features and corridors; 2) an update of the 1991 natural communities map; 3) an update of the wetlands resource map; and 4) a remote inventory and mapping of vernal pool locations. Updates to Town Plan maps 16 and 17 have been made to reflect this work by Arrowwood Environmental.

Wetlands – Wetlands can generally be defined as areas that are inundated by surface or ground water with a frequency sufficient to support significant vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction. The U.S. Department of the Interior has prepared a National Wetlands Inventory by mapping all wetlands one acre or more in size.

The wetlands appearing in the inventory, and as updated by Arrowwood Environmental are shown on Map 16. The state has stringent Wetland Rules to determine which areas are wetlands, but they are not included on the maps at present.

There are 430 wetlands comprising 3,081 acres in the Town of Essex. The number, type, and size of the wetlands mapped in Essex are presented in Table 9-2. A total of 34 wetlands in Essex were considered either locally or state significant for either functions and values, natural communities or

[1] The Vermont Department of Environmental Conservation has proposed that this waterway be reclassified to Class B, but that proposal has not yet been approved.

both of these functions. These wetlands are contained within the wetland complexes summarized in Table 9-3. The Natural Heritage Elemental Inventory and Assessment recommends management objectives for each of the Town's significant wetland communities which should be incorporated into the Zoning and Subdivision regulations.

Table 9-2
WETLAND COMMUNITIES MAPPED IN ESSEX

Community Type	Number of Sites	Average Acreage	Total Acreage
Agricultural Field	38	26.0	989.7
Alder Swamp	40	7.4	294.9
Beaver Wetland	26	5.0	129.9
Cattail Marsh	8	3.1	24.6
Deep Broadleaf Marsh	2	5.2	10.3
Floodplain Forest	17	8.6	145.5
Hemlock Swamp	1	2.5	2.5
Northern Hardwood Seepage Forest	9	2.6	23.7
Old Field	38	7.0	266.4
Open Water	13	3.1	40.4
Pond	80	0.4	35.1
Red Maple-Black Ash Swamp	23	14.3	329.6
Red Spruce-Hardwood Swamp	5	29.3	146.6
Seep	2	0.6	1.1
Shallow Emergent Marsh	123	4.8	591.5
Spruce-Fir-Tamarack Swamp	5	9.9	49.7
Total	**430**	**--**	**3081**

Source: Natural Heritage Element Inventory and Assessment, 2007

Vernal Pools – Vernal pools are seasonal wetlands that typically contain water during the wet spring months but become dry as the summer progresses. These isolated wetlands typically occur under a forest canopy, lack fish and provide habitat to a wide variety of wildlife. A total of 19 vernal pools were identified during the remote inventory and field work. Most of them are located east of Indian Brook or scattered throughout the forests in the northeast corner of Town.

Arrowwood Environmental suggested specific buffer zones and management recommendations for the vernal pools mapped in the fields. Regulations including these buffer zones should be adopted by the Town.

Table 9-3 NATURAL COMMUNITIES PRESENT IN THE WETLAND MAPPING UNITS	
Alder Swamp	Alder Swamp* Alluvial Shrub Swamp
Red Maple-Black Ash Swamp	Red Maple-Black Ash Seepage Swamp Calcareous Red Maple-Tamarack Swamp Red Maple-Acidic Basin Swamp* Red Maple-Red Spruce Swamp
Beaver Wetland	Shallow Emergent Marsh* Alder Swamp Open water beaver flooding* Deep Broadleaf Marsh
Forestplain Forest	Silver Maple-Ostrich Fern Floodplain Forest* Sugar Maple-Ostrich Fern Floodplain
Red Spruce-Hardwood Swamp	Red maple-Northern White Cedar Swam Hemlock-Hardwood Swamp Red spruce-Hardwood Swamp
Source: Natural Heritage Element Inventory and Assessment, 2007 * Indicates that most common community found within the mapping unit	

9.7 Agricultural Lands

The decline in farm activity both in Essex and in Chittenden County was described in previous Essex Town Plans. Certainly, the number of traditional dairy farms serving as the landowner's primary source of income decreased. Yet farming activities remain visible in Essex, and the variety of activities likely has increased.

Table 9-2 documents the continued presence of farming in Essex. After reaching a low of 5 farms in 1989, the number of farms participating in the Town of Essex Farm Contract Program has increased to 9. Additional agricultural parcels are not included under the Essex Farm Contract but are enrolled in the Vermont Land Use Program. In the early 1990s there were 26 farm parcels on the Town's grand list. Notably, by 2007 only seven parcels, totaling 1.312 acres were listed as "farm" parcels – and none were located in the Agricultural-Residential Zoning District, over the same period, however, the number of parcels enrolled in the Town's Farm Tax Stabilization Program increased from five in 1989 to nine in 2007. Enrolled farm acreage currently totals 2,143 acres.

Very few examples remain of dairy farms with fields, cows and barns all located on a home site in Essex. One relatively large dairy farm is in operation on Chapin Road and two or three smaller farms also are located in the Town. Several large agricultural fields in Essex are used to support dairy farms located in neighboring communities including Jericho, Williston, Westford and Fairfax.

The remaining Essex participants in either the Vermont Land Use Program or the Essex Farm Contract contain a wide variety of agricultural activities – raising beef cattle, an apple orchard, a fruit and vegetable farm, two Christmas tree farms, and a pumpkin patch. Horses, sheep and other farm animals can be found on numerous smaller parcels throughout the rural portions of Essex.

The 1989 "Essex Open Lands Study" inventoried the Town's most important open land resources. The study conducted a Land Evaluation and Site Assessment (LESA) of 53 farm parcels on the basis of the productivity of their soils and such attributes as size, character, location and current use.

Though direct comparisons are difficult, given boundary and ownership changes, of the 53 parcels identified, at least 24 (45 percent) have since been subdivided and, according to current grand list information, all but six (89 percent) have been developed or at least partially converted to other mostly residential uses. Of the 53 parcels evaluated in 1989, 20 were identified a "prime" farmland, comprising around 2,000 acres (70 percent in floodplains). As then anticipated, farmland was taken out of production for the construction of the Circumferential Highway (I-289), and for two large residential subdivisions.

The 2001 Essex Rural Lands Study addressed some of the same issues as the more comprehensive 1989 study. Recommended actions included an update of natural resource inventories which was done in conjunction with the 2007 Natural Heritage Inventory and Assessment, a survey of small farming operations, continued zoning restrictions on development in the floodplain (these restrictions were estimated to protect about 70 percent of the prime farmland identified by the 1989 Essex Open Lands Study), and expanded use of the Significant Features Resource Map in subdivision review.

By other measures, Essex still has a significant amount of land in production in the Browns River Valley and along the Winooski River. A 2000 parcel-based assessment of land use in Chittenden County, conducted by the Chittenden County Regional Planning Commission, identified more than 60 parcels in the Town that still supported some agricultural function or activity. Most of these are included in the Town's grand list as larger Residential (R2) or "miscellaneous" parcels – a listing category that includes undefined or transitional open land.

A recent University of Vermont analysis of enhanced 2001 satellite (Landstat) imagery identified approximately 4,600 acres of farmland remaining in the Town, comprising roughly 17 percent of the Town's total area.

Farmland conversion reflects, in part, ongoing changes in the local farm economy – many of which were identified in the 1989 study. By 2007, there were only two dairy farms left in the Town. On the other hand, USDA Agricultural Census data suggests that there are a growing number of smaller, more diverse farming operations in the area – such as Mazza's Vegetable Farms and the Chapin Orchard – that market and sell their products locally through direct sales, farm stands, farmers markets and Community Supported Agriculture.

9.8 Forest Lands

More than 12,500 acres in Essex are forested. The Open Lands Study prioritized and identified significant forestland as contiguous tracts of wooded land having the potential for forest management due to the productivity of the soils, the species mix, the size of the overall tract and presence of large (50+ acres) properties and managed wood lots. Property files and resource maps of the Town were reviewed by the Conservation Committee and foresters with first hand experience in the forest resources of the Town. The significant areas identified in the forestland inventory are shown on Map 17 and include the following:

1. Upper Indian Brook Valley and Brigham Hill
2. Osgood Hill
3. Bixby Hill
4. Saxon Hill
5. Lower Alder Brook Valley

The total area in Essex identified as prime forestland is approximately 8,300 acres. The above-mentioned areas were considered for commercial harvesting potential and for multiple use values (environmental and recreational). For a specific description of the forest cover type and significance, please refer to the Essex Open Lands Study. The 1989 Open Lands Study should be updated to assess the number of designated acres which no longer meet the definition of prime forestland set forth in 1989.

Upland Natural Communities – The 2007 Natural Heritage Element Inventory Analysis updated the existing data on the two upland natural communities tracked by the state Non-Game and Natural Heritage Program (NNHP). These are Sunderland Headwater woods and the Vermont Sandplain site. The Sunderland Headwater Woods is a seven acre, dry sandplain forest near the headwaters of the Sunderland Brook which as seen little disturbance. The Vermont Sandplain, comprised of pitch pine and white pine trees mixed with black and red oak, is now three acres in size, down from five acres, due to development. The 2007 Natural Heritage Element Inventory analysis suggested management recommendations for these significant upland communities which should be incorporated into the regulations.

The Town should consider setting guidelines for the harvesting of wood by individuals or commercial entities, as the cost of fossil fuels rise.

9.9 Natural and Fragile Areas

Natural and fragile areas are defined as "areas of land or water that are unusual and/or have significant plant or animal species or geological or similar features of scientific, ecological, or educational interest" (1988 Natural Areas component of the Vermont Recreation Plan). Essex has several features meeting this definition including unique forest cover types, wildlife habitats, rare plant communities and an esker. Map 17 shows these areas. Sources for this information include inventories maintained by the state, the 1973 Quality Environment Plan, the 1989 Open Lands Study, the 1989 Natural Resources Inventory, the 1986 Municipal Development Plan, the 2007 Natural Heritage Element Inventory and Assessment, and the 2008 Open Space Plan.

Chapter 7, *Parks and Recreation*, includes an inventory of significant natural areas in Essex that have long been considered worthy of protection.

9.10 Wildlife Habitat

Wildlife habitat in the Town of Essex is an ever-changing mosaic, as humans and wildlife continually adjust and readjust to each other's presence. The landscape constantly changes as active agricultural lands go fallow and as humans increasingly settle in Essex.

The Essex urban core is largely concentrated in the southern portion of Essex, which for wildlife presents highly fragmented and isolated backyard, woodlot, wetland and streamside environments marked by a strong human presence. Southern Essex is home to species of wildlife that can live in this fragmented environment where roads, houses, industries, people and their pets are found. Here white-tailed deer, red fox, skunk and raccoons can be found. The northern parts of Essex, where the landscape is dominated by forests with both broad-leaved deciduous and needle-leaved evergreen trees, provide habitat for a rich diversity of wildlife including waterfowl, herons, hawks, coyote, moose and mammals such as snakes, mink, fox, and muskrat.

The 2007 Natural Heritage Element Inventory and Analysis provides a detailed description and mapping of the Town's wildlife habitat elements, as well as a discussion of the larger Contiguous Habitat Units (CHU), which serve as the starting unit of measures and description. The management recommendations for the wildlife habitat should be incorporated into the zoning and subdivisions regulations.

9.11 Land Capability Summary

The preceding information is on various Town Plan maps, which show the capability of land areas to accommodate development based on slope (Map 14), wetlands and floodplains (Map 16) and suitability for on-site sewage disposal (Map 13).

9.12 Goals, Objectives and Strategies

Goal 9.1: Gather and regularly update information on areas that are suitable for generating renewable energy.

Goal 9.2: Update, augment and regularly maintain existing information and studies on the Town's significant natural resources, and implement the recommendations of those studies.

Objective 9.2.1: Update existing natural resources information drawing from the recommendation in the 2008 Open Space Plan.

Strategy 9.2.1.1: Prepare a Natural Resources Plan for the Town drawing from the recommendations in the 2008 Essex Open Space Plan. In addition to developing up-to-date information on significant farm and forest land use in Essex, the Natural Resource Plan should include new information on air quality, watersheds and water quality, wildlife, including aquatic species, rare and endangered species, and exotic/invasive species.

Strategy 9.2.1.2: Coordinate with the state Natural Resources Agency and the Chittenden County Regional Planning Commission to ensure the Town has the most recent natural resources mapping data.

Strategy 9.2.1.3: Refine local natural resources information, considering the natural resource values to be protected within the sewer service area, the resource values in the rural portions of the Town, and resources that are common to both areas. For example, new natural resources inventories and management plans should be developed on street trees in the sewer service areas and on forest land in the rural and undeveloped areas of the Town.

Strategy 9.2.1.4: Apply to state and federal agencies for planning and implementation loans/grants to acquire and update the Town's natural resource data.

Objective 9.2.2: As a priority task for updating natural resources information, the Town shall conduct studies to improve understanding of the existing water quality conditions in the Town and propose recommendations for improving the Town's water quality management.

Strategy 9.2.2.1: The Community Development Office in conjunction with the Department of Public Works and the Conservation Committee should initiate water quality improvement studies in the Town. The Town will coordinate with the appropriate

state/regional agencies and any university departments. This work shall be coordinated with implementation of the Town's Stormwater Management Plan for improving the quality of impaired waterways.

Strategy 9.2.2.2: Collect baseline data on the water quality of the major water bodies in Essex.

Strategy 9.2.2.3: Prepare a GIS-based watershed map of the Town and perform an analysis of the watersheds to better understand how existing and proposed land uses will affect water quality, including information on the percentage of impervious surfaces in each watershed.

Objective 9.2.3: The Town shall regularly consolidate its natural, renewable, and cultural resource data in an updated Significant Features Map and shall use the map to guide the design and review of public and private projects.

Strategy 9.2.3.1: Continue to use the Significant Features Map in the review of subdivisions and site plans to identify important natural and cultural features to be protected.

Strategy 9.2.3.2: Adopt development review standards to assist applicants in reducing the impact of new development on the Town's significant features, including renewable energy resources, scenic resources, water quality, and air quality, and incorporate the guidelines into the zoning and subdivision regulations.

Strategy 9.2.3.3: The Town shall consider any impacts on significant features in its capital facilities planning and preparation of future plans or zoning district changes.

Strategy 9.2.3.4: The Planning Commission shall review and recommend changes to the Significant Features Map.

Objective 9.2.4: Undertake a study to establish air quality goals/objectives for the Town and explore the implementation of simple methods of air quality improvement such as eliminating idling vehicles at schools, improving traffic signal timing, etc.

Goal 9.3: Engage townspeople in protecting natural resources and encourage the management of open lands for farming, forestry, recreation and conservation.

Objective 9.3.1: Establish a land preservation program to help ensure that critical natural and scenic resources are preserved for future generations and that sufficient open lands are preserved to meet the active and passive recreation needs of the community.

Strategy 9.3.1.1: Establish a land acquisition and preservation program.

Strategy 9.3.1.2: Raise funds and implement a land preservation program, addressing the following issues:

- Establishing a land preservation fund through the property tax mechanisms;
- Potential for establishing a land trust in Essex or with neighboring towns;
- Amending assessment practices and broadening tax stabilization provisions for owners of open lands;
- Acquiring easements for conservation and trail rights-of-way;
- Studying transfer of development rights as well as programs granting developers incentives for preserving land outside the sewer core; and

- Reviewing Town policies for any adverse, indirect effects on open land protection.

Strategy 9.3.1.3: Identify priority locations for land preservation based on the goals and objectives of this Town Plan. Priorities should include sites with large contiguous acreage, lands adjacent to already conserved land, renewable energy resources, watersheds/waterways, especially floodplains, and contiguous corridors for recreation and wildlife.

Strategy 9.3.1.4: Pursue the purchase of lands or development rights immediately outside the sewer core where the land has potential to meet the Town's active and passive recreational needs, and where the establishment of recreational facilities will help to create a green-belt around the developed portions of the Town.

Strategy 9.3.1.5: Prepare a plan for managing acquired lands, including funding, for every acquisition proposal.

Strategy 9.3.1.6: Promote public awareness of recreation/conservation resources in the Town that are underutilized. If necessary, improve access with parking and signage.

Objective 9.3.2: Provide townspeople with information about environmentally sound management of land and ways individuals can assist in protecting natural resources.

Strategy 9.3.2.1: Obtain brochures, videos, and books prepared by the Vermont Agency of Natural Resources and other state and non-profit organizations addressing actions people can take to improve the environment and make the information readily available at the library and Town offices. Topics of information could include forest management, the current use program, barn restoration programs, landscaping for wildlife habitat, household chemical disposal, and responsible trail use, etc. Information on up-coming events, staff and committee member contacts and ways to volunteer, should also be provided.

Strategy 9.3.2.2: Work with the Community Development Department staff to develop an information packet that can be given to new homeowners or people applying for a zoning permit, septic permit or through water bills and other points of contact with the Town, addressing natural resource issues pertinent to their project.

Strategy 9.3.2.3: Develop a hand-out for rural landowners informing them of local and regional professional resources available for assisting them in managing their land, including but not limited to: the County Forester, the Vermont Land Trust, the Chittenden County Conservation District, etc.

Strategy 9.3.2.4: Write a conservation column for the local newspaper addressing conservation issues and/or a quarterly newsletter addressing current conservation issues.

Strategy 9.3.2.5: Create a conservation link on the Town websiteand use it to present the best of the information collected under the strategies above. Additionally, all digital data pertaining to land use and natural resources shall be made available to the public in a user-friendly format on the Town of Essex website. Data shall meet the compliance criteria set forth by the ADA.

Strategy 9.3.2.6: Solicit residents for ad-hoc committees to work on issues/problems identified by the Selectboard, Planning Commission or Conservation Committee.

Committees should be formed not only when revising the Town Plan but also at times when significant natural resource issues face the Town.

Strategy 9.3.2.7: Encourage partnerships between volunteer groups and the Town to promote and organize the maintenance of trails and conservation areas.

Objective 9.3.3: Model environmentally sound practices for the community.

Strategy 9.3.3.1: Perform an environmental audit to identify local government practices that can be improved to reduce environmental impacts and long-term costs.

Strategy 9.3.3.2: Establish a policy for purchasing recycled paper products to join state and federal agencies working to create a stable market for recycled products.

Strategy 9.3.3.3: Examine Town road maintenance practices and implement any necessary changes to ensure that water quality impacts from road maintenance are minimized.

Goal 9.4: Increase access to and opportunities for public enjoyment of the Town's natural resources while respecting the rights and concerns of private property owners.

Objective 9.4.1: Increase the Town's efforts to educate the public about the benefits of trail systems and the responsibilities of trail users.

Strategy 9.4.1.1: Publish results of trail inventories produced by the Trails Committee and make the trails information available to townspeople. Include information about trail etiquette, in regards to protecting the environment and showing respect for public and private property and schools.

Strategy 9.4.1.2: Work with local trails, environmental and recreational organizations to lead guided walks, horseback or snowmobile trips, etc. and to organize trail maintenance days.

Strategy 9.4.1.3: Develop the Town trail system in a way that connects one trail to another, creating a seamless system through town. Both urban and rural types of trails should be provided and should respect residents' desires to have both motorized and non-motorized access to the Town's natural resources.

Objective 9.4.2: Assist landowners in understanding their rights, protections and obligations in regards to public access and preservation of natural resources, and encourage private landowners to keep land open and accessible to the public.

Strategy 9.4.2.1: Use all the outreach and education methods discussed above to instill in the general public an appreciation for the public access (including views) to land that many private landowners provide for public enjoyment, along with their responsibilities while using this access.

Strategy 9.4.2.2: Provide workshops and other opportunities for landowners to learn about and discuss natural resource protection, farm and forest management, renewable energy generation, public access, land preservation, estate planning, etc. Work with experts from local environmental organizations, land trusts, etc. on developing the workshops.

Strategy 9.4.2.3: Ensure that landowners who host trails used by the public are recognized by the Town and have their private property concerns (e.g. maintenance, liability and vandalism) addressed. The Town should seek ways to support the landowners in keeping the trails open to the public.

Goal 9.5: Create specific development review standards that will allow appropriate development to occur while protecting the Town's significant resources.

Objective 9.5.1: Continue the use of zoning, subdivision and health regulations to restrict development in unsuitable areas.

Strategy 9.5.1.1: Restrict or prohibit development on slopes greater than 15 percent and those areas affected by seasonal flooding or unstable soils.

Strategy 9.5.1.2: Carefully consider the density of development in locations with shallow soils and areas, which have a high or seasonally high water table.

Strategy 9.5.1.3: Continue to require proof, at development review hearings, that sufficient water and sewer capacity exists for development in accordance with Town and state guidelines.

Strategy 9.5.1.4: Require retention of vegetation or effective re-vegetation of areas vulnerable to erosion.

Strategy 9.5.1.5: Prohibit development in aquifer protection areas and near surface waters having the potential to introduce contaminants into the water supply.

Strategy 9.5.1.6: The Town should explore the ability of the Regional Planning Commission and/or other regional, state, and local entities to coordinate a joint public/private study to determine the location of the thrust fault lines in order to establish scientific findings regarding how those properties may be developed.

Strategy 9.5.1.7: Revise zoning bylaws to prevent visible development on ridgelines

Objective 9.5.2: Develop new stormwater treatment standards in the zoning and subdivision regulations and the Public Works specifications. Standards shall be flexible but comprehensive and designed to improve water quality in impaired waters and to minimize non-point source water pollution from new development in the Town.

Strategy 9.5.2.1: Minimize impervious areas in developments by encouraging shared parking and driveways for adjacent uses and by reducing the lengths and widths of new roads where feasible.

Strategy 9.5.2.2: Revise parking requirements to allow the use of pervious pavement, especially for peak parking needs, overflow, and special event parking.

Strategy 9.5.2.3: Increase canopy cover in areas with large amounts of impervious surface. Increase awareness of proper tree planting and maintenance methods to ensure that trees grow to maturity, where the largest benefits are derived.

Strategy 9.5.2.4: Where soil conditions allow, encourage the use of infiltration of stormwater, particularly from rooftops.

Strategy 9.5.2.5: Encourage the disconnection of roof drains from the stormwater drainage system.

Strategy 9.5.2.6: Discourage the plowing of snow into wetlands and streams.

Strategy 9.5.2.7: Encourage the use of rain barrels, as well as the capture of grey water – wastewater drained from sinks, tubs, showers, dishwashers, clothes washers, and other non-toilet sources – and promote its use by commercial and residential users alike.

Strategy 9.5.2.8: Develop and adopt stormwater management regulations that require new development and redevelopment in the Town to comply with applicable state Stormwater Management Rules. It may be appropriate to encourage higher impervious coverage ratios coupled with structural stormwater treatment measures in higher density growth area inside the sewer core.

Strategy 9.5.2.9: Encourage the use of best management practices to minimize erosion and sediment transport from construction sites and agricultural lands within the Town.

Strategy 9.5.2.10: Train Town staff and commissions to understand and apply best management practices in the development review process for water quality protection and preservation of other natural resources.

Strategy 9.5.2.11: In the C2 District, revise zoning requirements to include better consideration for conservation buffers/setbacks/easements.

Objective 9.5.3: Incorporate into the development review process recognition that natural resource values to be protected may differ inside and outside the sewer service area. Denser development is desirable within the sewer service area whereas low densities and rural patterns of development are to be preserved outside the sewer service area. Formulas for determining density should be revised according to the location of the project in the Town and the land capabilities of each individual site.

Strategy 9.5.3.1: Revise the Zoning and Subdivision Regulations to more specifically define the Town's significant resources inside and outside the sewer core. PUD requirements shall be refined to recognize the different goals of development in the urban/suburban and rural areas.

Strategy 9.5.3.2: Revise the Zoning Bylaws to allow the Town to grant density bonuses on sites inside the sewer core where development constraints are few, and to establish flexible development standards, where appropriate, for development projects that preserve significant natural resources.

Strategy 9.5.3.3: Revise the zoning and subdivision regulations to encourage flexible development standards, outside of the sewer core where significant natural resources are protected and options for rural land uses are maintained. Discourage the use of density bonuses in rural areas unless significant land preservation takes place.

Objective 9.5.4: Revise the Town's application process for development review to more clearly obtain compliance with the Town's goals for natural and cultural resource protection.

Strategy 9.5.4.1: Prepare information sheets for applicants that clearly explain the Town's natural resource protection goals and methods for mitigating the impacts of development.

Strategy 9.5.4.2: Adopt an application form for development review that requires applicants to explain how pertinent natural resource concerns will be addressed.

Strategy 9.5.4.3: Reinforce current efforts to negotiate the deeding of lands for conservation or easements to significant natural resources including the expansion of a trail network, as part of the development review process.

Strategy 9.5.4.4: Revise zoning, subdivision and public works regulations to create a system of incentives for preserving natural and cultural resources.

Strategy 9.5.4.5: Establish management plans for open space areas conserved through regulatory measures or acquisition to ensure that the natural resource values of the sites are retained.

Objective 9.5.5: Incorporate the natural resources management recommendation contained in the 2007 Natural Heritage Element Inventory and Analysis (NHEIA) into the zoning and subdivision regulations.

Strategy 9.5.5.1: Establish specific protection standards and buffer zones around vernal pools as depicted in the NHEIA.

Strategy 9.5.5.2: Conserve the significant upland communities as described in the NHEIA by developing conservation easements, purchasing development rights, and working with land owners on management plans or other proactive conservation efforts. Specific protective standards should be incorporated into the zoning and subdivision regulations.

Strategy 9.5.5.3: Incorporate into the zoning and subdivision regulations the management recommendations included in the NHEIA for the following wetlands in Essex: Browns River swamp, Lost Nation swamp, Winooski Oxbow wetlands, Saxon Hill swamp, Essex Center swamp, Westford swamp, Indian Brook wetlands, Alder Brook wetlands, and 68 Acres wetland. Specific protection standards should also be incorporated into the regulations.

Strategy 9.5.5.4: Incorporate into the zoning and subdivision regulations the management recommendations included in the NHEIA for all the Contiguous Habitat Units (CHU), including those with "core" habitat units and the smaller CHUs important to providing movement corridors. Specific protection standards should also be incorporated into the regulations.

10. AESTHETIC, HISTORIC AND CULTURAL RESOURCES

Special land use features that reflect the cultural development and character of the Town include its scenic views and vistas, scenic roads, and historic sites, buildings, and districts. The visual character of a community is of great value to its residents and helps to define for them a sense of place or identity.

10.1 Scenic Resources

A landscape which is aesthetically pleasing can only help to contribute to a better quality of life for those who live within and around this landscape. Scenic resources can include natural features only or a mixture of natural and human elements (such as houses, roads, farms, etc.). The view may be a compilation of a vast area containing different elements and textures.

The scenic resources in the Town of Essex include many of the landscape varieties, which have come to represent Vermont. A drive on any of the roads radiating from the center of the Town will put the observer in contact with active farmland, pastures, rolling hills, forests, views of distant mountains, historic buildings, rivers and streams.

The Town has had several inventories prepared on its more significant scenic resources. The "Essex Natural Resource Inventory" prepared by graduate students from the University of Vermont's Natural Resource Planning Program in 1988, the "Essex Open Lands Study" (1989), the "Quality Environment Plan" (1973), the "Town Center Master Plan" (1991), the Essex Open Space Plan (2008), incorporated herein and by reference, all provide a wealth of information. The UVM visual analysis by Karen Yacos as its primary author offers the most descriptive inventory. Yacos found that the scenic landscapes observed in Essex are the result of the following union of land types:

- Parallel north-south ridge lines running the length of Essex, divided by roadways. These form the backdrop for views from lower areas and also provide high elevations for viewing distant ridges and mid-ground expanses of farmland divided by hedgerows.
- Distant views of Mt. Mansfield, Camel's Hump, Bolton range, northern mountains and the Adirondacks.
- Large, relatively flat terrain, in the internal areas of Essex, along the Winooski River valley where views of mountains in both directions are possible. This arrangement provides long distance views which are not often available in the hillier areas of Vermont.
- Dirt roads through closer land forms (forested hills and steep slopes) provide for appealing foreground views.
- Several stream beds and flood plain areas create interesting foreground and mid-ground views, especially when close to farmland.
- Historic buildings and homesteads in rural settings or compact settlements.

- A sense of separation of the developed central part of the Town from surrounding lands and towns. This is especially evident on VT Route 15 leading to Jericho, the River Road leading to Jericho/Williston/Richmond, and roads heading north toward Westford. These are gateways to the Town, and are presently visually appealing due to little development in these areas.
- Flat terrain in the vicinity of Old Stage, Chapin, Colonel Page and Towers Roads is comprised of development, farmland, pasture, and open space surrounded by ridges and undulating wooded hill areas.

In 1997, the Selectboard established a Committee on Scenic Roads to look at the principles and guidelines for following the state's Scenic Road designation and to inventory the Town's roads to determine if a scenic road ordinance was needed, justified or recommended. The committee's report was submitted to and accepted by the Selectboard in February 1998. The committee listed six "intrinsic qualities" that potentially merit a road's special designation – natural, cultural, historical, scenic, recreational and archaeological quality. The final report included the following recommendations:

- The Selectboard should not adopt the state's scenic road designation program.
- The Town should follow a locally developed program that would ascribe a Unique Features Designation to certain Town roads in order to protect the special characteristics of the roads and the adjacent landscape.
- Designation of such roads would follow a process including petition to the Selectboard by landowners, input by the Conservation Committee and Planning Commission, and action by the Selectboard.
- Roads approved by the Selectboard would then be added to the Town's Significant Features Map, currently shown on Map 17.

The scenic resources identified in the above sources are listed in D. Most of these areas are also included on Map 18, *Scenic Resources,* which shows areas that are high priority for conservation, based on a broad analysis of the Town.

The Town's aesthetic qualities are not limited to designated scenic resources. All roads and properties can benefit from landscaping. The Planning Commission can require appropriate plantings and green space during site plan and subdivision review. The Town can include those elements in any road improvement or other public facility projects. On-going maintenance of trees and plantings also will enhance the overall scenic qualities of the Town.

In 2008, the Selectboard adopted the Essex Open Space Plan, prepared by Front Porch Planning and Design and Arrowwood Environmental LLC. This project, undertaken by the Conservation Committee and Community Development Department, contained a number of observations and recommendations with regard to Essex's aesthetic resources. These include:

- Scenic Resources are a particular category of "open space."
- The protection of scenic resources was ranked the highest priority among those participating in the planning process.
- The encroachment of development into visually sensitive areas is ongoing, with no regulatory protection mechanisms in place.

- There was strong public support among those participating in the planning process that open space should be protected from the adverse effects of future development.
- Some adverse effects include frontage development along Town roads that block scenic views and abandonment and re-growth of farm fields that have been converted to low density residential use.
- Information on the Town's scenic resources should be updated and effective GIS based development review standards should be implemented.
- The significant Features Map should be updated.
- A scenic overlay zoning district was suggested as a means to protect Essex's Scenic resources.

In response to these recommendations, the Community Development Department initiated a Scenic Roadside Protection Project in conjunction with the Town of Jericho, Smart Growth Vermont, the Chittenden County Regional Planning Commission, and the Metropolitan Planning Organization.

In the summer and fall of 2009, a photo inventory and assessment was performed by citizen volunteers along the roads identified as scenic in Map 18, *Scenic Resources*. The results of the inventory and viewscape rankings along hundreds of assessment points at 500 foot intervals along the roads were converted to GIS – based maps. The objective of the Scenic Roadside Protection Project is to create a manual with specific standards – based protection methods to be incorporated into the zoning and subdivision regulations and be used by the Planning Commission during development review.

10.2 Historic & Cultural Resources

The Vermont Division for Historic Preservation has an extensive inventory of historic resources in the Town. There are a total of 88 individual sites scattered throughout the Town, a significant portion of which are located in what the Division considered the Essex Center Historic District. Fort Ethan Allen has been established as being of national significance and all but a few of the Fort's buildings are included in the inventory. The inventory is included as Appendix D. All of the sites listed in Appendix D appear on Map 19, *Historic Buildings*.

The Vermont Planning and Development Act provides the enabling authority for the creation of a Design Control District for "any area containing structures of historical, architectural or cultural merit." The Town recognized two areas which clearly fit this description – the Essex Center/Town Common area and Fort Ethan Allen – and established design control districts for them in 1987. A report was prepared as part of the 1991 Town Plan which described the particular planning and design problems of these areas and set forth a design plan which included recommended planning and design criteria to guide future development. The report entitled "Historic Preservation and Design Control Standards for Essex Center and Fort Ethan Allen" (1986) is hereby incorporated by reference herein and should be consulted in the design or review of any project within these areas. Although the Town's Zoning Regulations also have design guidelines, they should be made more specific.

The purpose of designating certain areas within the Town of Essex as Design Control Districts was to maintain and enhance the rich cultural heritage of these areas and to eliminate or minimize substantial character alteration of the buildings. According to state statute, unless a design control

district is established for a specific area, neither the Planning Commission nor the Zoning Board of Adjustment have any jurisdiction over ensuring that the design and scale of a building is harmonious with its surroundings. Because Fort Ethan Allen and the Essex Center area are so important to the community, it was essential that some standards be established to protect them.

The Harriet Powell Museum was established in the early 1990s in the little white school building at 3 Browns River Road next to the Town Library. The Essex Community Historical Society meets regularly at the museum and is involved in researching and documenting Town history. In 2000, the Historical Society assisted in moving the 1805 Schoolhouse from its previous location on Chapin Road and restoring it at a new site on the Town Green.

Essex has many other historic structures and few tools to protect them from demolition or damage to their architectural integrity. Buildings at Butlers Corners, including the 1820 House are at risk, for example. The Town has been urged by residents and members of the Historical Society to adopt comprehensive measures to protect such structures, an effort which should be taken into consideration.

Essex also is the home of The Essex Art League, one of the largest local art groups in Vermont. The league's membership is open to any interested Vermonter.

10.3 Goals, Strategies and Objectives

Goal 10.1: Protect and maintain the scenic character of the Essex Landscape.

Objective 10.1.1: Update the Significant Features Map and use it to guide development review, land acquisitions and public facilities planning.

Strategy 10.1.1.1: Ensure that development proposed in areas identified by the Town as having scenic or cultural resources is designed to support and not detract from those resources. The Planning Commission shall develop guidelines to assist developers in protecting those resources.

Strategy 10.1.1.2: Ensure that development will not compromise prominent ridgelines, particularly in locations identified as being scenic.

Strategy 10.1.1.3: Participate in the Section 248 and 248(a) review before the Public Service Board when new telecommunications facilities in Essex are proposed. Recommend that the PSB take into consideration the standards in the zoning regulations regarding siting and co-location.

Strategy 10.1.1.4: Establish the preservation of significant scenic areas for future generations as a major component of the Town's land acquisition program.

Strategy 10.1.1.5: Ensure that all development within view from major thoroughfares is sensitive to the scenic character of Essex.

Strategy 10.1.1.6: Ensure that the scenic features as seen from the Town's roadsides are recognized and protected by the Selectboard in its road maintenance programs.

Strategy 10.1.1.7: Work with the Vermont Agency of Transportation and advocate for the construction of bridges, overpasses, rail crossings and similar highway accouterments that are the least intrusive on the traditional landscape, using alternatives that are in themselves scenic and meeting applicable engineering standards.

Objective 10.1.2: Encourage rural land uses outside the sewer core that will retain the Town's scenic and historic qualities while providing landowners with options for economic use of the land.

Strategy 10.1.2.1: When rural land is subdivided, require, to the extent possible, that viable farm and forest land be left in manageable condition by keeping the majority of land at a size that will qualify for current use tax benefits, and design lots to allow access for farming and forestry equipment and avoidance of conflicts with residences.

Strategy 10.1.2.2: Encourage alternatives to dairy farming, where it is no longer viable, to make economic use of open lands and improve the quality of life in the community. Alternatives could include agri-tourism linked to other regional tourist attractions, equestrian facilities linked to the Town trail network, and market farms linked to local farmers markets.

Goal 10.2: Use updated information on the Town's scenic resources to minimize the aesthetic impacts of development.

Objective 10.2.1: Employ the data and recommendations in the 2008 Essex Open Space Plan and the 2010 Scenic Roadscape Protection Manual to better protect scenic resources. Regulatory and non-regulatory tools to consider include creating a Scenic Overlay District with underlying review standards in the zoning and subdivision regulations, creating a land conservation fund; updating the Significant Features Map; conservation design subdivision regulations; expansion of existing incentives for permanent protection of open space; strengthen the roles of the Conservation Committee; a transfer of development program; and establishment of a local land trust.

Objective 10.2.2: Employ the data and recommendations of the 2008 Essex Open Space Plan and the 2010 Scenic Roadscape Protection Manual to better protect scenic resources. Update the inventory of significant scenic resources in Essex including historic and cultural sites and buildings.

Strategy 10.2.2.1: Review all previous designations of scenic resources such as the areas shown on the Town Plan Scenic Features Map and in the scenic roads study and amend the Scenic Resource Area on the Significant Features Map to reflect changing land uses and public attitudes.

Strategy 10.2.2.2: Perform a study of the scenic resources along the Circumferential Highway including an analysis of the scenic views, existing development and landforms at the highway intersections. Create a map showing the scenic areas along the highway and development guidelines for reducing impacts on the scenic resources.

Goal 10.3: Improve the aesthetic quality of the Essex landscape and increase residents' enjoyment of their surroundings. Landscape improvements are especially important along high-profile streets and in public spaces, and are as important for their winter contributions as for their summer presence.

Objective 10.3.1: Improve the quality of public trees and landscaping in Essex Town.

Strategy 10.3.1.1: Update and maintain the Tree Inventory and Management Plan for trees within Town rights-of-way, in parks, and on Town property. This inventory is a crucial step in prioritizing tree maintenance needs, and is an important step toward improving the health and appearance of existing public trees. The tree inventory should also include a five-year plan that identifies strategies for planting and maintaining public trees (e.g. applying for grants, organizing volunteers, etc.)

Strategy 10.3.1.2: Adopt a local tree ordinance prohibiting planting large trees under utility wires and encouraging proper tree selection, planting and maintenance methods.

Strategy 10.3.1.3: Involve residents in public tree care by organizing and training "citizen pruners" to supplement the efforts of regular Town maintenance employees and contractors.

Objective 10.3.2: Increase the number of public trees in Essex Town.

Strategy 10.3.2.1: Develop a Tree Planting Plan to direct future tree selection and placement. Identify vacant tree planting sites within Town rights-of-way, in parks, and on Town property, and then develop a five-year plan that facilitates the acquisition of appropriate trees for these vacant sites. Resources such as the Essex Tree Warden and staff from the Urban and Community Forestry Program (a joint venture by VT Department of Forests, Parks, and Recreation and UVM Extension) are helpful for their insights and expertise.

Objective 10.3.3: Improve the quality of non-tree landscape plantings in parks and public spaces.

Strategy 10.3.3.1: Hold regular training seminars for park and public works maintenance staff.

Strategy 10.3.3.2: Increase use of flowering plant material (annuals) in highly visible island beds and in containers around public parks and Essex Town offices.

Objective 10.3.4: Facilitate improved resident involvement in landscape care and planning.

Strategy 10.3.4.1: Stimulate private planting of trees and shrubs by Essex residents through education, such as programs offered by the UVM Extension Service.

Strategy 10.3.4.2: Allow groups of residents, businesses, school or nonprofit groups to "Adopt a Planting Bed" and agree to plant and maintain a landscaped public area under the supervision of a knowledgeable individual.

Strategy 10.3.4.3: Consider forming an Essex Tree Board to help organize and carry out public tree-related projects in the community.

Strategy 10.3.4.4: Consider setting guidelines for the harvesting of wood from Town forestlands by individuals or commercial entities, as the cost of fossil fuels rises.

Goal 10.4: Enhance the historic character of Essex Center by preserving historic properties and improving the livability and vitality of Essex Center.

Objective 10.4.1: Develop and adopt amendments to the Design Control Overlay District regulations that will work effectively and equitably to accomplish the enhancement of Essex Center.

Strategy 10.4.1.1: Revise the Zoning Regulations to discourage new highway-oriented commercial uses and other uses that may be out of character with the intent of the Design Control Overlay District.

Strategy 10.4.1.2: Expand the Design Control Overlay District boundaries to include properties recommended in the Town Center Master Plan, and including other areas of Town as determined by the Planning Commission and the Selectboard.

Strategy 10.4.1.3: Amend zoning bylaws to better preserve historic structures.

Objective 10.4.2: Seek funding for public improvements to implement the recommendations of the Town Center Master Plan for Essex Center and to attract private investment for restoring historic properties.

Strategy 10.4.2.1: Update the 1991 Town Center Master Plan to include an examination of densities, use, and design control, as well as funding mechanisms to complete needed infrastructure improvements.

Strategy 10.4.2.2: Place improvements recommended in the Town Center Master Plan for Essex Center such as sidewalk connections, street trees and the Town Green in the capital budget and actively seek local, state and federal funding to implement the improvements.

Strategy 10.4.2.3: Encourage the formation of a volunteer Essex Center enhancement organization that can seek funding for public improvements independently or in partnership with the Town, to help owners of historic properties find suitable tenants and maintain the historic integrity of the structures, and to promote neighborhood activities.

Strategy 10.4.2.4: In recognition of the fact that design control elements and historic preservation may add costs to a project in the Design Control Districts, the Town should work with developers to mitigate those additional costs, to the extent reasonable, by actively pursuing local, state and federal funding options.

Objective 10.4.3: Encourage Town property to use sculpture and statuary as part of the environment.

Goal 10.5: Promote historic preservation and promote development that enhances historic resources of the Town.

Objective 10.5.1: Update and verify the listing of historic resources currently shown in Appendix D.

Strategy 10.5.1.1: Establish a set of specific criteria to be used when adding sites to the list in Appendix D. Ultimately the list should include all sites on the state inventory, all sites on the Federal Register, and all sites determined to be of historic interest by the Historical Society.

Strategy 10.5.1.2: Establish a threshold age, typically 50 years, for initial consideration of historical interest. Once that threshold is met, the other criteria should be examined. Note that not all 50-year-old structures should be found to be of historic interest.

Strategy 10.5.1.3: Periodically publish the list of historic structures and any proposed additions/deletions from it.

Objective 10.5.2: Require exterior modification to historically and/or architecturally significant buildings and structures to be sensitive to and respect the architectural integrity of the building or structure.

Strategy 10.5.2.1: With assistance from the Historical Society, provide to owners of historic properties information on historically-sensitive restoration including a list of public and private historic preservation experts who can provide detailed advice on restoration or construction projects.

Strategy 10.5.2.2: Before issuance of a zoning permit for the alteration of an historic property, require the owner to obtain the advice of a historic preservationist regarding the special elements of a building and recommended preservation measures. This shall also be required for any proposal for site plan review or conditional use review affecting an historic building or structure. If preservation of the historic features is not possible, the applicant shall, at a minimum, have an approved historic preservationist document the special elements that will be disturbed or removed.

Objective 10.5.3: Develop better methods to ensure protection and preservation of historically and/or architecturally significant structures/sites.

Strategy 10.5.3.1: Regularly update and maintain an inventory of historically and/or architecturally significant structures/sites.

Strategy 10.5.3.2: Record in the Essex land records, by respective deed, acknowledging information that a parcel contains an historically and/or architecturally significant structure/site.

Strategy 10.5.3.3: Appoint a Town-recognized Historical Committee that would collaborate with the Essex Historical Society, provide recommendations to the Planning Commission and the Zoning Board of Adjustment on land development matters especially in the Business Design Control Overlay District, create and maintain the Town's inventory of historically and/or architecturally significant structures/sites, and other tasks determined by the Selectboard.

Strategy 10.5.3.4: Amend zoning bylaws to expand on the requirement for approval from the Planning Commission and create specific criteria for proposed structural demolition.

11. LAND USE AND DEVELOPMENT

The previous chapters of this plan provided critical information for deciding the amount, location, type and rate of development that should occur in the Town of Essex in the future. This Land Use and Development section takes into account the opportunities and constraints outlined previously and sets forth where and how Essex might grow.

11.1 Existing Conditions

According to the 2008 Essex Open Space Plan, incorporated herein by reference, since 1990, the majority of the Town's population growth (91 percent) and housing development (85 percent) has occurred outside the Village of Essex Junction. During the 1990s the Town's population outside the Village increased, on average, by 86 new residents per year, while the number of new housing units increased by 73 per year.

The majority (68 percent) of new housing permitted in the Town since 2000 is townhouses and condominiums located in the sewer service area. Permit data indicates that since 2000 an additional 385 housing units have been approved outside the Village- including 260 condominium and townhouses within the sewer core. The amount of higher density housing being developed in this area reflects residential phasing requirement that target the sewer core for 80 percent of new housing; and also suggested that this area is now largely built out. The shift toward higher density multi-family housing also reflects increased market demand for smaller, more affordable units to serve both new households and an aging population – including more housing options for empty nesters and seniors.

Zoning regulations confine most new commercial and industrial development outside the Village of Essex Junction to planned growth areas served by municipal infrastructure. These include Essex Town Center – long planned for higher density by mixed residential and commercial development, and the Saxon Hill Industrial Park areas (RPD-I District) which are zoned and managed for both industrial development and open space protection.

The Town's ongoing efforts to manage growth – its plans, policies, land use regulations, allocation ordinances, and investments in public land and infrastructure – have well served both the community, and the Town's remaining open land.

The trends in land use development, however, have resulted in the following impacts:

- The continued subdivisions or "parcelization" of open land which results in increasingly fragmented land ownership, management and use.
- The conversion and abandonment of farm and forest land to other use – mostly large lot residential development.
- The ongoing encroachment of development into environmentally and visually sensitive areas.
- For these reasons, it is important for the Town to carefully evaluate all planning areas to determine if current goals and objectives align with where Essex desires to see its residential,

commercial, and industrial growth for years to come. Discussions may take into consideration planned growth, economic development, preservation of open space and scenic corridors, preservation of prime agricultural lands and the general rural character of much of Essex.

The Town of Essex remains largely underdeveloped if measured only by land cover. A University of Vermont analysis of 2001 satellite data shows that roughly 52 percent of the Town is forested, 17 percent is in agriculture and 25 percent is developed at visible "urban" densities of development, as seen in Figure 11-1. A comparison of these data to the 1992 data however, suggests that during this period the Town has lost an average of 72 acres of forestland to development each year, as seen in Figure 11-2.

Figure 11-1
Essex Land Use/Cover 2001
Source: Natural Heritage Element Inventory and Assessment, 2007

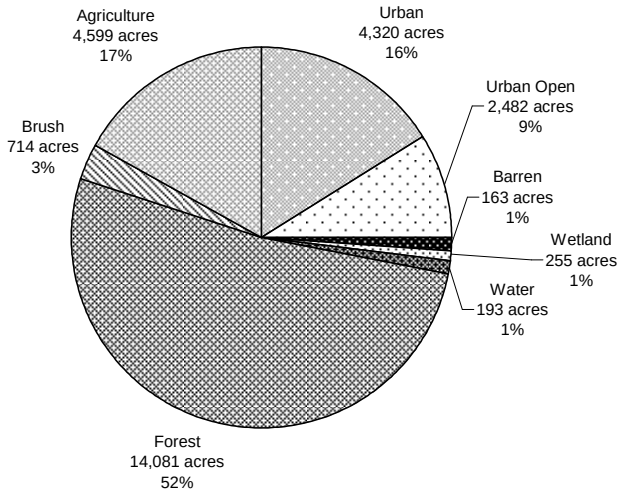
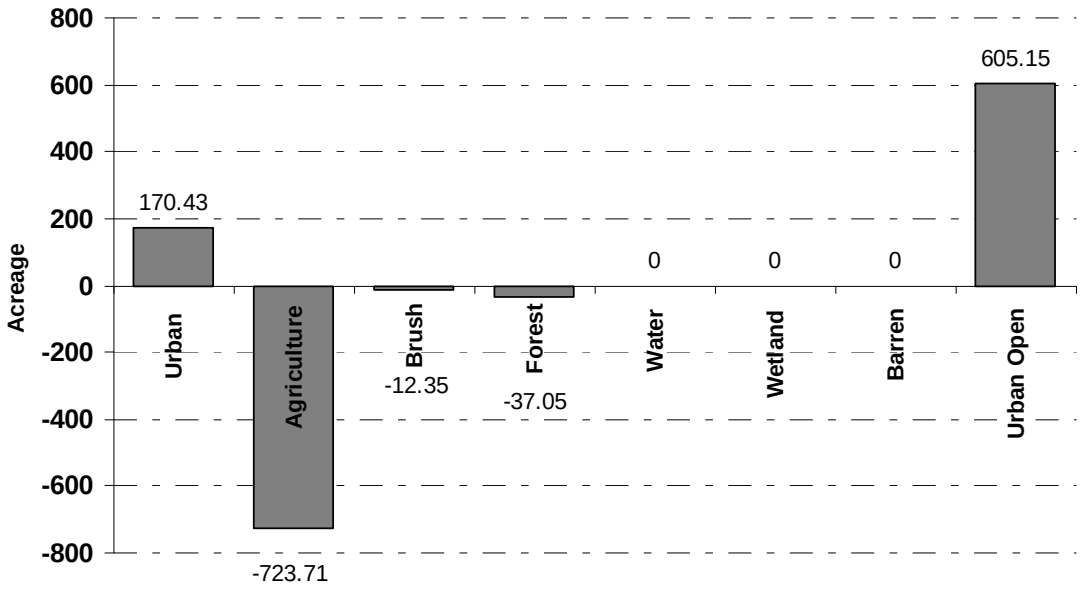


Figure 11-2
CHANGE IN LAND USE/COVER
1992-2001



Source: Natural Heritage Element Inventory and Assessment, 2007

Table 11-1 helps illustrate the changes, which have occurred in the Town's land use. Analysis of the parcels making up the Town's Grand List shows that land devoted to all residential housing in proportion to total land area in the Town was about 57 percent in 2009. Comparing this figure with previous Town Plans shows a 12 percent growth in the total area of land used for all residential housing from 1977 to 1990, 16 percent growth from 1990 to 2000, and an additional eight percent from 2000-2009.

Map 21, *Existing Land Use,* depicts the generalized pattern of land uses in the Town. Noteworthy features include the large portion of the Town that is forested, the significant corridor of agricultural lands east of Old Stage Road and another between River Road and the Winooski River, and the concentration of residential, commercial, and industrial development in the southern portion of the Town (outside of the Village). This latter observation is reinforced when the dense patterns of the Village are considered.

The rate of growth in commercial acreage was high with 173 percent growth from 1977 to 1990; 48 percent growth from 1990 to 2000; and an additional 21 percent from 2000 to 2009. Industrial acreage grew by 81 percent from 1977 to 1990; by a much lower 17 percent from 1990 to 2000, but grew by an additional 50 percent from 2000 to 2009. In 1977, less than one percent of the Town's land was allocated to each of the commercial and industrial land use categories. That share rose in 2009 to five percent for commercial uses and rose to 1.7 percent for industrial uses.

Table 11-1
EXISTING LAND USE IN THE TOWN OF ESSEX OUTSIDE THE VILLAGE

	1977			1990			2000			2009		
	Units	Acres	% Total Land	Units	Acres	% Total Land	Units	Acres	% Total Land	Parcels	Acres	% Total Land
Residential	1858	8172	36.8	2718	9190	41.5	3633	10694	48.3	3703	11584	56.9
Commercial	38	NA	0.9	340	544	2.5	346	807	3.6	194	1024	5.0
Industrial	5	85	0.4	14	153	0.7	17	179	0.8	16	361	1.7

Source: Town of Essex Community Development Office, Grand List

The expanding use of land for housing and business growth has been at the expense of open space: multi-acre holdings of residential land, farm land, and wooded countryside. In 1977, 5,270 acres (24 percent of the land supply) was shown to have been in farm use. That acreage was significantly reduced by 2009.

It should be emphasized that the results from this summary of land use are most valuable when viewed in terms of the relative changes that are exhibited: general shifts in the use of residential land from one density to another, and categories of growth or loss. Actual numbers should be used with care and discretion as methods and the precision of recording the information have varied from one collection period to another.

Because of variations in the methods of recording information and in the actual definition of other types of land use (and non-use) over this time period, it would not be valid to make comparisons in the other categories of land use.

11.2 Description of Planning Areas

In looking at the diversity and extensive land area that make up Essex, the Planning Commission has divided the Town into distinct planning areas – Fort Ethan Allen, Essex West, Neighborhood Growth Centers, Saxon Hill, the Highlands, the Lowlands, the Winooski River Corridor and the Town Center area, made up of several sub-areas known as Butlers Corners/Lang Farm and Essex Center. Map 20, *Planning Areas and Neighborhoods*, depicts each of these areas. This approach provides a location-specific means for addressing the unique set of circumstances found in the different regions of Essex. The following lays out a specific vision for each of these planning areas by identifying goals and objectives for accomplishing the vision.

Fort Ethan Allen

Fort Ethan Allen is an historic complex of buildings providing industrial, institutional and residential uses in a unique setting on VT Route 15. In 1987, the Town designated this area as a design control district to enhance the rich cultural heritage of the Fort and to minimize the threat of demolition or substantial character alterations of the many historic structures within the area. The large open area in front of Officers' Row is known as the Parade Grounds and is zoned for recreational uses only. The Parade Grounds, located both in Essex and Colchester, have significant recreational and

aesthetic value not only for the two towns, but for the entire region. They are integral to maintaining an aesthetically pleasing gateway to the Town and for providing an essential visual break in the built-up areas along VT Route 15.

The Fort property is under the ownership of the University of Vermont, St. Michael's College and private land holders. It also lies within the towns of Essex and Colchester. The proximity of the Circumferential Highway and other major commuter routes will make this area especially attractive for increased development. Planning efforts should recognize the Fort in its entirety in order to coordinate future development.

Goal 11.1: Preservation of the historic, cultural, and visual qualities of Fort Ethan Allen.

Objective 11.1.1: Retain designation as a historic district of local, state and national significance.

Objective 11.1.2: Expand Design Control District to encompass the entire Fort area to preserve existing buildings and ensure architectural compatibility of renovations, alterations, and new construction. Although individual sections of the Fort have distinct uses, zoning and design controls should treat the entire area as one cohesive unit.

Objective 11.1.3: Maintain the Parade Grounds as open space, as affirmed by the 2008 Essex Open Space Plan.

Goal 11.2: Coordinate planning of the Fort with the Town of Colchester to ensure it develops as a cohesive neighborhood.

Objective 11.2.1: Implement the "Fort Ethan Allen Master Plan Study", 1988.

Objective 11.2.2: Ensure that Essex and Colchester zoning provisions are mutually compatible.

Goal 11.3: Encourage economic growth and diversity of uses within the Fort.

Objective 11.3.1: Provide infrastructure to foster economic development.

Objective 11.3.2: Modify zoning to allow more commercial and industrial uses in appropriate locations.

Objective 11.3.3: Improve pedestrian traffic patterns via links from the Fort to Susie Wilson Road and Kellogg Road. Evaluate options, which may include a pedestrian bridge connection to the westerly end of the abutting shopping center.

Essex West

The Essex West area is bounded by Fort Ethan Allen to the south, the Town of Colchester on the west, Gentes Road and the Tree Farm soccer facility to the north and the Village of Essex Junction on the east. Although it is somewhat isolated from the rest of the Town outside the Village, this area is almost a self-contained community with its diversity of uses, a mix of housing opportunities and direct access to major transportation routes.

Essex West currently contains five different zoning districts including an Industrial Zone, a Retail Business Zone, a Medium Density Residential Zone, a Mixed Use Development Zone and an Open Recreation district which includes the Tree Farm soccer facility, now owned by the Town. It also provides several gateways to the community from VT Route 15, VT Route 2A, Kellogg Road, and the Circumferential Highway.

With construction of only the Essex portion of the Circumferential Highway, this area has experienced a significant increase in development pressure. Susie Wilson Road has become one of the primary commuter routes in Chittenden County because it provides a direct connection to the

Highway from VT Route 15. A report was prepared for the Town by Lamoureux and Dickinson, Consulting Engineers, in May 2000 entitled "Susie Wilson Road, Capacity and Access Management Study". The report recommends that the Town consider such measures as general access management standards, specific driveway relocation or consolidation, removal of certain high traffic generating uses from the list or permitted uses, development of performance standards to limit traffic generation, and encouragement of demand management incentives. A follow-up "scoping report" is pending that will specifically identify work elements to address existing and anticipated traffic issues. In 2004 the Selectboard received a report from the Susie Wilson Road Study Committee, which recommended zoning changes to allow higher densities, mixed uses, and additional lot coverage.

Goal 11.4: Encourage the development of the Essex West area as a subregional growth center which will provide greater employment opportunities, broaden the tax base, increase retail and personal services and provide a diversity of housing opportunities.

Objective 11.4.1: Evaluate vacant land in the area for use as potential affordable housing sites.

Objective 11.4.2: Encourage a variety of housing types that will benefit from proximity to employment opportunities, shopping, and transportation infrastructure including bus routes.

Strategy 11.4.2.1: Specific Zoning Recommendations: Change zoning for existing non-residential districts that are appropriate for residential use – the I1 district northeast of VT Route 2A and the Circumferential Highway. The area east of the rail line should be Agriculture-Residential. The area west of the rail line should be Mixed Use.

Objective 11.4.3: Maintain transition zones and buffer strips to prevent encroachment of commercial/industrial uses into residential districts.

Goal 11.5: Plan for the expansion of needed facilities and services to support this area's potential for future growth.

Objective 11.5.1: Implement appropriate measures from the Susie Wilson Road, Capacity and Access Management Study and subsequent recommendations of the follow-up scoping analysis.

Objective 11.5.2: Upgrade deficient bridges and railroad crossings on Old Colchester Road and Gentes Road.

Objective 11.5.3: Facilitate the extension of municipal water along the length of VT Route 2A to the Town line.

Objective 11.5.4: Facilitate the provision of municipal sewer to the Painesville Manor area.

Objective 11.5.5: Work toward providing pedestrian and vehicular links to the Village in the Pinecrest Drive area.

Objective 11.5.6: Complete construction of sidewalks along Susie Wilson Road, Kellogg Road and Pinecrest Drive.

Goal 11.6: Ensure a well integrated, aesthetically pleasing mix of uses.

Objective 11.6.1: Revise Zoning Bylaws to ensure that development along VT Route 2A, VT Route 15 and Kellogg Road is subject to landscape and site design review criteria to create a unified treatment of existing and future development. These areas function as gateways to the community and their appearance is extremely important.

Objective 11.6.2: Restrict access to the arterials and major collectors to ensure safe, functional and efficient travel.

Objective 11.6.3: Re-evaluate the setback and landscaping requirements for the Mixed Use Development District along the Pinecrest Drive area to ensure that as sites are developed for non-residential purposes, they are compatible with the existing residential uses.

Goal 11.7: Protect and enhance existing natural features.

Objective 11.7.1: In accordance with recommendations in the 2008 Essex Open Space Plan, establish a trail network and green belt along Sunderland and Indian Brooks with connections provided adjacent to residential developments. Any trail system development occurring along these stream banks must be done sensitively given the fragile nature of these areas.

Objective 11.7.2: Establish a conservation/buffer zone on either side of Indian and Sunderland Brooks.

Neighborhood Growth Centers

The areas immediately adjacent to River Road, Sand Hill Road, VT Route 15 and the Village/Town boundary have historically been the Town's residential growth centers. Because of past policies and regulations, nearly half of all homes in Essex are located on neighborhood streets as opposed to major roads. Neighborhoods are important for creating a sense of community and therefore, future growth should be encouraged to maintain this development pattern. Town services, including schools, adequate streets, sidewalks, sewer, water and recreation facilities should be provided where needed to support these land uses.

The neighborhood growth centers are located within the Town's sewer service area. As undeveloped land inside the sewer boundary becomes scarcer, additional development or redevelopment can be considered in neighborhood growth centers. However, any such development should not be allowed to alter the essential character of the existing neighborhood.

Goal 11.8: Promote a human dimension to development that will enhance a sense of community.

Objective 11.8.1: In accordance with the 2008 Essex Open Space Plan, encourage provisions for greenbelts, open space and recreational amenities within new residential developments.

Objective 11.8.2: Encourage vehicular and trail connections between old and new development, but take into account impacts on the character of the neighborhoods.

Objective 11.8.3: Encourage affordable housing to allow for a wider income mix of residents within Essex.

Objective 11.8.4: Evaluate residential street improvements to determine if they meet neighborhood goals, traffic safety and functional classification requirements.

Objective 11.8.5: Enlist the assistance of residents in public safety programs (Neighborhood Watch, McGruff House) and in maintenance of neighborhood parks.

Goal 11.9: Encourage innovative neighborhood concepts.

Objective 11.9.1: Provide flexibility within the zoning and subdivision regulations to allow consideration of concepts such as, but not limited to:

a. Zero lot line development;

b. Congregate and group housing;

c. Higher densities for multi-family dwellings;

d. Vertical construction through increased height allowances tied to increased setbacks;

e. Expanded use of accessory apartments.

Objective 11.9.2: Evaluate zoning and subdivision regulations to allow density bonuses in order to promote and encourage development within neighborhood growth centers.

Objective 11.9.3: Promote Planned Unit Developments – Residential (PRD-Rs) as a means of providing affordable housing through decreased infrastructure costs, open space, and green belts within developments.

Goal 11.10: Encourage development within existing neighborhood growth centers to ensure the efficient provision of municipal services.

Objective 11.10.1: Through the subdivision process, provide for interconnections between adjoining neighborhoods.

Objective 11.10.2: Continue to require two or more points of ingress/egress for large developments.

Objective 11.10.3: Encourage access for new development that connects directly to major streets without causing increased traffic on existing minor residential streets.

Objective 11.10.4: Minimize curb cuts on major collector roads.

Objective 11.10.5: Encourage provisions for greenbelts, open space and recreational amenities within new residential development; encourage trail connections between old and new developments.

Saxon Hill

The Saxon Hill area has long been considered a resource to be preserved. The area consists of a forest and four ponds formerly used as a public water supply. Of educational, historical and commercial (logging) value, the Saxon Hill forest serves as a prime example of intensive forestry management and the function of forestry in reclaiming poor soils and maintaining a watershed. The recreation potential of this area has long been affirmed and is addressed to greater detail in the Parks and Recreation chapter.

In 1977, a major portion of the area was designated a Resource Preservation—Industrial District. The specific objective of the RPD-I District is to "protect…natural attributes for public enjoyment and when it is deemed economically and aesthetically feasible, to carry out economic development activities in harmony with the natural surroundings." Limited, well-planned industrial and office uses are considered a compatible use within this area for several reasons. The forest itself provides a suitable buffer for neighboring residential developments. In addition, this area offers many of the characteristics which are desirable for such uses: level terrain, well-drained soils, proximity to transportation routes and availability of utilities.

Since 1977, a number of industries have chosen to locate in Saxon Hill Forest. As this area has evolved, a number of issues about its future use and management have been raised. The Town has agreed that 60 percent of the land should be kept in open space; 25 percent can be developed for industrial uses and the remaining 15percent shall be retained for recreation/conservation use until

and unless the Planning Commission deems it necessary to allow industrial or office uses in all or part of that portion.

The 2008 Essex Open Space Plan recommends that natural amenities for public enjoyment be protected and that fixed boundaries for conservation and development be established.

Goal 11.12: Promote a diversified and stable economy by encouraging compatible industrial development and assuring the successful operation of existing industries in the Saxon Hill Industrial Park.

Objective 11.12.1: Ensure that uses in the park are primarily light industrial and large-scale uses. Limited commercial support services should be allowed in a very minor portion of the park.

Objective 11.12.2: Ensure that residential uses are not allowed in the RPD-I District.

Goal 11.13: Protect the natural attributes of the RPD-I District for public enjoyment and, when it is deemed economically and aesthetically feasible, carry out economic development activities in harmony with natural surroundings.

Objective 11.13.1: While maintaining the 60/40 split reserved for recreation/conservation uses, the Town should work with the landowner to establish fixed boundaries of land to be considered for development and land to be protected for recreation/conservation use.

Objective 11.13.2: The Town shall evaluate options to purchase or otherwise permanently preserve 60 percent of large contiguous sections of the RPD-I District.

Objective 11.13.3: Enhance the importance of the major points of entry to the park and take steps to maintain them.

Objective 11.13.4: Retain the 200-foot buffer requirement between residential areas and along Route 15 and Sand Hill Road. The Planning Commission should evaluate the need for and the size of buffers between other industrially-zoned properties.

Objective 11.13.5: Ensure that recreation/conservation areas are effectively managed and clearly establish the responsibility for such management.

Objective 11.13.6: Consider the addition of color standards or other regulations to the RPD-I District to ensure building and accessory use designs that are in harmony with the natural surroundings.

Goal 11.14: Assure the provision of adequate infrastructure to support the existing industries and the build-out of the industrial park.

Objective 11.14.1: Encourage the provision of improved public transportation to this area to minimize land area needed for parking lots and to reduce traffic.

Objective 11.14.2: Encourage the developer of the park to develop a transportation system management plan (TSM) which outlines a range of options to decrease vehicular trips to the park, including:

a. Car pooling;

b. Park and Ride facilities;

c. Public transportation;

d. Incentives for multiple occupant vehicle use;

e. "Transit passes".

Objective 11.14.3: When segments A and B of the Circumferential Highway have been completed and connected to the existing segment, efforts should be focused on scoping studies aimed at mitigating the corresponding traffic impacts along VT Routes 15 and 117. Part of the scoping effort should be on the completion of the connection of Allen Martin Parkway to the Circumferential Highway.

Objective 11.14.4: Extend municipal sewer to allow high water usage industries.

Objective 11.14.5: Consider allowing the reallocation of a small portion of the existing sewer allocation for the RPD-I and abutting industrial districts if it is determined that the remaining allocation will be sufficient to serve anticipated development for a 20-year planning period.

Objective 11.14.6: Review the existing road infrastructure to ensure adequate connectivity and emergency access at full build-out at the industrial park.

Goal 11.15: Better manage the Saxon Hill area for its recreational and resource value.

Objective 11.15.1: The Town Parks and Recreation Department should work with the developer to establish a trail management plan which addresses on-going maintenance, trail signage, better policing of trails to eliminate motorized vehicles, illegal dumping and protection of deeded easements for multi-use trails.

Objective 11.15.2: Undertake educational efforts to make the public aware of Saxon Hill and enlist their assistance in trail maintenance.

Objective 11.15.3: Organize and promote public events such as cross country ski races, mountain bike races, foot races, orienteering competitions, nature walks, etc. to increase the use of the park. Area fitness clubs and interested residents should be encouraged to coordinate such events.

Objective 11.15.4: Establish a hiking trail connecting the Winooski River to the top of Saxon Hill with an overlook tower to be developed.

Objective 11.15.5: Re-evaluate the Forest Management Plan with the Tree Warden to assure it is being implemented.

Objective 11.15.6: Initiate discussions with the Essex Junction School District regarding future use of their 90-acre parcel and include it in an overall management plan for the forest.

The Highlands

More than 20 percent of the Town's land area can be described as "Highlands" or those areas having steep slopes and high elevations. These include Brigham Hill (elevation 1,032 feet), Bixby Hill (elevation 666 feet), Saxon Hill (elevation 807 feet), and the Osgood Hill Road and Sleepy Hollow Road areas. The Town has appropriately designated the majority of these areas as conservation zones with a minimum of 10 acres required for residential use. The two largest conservation areas extend from the northwestern and northeastern corners of the Town. They have in common soils ill-suited for anything but low density development, large tracts of productive timber, remoteness from public services and transportation arteries, and light, scattered development. The Saxon Hill areas extending from the Jericho Town line to Sand Hill Road are unique planning areas described previously.

These areas are important for wood production, aquifer recharge, wildlife habitat, recreation, erosion control and aesthetics. They also provide an alternative residential development pattern for those

interested in housing located in more remote areas than the higher density zones closer to Town services and facilities. The challenge is how to preserve the integrity of the fragile natural resources in the area.

Goals and objectives for the highlands are presented in Section 11.3, Rural Lands.

The Lowlands

The Town of Essex is drained by three river basins—the Winooski and Lamoille Basins and a small area drained by Indian Brook and Sunderland Brook, which flow directly to Lake Champlain. The Brown's River and Abbey Brook drain the northeast section of the Town and flow into the Lamoille River, while Alder Brook is the principal drainage into the Winooski River. These water resources and their associated floodplains and wetlands influence the distribution of other low lying open land types identified in the "Open Lands Study" completed for the Town in 1989. For example, the distribution of floodplains closely aligns with the availability of prime agricultural soils. These in turn represent the Town's most visually sensitive areas. The fact that development in the floodplain is prohibited explains the continuing presence of open land, particularly along the Browns River and Alder and Abbey Brooks. Similarly, the pattern established by the Winooski River and stream and brook tributaries is reflected in the networks of recreation areas and proposed trails that the "Open Lands Study" identified.

Despite a major portion of the low lying areas in Essex being protected via floodplain regulations, there is a significant area which is vulnerable to development. The Lost Nation Road area and the area west of VT Route 15 have become particularly attractive because of the proximity of two new intersections for the Circumferential Highway. Similarly, agricultural lands are attractive for development given the lack of physical constraints for same. The 1977 Town Plan identified 16 active farms in Essex. In 1988, there were five active farms including one located in the Village participating in the Farm Tax Contract. In 2004, there were nine farms in the program. The rest of this area is used for low density housing.

The zoning for this area is intended for agricultural, forestry, rural housing, recreation and resource protection purposes. Significant open land resources that should be protected in this district include:

a. Prime farm lands;

b. Prime forest lands;

c. Scenic vistas and views;

d. Trails having local and statewide significance identified by the Vermont Association of Snow Travelers (VAST), the Winooski Valley Park District (WVPD), and the Chittenden County Regional Planning Commission (CCRPC);

e. Floodplains, wetlands, and water bodies.

These resources are shown on the maps included in the Open Lands Study. Because a major portion of the lowlands area is overlain by these significant features, the purpose of the zoning districts in the area is to protect and wisely manage these valuable natural resources through the careful placement of housing with respect to these resource lands and the establishment of open space requirements.

The challenge for the Town is to work with the owners of these important open lands to encourage their long-term maintenance. The 2008 Essex Open Space Plan re-affirmed the following goals for this planning area.

Goal 11.16: Protect the integrity and quality of existing water courses and wetland areas.

Objective 11.16.1: Ensure that development in floodplain areas is avoided.

Objective 11.16.2: Require development to be setback from streams, drainage ways and wetlands to minimize the impairment of same.

Objective 11.16.3: Retain the current low density and type of uses allowed in the area.

Objective 11.16.4: Do not extend municipal water and sewer into these areas except for conditions of compelling need to maintain the public's health.

Goal 11.17: Wisely manage the natural resources through careful placement of housing and the establishment of open space requirements.

Objective 11.17.1: Review Town policies on community waste water disposal systems and private roads and revise as needed.

Objective 11.17.2: Amend zoning and subdivision regulations to implement the recommendations in Section 11.3, Rural Lands and to establish specific standards for natural resources protection.

Objective 11.17.3: Consider implementing Conservation Design Subdivision regulations to preserve natural resources and open space.

Winooski River Corridor

The Winooski River Corridor provides one of the more spectacular natural and recreational areas in Essex. Within the Corridor are to be found fast water, secluded groves, vistas of riverscape and mountains, wild flowers and unique natural areas. However, this area is known and frequented by only a small number of people as access to it is unimproved or difficult and the water quality is poor in certain areas.

The Town is a member of the Winooski Valley Park District, a union municipal district comprised of the communities bordering the lower Winooski River Valley. The purpose of the District is to acquire and manage park lands, to protect open space and access to the Winooski River, and to provide passive recreational opportunities on lands within its seven member towns. Other than participation in the district, the Town has not worked to improve access or water quality in recent years. With increasing demands on the river for hydroelectric power and wastewater treatment and as a recreational and natural resource, the Town should refocus its efforts to assure its future use does not compromise one of these uses over another.

Goal 11.18: Revise Zoning and Subdivision Regulations to ensure that review of development proposals and future planning efforts includes consideration of access to and along the Winooski River Corridor in order to take better advantage of its importance as a natural resource. The 2008 Essex Open Space Plan re-affirmed the objectives listed below.

Objective 11.18.1: Develop a bicycle/walking path along the entire corridor to connect the Burlington bike path to a bike path running along the Circumferential Highway and looping back to the mouth of the Winooski River.

Objective 11.18.2: Develop a spur trail to an overlook tower and picnic area on the top of Saxon Hill.

Objective 11.18.3: Preserve the oxbow near the bottom of Sand Hill Road as a natural area and outdoor laboratory.

Objective 11.18.4: Work with Winooski Valley Park District to upgrade the remainder of "68 Acres" as a walk-in park with parking established near the Woodside facility.

Objective 11.18.5: Develop canoe launch areas in strategic locations.

Objective 11.18.6: Encourage ecologically sensitive vegetable/fruit farms along the river's banks via tax stabilization and regulatory measures.

Objective 11.18.7: Renew interest in the river as an amenity via public education and marketing, and by sponsoring canoe treks, hikes, and green-up days.

Objective 11.18.8: Promote annual "green-ups" of the corridor using civic groups, Scouts, and Correctional Center residents.

Objective 11.18.9: Encourage private owners of property along the river to "adopt" a portion of the Winooski River by maintaining their frontage and keeping it free from debris.

Town Center

In the 1990 Town Plan public forum, residents overwhelmingly expressed a need to maintain a sense of community and pride in the place they live. The historic Essex Center area was identified as an essential element in achieving this goal and was pointed to as a focus in the community worthy of preservation. A Land Use Committee, charged with formulating a vision for the future land use of Essex, recommended that a Town Center be developed. According to the Committee, the Town Center should be pedestrian-oriented and contain a mixture of residential, commercial, civic and cultural opportunities. The center should be separated from other settlements by open lands.

The call for a Town Center, as a focus for growth and a center for community life, led the Town to conclude that a plan was needed to identify where the center should be and how it should be developed.

Through the town-wide surveys conducted for the 1991 Town Plan and subsequent plan updates, the work of the Essex Land Use Committee, and a public design workshop on the new Town Center, a set of goals for the Town and for the Town Center was established. These goals have guided the design process throughout and were re-affirmed in the 2008 Essex Open Space Plan.

Town-wide Goals

1. Involve citizens in planning.
2. Promote growth in compact centers.
3. Develop a Town Center.
4. Preserve significant features.
5. Prohibit strip development.
6. Plan for growth both with and without the Circumferential Highway.
7. Service growth centers with adequate infrastructure.
8. Pace growth with the market and Town services.
9. Provide for a rural/private lifestyle and encourage the location of neighborhoods near growth centers.

10. Encourage non-motorized, multi-use paths.

Goals for the Center

1. Provide a separation between built-up areas and countryside.
2. Provide a human scale for development.
3. Promote a settlement pattern that:
   a) enables mixed uses,
   b) has compact commercial development, public services, and residential development at higher densities, and
   c) protects major open spaces and views.
4. Incorporate a pedestrian/bikeway network.
5. Provide for alternative transportation systems.
6. Identify new routes to better serve the center.
7. Provide for affordable housing.
8. Amend regulations to carry out goals.
9. Enable growth at both the Town Center and historic Essex Center, but in different ways.
10. Control development of the VT Route 15 corridor between Butlers Corners and historic Essex Center.

A build-out analysis was prepared in 1991 showing what the historic Essex Center, "Golden Triangle", Butlers Corners and Lang Farm area would look like under the then current zoning and subdivision regulations and development trends. These areas were chosen for study because of their current as well as historical focus as centers of community growth and activity. The results of the build-out analysis were startling. The current regulations were clearly leading the Town in a direction that people did not want to go. The build-out plan showed that:

- Instead of compact settlements surrounded by rural countryside, there would be sprawl.
- Instead of mixed-use developments, projects would contain only one major type of use.
- Views that citizens identified as being important would be obstructed.
- Higher density housing would not be possible.
- There would be strip commercial development along Center Road.
- Neither a pedestrian-oriented center nor public transit would be facilitated by the plan.

As a result of the build-out plan, a new design for the Town Center was developed based on the goals for the Town and the center, the results of three public design workshops, and the guidance of the Town Center Master Plan Advisory Committee, the Planning Commission and the Selectboard. The Town Center Master Plan (April 1991) prepared by Humstone Squires Associates was incorporated by reference into the 1991 and 1996 Town Plans and continues to guide development in the Town Center. The designs, standards and recommendations from the Town Center Master Plan should be considered in the review of future development plans for this area, but the Planning

Commission may permit modifications if in conformance with the overall goals and objectives of this Town Plan.

The Town Center Master Plan reinforces the goal of compact settlements surrounded by rural countryside through the preservation and improvement of the quality of open space and the enhancement of settled areas. The plan offers the Town of Essex lively, mixed-use centers for community life in close proximity to greenways, trails, recreation land, forests, and farmland. With the plan, the Town has a focus for new development and a wide range of activities. People can walk to the store and post office, a friend's house, their job, or a park. Nearby trails wind through deeply wooded areas or alongside a brook. Beyond there are vast expanses of protected wetlands, forest land and open meadow land.

In the Butlers Corners area, historic buildings are to be retained as prominent features within the greenway. Progressing eastward, the VT Route 15 greenway becomes a broad, tree-lined boulevard adjacent to existing and in-filled residences. The VT Route 15 boulevard will continue to Historic Essex Center where it will be scaled down to fit within the existing buildings and historic character of the area. While some commercial development will be permitted along VT Route 15 between Butlers Corners and Essex Center, it will be limited in scale. Controls may include building design guidelines or restrictions on high-traffic generating uses, such as gas stations and fast-food restaurants.

Essex Four Corners is defined as the cultural center of the community. The vision is for a center in which civic spaces, cultural events, churches, community groups, pedestrians, artists and performers, and pedestrians thrive. A new common is envisioned whereby the existing common and Library lawn are renovated.

A new center is to be located at Butlers Corners and the Lang Farm. Here, higher density and mixed-use buildings will offer a variety of housing types within close proximity to shops, services, community facilities and places of work. A street network will provide a framework for development and promotes pedestrian circulation and public transit.

The scope and scale of commercial development in the Town Center will serve a market that extends beyond the Town of Essex. In addition to this major retail presence, the Town Center will be home to a number of other community-serving offices, retail shops and services.

Higher-density residential development will continue in the Town Center, either in combination with first-floor commercial development or in residential-only buildings in close proximity to non-residential uses. A new common will be established in the Town Center.

A secondary commercial and residential center, not specifically proposed in the final design concept of the Town Center Master Plan, is proposed here for the area west of VT Route 15, south of Lost Nation Road, and north of the Circumferential Highway as shown on Map 22, *Future Land Use.* High-density residential development will go forward only if, in addition to the sole planned VT Route 15 vehicular access at the existing traffic signal, a strong pedestrian connection is provided across VT Route 15 to the Town Center.

This secondary center also will allow for an expansion of the locally oriented commercial services that were originally expected to fill the former Lang Farm Retail Center and the Town Center area.

The development should be carefully designed and executed to preserve the rural/urban settlement pattern break proposed by the Town Center Master Plan. Of particular concern would be the size, scale, and orientation of proposed buildings and how the final appearance of this highly visible area

would be altered. The Business Design Control District should be extended to include the commercial development of this area.

Development in this area can probably be best accomplished through a Planned Unit Development that would allow proposed projects to address setbacks and other zoning regulations constraints with some flexibility.

Outside Butlers Corners/Lang Farm, Essex Center, and existing residential areas, development will be clustered and multi-unit dwellings discouraged so as to reinforce the concept of compact settlement surrounded by countryside, create more contiguous open space and preserve significant views. Additional analysis should be conducted addressing possible expansion of the sewer core area that enhances the Town Center. Such analysis must consider the consequences of additional growth and sprawl.

Implementation

The implementation of the new Town Center Plan has begun and will continue to take place over a long timeframe. The exact timeframe is unpredictable and will be dependent on the actions of the landowners, the Town's priorities as reflected in the Town Plan, Capital Budget and Program, changing fiscal conditions, and regional and local market conditions. The implementation of the plan began with its incorporation into the Town Plan. Regulatory changes have included revisions to zoning districts and district regulations and amendment of standards in the subdivision regulations.

Private development has begun in accordance with the 1991 The Town Center Master Plan and with the revised zoning and subdivision regulations. Other steps will include adoption of an official map that will show new streets, trails, public recreation areas, pedestrian easements, drainage ways, and public building sites. It will also provide a mechanism for public acquisition of these areas. The improvements will be financed by a combination of public and private mechanisms. The public investment will be phased according to the Town's Capital Budget and Program. Impact fees, public subsidies, special assessment districts and tax increment financing will also be considered. In addition, the 1991 Master Plan should be updated to include existing conditions and to validate local perspective of the Town Center. In 2004 the Selectboard received the report of the Town Center Study Committee, which recommended increased residential densities, increased proportions of residential in the residential to commercial mix, and underground or tiered parking. The 1991 Master Plan is long over due for a comprehensive update to examine densities, infrastructure funding, uses and design control.

11.3 Land Use in Outlying Areas

Rural Lands

Much of the Town's land use planning is focused on directing new development towards the Town Center and other planning areas within the sewer service area. A complementary planning goal is the prevention of excess development on rural land outside the municipal service boundary. As part of the preparation of this Town Plan, Burnt Rock, Inc. was hired to review recent development trends, to examine land use patterns and goals for the rural area, and to recommend regulatory and non-regulatory techniques to achieve those goals. Recommendations from the 2001 Essex Rural Land Study are provided below. These recommendations were re-affirmed in the 2009 Essex Open Space Plan:

Data and Information Collection

(1) Significant headway on updating natural resources inventory was made with the 2007 Natural Heritage Element Inventory and Assessment, incorporated herein, and one by Arrowwood Environmental. The assessment recommended further and ongoing field work to map wetlands, vernal pools, and wildlife habitat.

(2) Conduct a GIS, orthophoto-based inventory of land use and land cover, in addition to data layers comprised of natural resources identified in (1) above.

(3) Undertake a survey of rural enterprises, including small farming operations, to document non-residential land uses within the rural area.

Regulatory Options

(1) In accordance with the 2008 Open Space Plan, establish specific natural resource protection standards to apply to all development throughout the rural area districts. Such standards, adopted as part of the zoning bylaws, should include:

a. Setback and buffer requirements for streams and wetlands (minimum of 50 feet, preferably greater; could be relative to site conditions).

b. Steep slope standards (e.g., erosion control measures for all development on slopes of 15 percent or greater; possible prohibition of development on slopes of 25 percent or greater). Such a standard would be an expansion of existing slope limitations related to the construction of septic systems.

c. Specific standards to protect water supply source protection areas to ensure that development does not result in groundwater contamination.

d. Definition and delineation of ridgelines, on which inappropriate development activities could adversely affect the town's scenic landscape, and adoption of appropriate development standards either to prohibit development in those areas or to mitigate the environmental and visual impacts of development.

e. Preservation of open space whenever land development is proposed.

f. Increasing lot size requirements (e.g., amending Agriculture-Residential zoning district from 3 acres to 5, 10 or greater).

g. Undertake a Comprehensive Growth Management Program, including allocation ordinances and subdivision regulations that direct 80 percent of new development to the Town's sewer core area.

h. Consider adopting Conservation Design Subdivision regulations to better protect open space in the more rural areas in the Town.

i. Establish minimum open space standards for subdivisions and higher density development within the sewer core, i.e.: re-establish a 15 percent open space requirement for neighborhood parks and playgrounds.

j. Strengthen the role of the Conservation Committee in the development review process.

(2) Revise Planned Unit Development-Residential provisions to encourage greater use. Such revisions could include:

a. Providing additional incentives (such as increased density and/or the elimination of standards that are more restrictive than conventional subdivision standards).

b. Including specific standards regarding the preservation of open space. Such guidelines should describe the features to be protected as open space, the area and configuration of land to be dedicated as open space, and the legal mechanisms for dedicating open space.

c. Reducing existing road standards (perhaps to allow private roads in exchange for a high quality of site design and/or the preservation of open space. Related to revised road standards, a minimum requirement for PUD-Rs might include a standard that the pre-development parcel has a minimum frontage on an existing public road of between 500 and 1,000 feet to discourage residential developments on large parcels that lack frontage. Such a standard should be coordinated with the policies regarding the extension or creation of new public roads. Reduction of road standards should not allow a greater number of lots than could be approved under conventional subdivision design.

d. Review administrative procedures to ensure that the review process and application requirements are, at minimum, no more cumbersome than the requirements for conventional subdivisions.

e. Preservation of open space whenever land development is proposed.

(3) Subdivision regulations should be revised to provide better protection of natural resources and to ensure that future development patterns in the rural areas are consistent with the area's rural character and landscape. Such revisions should include:

a. Strengthening natural resource protection standards to address streams, steep slopes/ridgelines, wildlife habitat and scenic areas (e.g., requiring house placement/building envelope in the middle-ground of view sheds to avoid placement in the foreground and background).

b. Establishment of a Conservation Subdivision Design requirement that requires the identification of prominent site features (farmland, steep slopes, etc.) and the preservation of those features through designation as open space prior to house siting, lot configuration, and road layout. Designated building envelopes should be required on all lots to limit the extent of area in which development of homes and related improvements could take place.

c. Consideration of adopting performance standards to determine project density (e.g. wetlands, slopes in excess of 25percent, etc. might be eliminated from density calculations).

d. Requiring cluster design, whether in conventional subdivisions or Planned Unit Developments-Residential, as needed to avoid adverse impacts on lands identified on the Significant Features Resource Map.

(4) In addition to regulatory revisions described above, it is important that the following existing regulatory provisions be continued:

a. The C2 zoning should be maintained in its present form, except as may be modified under (1) and (2) above.

b. Existing phasing policies should be continued, with revisions only to reflect current growth projections.

Non-Regulatory Options

(1) Seek the assistance of private, non-governmental land conservation organizations (e.g., Vermont Land Trust) to further local land conservation priorities and encourage voluntary protection options (e.g., donation of conservation easements).

(2) Consider the creation of a local open space conservation fund, in combination with available state and federal matching funds, to protect open space through purchase of land or interest in land (e.g., conservation easements, trail easements).

(3) Review the Town's existing tax stabilization program and consider opportunities for expanding or strengthening that program.

(4) Establish a formal public land acquisition and stewardship program, to be managed by the Selectboard in consultation with the Conservation Committee.

(5) Undertake other non-regulating measures to conserve open space, including additional field inventories and natural resources mapping; a survey of owners of remaining farm and forest parcels; a mapping and analysis of local watersheds; considering expansion of the Essex Farm and Open Land Tax Abatement Program; encourage community support programs such as "Buy Local," and additional updating of the Significant Features Map.

11.4 Proposed Land Use

Map 22, *Future Land Use*, shows the anticipated patterns of development for the Town outside of the Village. The following are more specific descriptions and purposes of each designated area.

Conservation (C1): The purpose of the Conservation Area is to protect the sensitive natural resources and steep slopes which make these areas inappropriate for intensive development. These areas are remote from municipal services and facilities and lack accessibility. Low density residential and related uses are permitted in this district only if applied to a land unit of ten acres or more.

Floodplain (C2): The purpose of the Flood Plain Area is to reduce the potential for damage from flooding; to protect streams and water courses for erosion, siltation and pollution; and to protect the natural ecology of stream beds and lands adjacent to water courses. In these areas, no building is permitted and excavation, fill, disruption of vegetative cover or other encroachment is restricted.

Open Recreation (O1): The purpose of the Open Recreation Area is to protect the natural resource value of publicly owned lands which are essentially undeveloped; lack direct access to public roads; are important to wildlife and wildlife habitat;, have high potential for commercial forestry use; are unsuitable for land development, or include irreplaceable, limited or significant natural, recreational or scenic resources. No public sewer and water facilities are planned for these areas. Due to the limited facilities and services proposed for the district and the critical resources located within it, only limited recreation uses, conservation uses and forestry which are compatible within the district purposes, and do not require additional facilities and services, will be encouraged.

Agriculture/Residential (AR): The purpose of the Agriculture/Residential Area is to protect lands with an economic capability for agriculture and which are now essentially undeveloped except for uses associated with agriculture or forestry. In this district, planned residential developments and developments which do not remove the potential of the land for agricultural production, such as open space, conservation, and certain forms of outdoor recreation, are encouraged. Further road development and the extension of public water supply and sewage disposal systems are not planned

for the district. Therefore, only low density residential and recreational development which utilizes existing facilities; adequately disposes of sewage; and which is compatible with the district's purposes and guidelines should be permitted. However, in order to facilitate effective use of existing structures (particularly historic structures and farm structures) the Town should explore additional allowable uses, such as Community Supported Agriculture (CSA) and renewable energy production that will generate some economic return while not jeopardizing the rural character of the area. Evaluate, as part of the potential merger of the Town and the Village, the Agriculture-Residential zones on the Future Land Use Map regarding more suitable development allowances, for that land occurring south of the Circumferential Highway, east of VT Route 2A, and west of VT Route 15 to the Village jurisdictional boundary.

Low Density Residential (R1): The purpose of the Low Density Residential Area is to facilitate residential development in areas adjacent to but outside of the "sewer core area" as defined in the most recently adopted Town of Essex Sewer Allocation Policy. Densities are kept low and lots are large enough to accommodate on-site disposal systems. Connection to municipal water service may be required.

Medium Density Residential (R2): The purpose of the Medium Density Residential Area is to facilitate residential development in areas inside the "sewer core area" as defined in the most recently adopted Town of Essex Sewer Allocation Policy. Connection to municipal sewer service shall be required where installation of these facilities is feasible or deemed necessary. Densities and lot sizes are based either on the provision of off-site services or the ability to accommodate on-site services.

High Density Residential (R3): The purpose of this area is to encourage a wider range of housing opportunities in an area served by municipal services and facilities and public transportation. Home occupations, accessory apartments, and provisions for multi-family units on small lots are encouraged in this district to enable some expansion of uses while avoiding strip commercial development.

Residential Business (RB): This area includes properties, which are predominantly residential in nature located on the south side of VT Route 15 in Essex Center. The RB district was established to protect the existing residential uses while allowing for limited commercial uses, which are low traffic generators and compatible with neighboring residences.

Business Design Control Overlay (B-DC) and Historic Preservation Design Control Overlay (HPDC): The purpose of these areas is to maintain and enhance the rich cultural and architectural heritage of the Fort Ethan Allen and Essex Center areas and to eliminate or minimize substantial character alterations of the buildings. A report entitled Historic Preservation and Design Control Standards for Essex Center and Fort Ethan Allen (1986) contains standards and guidelines to be used in the review of development proposals in these areas.

Mixed Use (MXD): The purpose of this area is to allow a mix of residential and commercial uses in keeping with the existing character of the area.

Mixed Use-Planned Urban Development (MXD-PUD): This area has a combination of residential, commercial and industrial development on a large tract of land where a comprehensive planning effort has been undertaken.

Mixed Use District-Commercial (MXD-C): The purpose of this area is to provide an area in the Town which permits a broad range of retail and personal service shops, professional and governmental offices, and supportive, compatible commercial uses. Residential uses, which add

interest and vitality to the area and accommodate those who desire high-density housing are encouraged. All uses should be properly located and designed to enhance the existing structures in the area. Development should be reviewed in accordance with the 1991 Town Center Master Plan.

Center (CTR): The purpose of the Center Area is to support the role of the Historic Essex Center as the focus of many social and economic activities in the community. The types of uses that will be encouraged include residential, civic, cultural, neighborhood commercial, home occupations, and other compatible uses that will serve the needs of the community. Such development should occur in a pattern and scale that will maintain the traditional social and physical character of the Historic Essex Center and preserve its historic and scenic resources. Sufficient facilities and services are planned for this area to accommodate moderate to high-density development. Development should be reviewed in accordance with the 1991 Town Center Master Plan.

Retail Business (B1): This area consists of existing commercial areas and adjacent lands which are becoming predominantly commercial in nature. Due to the location of these areas on major thorough-fares, they are well suited for providing the retail, business and personal service needs of this community and other nearby towns. However, strip development along these thoroughfares must be discouraged in favor of consolidated access points in order to minimize traffic hazards and maintain smooth traffic flows. Also, since these areas are the focal point of activity for the Town, the review of commercial development within this district must ensure attractiveness for site design and signage. Furthermore, new commercial development should be compatible with adjacent commercial and residential structures.

Resource Preservation-Industrial (RPD-I): This area is established for land that is comprised of forests, bodies of water, or similar natural settings. The specific objective of the RPD-I district is to protect all or part of such natural attributes for public enjoyment and, when it is deemed economically and aesthetically feasible, to carry out economic development activities in harmony with the natural surroundings. Uses included in this district include office, research and development facilities, laboratories, and limited commercial support services for employees of the Saxon Hill Industrial Park, such as banks, restaurants, recreation/health spas, etc.

Industrial (I1): This area provides for employment opportunities in manufacturing, warehousing, research and development and commercial uses which specifically serve the industries or their employees in areas serviced by good transportation facilities and public utilities. Other uses incompatible with industrial uses, such as residential uses, shall not be permitted for the health, safety and welfare of the community.

11.5 Land Use Goals and Objectives

The following general goals and objectives shall guide any future land use planning, zoning changes and development approvals.

Goal 11.19: Future development should be consistent with Essex's role as a sub-regional center with the scale of development supportable by a market derived from Essex and its surrounding communities.

Objective 11.19.1: Work with other communities in the region to ensure land use compatibility across municipal borders and to protect the vitality and importance of the region's dominant commercial centers.

Objective 11.19.2: Cooperate with the Village of Essex Junction to ensure its vitality as a commercial service center.

Objective 11.19.3: Should merger of the Town and Village occur, the entire community should carefully examine lands along both sides of the current Town/Village boundary to determine appropriate land use designations. Zoning changes may be made to reflect the results of this evaluation.

Objective 11.19.4: Participate in the formulation and implementation of the Chittenden County Regional Plan to ensure the regional functions of the area's municipalities are represented.

Goal 11.20: Facilitate the future development of the Town of Essex by taking into consideration the physical, natural and economic constraints and opportunities.

Objective 11.20.1: Guide and direct future development in accordance with:

a) the physical capability of the land,

b) the economic and efficient provision of public services and facilities,

c) the interrelationship and compatibility of existing settlement patterns,

d) the proximity to highways and railroads, commercial and employment centers and municipal services,

e) the appropriate siting of renewable energy sources, such as solar arrays, biomass fields, etc.

f) the need to address existing deficiencies,

g) the impact on natural resources and significant features, and

h) the consistency with the overall goals established in this Plan.

Goal 11.21: Continue to implement a growth management plan that establishes an acceptable rate of growth that can be accommodated by the Town.

Objective 11.21.1: Maintain a population growth rate consistent with the growth rate projected in Chapter 2.

Goal 11.22: Link neighborhoods to shopping centers, schools, work places, and parks and natural areas via a trail and greenbelt system.

Goal 11.23: Plan development so as to maintain and enhance Essex's historic settlement pattern of compact centers separated by rural countryside.

Objective 11.23.1: Intensive residential development shall be encouraged primarily in areas related to community centers, and strip development along highways shall be discouraged.

Objective 11.23.2: Economic growth shall be encouraged in the Town's designated growth centers which are: Essex West/Fort Ethan Allen, Essex Center including Butler's Corners and Lang Farm, and the Saxon Hill Industrial Park.

Objective 11.23.3: Public investments, including the construction or expansion of infrastructure, shall reinforce the general character and planned growth patterns of the area.

Objective 11.23.4: The long-term maintenance of significant open lands shall be encouraged via the implementation of strategies set forth in the 2008 Essex Open Space Plan.

Goal 11.24: Develop a physical and psychological "center" for Essex.

Objective 11.24.1: Update and consider the designs, standards and recommendations from the 1991 Town Center Master Plan in the review of future development plans for the Town Center area.

Objective 11.24.2: Review and consider the recommendations of the 2004 Town Center Study Committee, including increased residential densities, increased proportions of residential in the residential to commercial mix and underground or tiered parking.

Goal 11.25: Preserve existing structures in the Agriculture/Residential Area (particularly historic structures and farmstead structures) by allowing additional uses that provide more economic return while not jeopardizing the rural character of the area that the Town seeks to maintain.

Objective 11.25.1: Explore the potential of additional uses that may be allowed in the Agricultural/Residential Area to provide some economic return for the use of existing structures (particularly historic structures and farmstead structures) while not adversely impacting other important characteristics of the area.

Strategy 11.25.1.1: Undertake a study of potential uses that meet the above criteria, and ways that they can be incorporated into the regulations for the Agriculture/Residential Area while continuing to protect the rural character and natural features of the area.

Strategy 11.25.1.2: Amend the Zoning Regulations for the Agriculture/Residential Area to allow those uses identified as providing some economic return to the use of existing structures while not adversely impacting other important characteristics of the area.

12. GOVERNMENT AND FINANCE

12.1 Functions and Organization of Government

The authority for Essex's government is found in a combination of Vermont statute and separate charters for the Town of Essex and the Village of Essex Junction. The Town of Essex includes the Village of Essex Junction, and Village residents are also Town of Essex residents. Late in the nineteenth century, it became apparent that residents of the Village needed more services than the rest of the Town was willing to support. Thus, in 1893, after petitioning the Legislature, Essex Junction was granted a separate municipal Village Charter, yet the Village remained a part of the Town.

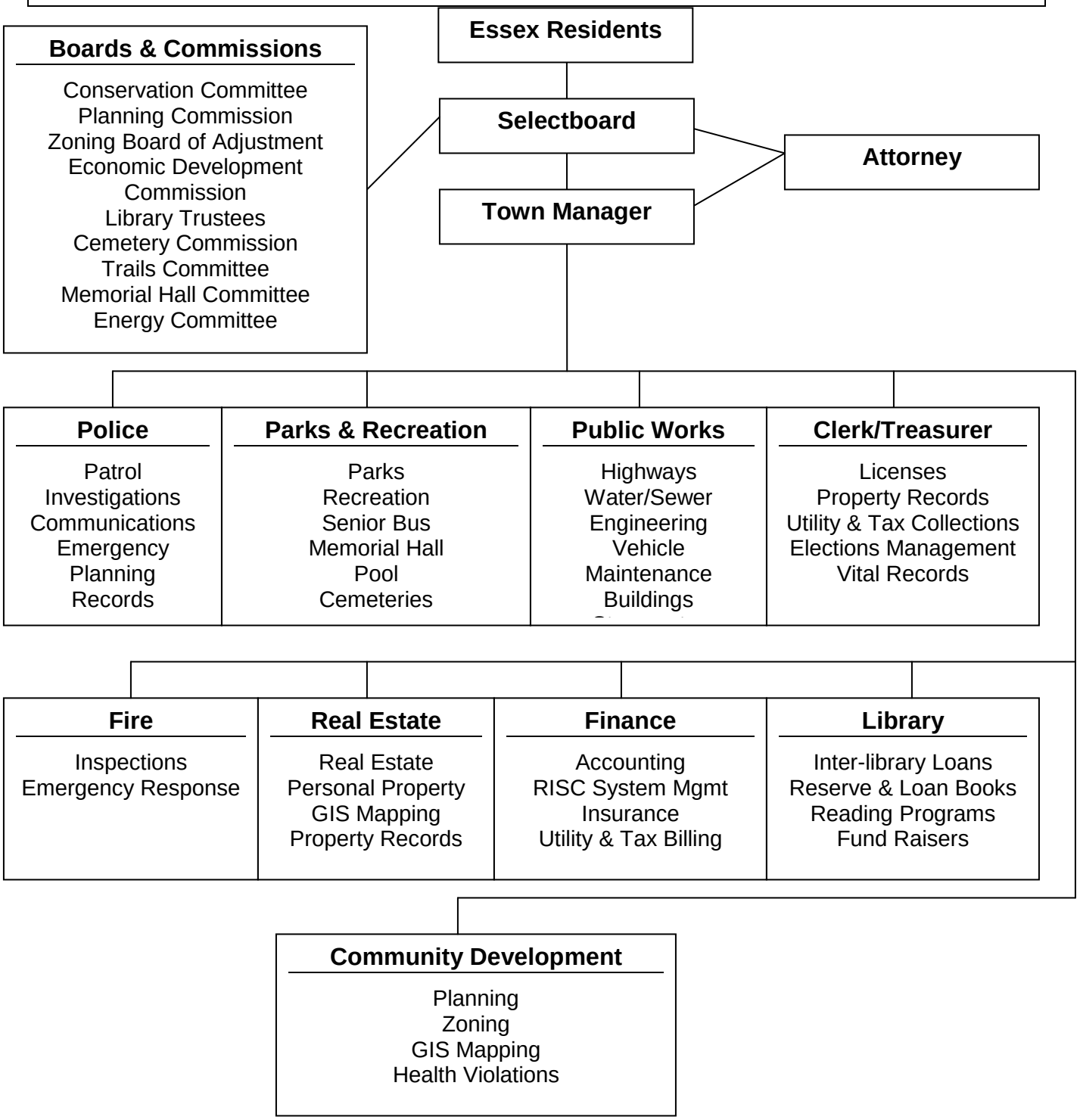
The Village Charter established the boundaries of the Village and also described the Village officers and their duties. The areas of responsibility include streets, municipal services such as water and sewer, and the keeping of the law, order and safety. The Village government has the responsibility for taxing Village residents for Village services.

Village government serves and is responsible only to the residents of Essex Junction. The Village is served by a Village President and a board of four Trustees whose duties are similar to those of the Selectboard in the Town. The terms of these offices were recently changed to three years. Village functions are administered by the Village Manager, who is appointed by the Trustees, and who works within the framework of the Village Charter.

The original charter of 1763 for the Town of Essex was completely redrawn in 1971 and accepted by the voters at a special Town Meeting. The charter grants the Selectboard powers such as the provision of police and fire protection, acquisition of land, adoption and enforcement of ordinances and dog control. The Town of Essex is also responsible for functions related to records, listing (real estate assessment), tax collection, planning, issuing of licenses (liquor, dog, hunting, fishing, marriage, etc.), public health and welfare and monitoring of the landfill. Outside the Village of Essex Junction, the Town is also responsible for water and sewer utilities, fire protection, regulation of elections, zoning enforcement and maintenance of Town roads.

Five people are elected to the Selectboard for staggered three-year terms, and they appoint a Town Manager, a salaried official responsible for the daily administration of Town affairs. The Manager does not initiate policy, but advises the Selectboard and is accountable to them for decisions. There are several committees and boards appointed by the Selectboard. Figure 12-1 is an organizational chart of the Town's government.

Figure 12-1 TOWN ORGANIZATIONAL CHART



The Police, Parks & Recreation, Finance, Town Clerk, and Real Estate Appraisal Departments, in addition to the Library and Cemeteries, serve the residents of both the Village and the Town outside the Village. The Fire, Community Development, and Public Works Departments primarily serve residents of the Town outside the Village.

There are differences in organization, structure and responsibilities among the Town of Essex, the Town outside the Village, and the Village of Essex Junction that are easiest to show with a diagram. Figure 12-2 summarizes the major differences.

FIGURE 12-2
Organization, Structure And Responsibilities Of The Jurisdictions Of The Town Of Essex, the Town Outside The Village, And The Village Of Essex Junction

	Town of Essex Outside the Village	Town of Essex including the Village	Village of Essex Junction
Governing Body:	**Selectboard** **May be Town or Village Residents**		**Trustees** **Must be Village Residents only**
Responsibilities and Services:	Municipal Services Streets Water Sewer Fire Protection Tax Collection	Records Listing Property Assessment Licenses Police Protection Recreation Library (Essex Free) Cemetery Tax Collections	Municipal Services Streets Water Sewer Fire Protection Tax Collection Library (Brownell)
Regulatory Authority:	Town Plan Zoning Regulations Subdivision Regulations Ordinances		Village Plan Zoning Regulations Subdivision Regulations Ordinances
Voter Participation:	Essex Town School District Meeting (April)	Annual Town Meeting (March) Essex Community Union School District Meeting (April)	Annual Village Meeting (April) Essex Junction School District Meeting (April)

Over the past decades there have been numerous proposals and votes on reorganizing the Town and the Village. These proposals have included merger and complete separation. Most recently, in April of 2005, both Town and Village residents approved a non-binding proposal to establish a commission to draft a charter for the merger of the two municipal entities. That commission completed its work and Town and Village residents approved the merger of the two entities. By petition, a second vote took place and the proposal failed.

12.2 Regional Government

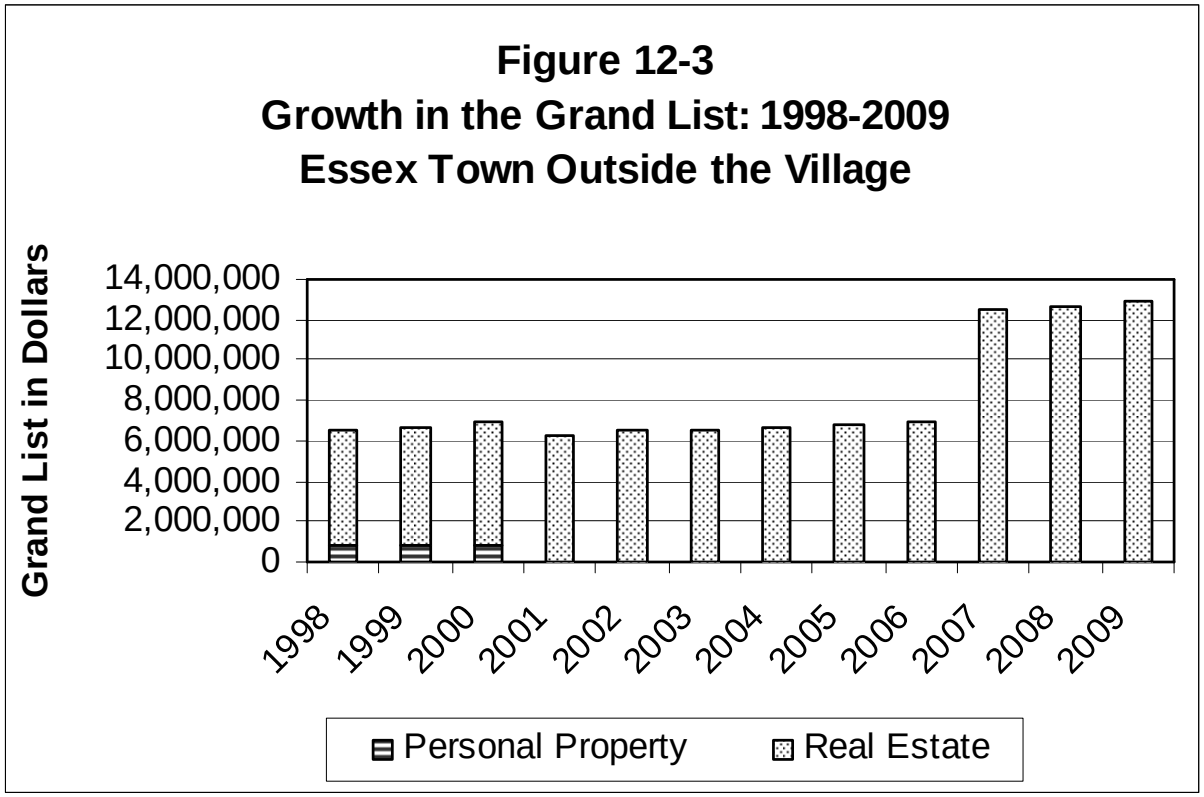
The Town of Essex actively participates in or provides funding for a number of regional governmental entities including:

- Chittenden County Regional Planning Commission (CCRPC)
- Chittenden County Metropolitan Planning Organization (CCMPO)
- Chittenden County Transportation Authority (CCTA)
- Winooski Valley Park District (WVPD)
- Champlain Water District (CWD)
- Chittenden Solid Waste District (CSWD)
- Chittenden County Court System
- Greater Burlington Industrial Corporation (GBIC)
- Lake Champlain Regional Chamber of Commerce (LCRCC)

12.3 Fiscal Conditions

The Town's fiscal situation is best examined by considering its revenue resources and its expenditure patterns. For the most part, non-school revenues are generated by local property taxes levied against real and personal property within the Town. While the Town does receive taxes from properties located in the Village, the bulk of this analysis will focus on value of property located outside the Village. The grand list represents $1/100^{th}$ of the value of property in the Town and is the value against which taxes are assessed. The grand list grows in two ways. First, as growth occurs, the value of new development is added to the grand list. Second, as property values increase, appreciation causes the grand list to grow, but this occurs only when adjustments via a reassessment are made. In between reassessments, growth in the grand list reflects only new development.

Figure 12-3 shows the trend of growth in the Town's grand list from 1998 to 2009. The total grand list grew in a relatively linear manner, except for an adjustment made in 2000 and in 2007 when a reassessment took place. It is likely that the linear growth pattern will continue into the future.



Source: Essex Grand List

Table 12-1 presents detailed grand list data, including the breakdown of the total grand list by category. Figure 12-4 shows how these categories have changed over the past eight years. The "other real estate" heading includes vacation, utilities, farms, and miscellaneous categories.

Table 12-1
DETAILED GRAND LIST DATA, 1998 – 2009
ESSEX TOWN OUTSIDE OF THE VILLAGE

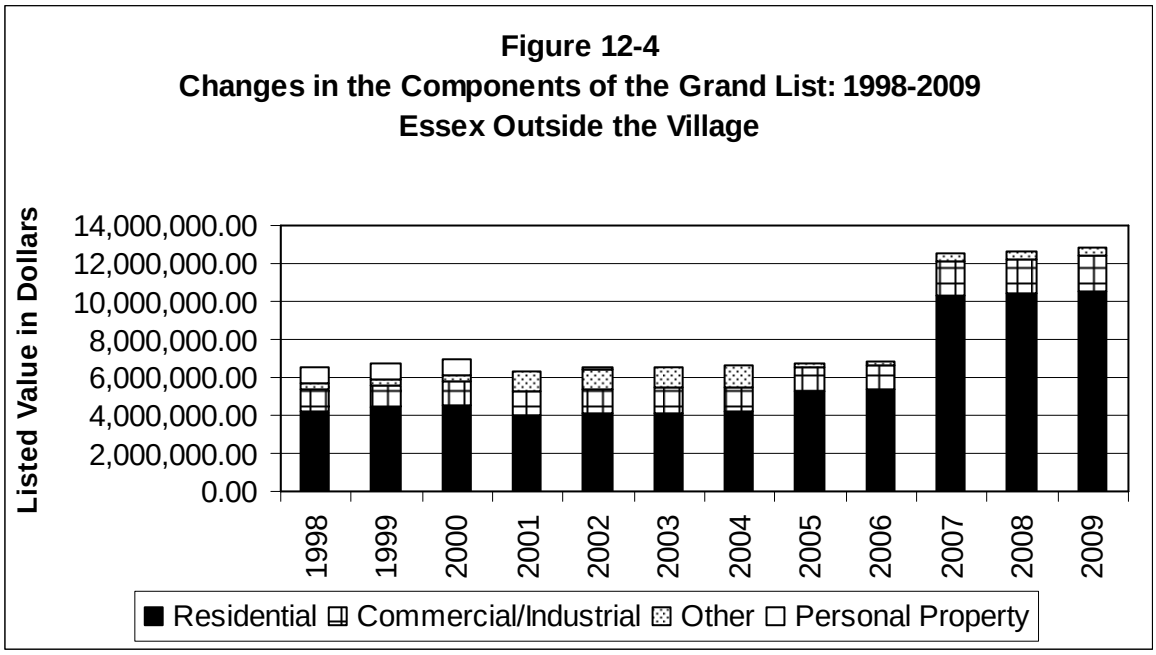
Land Use Category	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Residential I												
Number of Parcels	2736	2825	2886	2193	2208	2216	2226	3150	3235	3256	3266	3273
Listed Value (dollars)	$3,486,380	$3,686,417	$3,828,520	$3,232,195	$3,285,483	$3,313,767	$3,339,360	$4,404,723	$4,537,145	$8,702,922	$8,780,329	$8,859,944
Percent of Total Real Estate	53.53%	54.87%	55.40%	51.17%	50.70%	50.53%	50.26%	49.96%	65.27%	65.81%	69.38%	68.85%
Residential II												
Number of Parcels	371	372	380	386	383	385	397	398	401	400	400	401
Listed Value (dollars)	$713,874	$689,533	$718,225	$740,954	$743,274	$748,738	$788,223	$796,319	$809,774	$1,559,767	$1,568,406	$1,580,719
Percent of Total Real Estate	10.96%	10.26%	10.39%	11.73%	11.47%	11.42%	11.86%	11.76%	11.75%	12.46%	12.39%	12.28%
Mobile Homes U												
Number of Parcels	19	20	20	20	20	19	19	19	19	18	18	18
Listed Value (dollars)	$5,136	$5,312	$5,360	$5,736	$5,748	$5,684	$5,712	$5,712	$5,839	$5,651	$5,451	$5,487
Percent of Total Real Estate	0.08%	0.08%	0.08%	0.09%	0.09%	0.09%	0.09%	0.08%	0.08%	0.05%	0.04%	0.04%
Mobile Homes L												
Number of Parcels	30	29	27	27	27	27	28	27	26	24	23	22
Listed Value (dollars)	$25,823	$24,567	$23,178	$22,636	$22,550	$23,090	$23,996	$23,607	$23,098	$40,555	$38,687	$34,687
Percent of Total Real Estate	0.40%	0.37%	0.34%	0.36%	0.35%	0.35%	0.36%	0.35%	0.34%	0.32%	0.31%	0.27%
Vacation												
Number of Parcels	6	4	1	1	1	1	1	0	0	0	0	0
Listed Value (dollars)	$7,273	$3,966	$907	$907	$907	$907	$907	$0	$0	$0	$0	$0
Percent of Total Real Estate	0.11%	0.06%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial												
Number of Parcels	172	173	176	176	177	178	183	172	175	175	179	183
Listed Value (dollars)	$792,246	$873,829	$914,576	$942,805	$974,915	$979,377	$1,006,678	$924,995	$921,076	$1,529,581	$1,541,460	$1,634,470
Percent of Total Real Estate	12.16%	13%	13.13%	14.93%	15.05%	14.94%	15.15%	13.66%	13.36%	12.22%	12.18%	12.70%

Table 12-1
DETAILED GRAND LIST DATA, 1998 – 2009
ESSEX TOWN OUTSIDE OF THE VILLAGE

Land Use Category	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Industrial Plants												
Number of Parcels	15	15	15	14	14	14	14	14	17	16	16	16
Listed Value (dollars)	$309,484	$322,236	$323,286	$347,989	$349,463	$349,533	$349,533	$349,533	$351,781	$275,328	$278,707	$280,589
Percent of Total Real Estate	4.75%	4.80%	4.68%	5.51%	5.39%	5.33%	5.26%	5.16%	5.10%	2.20%	2.20%	2.18%
Utilities												
Number of Parcels	6	8	7	6	5	5	5	5	6	6	6	6
Listed Value (dollars)	$72,043	$73,489	$82,030	$76,862	$76,551	$73,453	$65,705	$65,529	$64,427	$106,022	$116,011	$122,061
Percent of Total Real Estate	1.11%	1.10%	1.18%	1.22%	1.18%	1.12%	0.99%	0.97%	0.93%	0.85%	0.92%	0.95%
Farms												
Number of Parcels	8	7	7	7	7	7	6	6	6	6	6	6
Listed Value (dollars)	$18,792	$16,478	$16,475	$16,442	$16,103	$14,992	$14,476	$10,602	$10,987	$18,850	$20,598	$20,604
Percent of Total Real Estate	0.29%	0.25%	0.24%	0.26%	0.25%	0.23%	0.22%	0.16%	0.16%	0.15%	0.16%	0.16%
Government Land												
Number of Parcels	124	123	120	na	na	na	na	na	na	na	na	na
Listed Value (dollars)	0	0	0	na	na	na	na	na	na	na	na	na
Percent of Total Real Estate	0.00%	0.00%	0.00%	na	na	na	na	na	na	na	na	na
Miscellaneous, Other												
Number of Parcels	318	284	255	1005	1026	1057	1085	301	281	208	278	286
Listed Value (dollars)	$220,018	$197,606	$200,953	$922,042	$988,502	$1,031,134	$1,049,342	$188,187	$170,394	$277,307	$305,732	$329,680
Percent of Total Real Estate	3.38%	2.94%	2.91%	14.60%	15.25%	15.72%	15.79%	2.78%	2.47%	2.22%	2.42%	2.57%
Total Parcels	3857	3860	3894	3835	3868	3909	3964	4092	4166	4181	4192	4211
Real Estate	$5,651,069	$5,893,433	$6,113,510	$6,308,568	$6,463,496	$6,540,675	$6,643,880	$6,769,206	$6,894,520	$12,515,983	$12,655,381	$12,868,333
Personal Property	$861,035	$824,989	$793,332	$7,845	$16,488	$16,776	$16,776	na	na	na	na	na
Total Grand List	$6,512,104	$6,718,422	$6,906,842	$6,316,413	$6,479,984	$6,557,451	$6,660,656	$6,769,207	$6,894,520	$12,515,983	$12,655,381	$12,868,333

Source: Form 411

Figure 12-4
Changes in the Components of the Grand List: 1998-2009
Essex Outside the Village



Source: Essex Grand List

Prior to 2000, the residential component of the grand list had shown steady growth while the other components had held relatively constant. After 2000, there was a distinct drop in the total grand list, including a drop in residential, the elimination of personal property, and a jump in the "other" category. From that point forward, the grand list has grown by 1.78 percent per year. The residential category accounted for the major part of that growth, followed by the "other" category until 2004, where "commercial/industrial" growth accounted for a larger part of the growth. The decline in the personal property category reflects the Selectboard's 1995 decision to phase out business personal property tax over a five-year period. After 2000, the only listed personal property belongs to the largest company in the Town, IBM. That company agreed with the Town to enter into a 10-year tax stabilization agreement. Representatives of the Town, the Village and IBM continue to meet to discuss tax policy beyond the ten-year agreement.

The other half of the local revenue equation is the tax rate. Prior to 1994, the tax rate in Essex Town was made up of three components: the Town School tax rate, the Town General tax rate and the Town Highway tax rate. In 1994 voters approved an annual one-cent capital tax, and the General tax rate was split into Town Operating and Town Capital tax rates. With the passage of Act 60 in 1998, the Town School tax rate was replaced by the State Education and Local Education tax rates. Beginning in 2004, the state and local education tax rates were replaced with a combined tax rate, but one that differentiates between homesteads and other property. Over the past few years, these tax rates have changed as shown in Table 12-2.

Table 12-2
COMPONENTS OF THE TAX RATE, 1999-2009
TOWN OF ESSEX OUTSIDE THE VILLAGE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Town General	---	---	0.384	0.367	0.384	0.412	0.444	0.5097	0.2965	0.2989	0.3066
Town Operating	0.312	0.327	---	---	---	---	---	---	---	---	---
Town Capital	0.010	0.010	0.010		0.010	0.010	0.010	0.0200	0.0200	0.0200	0.0200
Town Highway	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
Town School	---	---	---	---	---	---	---	---	---	---	---
Local Agreement Rate	---	---	---	---	---	---	0.0047	0.0048	0.0037	0.0023	0.0009
State Education											
Residential	---	---	---	---	---	2.0669	2.2599	2.3817	1.3365	1.3571	1.3550
Non Residential	1.116	1.120	1.346	1.249	1.346	2.0441	2.1531	2.2904	1.3066	1.3292	1.3732
Local Education	0.659	0.848	1.146	1.127	1.146	----	---	---	---	---	---
Total Residential	---	---	---	---	---	2.5689	2.7986	2.9962	1.7367	1.7583	1.7583
Total Non Residential	2.177	2.385	2.966	2.833	2.966	2.5461	2.6918	2.9049	1.7068	1.7304	1.7807

Source: Town of Essex Annual Reports

Trends in revenues, by source, and expenditures, by general service category, for the years 1999 through 2009 are shown in Tables 12-3 and 12-4 respectively. Table 12-5 summarizes the Town's recent capital expenditures.

Table 12-3
GENERAL FUND REVENUES, 1999/2000 THROUGH 2008/2009
ESSEX TOWN OUTSIDE THE VILLAGE

	Fiscal Year									
Revenues	**1999/00**	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**
Property Taxes	5,276,556	5,545,509	5,822,851	4,931,757	5,213,177	5,688,721	6,265,625	7,180,495	7,525,684	7,796,304
Licenses and Permits	35,948	42,818	44,081	37,145	47,132	51,246	39,170	46,729	58,020	49,113
Intergovernmental	334,904	314,556	250,455	274,326	204,870	323,836	247,935	214,438	211,716	493,292
Charges for Services	227,691	338,868	507,441	1,656,511	1,525,494	1,359,055	1,258,078	1,147,074	1,701,231	1,072,047
Fines	118,616	112,042	82,784	81,019	95,978	79,095	84,993	127,004	109,773	122,361
Miscellaneous	112,642	107,019	147,241	115,885	57,047	157,036	129,570	175,723	206,581	70,328
Total Revenues	6,106,357	6,251,641	6,610,015	6,984,412	7,413,384	7,658,989	8,025,371	8,891,464	8,770,814	9,534,614

Source: Town of Essex Annual Reports

Table 12-4
GENERAL FUND EXPENDITURES, 1999/2000 THROUGH 2008/2009
ESSEX TOWN OUTSIDE THE VILLAGE

	Fiscal Year									
Expenditures	**1999/00**	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/2008**	**2008/0209**
Public Safety	2,147,689	2,352,038	2,365,551	2,490,950	2,618,832	2,806,969	2,988,227	3,115,656	3,157,115	3,290,377
General Government	1,332,204	1, 325, 522	1,433,227	1,532,824	1,661,326	1,777,184	1,786,110	1,933,259	2,2027,193	2,058,213
Highways and Streets	1,246,779	1,303,427	1,290,191	1,413,088	1,410,742	1,549,896	1,491,603	1,627,222	1,591,479	1,621,447
Stormwater	---	---	---	---	126,973	107,785	238,194	125,669	93,096	549,878
Health and Recreation	670,388	698,727	872,113	908,176	983,677	987,979	1,075788	1,144,232	1,188,433	1,292,260
Intergovern-mental	349,359	342,195	363,635	360,225	351,459	351,459	339,058	363,427	387,839	398,204
Debt Service	184,815	218,624	274,949	263,212	260,375	258,534	256,432	204,230	325,659	324,235
Total Expenditures	5,931,234	6,251,641	6,610,015	6,984,412	7,413,384	7,827,414	8,199,781	8,534,003	8,770,814	9,534,614

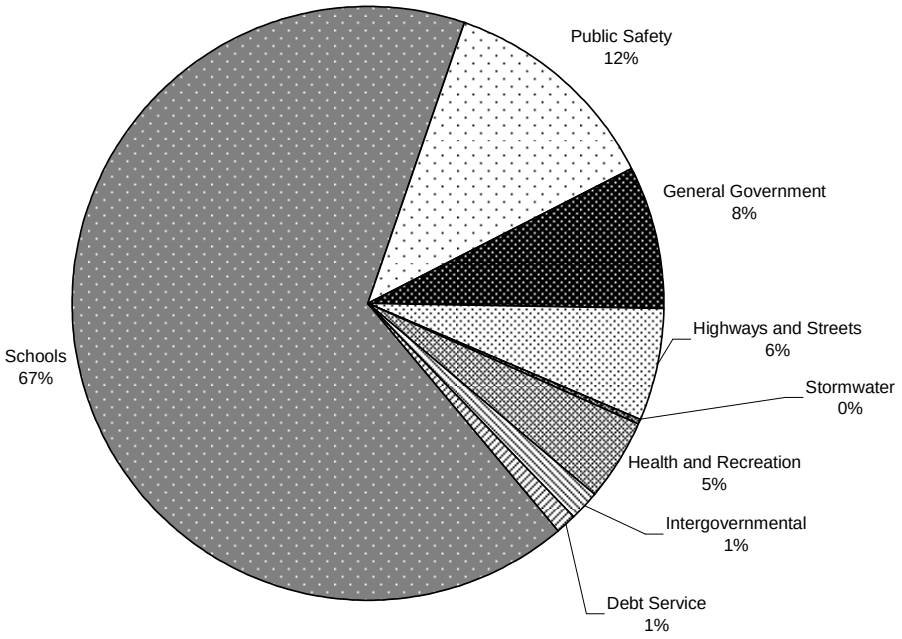
Source: Town of Essex Annual Reports

Table 12-5
ESSEX TOWN CAPITAL EXPENDITURES, 2001-2002 THROUGH 2009-2010

Capital Expenditures	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Transit Improvements									40,000
Susie Wilson Road/VT Rte. 15 Intersection									93,200
Susie Wilson//David Drive Traffic Lights	162,725							455,000	32,379
Sewers	20,000			15,000	22,000	20,000	74,075	580,000	600,000
Waterlines	60,000			5,000	8,000	60,000	171,130	580,000	580,000
Cemetery Columbarium	52,395					52,395	38,500		
Lamell Ave				25,000					
Fire truck							400,000		
Building Improvements	450,000	50,000	106,000	158,000	71,600	50,000	140,000	115,000	153,000
Park Development	97,365	35,160	169,365	32,000	32,000	129,000	235,160	75,175	50,680
Road Reconstruction	175,000	135,500	60,000	110,000	128,000	142,200	124,921	228,000	4000,000
Kellogg Road/David Drive Signals	215,000			20,000		215,000			
Butlers Corners			586,500	586,342					
Heavy Vehicles		92,000	129,456	68,600	277,296	130,992	148,866	178,197	124,586
Park & Ride Lots							38,500	40,000	75,000
Paths & Walks		30,000	102,000	359,000	858,300	578,611	123,000	234,000	130,000
Reappraisal					292,300	162,725			
Old Stage Reconstruction			132,000	10,000					
Stormwater Management Plan									187,000
Economic Development									50,000
Total Expenditures	624,000	348,865	1,285,321	1,668,942	1,397,196	1,540,923	1,865,702	2,455,372	2,560845

Source: Town of Essex Annual Reports

Figure 12-5
Expenditures by Type, 2007/2008
Essex Town Outside the Village



Source: Town of Essex Annual Reports

Tables 12-2 through 12-5 primarily relate to municipal revenues and expenditures. However, as shown in Figure 12-5, the greatest percentage of local expenditures is related to school costs. The passage of Act 60 in 1998 has dramatically changed financing methods for school expenditures. Prior to that time, many communities encouraged commercial and industrial growth. After Act 60, a town keeps its commercial and industrial tax base for municipal costs; but that portion of the tax base is shared with the entire state to pay for state-wide educational costs. Growth in a community's commercial and industrial tax base will now benefit the state as a whole but it will have a much smaller financial benefit for the community. With school costs representing a high percentage of overall municipal expenditures, the new funding formula greatly reduces a community's incentive to seek commercial and industrial growth.

The Town of Essex has a number of policies in effect that will influence the type and amount of future development, and the ability to generate local revenues. The Town has established tax contracts with the owners of farm land and open land which establish a reduced property tax burden in exchange for holding the land back from development. This policy is intended to preserve some of the open features of the Town's landscape and to encourage the continuation of farming in the Town.

The Town also has a sewer allocation policy which has established the boundaries of the sewer service area (the "core") and the amount of sewer capacity that can be allocated to residential and nonresidential uses. This policy has the effect of encouraging development within the sewer service areas (to the extent that sewer allocations can be obtained). The Town also has a residential phasing policy that establishes the rate of development that can occur in any one year.

The Town has enacted impact fees on new development to cover some or all of the capital costs of new public facilities needed to serve the new development. Funds generated by impact fees must be used for the designated capital expenditures within a specified period of time. This will reduce the burden of funding new capital facilities, which falls on the remainder of the grand list.

Finally, the Town has established enterprise funds for providing sewer and water facilities. These funds are designed to cover both capital and operating costs through user fees by charging only the users of these services. The enterprise fund operations derive no revenue from the general tax base.

It is assumed that these policies will be continued into the foreseeable future.

12.4 Goals, Objectives and Strategies

Goal 12.1: Maintain an effective balance between municipal administrative services, elected and appointed officials, and Essex's residents, businesses and visitors.

Strategy 12.1.1: Carry out day-to-day administrative tasks with attention to the provision of good customer service for the Town's residents, businesses and visitors.

Strategy 12.1.2: Conduct sound coordination and communication between and among departments, boards and committees.

Strategy 12.1.3: Collaborate with the Village and surrounding communities, regional entities and the state concerning issues of mutual interest and policy.

Strategy 12.1.4: Continue working with the Vermont League of Cities & Towns to further the Town's vision, goals and objectives.

Goal 12.2: Use technology, when practicable, to save money, time and energy, as well as to improve the flow of communication.

Strategy 12.2.1: Study and consider implementing "*e-Government*" digital/computer techniques (e.g., enabling the on-line payment of property taxes and dog licenses, and research of land records).

13. ENERGY

Like most Vermonters, the lives and lifestyles of Essex residents are heavily dependent on the use of conventional (oil, coal, natural gas, hydro) energy sources. This long-standing practice is under threat from several fronts. Rising fuel costs, limited resources and adverse impacts on health, quality of life and the environment are of concern. Thus, the conservation, cost and efficient use of energy is becoming ever more important. The use of alternative, renewable energy sources (such as sun and wind) must be explored, while minimizing negative visual and environmental impacts associated with capturing and using any form of energy.

As part of a serious commitment to reduce greenhouse gas emission, some Vermont municipalities have voted to take the "Ten Percent Challenge" of reducing emission of greenhouse gasses by 10 percent over the coming decade. While the focus of the "Ten Percent Challenge" is global climate change, strategies for meeting the challenge also result in a reduced energy "footprint" for the town. Other towns have voted to become a "Transition Town". Such towns make a conscious effort to create more localized and sustainable communities that depend less on fossil fuels.

13.1 Energy

Energy sources and consumption are issues of growing importance for all Vermont municipalities. As the cost of electricity and prices for petroleum products such as gasoline, diesel and heating fuel continue to increase, Town government must consider ways to ease the impact of such trends on its residents.

First, the Town can institute energy conservation measures in its own buildings and practices to reduce consumption and thus reduce the costs it has to pass on to taxpayers. Second, through its planning and regulatory authority, the Town can encourage energy conservation measures by property owners. In this plan, the Town of Essex chooses to pursue a non-regulatory approach; instead taking steps to enable energy efficient development, employing energy saving modes of transportation, and pursuing opportunities for generating and utilizing alternative energy sources.

Finally, the Town can influence the way energy is generated and transmitted, especially electricity, through its own regulations and through participation in the Public Service Board's Section 248 process. As discussed in Chapter 11, it is imperative that the Town consider the impact that land use has on energy use, and vice versa. The Town has chartered an Energy committee with the responsibilities to track municipal energy use to make energy-related recommendations to the Selectboard. It has also been chartered to recommend funding opportunities for renewable energy and energy efficiency, as well as to develop community energy-related education programs.

It is challenging to locate useful, Town-level information on energy resources or consumption. The US Census Bureau collects basic data on what fuel people use to heat their residences. While these data are subject to all the caveats associated with the decennial census (for example, they are drawn from a sample of households which is now 10 years old), they do provide some sense of change. It is also very important to note that the following data are for residential uses only. The Census does not include any data on commercial or industrial use. The 2010 Census data was not available for the 2011 Town Plan update. Efforts were made to obtain interim data, where possible. However,

the 2000 Census data had to be relied on for home heating data. Table 13-1 illustrates how residents in Essex heated their homes in 1990 and 2000.

Table 13-1
HEATING FUEL USED IN TOWN OF ESSEX HOUSING UNITS

Fuel Type Used	Number of Housing Units 1990	Number of Housing Units 2000*
Utility gas	1930	3399
Bottled, tank or LP gas	248	511
Electricity	1136	367
Fuel oil, kerosene, etc	2357	2564
Coal or coke	19	40
Wood	346	107
Solar energy	0	0
Other fuel	0	16
No fuel used	10	9
Total	6046	7013

Source: US Census Bureau, 2000 Census *Updated data not available

Clearly the table suggests a very significant shift away from electric heat during the 1990s, not a surprising change given Vermont electric rates. The large increase in the number of housing units that used "utility gas" for heat reflects both the large number of new units built in areas served by Vermont Gas Systems, Inc. and the expansion of those service areas to include many existing homes. Electricity demand continues to rise due to other factors. Town residents need to be aware that continued increase will result in the need to add future electrical grid infrastructure in Town.

Map 2, *Utilities*, shows the location of main electrical transmission lines and substations in Essex, as well as the areas serviced by Vermont Gas.

Electricity in the Town outside the Village is supplied by Green Mountain Power, Central Vermont Public Service, and Vermont Electric Cooperative. As local demand for electricity grows, it may not be necessary to upgrade our infrastructure if we can curb our electricity use. With this in mind, Efficiency Vermont (EVT) designated Essex as one of their geo-targeted areas in 2007. At that time, the Town Energy Task Force worked with EVT to help educate the public about compact fluorescent light bulbs (CFLs) and reduce our demand for electricity, thereby extending the useful life of existing power equipment.

Table 13-1 shows that there has been a significant expansion in the number of households in Essex using Vermont Gas as the source of fuel to heat their homes.

Should electric or gas utilities need expansion in the future - despite our best efforts to conserve energy – the Town should work with Vermont Gas and other energy providers to facilitate service area expansion and to locate distribution lines in existing corridors in order to avoid an undue adverse impact on residents. The Town should also explore further opportunities for co-generation

of electricity. This process is already used at the wastewater treatment plant located in Essex Junction. The Town should also avail itself of the latest data, to help analyze and visualize renewable energy possibilities.

Given the significance of future energy supplies and costs to both residential and commercial customers, it would be in the best interest of the Town to undertake a comprehensive energy planning project in the very near future to explore in greater depth appropriate and productive Town involvement in this critical issue.

13.2 Goals, Objectives and Strategies

Goal 13.1: Develop a Comprehensive Energy Plan.

Objective 13.1.1: In accordance with 24 V.S.A § 4382, the Town should develop an energy plan which includes an analysis of energy resources, needs, scarcities, costs and problems within the municipality. The plan should also include 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 the conservation of energy. The plan should contain specific implementation strategies, along with timelines and cost estimates.

Nothing in this chapter is meant to suggest that the Town should not start on any of the below objectives and strategies before the official adoption of a Comprehensive Energy Plan.

Strategy 13.1.1.1: Solicit help from outside organizations to provide support for the development of a Comprehensive Energy Plan.

Strategy 13.1.1.2: Within one year of adoption of the Comprehensive Energy Plan, department heads should develop and submit a five-year plan, based on known projected lifespan of equipment and systems, for future energy saving improvements and cost-effective investments regarding systems and equipment.

Objective 13.2.1: As part of a Comprehensive Energy Plan, energy conservation should be promoted by municipal example and by encouragement of appropriate actions by other public and private entities. These actions should include, but not be limited to, the following:

Strategy 13.2.1.1: The Town should update the energy audits of all Town-owned buildings to determine what cost-effective improvements should be undertaken to reduce energy consumption and costs. Such measures should include consideration of insulation, the most cost efficient fuels for heating and cooling, energy efficient appliances, lighting, and office equipment.

Strategy 13.2.1.2: The Town Manager's Office should ensure that both a benefit-cost analysis and a life cycle cost analysis are carried out on all new Town buildings to determine the effectiveness of incorporating "green building" design, materials and technology.

Strategy 13.2.1.3: Evaluate steps to improve the energy efficiency and cost of lighting for streets, parking lots and other public spaces, and for traffic signals.

Strategy 13.2.1.4: Regularly update lighting, insulation, and other building requirements for new residential, commercial and governmental buildings to keep up with changing technologies.

Strategy 13.2.1.5: Implement municipal recycling and other solid waste reducing measures in all municipal and school buildings.

Strategy 13.2.1.6: The Town Public Works Department should establish and employ fuel efficiency standards as important considerations in acquisition of new vehicles.

Strategy 13.2.1.7: The Town Public Works Department should consider the cost-effectiveness of diverse fuel types, such as biodiesel, and innovative engines, such as gas-electric hybrids, when it purchases new vehicles.

Strategy 13.2.1.8: The Town Public Works Department should implement a schedule of regular vehicle maintenance to minimize emissions in order to preserve air quality.

Objective 13.3.1: As part of a comprehensive energy plan, promote development of alternative energy resources.

Strategy 13.3.1.1: Encourage voluntary use of alternative fuels such as biodiesel for vehicles

Strategy 13.3.1.2: Through the Town's permit process, the Community Development Department should design incentives for voluntary use of solar energy, geothermal energy, and where appropriate wind energy, for heating, cooling, and generation of electricity for residential and commercial buildings.

Strategy 13.3.1.3: The Community Development Department and the School District should promote public education and information to illustrate the benefits of energy conservation and energy efficiency through cooperative programs with existing non-governmental organizations.

Objective 13.4.1: As part of a Comprehensive Energy Plan, encourage the development of new renewable energy sources, and the maintenance of such existing sources, taking into account cost effectiveness as well as environmental and social impacts.

Strategy 13.4.1.1: Encourage operational improvements for the continued use of the Winooski River Dam for hydroelectric power.

Strategy 13.4.1.2: Consider financing Property Assessed Clean Energy (per Act 45) to encourage residents to take advantage of local or state bonds to help finance longer-term renewable energy projects.

Strategy 13.4.1.3: In the zoning and subdivision regulations, amend site plan review standards to encourage the use of energy conservation measures and building siting techniques.

Objective 13.5.1.: As a part of a comprehensive energy plan, establish land use patterns and densities that should result in the conservation of energy.

Strategy 13.5.1.1: The Community Development Department should require private sector developers to utilize the Vermont's State Residential Building Energy Code as updated in 2005 and the 2001 Vermont Guidelines for Commercial Construction.

Strategy 13.5.1.2: The Community Development staff should propose amendments to the Town's Zoning and Subdivision Regulations to encourage (a) the construction of buildings with configurations that reduce overall energy requirements, (b) planting of trees that are the appropriate types and size to maximize cooling possibilities and wind protection so as to conserve energy, and (c) site plan design that maximizes solar access for building sites.

Strategy 13.5.1.3: Consider requiring that all new residential construction be certified as meeting Federal Energy Star requirements before issuing a Certificate of Occupancy.

Strategy 13.5.1.4: The Community Development Department should pursue developing regulatory incentives to achieve net zero (or negative) energy use and greenhouse gas emissions for new construction.

Objective 13.6.1.: As part of a Comprehensive Energy Plan, establish land use patterns and implement bylaws that should encourage use of non-automotive travel

Strategy 13.6.1.1: The Community Development staff should recommend, where appropriate infrastructure is available or planned, regulations that will encourage denser, mixed use development conducive to bicycle and pedestrian traffic.

Strategy 13.6.1.2: The Public Works Department should work with the Chittenden County Metropolitan Planning Organization (CCMPO) to plan for and support construction of park and ride facilities along key commuter corridors such as VT Route 15, VT Route 117, VT Route 2A and VT Route 128.

Strategy 13.6.1.3: The Town should encourage the School District to work with the CCMPO's "Safe Routes to School" program to encourage students to walk to school.

Strategy 13.6.1.4: The Public Works Department will consider working with the CCMPO to plan and construct bike paths and bike lanes throughout Essex to encourage non-vehicular traffic.

Strategy 13.6.1.5: The Community Development Department should work with utility companies to plan for the efficient location of energy distribution infrastructure necessary to support denser, mixed use land use patterns.

Objective 13.7.1: As part of a comprehensive energy plan, promote policies for efficient and environmentally sound solid waste disposal.

Strategy 13.7.1.1: Continue to work with the Chittenden Solid Waste District to promote regional solid waste programs.

Strategy 13.7.1.2: Encourage regional efforts to locate solid waste and hazardous waste disposal facilities, whether inside or outside of the county.

Strategy 13.7.1.3: Continue to expand efforts to encourage reuse and recycling.

14. IMPLEMENTATION

The Town of Essex has a variety of tools and techniques to draw upon in establishing a program to implement this plan. This chapter describes the actions to be continued or developed by the Town in order to carry out the goals, objectives and policies that have been described previously.

14.1 Description of Implementation Techniques

Techniques available to implement a community's plan can be categorized as follows:

- Planning and studies;
- Land use regulations including zoning, subdivision and sewer allocation;
- Financial measures including capital expenditures for Town facilities, use of personnel and other Town resources, tax policy, and non-Town funding sources; and
- Communication including encouragement of various actions, coordination with other public and private entities, and education.

The following is a description of these implementation techniques.

Planning and Studies

The first step toward implementing this plan will be its adoption. Vermont statutes (24 V.S.A. Chapter 117, as amended by Act 200) empower communities by requiring plans adopted by adjacent communities, the Regional Planning Commission and state agencies to be consistent with one another. Furthermore, the Act 250 process requires projects to be in conformance with local plans. Therefore, it is essential that Essex have a plan to control its own destiny. An update is required by statute every five years. An annual report is recommended describing planning activities and status of implementing this plan in order to monitor its progress.

A variety of plans and studies are recommended to implement this plan. Examples include monitoring information technology to determine changes pertaining to land use, projecting school capacity and enrollment trends, evaluating energy use in Town facilities, and undertaking traffic studies to determine the need for road and intersection improvements.

Land Use Regulations

Zoning and subdivision regulations are important means for implementing a Town Plan. Minor amendments to those regulations may be required to accomplish some of the goals established herein. Growth management regulations relate the capacity of Town facilities to the anticipated growth rate. Both the timing and location of growth may be affected. The Town's principal growth management tool is the sewer allocation ordinance. Other regulations at the Town level may include heath regulations, an official map, public works specifications, and a building code. Regulations from other levels of government, such as state on-site wastewater disposal regulations, may also have an impact on the goals of this plan.

Finances

Many of the recommended actions from this plan will have an impact on Town finances. The foremost impact relates to capital expenditures for the purchase and upgrade of Town facilities. Many proposals are tied to the

Town's capital budget and program, a document that is updated and approved by the Selectboard annually. Items recommended for inclusion into the capital budget include expansion of police, fire and other facilities to meet the needs of a growing population; increased space for indoor and outdoor recreation activities, establishment of a land acquisition and preservation program for natural/scenic resources, and construction of a trail network. The expenditure of Town funds also relates to the use of Town personnel and other resources. Staff time is suggested for promoting economic development, supporting affordable housing, improving maintenance of recreation facilities, and providing information about land management and protection practices.

Items relating to Town tax policy include maintaining stable local property taxes as a means of encouraging economic development and acting as partner to developers in seeking tax credits from other sources. Impacts on Town finances may be reduced to the extent that funding is available from other sources. The use of impact fees will allow new development to pay its proportionate share of the costs of new facilities needed to support that development. Outside grants may assist in achieving such objectives as acquisition of land and easements for trails and construction of priority transportation projects.

Communication

In addition to use of land use regulation and financial outlays, many goals and objectives may be accomplished by effective communication with others. At times, the Town's role primarily is to offer encouragement for certain activities to occur. Examples include noting the mutually supportive roles of manufacturing and service-oriented businesses, supporting expansion of communications networks, and encouraging a variety of public transportation alternatives. Another form of encouragement is the creation of citizen boards and committees to support such activities as planning recreation programs and establishing trail priorities and seeking funding sources.

Coordination may include participation in regional planning efforts by CCMPO, CCRPC, CCTA and others; joint undertakings with neighboring communities; and cooperation between local bodies such as the Planning Commission and Schoolboard. Examples of education activities are working with CSWD to promote regional solid waste programs, providing information about land management and protection, and developing natural areas and museums.

14.2 Implementation Strategy

Table 14-1 lays out a detailed program for implementing the goals and objectives of this plan. Objectives are listed by number within each of the plan's chapters. The various techniques appropriate for implementing this plan are noted.

Table 14-1
Town Plan Objectives Implementation Summary

		Land Use Regulations				Finances				Communication		
Chapter and Objectives	**Planning & Studies**	**Zoning**	**Sub-division**	**Growth Mgt & Sewer**	**Other**	**Town Facilities**	**Town Resources /Personnel**	**Town Tax Policy**	**Funding from Others**	**Encour-agement**	**Coor-dination**	**Educa-tion**
Chapter 3 Economic Development												
3.1.1: Decide how economic initiatives can be delivered most effectively	✦						✦	✦	✦		✦	
3.1.2: Develop and implement coordinated marketing efforts							✦				✦	
3.1.3: Work with manufacturers to implement new technologies									✦		✦	
3.1.4: Work with all economic sectors to diversify the Essex economy										✦	✦	
3.1.5: Build upon position as a transport center to improve economic centers						✦	✦				✦	
3.1.6: Encourage talented individuals to start their own businesses										✦	✦	✦
3.1.7: Promote workforce training											✦	✦
3.1.8: Promote infrastructure readiness						✦						
3.1.9: Facilitate efficient state and local development review processes	✦				✦		✦				✦	
3.1.10: Expand access to affordable capital									✦		✦	
3.1.11: Support business development and retention programs		✦	✦				✦				✦	
3.1.12: Inventory and enhance Essex's tools for economic development								✦	✦		✦	
Chapter 4 Education												
4.1.1: Maintain residential growth consistent with fiscal capacity	✦	✦		✦								
4.1.2: Plan capital projects in advance to stabilize tax rates and identify alternative revenue sources	✦					✦						
4.2.1: Prepare a master plan for effective use of school property	✦											
4.2.2: Improve connections between schools and neighborhoods						✦						
4.2.3: Develop natural areas, museums, trails, etc										✦		✦
4.2.4: Include community use in future design of school facilities	✦					✦						
4.3.1: Follow the *Essex Design for Learning* in design/use of facilities						✦						✦
4.4.1: Planning Commission & School Bd. coordinate development & facilities						✦					✦	
4.4.2: Town/school cooperate in preparing 5-year capital budget						✦					✦	
4.4.3: Selectboard, Planning Commission, School Board meet periodically											✦	
Chapter 5 Housing												
5.1.1 Appoint ad-hoc task force to assess housing needs and develop targets	✦						✦					
5.1.2: Preserve the existing stock of affordable housing		✦						✦	✦			
5.1.3: Adopt zoning to encourage development of new housing		✦		✦					✦			
5.1.4: Allocate resources to assist development of affordable housing						✦	✦	✦	✦	✦	✦	
5.1.5: Contribute to regional effort to address homelessness											✦	
5.2.1: Encourage mix of housing suitable for all income levels		✦						✦	✦			
5.2.2: Preserve existing stock of rental housing										✦		
5.2.3: Locate housing adjacent to commercial centers		✦								✦		
5.3.1: Promote higher density cluster development in growth centers		✦										
5.3.2: Establish target of 80% of new housing within growth areas		✦	✦	✦								
5.3.3: Connect residential areas for sense of community and movement						✦						
5.3.4: Adopt regulations to preserve the Town's more rural areas		✦	✦	✦								
5.4.1: Adopt regulations to encourage new elderly housing		✦										
5.4.2: Enhance housing affordability for elderly residents										✦		
5.4.3: Pursue policies to encourage affordable elderly housing												
5.5.1: Encourage energy efficient housing construction and renovation		✦	✦		✦					✦		✦

		Land Use Regulations				Finances				Communication		
Chapter and Objectives	**Planning & Studies**	**Zoning**	**Sub-division**	**Growth Mgt & Sewer**	**Other**	**Town Facilities**	**Town Resources /Personnel**	**Town Tax Policy**	**Funding from Others**	**Encour-agement**	**Coor-dination**	**Educa-tion**
Chapter 6 Community Services and Facilities												
6.1.1: Work with CSWD to promote regional solid waste programs											✦	✦
6.1.2: Promote public education, awareness and participation												✦
6.2.1: Provide for growth within existing areas before expanding	✦			✦		✦						
6.2.2: Ensure future availability of water, sewer and stormwater systems	✦					✦						
6.2.3: Keep Town services/facilities in conformance with goals				✦		✦						
6.3.1: Maintain existing water, sewer and stormwater and additions	✦					✦						
6.3.2: Ensure new subsurface disposal systems are not detrimental					✦							✦
6.3.3: Limit construction of new community wastewater systems			✦									
6.3.4: Encourage water conservation methods and technology												✦
6.4.1: Ensure that users/new development contribute to costs	✦								✦			
6.4.2: Promote efficient use of funds by adopting a capital budget						✦						
6.5.1: Coordinate with communications providers re municipal growth											✦	
6.5.2: Support expansion of communication network										✦		
6.5.3: Allow expansion of cable television services										✦		
6.5.4: Encourage underground utilities where feasible		✦	✦									
6.5.5: Site new infrastructure consistent with rural environment		✦	✦									
6.5.6: Learn about emerging technologies and costs/benefits											✦	✦
6.5.7: Ensure local regulations promote and regulate such facilities		✦	✦							✦		
6.5.8: Research weather the Town should go “wireless”	✦						✦					
6.6.1: Expand police, fire etc. services according to population demand	✦					✦						
6.6.2: Ensure adequate facilities to provide police, fire etc. services						✦						
6.6.3: Preserve the safety and security of the citizens							✦					
6.6.4: Cooperate with county, state, etc. in delivery of services											✦	
6.7.1: Minimize risk of falling limbs and trees on public property	✦						✦		✦			
6.7.2: Collaborate with first-response agencies re: town facilities	✦					✦	✦				✦	
6.8.1: Develop and implement stormwater management program	✦					✦	✦				✦	
6.9.1: Recognize the importance of adequate child care to Essex residents												✦
6.9.2: the provision of childcare services in a variety of settings		✦					✦					
6.9.3: Facilitate the creation, expansion, or continuation of child care facilities						✦				✦		
Chapter 7 Parks and Recreation												
7.1.1: Enhance trail system to link neighborhoods and other areas												
7.1.2: Link trail system to neighboring Towns											✦	
7.1.3: Provide pedestrian and bicyclist opportunities	✦					✦						
7.2.1: Increase space for indoor recreational opportunities	✦					✦					✦	
7.2.2: Increase level field space for outdoor recreational opportunities						✦						
7.2.3: Pursue establishment of land acquisition program	✦						✦	✦	✦	✦	✦	✦
7.3.1: Get support from Essex residents in planning recreation activities							✦			✦	✦	
7.3.2: Increase public awareness and use of amenities and programs						✦	✦					✦
7.3.3: Sustain a wide variety of programs for all residents							✦					✦
7.4.1: Improve the maintenance of Essex parks and fields							✦		✦			
7.4.2: Improve facilities owned now or to be acquired by the Town	✦					✦						

		Land Use Regulations				Finances				Communication		
Chapter and Objectives	**Planning & Studies**	**Zoning**	**Sub-division**	**Growth Mgt & Sewer**	**Other**	**Town Facilities**	**Town Resources /Personnel**	**Town Tax Policy**	**Funding from Others**	**Encour-agement**	**Coor-dination**	**Educa-tion**
7.4.3: Develop and maintain more trails in parks and natural areas	✦						✦		✦		✦	
7.4.4: Determine how hardwood may be harvested and by whom							✦			✦	✦	✦
7.4.5: Maximize coordination with the Village Recreation Department						✦	✦			✦	✦	
Chapter 8 Transportation												
8.1.1: Study all modes in a consistent, cost-appropriate manner	✦											
8.2.1: Road plans/expenses to be consistent with functional class system	✦					✦			✦			
8.2.2: Adopt/update a Road Management Plan to prioritize road work	✦					✦						
8.2.3: Choose recommendations for Susie Wilson Rd. improvements						✦	✦					
8.2.4: Maintain commitments to existing public transit services						✦	✦		✦		✦	
8.2.5: Maintain acceptable level of service for all transportation modes						✦						
8.3.1: Undertake aggressive efforts to complete the Circ. Highway									✦		✦	
8.3.2: Provide only new roads and upgrades that improve safety, etc	✦	✦	✦			✦			✦			
8.3.3: Encourage a variety of public transportation alternatives	✦									✦	✦	
8.3.4: Create trail network to connect residents to schools, work, etc.			✦			✦			✦	✦	✦	
8.4.1: Prohibit strip development and improve roadside aesthetics	✦	✦	✦									
8.4.2: Impacts from the Circumferential Highway shall be controlled		✦										
8.4.3: Integrate transit concerns in the land use planning/review process	✦	✦	✦									
8.4.4: Control rural development on new roads or with no frontage		✦	✦									
8.4.5: Encourage development of shared parking facilities		✦										
8.4.6: Ensure that land use and functional road classes are matched	✦	✦					✦					
8.4.7: Require second accesses and development connections			✦									
8.5.1: Adopt a Capital Plan including lifecycle analyses for each project	✦					✦						
8.5.2: New development to contribute its proportionate share of costs		✦							✦			
8.5.3: Adopt a Capital Plan for efficient expenditure of public funds						✦						
8.5.4: Adopt an official map for road/trail networks and explore funding	✦				✦	✦			✦			
8.6.1: Obtain annual reports of key traffic counts and accident data	✦											
8.6.2: Create a Town traffic model to assess development impacts	✦								✦			
8.6.3: Monitor impacts resulting from the Circumferential Highway	✦											
8.6.4: Monitor transportation systems' environment impacts	✦										✦	
8.7.1: Collaborate with CCMPO, CCTA and others re transportation												
Chapter 9 Natural Resources												
9.2.1: Update existing natural resources from 2008 Open Space Plan		✦	✦								✦	✦
9.2.2: Conduct studies to better understand water quality conditions	✦	✦					✦				✦	
9.2.3: Consolidate resource data in an updated Significant Map	✦	✦	✦			✦						
9.2.4: Conduct air quality study to establish goals and objectives	✦	✦	✦				✦				✦	
9.3.1: Establish land preservation program for natural/scenic resources	✦	✦				✦			✦		✦	
9.3.2: Provide information about land management and protection							✦			✦	✦	✦
9.3.3: Model environmentally sound practices for the community	✦					✦						✦
9.4.1: Educate public about trail benefits and user responsibilities	✦										✦	✦
9.4.2: Assist landowners in understanding rights and obligations											✦	✦
9.5.1: Continue use of regulations to restrict unsuitable development		✦	✦		✦							
9.5.2: Develop new stormwater treatment standards		✦	✦				✦					
9.5.3: Recognize differing natural resource values in growth areas		✦	✦									
9.5.4: Revise development review process for more resource protection		✦	✦		✦							✦
9.5.5: Incorporate resources management recommendations into regulations		✦	✦				✦				✦	✦

		Land Use Regulations				Finances				Communication		
Chapter and Objectives	**Planning & Studies**	**Zoning**	**Sub-division**	**Growth Mgt & Sewer**	**Other**	**Town Facilities**	**Town Resources /Personnel**	**Town Tax Policy**	**Funding from Others**	**Encour-agement**	**Coor-dination**	**Educa-tion**
Chapter 10 Aesthetic/Historic/Cultural Resources												
10.1.1: Incorporate identified resources into Significant Features Map	✦	✦	✦								✦	
10.1.2: Retain rural scenic/historic qualities while allowing use of land	✦		✦									
10.2.1: Update objective and standards for open space and roadside protection		✦	✦				✦				✦	
10.2.2: Update inventory of historic, cultural and scenic resources	✦											
10.3.1: Improve quality of public trees and landscaping	✦				✦					✦		
10.3.2: Increase the number of public trees in Essex	✦						✦					
10.3.3: Improve quality of non-tree plantings on public property						✦	✦					
10.3.4: Improve resident involvement in landscape care and planning										✦		
10.4.1: Amend Design Control District to enhance Essex Center		✦										
10.4.2: Seek funding for public improvements and attract private funds						✦			✦			
10.4.3: Encourage sculpture and statuary on public property						✦						
10.5.1: Update and verify the list of historic structures shown in Appendix F	✦											✦
10. 5.2: Exterior building modifications to respect architectural integrity		✦								✦	✦	
10..5.3: Develop better methods to ensure protection of historic sites	✦	✦										
Chapter 11 Land Use and Development												
Fort Ethan Allen:												
11.1.1: Retain designation of Fort as a historic district					✦					✦		
11.1.2: Expand Design Control District to encompass the entire Fort area	✦	✦					✦					
11.1.3: Maintain the Parade Grounds as open space.					✦					✦		
11.2.1: Implement the “Fort Ethan Allen Master Plan Study”	✦				✦		✦					
11.2.2: Ensure that Essex and Colchester zoning provisions are compatible											✦	
11.3.1: Provide infrastructure to foster economic development						✦	✦			✦		
11.3.2: Modify zoning to allow more commercial and industrial uses		✦					✦					
11.3.3: Improve pedestrian traffic patterns via links from the Fort						✦						
Essex West:												
11.4.1: Evaluate vacant land in Essex West for affordable housing	✦											
11.4.2: Encourage a variety of housing types		✦					✦			✦		
11.4.3: Maintain transition zones and buffers to prevent encroachment		✦										
11.5.1: Implement appropriate measures from Susie Wilson Road studies	✦					✦	✦		✦			
11.5.2: Upgrade deficient bridges and railroad crossings						✦	✦		✦			
11.5.3: Facilitate the extension of muni. water along the length of Rt 2A						✦	✦					
11.5.4: Facilitate the provision of municipal sewer to Painesville Manor						✦	✦					
11.5.5: Work toward providing links to the Village in Pinecrest Drive						✦	✦					
11.5.6: Complete construction of sidewalks along key roads						✦	✦					
11.6.1: Revise landscape and site design review zoning criteria		✦					✦					
11.6.2: Restrict access to the arterials and major collectors		✦	✦									
11.6.3: Re-evaluate setback and landscaping requirements along Pinecrest Dr	✦	✦					✦					✦
11.7.1: Establish green belt along Sunderland and Indian Brooks				✦								
11.7.2: Establish buffer zone along Indian and Sunderland Brooks.		✦		✦								
Neighborhood Growth Centers:												
11.8.1: Encourage green belts, open space and recreational amenities										✦		
11.8.2: Encourage vehicular and trail connections between developments						✦	✦			✦		

		Land Use Regulations				Finances				Communication		
Chapter and Objectives	**Planning & Studies**	**Zoning**	**Sub-division**	**Growth Mgt & Sewer**	**Other**	**Town Facilities**	**Town Resources /Personnel**	**Town Tax Policy**	**Funding from Others**	**Encour-agement**	**Coor-dination**	**Educa-tion**
11.8.3: Encourage affordable housing for wider income mix of residents		✦								✦		
11.8.4: Evaluate residential street improvements	✦						✦					
11.8.5: Enlist the assistance of residents in public safety programs												✦
11.9.1: Provide flexibility within the zoning and subdivision regulations		✦	✦				✦					
11.9.2: Evaluate zoning and subdivision regulations to allow density bonuses	✦	✦	✦									
11.9.3: Promote PUD's as a means of providing affordable housing		✦								✦		
11.10.1: Through subdivision process, provide interconnections			✦									
11.10.2: Continue to require two or more points of ingress/egress			✦									
11.10.3: Encourage access that connects directly to major streets										✦		
11.10.4: Minimize curb cuts on major collector roads		✦	✦									
11.10.5: Promote opens space, recreational amenities and connections		✦	✦							✦		
Saxon Hill:												
11.12.1: Ensure that park uses are primarily light industrial uses		✦										
11.12.2: Residential use is not allowed in RPD-I	✦	✦	✦	✦								✦
11.13.1: Retain provisions regarding recreation/conservation uses.		✦										
11.13.2: Evaluate options to purchase/preserve 60% Conservation RPD-I												
11.13.3: Enhance the importance of the major points of entry to the Park						✦						
11.13.4: Retain the 200-foot buffer requirement between residential areas		✦										
11.13.5: Ensure that recreation/conservation areas are effectively managed						✦	✦					
11.13.6: Consider standards to ensure building harmony with surroundings	✦	✦	✦				✦					✦
11.14.1: Encourage the provision of improved public transportation										✦		
11.14.2: Encourage a transportation system management plan (TSM)										✦		
11.14.3: Focus efforts on Allen Martin Parkway as a major arterial						✦						
11.14.4: Extend municipal sewer to allow high water usage industries						✦						
11.14.5: Consider reallocation of a small portion of the existing sewer						✦	✦					
11.14.6: Review road infrastructure for adequate connectivity and emergency Access						✦						
11.15.1: Work with the developer to establish a trail management plan							✦				✦	
11.15.2: Undertake educational efforts to make public aware of Saxon Hill							✦					✦
11.15.3: Organize and promote public events to increase use of the park											✦	✦
11.15.4: Establish a hiking trail from Winooski River to top of Saxon Hill						✦						
11.15.5: Re-evaluate the forest Management Plan with the Tree Warden	✦						✦					
11.15.6: Discuss with School District regarding future of 90-acre parcel											✦	
The Lowlands:												
11.16.1: Ensure that development in floodplain areas is avoided.		✦										
11.16.2: Require setbacks from streams, drainage ways and wetlands		✦										
11.16.3: Retain the current low density and type of uses		✦										
11.16.4: Do not extend municipal water and sewer into these areas						✦						
11.17.1: Review policies on waste water disposal and private roads	✦											
11.17.2: Amend regulations to implement rural lands objectives		✦	✦									
11.17.3: Implement Conservation Design Subdivision regulations		✦	✦							✦		✦
Winooski River Corridor:												
11.18.1: Develop a bicycle/walking path along the entire corridor						✦						
11.18.2: Develop spur trail to top of Saxon Hill						✦						
11.18.3: Preserve oxbow near bottom of Sand Hill Road as natural area					✦					✦		
11.18.4: Work with WVPD to upgrade the remainder of "68 Acres"						✦					✦	

	Land Use Regulations					Finances				Communication		
Chapter and Objectives	**Planning & Studies**	**Zoning**	**Sub-division**	**Growth Mgt & Sewer**	**Other**	**Town Facilities**	**Town Resources /Personnel**	**Town Tax Policy**	**Funding from Others**	**Encour-agement**	**Coor-dination**	**Educa-tion**
11.18.5: Develop canoe launch areas in strategic locations					✦							
11.18.6: Encourage ecologically sensitive vegetable/fruit farms										✦		
11.18.7: Renew interest in the River as an amenity via public education										✦		✦
11.18.8: Promote annual "green-ups" of the Corridor										✦		
11.18.9: Encourage landowners to "adopt" a portion of the River										✦		
Future Land Use:												
11.19.1: Work with other communities to ensure land use compatibility											✦	
11.19.2: Cooperate with the Village to ensure its vitality as a center											✦	
11.19.3: Participate in the Chittenden County Regional Plan					✦							
11.20.1: Guide and direct future development	✦	✦	✦	✦	✦							
11.21.1: Maintain a growth rate of 210 people/year			✦	✦								
11.23.1: Encourage residential development in community centers	✦	✦		✦		✦						
11.23.2: Economic growth shall be encouraged in the Town's designated		✦										
11.23.3: Public investments shall reinforce the general character							✦	✦	✦			
11.23.4: The long-term maintenance of open lands shall be encouraged							✦	✦				
11.24.1: Consider recommendations from the Town Ctr Master Plan	✦							✦				
11.25.1: Explore potential uses to be allowed in the Ag/Residential Area		✦						✦				
Chapter 13 Energy						✦			✦	✦		✦
13.1.1: The Town will develop an energy plan					✦	✦			✦	✦		✦
13.2.1: Promote energy conservation by municipal example					✦	✦			✦			✦
13.3.1: Encourage the development of alternative energy resources					✦				✦			✦
13.4.1: Encourage the development of new renewable energy sources	✦	✦	✦	✦	✦				✦			✦
13.5.1: Establish land use patterns and densities for energy conservation												
13.6.1: Encourage land use patterns and bylaws to lessen auto-dependency	✦	✦	✦	✦	✦				✦			✦
13.7.1: Promote policies for environmentally sound solid waste disposal						✦			✦	✦		✦

Appendix A

Significant Natural and Fragile Areas

1. Indian Brook Reservoir
2. Saxon Hill Forest (RPD-I District), reservoirs and drainage basin
3. Abbey Brook drainage basin
4. Cedar Swamp
5. Winooski River
6. Alder Brook drainage basin
7. Browns River
8. Essex Esker – Chapin Road
9. Brigham Hill forest area (gypsy moth focal point)
10. Jack Pine plantation located in the State Tree Nursery
11. Bear and Deer Habitat – Osgood Hill and Sleepy Hollow Road
12. Saxon Hill (Town School District Forest)
13. Town Forest
14. Hill Property (Essex Center)

Appendix B

Scenic Resources

1. Alder Brook Valley – Old Stage Road East
2. Alder Brook Valley – Chapin Road West
3. Browns River Floodplain – Bixby, Osgood Hill, Browns River Road, Ellis Road, Hanley Lane, Weed Road, VT Route 15
4. VT Route 15 – Between Essex Junction and Essex Center; Winooski Valley Park District Overlook across from Fort Ethan Allen
5. Brigham Hill Road/Lane
6. Towers Road
7. Allen Martin Drive
8. River Road (select points particularly near the North Williston Road Bridge)
9. Circumferential Highway (proposed)
10. Hanley Lane (Osgood Hill)
11. Osgood Hill East and West
12. Weed Road
13. Sleepy Hollow Road
14. Old Stage Road East
15. Chapin Road
16. Browns River Road
17. Winooski River
18. Farms and adjacent landscape – Whitcomb Farms (Village and Town); Hunter Farm – Robert Lemire; Earl Mathews; Holmes; and others
19. Essex Center Commons
20. Saxon Hill Fire Tower Site (no longer standing)
21. Fort Ethan Allen Stone Tower
22. Fort Ethan Allen Officiers' Row and Parade Grounds

Appendix C

Historic Sites and Structures

MAP 19 NUMBER	SITE	PARCNUM	REGISTER
1	McCuin House	2006013000	
2	Labarge House	2006014000	
3	Tveraas House	2006017000	
4	Lang House	2090005000	State
5	Thibault House	2006021000	State
6	Kilmoyer House (1820 Coffee House)	2091003000	Nat. and State
7	Fiske House (was Buell Tavern)	2010002000	State
8	Molloy House	2091001000	State
9	Clark House	2056094000	
10	Foell House	2058002000	
11	Tyler House	2058051000	
12	Esmond House	2058003000	
13	Hoagies	2058004000	
14	Macy House	2058048000	
15	Candy Store	2058006000	
16	Diamond House	2058047000	
17	Grange Hall	2058007000	
18	Methodist Church	2058046000	
19	Prenventorium	2058008000	
20	Packard House	2058045000	
21	Richard Lamson House	2058010000	
22	C. W. Rice Store	2058043000	
23	Town Common Cemetery	2058042001	
24	Congregational Meeting House	2058030000	
25	Whitten Wheelwright Shop	2058041000	
26	Chapin Road School House	2058042000	
27	Farnsworth Weed Phone Co.	2058040000	
28	Old Essex Library	2058039000	
29	Nichols House	2058032000	
30	Knapp House	2059008000	State
31	Green Meadow Farm	2008011000	State
32	Senn House	2008014001	State
33	Little White School	2058028000	
34	Delibac House	2058029000	
35	William Holmes House	2011021000	State
36	St. Amour House	2011024000	State
37	Douglas House	2011032000	State
38	Hunter House	2015011000	State
39	Thibodeau House	2019001000	State
40	Weeds Corner	2011046000	
41	Lemnah House (Castle House)	2011049000	State
42	Sirotkin House	2011051000	
43	Packard House	2011073000	

44	Schumacher House	2011070000	State
45	Aremsapaban Farm	2008026000	State
46	Harold Whitcomb House	2008021000	
47	Varnum House	2008018000	
48	Page House	2012010000	State
49	Schuppin House	2012024000	State
50	Wisehart House	2062005000	State
51	Parker House	2010004000	
52	Whitten House	2056089000	State
53	Mansfield Homestead	2010050000	State
54	Bigelow House	2010055000	State
55	Diego House	2010063006	
56	Page Homestead	2014002000	State
57	Thomas Parizo House	2018002000	State
58	Bent House	2018007000	State
59	Essex Town Hall	2058018000	
60	Essex Town Hall	2058016000	
61	Essex Center Railroad Station	2058001000	
62	Towers House	2010069000	State
63	Shonberg House	2010062000	State
64	Essex Classical Institute Boarding House	2058023000	State
65	W. B. Johnson Creamery	2059005000	
66	Kelley's Blacksmith Shop	2059006000	
67	First Essex Center	2010070001	
68	Murdock House	2014042000	
69	Spitz / Digennaro House	2014010000	
70	Grandview Farm	2014015000	State
71	Harlow Desso House	2017018000	
72	Harold Desso House	2017017000	
73	Monahan House	2017003000	
74	White House	2017001000	
75	Griffin School House	2009008000	
76	R. A. Parizo House	2078006003	State
77	Gregory House	2054002000	State
78	Baker House	2077007000	State
79	Gentes House School House	2075002000	State
80	Mountain View Cemetery	2050033000	
81	Fort Ethan Allen - Limoge Bros	2046003000	Nat. and State
82	Fort Ethan Allen - MLI Construction	2046009000	Nat. and State
83	Fort Ethan Allen - Green Mt Nursing Home	2046005000	Nat. and State
84	Fort Ethan Allen - Pike (1 Claire Dr)	2046008000	Nat. and State
85	Fort Ethan Allen - UVM	2046001000	Nat. and State
86	Fort Ethan Allen - Parade Grounds	2046002000	Nat. and State
87	Fort Ethan Allen - Officers Row	2046001002	Nat. and State
88	Fort Ethan Allen - Officers Row	2046600000	Nat. and State

Appendix D

Plan Consistency

This table compares the Town of Essex's future land use map to those of abutting municipalities.

Rating Symbols

I Incompatible
C Compatible

Boundary	Location	Proposed Essex Land Use	Abutting Town Land Use	Rating
Colchester	Fort Ethan Allen	Design Control District	General Development 2	C
	Essex Highlands	Conservation/Open Recreation/ Agriculture-Residential	Rural	C
	South of 289, North of VT Route 15	Manufacturing/ Industrial	Manufacturing/ Distribution	C
Westford	Essex Lowlands (Old Stage Road and VT Route 128)	Conservation/Floodplain/ Agriculture-Residential	Floodplain/ Agriculture/ Residential(II)	C
Jericho	Browns River Winooski River	Conservation/Floodplain/ Agriculture	River	C
	Eastern Lowlands and Saxon Hill	Conservation/Floodplain/ Agriculture-Residential	Agricultural	C
Williston	Riverfront Land, West of Village	Floodplain	Floodplain	C
	Immediately East of Village	Industrial	Industrial	C
	Winooski River, further East of Village	Floodplain	Floodplain	C
South Burlington	Winooski River	Conservation/ Floodplain	Conservation/ Floodplain	C
Essex Junction	Neighborhood Growth Centers (River Road, Sandhill Road, Village/Town Boundary)	Mixed Use PUD, medium density residential	Mixed residential	C
	Lowlands between Upper Main Street and VT Route 2A, surrounding 289	Agricultural/Residential	Mixed residential	C