

Hinesburg Town Plan

Hinesburg, Vermont

Originally Adopted 1971
Most Recent Adoption September 9, 2013

TABLE OF CONTENTS

1. INTRODUCTION TO THE PLAN	1
1.1 PURPOSE OF THE PLAN	1
1.2 USE OF THE PLAN	1
1.3 RECENT TOWN PLANS AND ADOPTION PROCESS	1
1.4 VISION STATEMENT	2
1.5 GOALS AND OBJECTIVES	3
1.6 RELATIONSHIP TO PLANS FOR ADJACENT TOWNS AND THE REGION	4
2. POPULATION AND HOUSING	6
2.1 POPULATION	6
2.2 HOUSING	11
3. LAND USE	16
3.1 PATTERN OF DEVELOPMENT	16
3.2 THE VILLAGE	18
3.3 COMMERCIAL AND INDUSTRIAL	25
3.4 RURAL REGIONS	28
4. NATURAL RESOURCES & ECOLOGICAL SYSTEMS.....	32
4.1 FORESTRY	32
4.2 AGRICULTURE	33
4.3 SURFACE WATERS	36
4.4 GROUNDWATER	38
4.5 WETLANDS.....	40
4.6 FLOOD HAZARD AREAS	41
4.7 WILDLIFE HABITAT.....	43
4.8 SENSITIVE AREAS	45
4.9 GREENSPACE PLANNING	46
4.10 GEOLOGICAL RESOURCES	48
5. COMMUNITY FACILITIES AND SERVICES	49
5.1 ROADS	49
5.2 WATER AND WASTEWATER	49
5.3 PUBLIC SAFETY: POLICE, FIRE, RESCUE	51
5.4 CULTURE AND RECREATION.....	51
5.5 GENERAL GOVERNMENT	56
5.6 SCHOOLS.....	57
5.7 CHILD CARE.....	59
5.8 SERVICES FOR THE ELDERLY AND DISABLED	60
5.9 SOLID WASTE	61
5.10 UTILITIES	62
6. TRANSPORTATION.....	63
7. ENERGY	68
8. OTHER RESOURCES/ISSUES.....	75
8.1 HISTORIC RESOURCES	75

8.2 LIGHT POLLUTION.....	75
8.3 WIND ENERGY/TELECOMMUNICATIONS TOWERS	75
8.4 SOLAR ENERGY TECHNOLOGIES	75
9. IMPLEMENTATION	76
TOP PRIORITY GOALS & RECOMMENDATIONS.....	76
OVERALL IMPLEMENTATION STRATEGY	78
APPENDIX A: TOWN HISTORY.....	84
GLOSSARY.....	86
MAPS:	
Map 1: Base Map	
Map 2: Current Zoning	
Map 3: Future Land Use	
Map 4: Building Locations	
Map 5: Agricultural Soils	
Map 6: Current Land Cover	
Map 7: Wetlands and Floodplains	
Map 8: Environmental Features (Water Supply)	
Map 9: Natural Features	
Map 10: Sewer and Water	
Map 11: Town Facilities and Conserved Lands	
Map 12: Official Map (future community facilities & infrastructure)	
Map 13: Trail Network Vision: Existing Routes and Gaps	
Map 14: Wildlife Habitat	

These maps were originally done in color, 11"x17" format. The full color versions can be viewed on the Planning/Zoning page of the Town web site (www.hinesburg.org).

1. INTRODUCTION TO THE PLAN

1.1 Purpose Of The Plan

The Hinesburg Town Plan serves as the framework for planning the future of the Town throughout the next five-year planning period, especially with regard to the decisions that will guide the Town's growth. It also seeks to achieve a longer-range planning horizon by looking into the future for twenty years or more. It describes the Town's history, the existing physical, social, and economic conditions of the Town, and establishes a vision for the Town's future. This vision is supported by a series of goals and objectives that are recommended in each section of this plan.

1.2 Use Of The Plan

The Plan is for the use of the Hinesburg Planning Commission, Selectboard, Development Review Board, Conservation Commission, other Town committees/boards, and regional and state agencies. It is also meant as a guide to individuals and other organizations for decisions affecting the Town. This plan is to be used as:

- a plan for the future growth and development of the Town;
- the basis for revisions to the zoning and subdivision regulations;
- the basis for planning and adopting a capital budget and plan;
- a source of recommendations for studies or programs to address specific community issues;
- a standard for review under local, regional and state regulatory proceedings; and
- a source of information about the Town.

1.3 Recent Town Plans And Adoption Process

The Hinesburg Planning Commission is responsible for the preparation of the municipal plan, as outlined in the Vermont Municipal and Regional Planning and Development Act. The Act stresses that the development of the plan should involve broad participation of citizens and community groups. Hinesburg's first Town Plan was adopted in 1971. Since that time, the plan has been re-adopted and amended as needed or as required by state statute. Currently, state statute requires Town Plans be evaluated every five years in order to be confirmed and recognized by the Regional Planning Commission and the State.

In 1989, in response to a very rapid growth rate in the 1980's, the Planning Commission initiated a State-funded citizen participation project to gain public input on planning issues facing the town. The project had three components: 1) a survey on planning issues; 2) a series of 4 community forums ("Mud Season Forums") on a wider range of issues; 3) the formation of nine committees to investigate specific issue areas (e.g., village, natural resources, housing, etc.). The culmination of this process was a completely rewritten Town Plan, adopted in 1992.

The Town Plan was updated in 1997. Many of the improvements and services anticipated in the 1992 Town Plan had been implemented or were near completion. They included:

- renovated Town Hall and municipal offices
- establishment of a Town police department
- establishment of a recreation department
- sidewalk extension to the post office
- water system upgrade, and
- the new library.

After a five-year period of moderate growth, a purely statistical update to the Town Plan was completed in 2002. Significant activities between 1997 and 2002 included:

- construction of a new and enlarged post office
- increase in size of the fire station
- purchase of property adjoining the fire station for use by the police department
- purchase of the former Masonic Building for use by Hinesburg's Cooperative Nursery School
- Zoning Bylaw update to encourage home-based businesses while protecting adjoining properties from adverse impacts
- implementation of a plan for Geprags Park
- involvement in multi-town projects on identification and protection of wildlife habitat, wetlands and other natural resources
- establishment of a Development Review Board.

Shortly after adoption of the 2002 Town Plan, the Planning Commission began a significant public input process patterned after the successful survey and Mud Season Forums that culminated in the 1992 plan. The Planning Commission mailed a Community Survey to all Hinesburg residents in early 2003 seeking input on "Shaping the Future of Hinesburg". Approximately 344 survey responses were returned. A Municipal Planning Grant funded a series of four public forums in spring 2003 on the Village, Rural Areas, Managing Growth and Development, and Bringing it all Together. The Planning Commission spent the balance of 2003 reviewing public input and revisiting all aspects of previous plans. The Town Plan was rewritten with considerable citizen input via successive drafts. It was presented to citizens in a formal Planning Commission public hearing in August 2004, and was adopted by the Selectboard in June 2005. The current plan incorporates minor revisions to the 2005 plan, and more substantial revisions to certain sections (e.g., Village land use & Energy sections) to account for progress over the last five years. Significant activities during the 2005-2010 time period include:

- Approvals for and/or construction of substantial development in the village area, including approximately 134 new dwelling units
- Creation of Village Steering Committee, Affordable Housing Committee, Trails Committee
- Multiple Zoning & Subdivision Regulation Revisions, including very comprehensive Village Growth Area (see glossary for definition of this area) regulations and Hinesburg's first Official Map showing locations of future community facilities and infrastructure
- Major upgrade of the Town wastewater treatment facility including a minor treatment capacity expansion
- Two new traffic lights with improved pedestrian crossings along Route 116 (at Charlotte Road and Commerce Street) and a major redesign of the Route 116, Silver Street intersection
- New sidewalk along portions of Route 116 in the village area
- Closure of the Saputo cheese factory in October 2008. As a result, the Selectboard adopted interim zoning for this property, and created the Saputo Redevelopment Steering Committee to propose redevelopment opportunities that meet the needs of the community
- Creation of the new 300+ acre LaPlatte Headwaters Town Forest on Gilman Road as part of a larger project that conserved approximately 600 acres of the former Bissonette farm
- Initial drafting of a Town Greenspace (i.e., Open Space) plan by the Conservation Commission

1.4 Vision Statement

Hinesburg will plan its growth and manage its resources so that our town continues to be a desirable place to live and work. It will enhance the Village area, maintain its rural character and provide for environmental sustainability. These efforts will be guided by community input. It will strive to offer the highest quality social, educational, recreational and economic opportunities, and a variety of housing options.

1.5 Goals And Objectives

GOAL 1. To maintain and enhance the rural small town character and environment of Hinesburg.

Objectives:

- 1.1 To guide development into locations that reinforce the rural pattern of compact settlements surrounded by open lands.
- 1.2 To encourage the economic viability of agriculture and forestry uses.
- 1.3 To encourage the Town's continued vitality through a diversity of social and economic opportunities.
- 1.4 To preserve the historic structures and features that are an essential part of Hinesburg's character.
- 1.5 To promote the participation of a wide range of Hinesburg citizens in all aspects of community life.
- 1.6 To maintain diversity in Hinesburg's population.

GOAL 2. To guide the Town in appropriate well managed growth.

Objectives:

- 2.1 To encourage and support the development of a supply of safe, and affordable housing in a variety of types and price ranges.
- 2.2 To foster the preservation and rehabilitation of Hinesburg's existing stock of affordable housing.
- 2.3 To encourage industry and commerce of types that will be a physical and economic asset to the Town.
- 2.4 To promote the provision of local services and job opportunities.
- 2.5 To encourage environmentally conscious commercial, agricultural and industrial development.
- 2.6 To recognize the significance and importance of private land and seek to balance the community good with private property rights.

GOAL 3. To provide and plan for efficient and adequate community facilities and services.

Objectives:

- 3.1 To broaden citizen participation in town government.
- 3.2 To balance growth with the Town's ability to pay for the provision of expanded services and facilities.
- 3.3 To provide services in locations and of types that reinforce the other goals of this Plan.
- 3.4 To strive for safe and well-designed transportation systems including an interconnected network of sidewalks, trails, bike paths, and greenways.
- 3.5 To provide for the most efficient maintenance and use of Town facilities.
- 3.6 To ensure efficient and effective Town government.
- 3.7 To foster provision of quality educational opportunities.
- 3.8 To provide a greenway system for multiple benefits – e.g., wildlife habitat, protection of riparian areas, ecological connectivity between natural areas, etc.

GOAL 4. To preserve and protect the natural resources and special features of Hinesburg.

Objectives:

- 4.1 To enhance and protect the surface and groundwater resources of the Town.
- 4.2 To preserve significant natural areas such as wetlands, wildlife habitat, streams, and shorelines.
- 4.3 To restrict development in areas where such development would be detrimental to human health, safety and the public good.

- 4.4 To promote the wise use and conservation of natural resources.
- 4.5 To conserve viable agricultural and forestry lands in the rural regions of Hinesburg.
- 4.6 To encourage a pattern of development that maintains open spaces and scenic resources.
- 4.7 To encourage recycling, the use of renewable resources and the safe cost effective disposal of wastes.

GOAL 5. To work towards regional, state and national solutions to meet Hinesburg's goals.

Objectives:

- 5.1 To participate in discussions relating to policies that affect the viability of Hinesburg's agricultural and forestry operations.
- 5.2 To coordinate with other municipalities and agencies in meeting transportation needs.
- 5.3 To participate in regional and statewide solutions to waste disposal, resource protection and energy conservation.
- 5.4 To coordinate with other agencies and governmental units for provision of the social and economic needs of the community.

1.6 Relationship To Plans For Adjacent Towns And The Region

This Plan is generally compatible with both the Chittenden County Regional Plan (2006) as well as Town Plans from the surrounding municipalities.

Chittenden County Regional Plan (2006) – Hinesburg’s Plan embodies the same distinctions between village, rural, and enterprise planning areas that are emphasized in the Regional Plan. The Hinesburg Plan seeks to accommodate the town’s fair share of residential and commercial growth, while recognizing that the core metro and transition areas in other parts of the county will continue to be the primary focus for future development. It also recognizes and seeks to conserve the critical natural resources and open spaces that make Hinesburg an important part of the county’s rural landscape.

Shelburne (portion of northern border) – The Shelburne Plan (2007) emphasizes the rural and agricultural landscape, including conservation areas, near its border with Hinesburg. Both the future land use and the overall goals and recommendations are compatible with Hinesburg’s vision for this area.

St. George (portion of northern border) – St. George (2007 plan) identifies four different land use planning areas along the Hinesburg border – from west to east: Rural (Rocky Ridge Golf Course), West Side Residential, Upland Forest (Mt. Pritchard), and East Side Residential (eastern slope of Mt. Pritchard overlooking Lake Iroquois). Even in the aforementioned “residential” planning areas, the St. George plan calls for relatively low density development that respects adjacent forests and natural resource areas, and encourages smaller cluster-style development to preserve larger tracts of working land and greenspace. The Rural and Upland Forest planning areas have an even stronger focus/intention on natural resource preservation and the working agricultural and forested landscape. These uses are largely compatible with Hinesburg’s emphasis on agricultural and forestry as primary uses in this part of town, with low to medium density residential uses remaining possible where site constraints allow.

Williston (small portion of northern border near Lake Iroquois) – Williston’s goals (2006 plan) for this area are similar to Hinesburg’s. Both communities highly value Lake Iroquois, and both communities provide special protections immediately around the lake, while identifying the surrounding area as rural residential.

Richmond (northeast border) – The Richmond Plan (2007) emphasizes the low density, rural landscape in this area, which is compatible with Hinesburg’s vision for this corner of the town.

Huntington (most of eastern border) – Huntington’s goals (2007 plan) for this border area are very similar to those expressed in this Plan. Both towns classify the area as “rural residential” with special emphasis on the protection of important natural resources and rural character. Both towns encourage the forest conservation and development techniques that maximize open space conservation.

Starksboro (portion of southern border) – Starksboro (2003 plan) places a high value on the agricultural and scenic lands along its portion of the Route 116 corridor. Adjacent forested areas, without easy access, are planned for forest and conservation uses. The Hollow Road vicinity is the only area along the Starksboro-Hinesburg border where residential development is Starksboro’s primary purpose. Along most of the border, the two Plans are compatible; however, this is not the case in the Route 116 vicinity. Rather than emphasizing agricultural and scenic resources, Hinesburg has designated a large portion of this area for industrial uses.

Monkton – (portion of southern border) – Monkton’s plan (2007) for this border area emphasizes low density rural residential uses with provisions to protect important natural resources. Although Monkton’s base density for this area is currently lower than what Hinesburg allows, the goals are comparable.

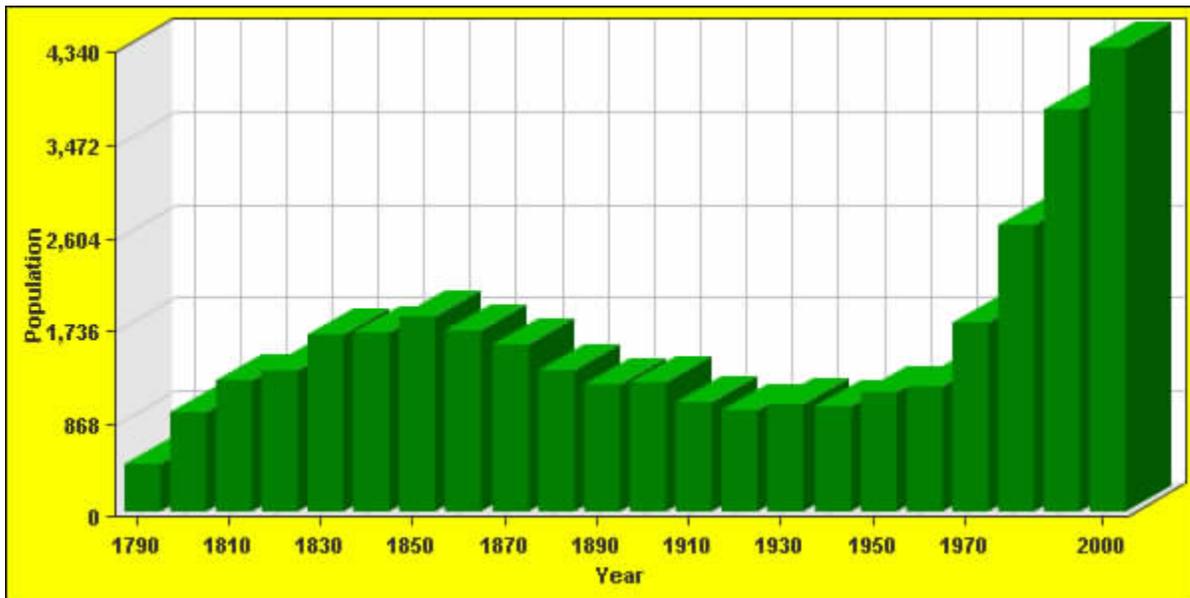
Charlotte – (all of western border) – The Charlotte Plan (2008) describes the border area as part of their rural district where protection of natural resources and land conservation is emphasized. These types of values are also embodied in Hinesburg’s vision for this rural agricultural region. Furthermore, our two communities frequently work together on conservation and watershed projects with the help of the Lewis Creek Association, the Hinesburg Land Trust, and the Charlotte Land Trust.

2. POPULATION AND HOUSING

2.1 Population

Past and projected population trends are a key element in planning for Hinesburg's future. Information about the numbers, ages and income levels of town residents serves as an important gauge for the future demands for housing, town services and facilities, and economic opportunities. Population and income data are also indicators of the diversity and character of town residents. Hinesburg's population diversity has been cited time and again in survey and forum responses as one of the positive features of the Town that contributes to our small town character.

Figure 1 – Hinesburg Population 1790-2000



Source: Census Data, Center for Rural Studies - <http://maps.vcgi.org/indicators>

In the early 1800's, Hinesburg had a larger population than most of the towns in Chittenden County. In the year 1800, Hinesburg was even more populated than Burlington. The Town reached a peak of 1,834 residents in 1850, then slowly declined to 965 inhabitants in 1920. Throughout the early and mid 1900's the Town's population remained relatively static. This trend was consistent with much of Vermont due to the large out migration to the West and to more urban areas.

During the second half of the 20th century Hinesburg experienced a change in growth patterns and some sharp increases in its population. Between 1960 and 2000, the Town's population grew by 267%. The Town grew steadily at a rate of 91.5 persons per year through the 1970s, slowed down somewhat during the early 1980s, and then resumed growth of 146 persons per year during the second half of the decade. The 1990 census put Hinesburg's population at 3,780. The 1985 Town Plan projected that Hinesburg's population would increase 23.2% between 1980 and 1990, however the actual growth was more rapid with a 40.5% increase. Hinesburg experienced the largest percentage growth in Chittenden County during the period 1980-1990. During the period of 1960-2000, Chittenden County's population nearly doubled.

By 1995 population growth in Hinesburg slowed considerably. Between 1990 and 2000, population increased 14.8%. Growth in the neighboring town of Williston, increased 56.5% over the same decade. Hinesburg's growth rate between 1990 and 2000 was higher than the 11.2% growth rate for Chittenden

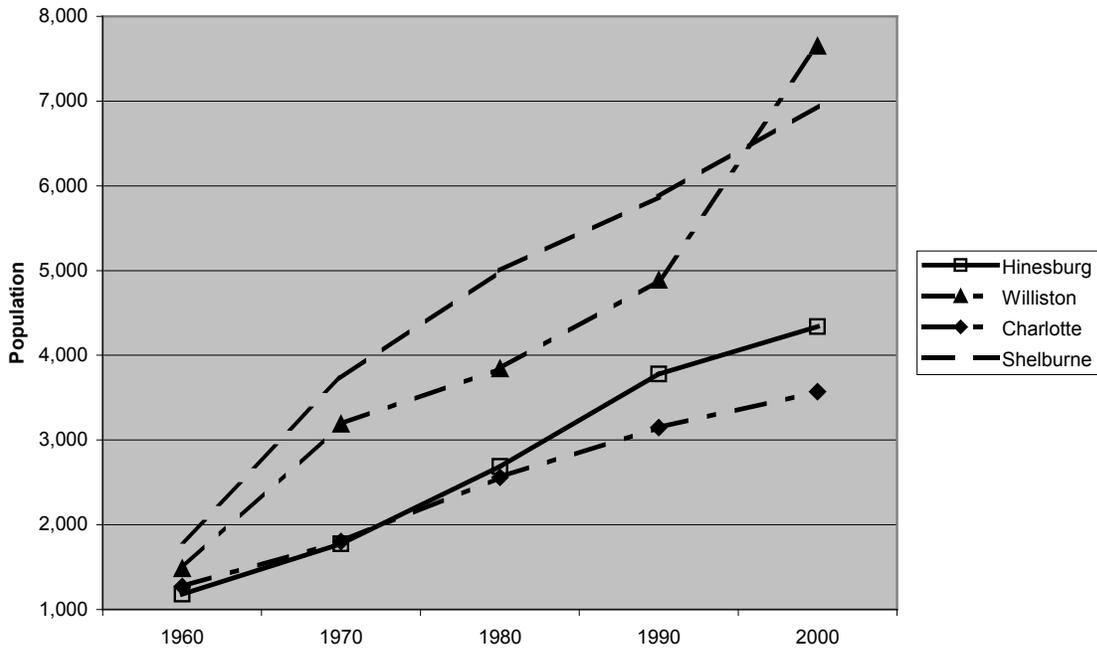
County. Census data indicates Hinesburg's population was 4,340 in the year 2000, and Census estimates (not based on actual counts) show a 2008 population of 4,629. Additional Census data and community profiles are available thanks to the UVM Center for Rural Studies and the VT Center for Geographic Information (VCGI) at <http://maps.vcgi.org/indicators>. The 2010 Census is currently underway, so more accurate population and demographic data should be available for the next Town Plan update. Figure 2 compares Hinesburg's growth with that of neighboring towns over most of the second half of the 20th century. Figure 3 provides an age distribution of Hinesburg's population between 1970 and 2000.

Projections vary for Hinesburg's growth over the next 20 years. The 2005 Town Plan predicted an annual growth rate of 1.7% through the year 2025, based on regional growth projections, demographics, continued availability of wastewater allocation in the village area, and actual growth seen in the 1980's and 1990's. Census estimates of actual population growth indicate a much slower growth rate over the last 8-10 years. The projected 1.7% growth rate would have resulted in a 2008 population of 4,967; whereas, the Census estimate for 2008 is only 4,629.

Population growth projections from 2001 by the Chittenden County Regional Planning Commission (CCRPC) have been revised downward since slower growth is a county-wide trend. The CCRPC's current projections were endorsed in November 2006, but are currently being revised as work on the 2011 regional plan is underway. The CCRPC's 2006 projections indicate average annual county-wide population growth of 0.65% for 2000-2005, 0.77% for 2005-2010, 0.70% for 2010-2015, 0.84% for 2015-2020, 1.15% for 2020-2025, and 1.09% for 2025-2030. CCRPC's population and household projections are heavily influenced by employment projections, which can vary greatly with economic swings that are hard to predict. By contrast, Bill Smith, an amateur demographer who prepares projections for many local school districts, predicts much smaller county growth rates based solely on demographic trends (births, deaths, immigration, emigration). He projects smaller and smaller growth rates until Chittenden County's population peaks in 2025 and then begins to decline, largely due to changes in age distribution and related birth rates. Smith's 2010 projections indicate average annual county-wide population growth of approximately 0.532% for 2000-2005, 0.509% for 2005-2010, 0.396% for 2010-2015, 0.292% for 2015-2020, 0.135% for 2020-2025, and -0.071% for 2025-2030.

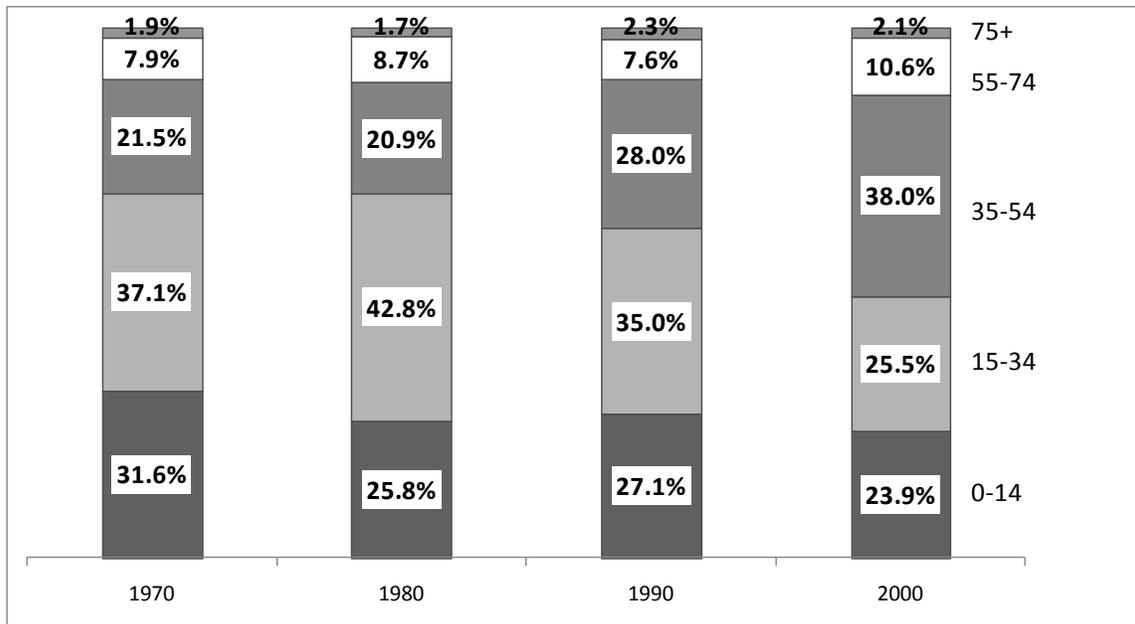
Unlike the 2005 Town Plan, this plan predicts much more conservative growth that attempts to strike a middle ground between the two projections mentioned above for an annual growth rate of 0.583%. This represents an average of the two rates mentioned above for each five year block, followed by an average of the six 5-year block averages to come up with a nominal annual rate of growth for the 2000-2030 period. Figure 4 shows our growth projection along with extrapolations of the CCRPC and Smith projections by simply applying their county-wide growth rates to Hinesburg. These projections will undoubtedly be reviewed and adjusted when the 2010 Census data becomes available. The trend towards an aging population is expected to continue. By year 2025, the percentage of the overall population in the 0-14 age group is projected to decline to 17.4% while the over 55 age group will increase to 26.7% (Figure 5).

Figure 2
Population Growth, 1960 – 2000
Hinesburg vs. Neighboring Towns



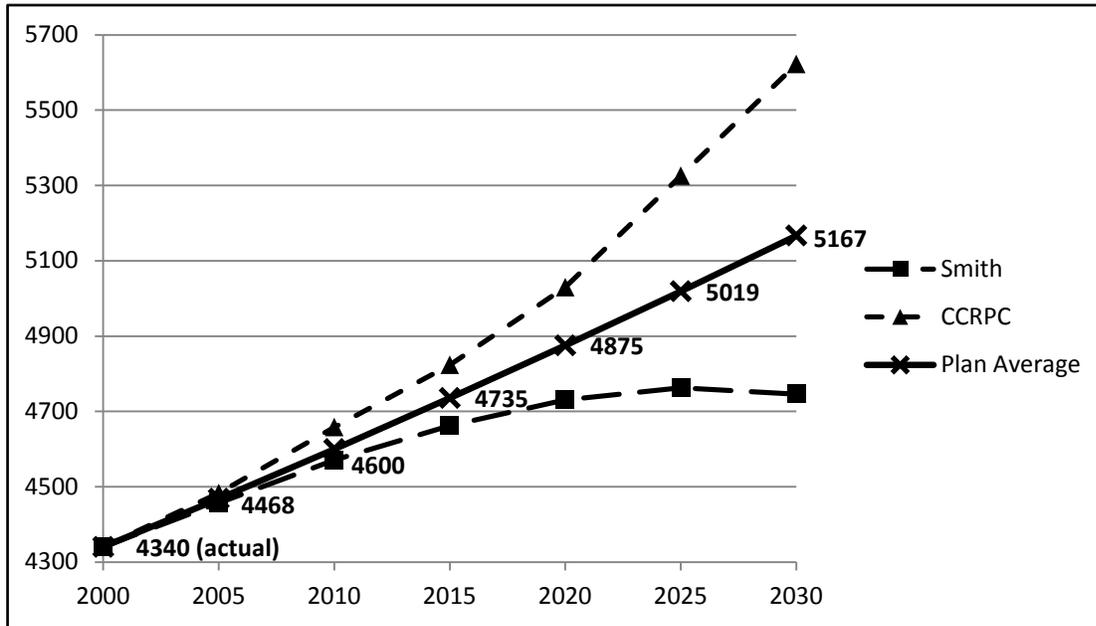
Source: US Census

Figure 3
Hinesburg Population Distribution by Age
1970 to 2000



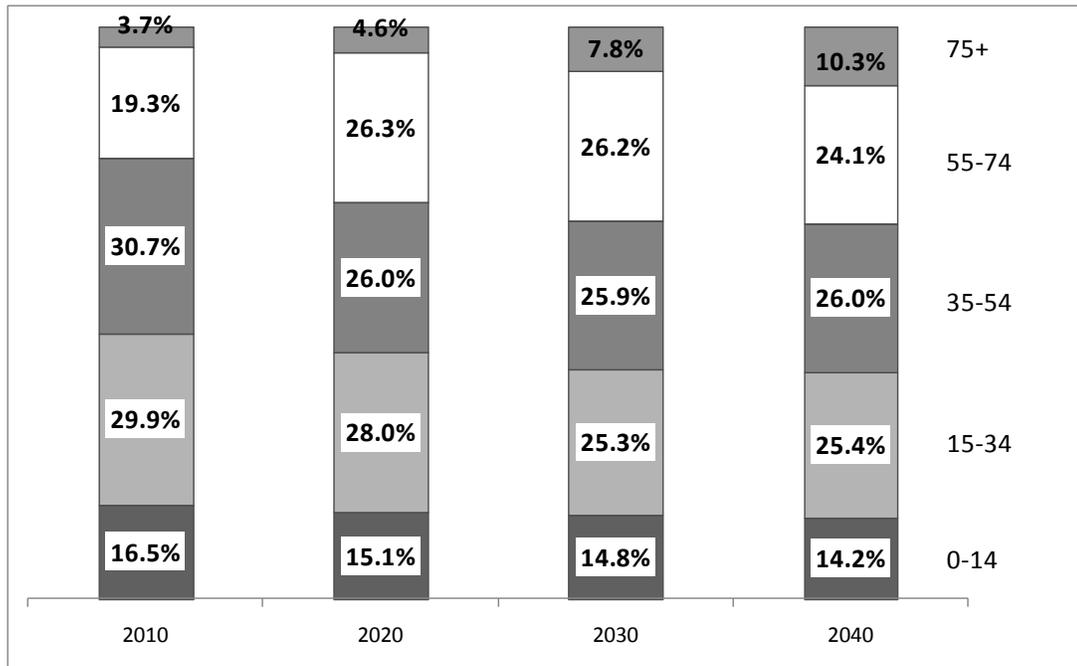
Source: US Census

Figure 4
Projected Hinesburg Population Growth, 2000 – 2030



Source: CCRPC, Bill Smith, Hinesburg Planning & Zoning

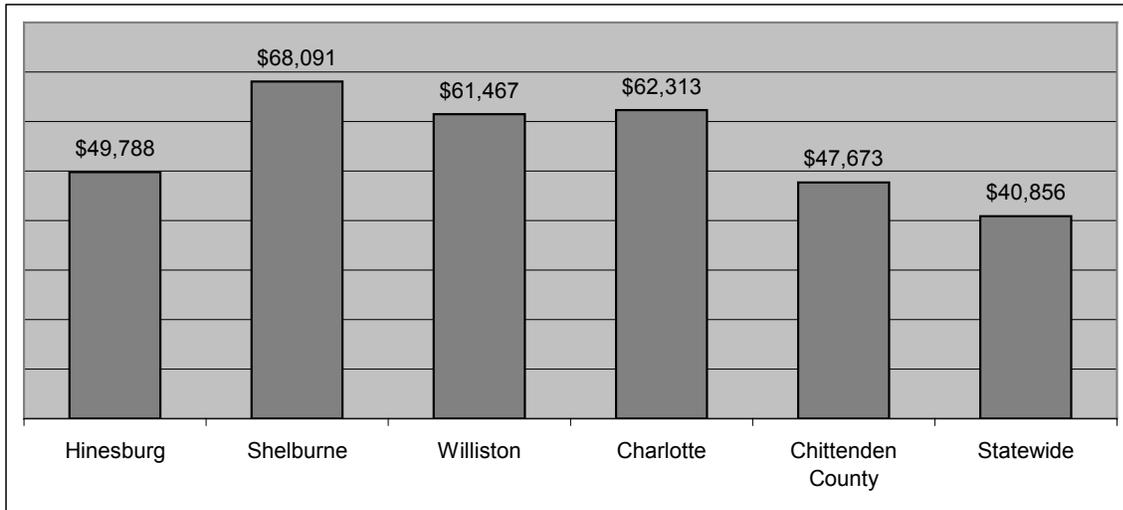
Figure 5
Chittenden County – Projected Population Distribution by Age
2010 to 2040



Source: Bill Smith's Chittenden County Population Model (last updated 10/29/2009)

According to the 2000 U.S. Census, the median household income for Hinesburg was \$49,788, slightly above the median for Chittenden County as a whole. As shown in Figure 6, the median household income of several adjacent towns was considerably above that of Hinesburg.

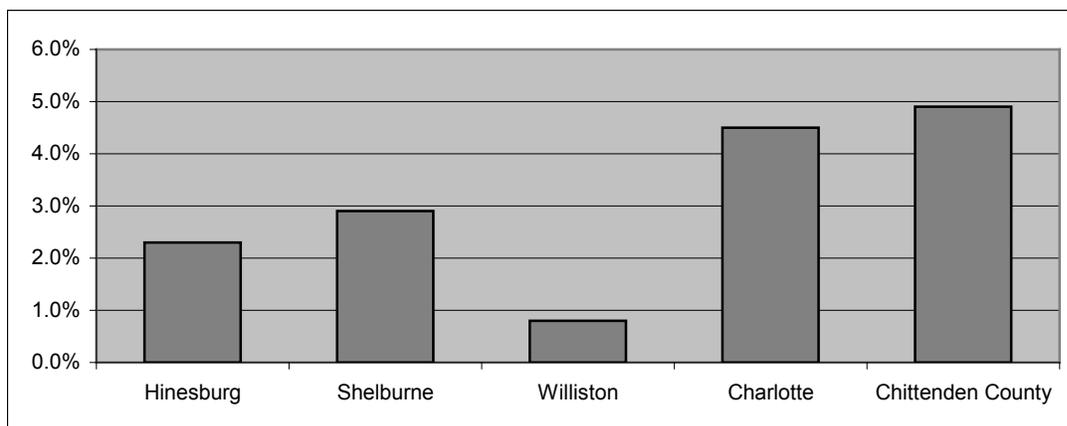
Figure 6
1999 Median Household Income



Source: 2000 U.S. Census

However, while Hinesburg’s median household income was relatively modest, its percentage of families below poverty level was relatively low (Figure 7). The US Census definition of “poverty” considers family income, the number of people in the family, and the number of children under 18 – all in relation to nationwide poverty thresholds.

Figure 7
1999 Families Below Poverty Level



Source: 2000 U.S. Census

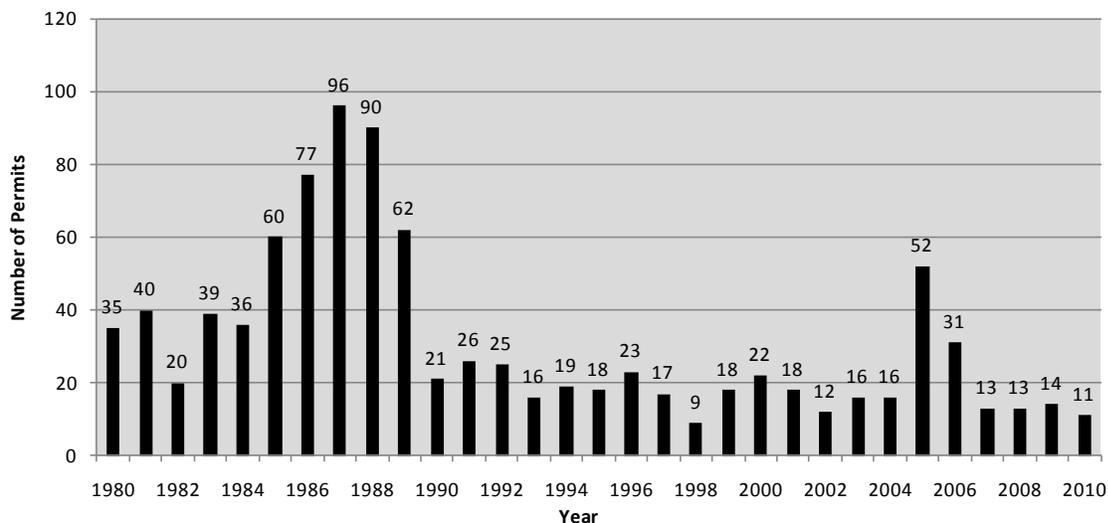
2.2 Housing

The makeup of Hinesburg's housing stock has a direct and highly visible impact on the type of town we are and will become in the future. Hinesburg has had a diversity of housing opportunities, a fact that is reflected in the wide social and economic range of its population. Housing trends in recent years, however, have begun to narrow the diversity of housing available, not only in Hinesburg but throughout the county. The rapid inflation of property values both in Vermont and throughout the nation during the real estate boom between 2000-2007 exacerbated this, making even more homes (new and existing) unaffordable. Even during the recessionary period we are currently experiencing (2008-2011), housing prices have not dropped significantly in Vermont or Hinesburg. This trend can have a substantial impact on the diversity of the Town's population, the continuity of residents from one generation to the next, and the ability of local employees and employers to live and work in Hinesburg.

The dispersal of housing in Hinesburg reflects the Town's historical pattern of both small settlements clustered around the streams and ponds that provided the focus for the Town's early economic development and the scattered dwellings of the numerous farms. During the building boom of the last forty years, this pattern has begun to be replaced by a more suburban character of large lots spread widely through all parts of Town. This pattern is not only changing the Town's historic pattern of development but also the type and price range of housing available.

According to the 2000 Census, there were 1,693 housing units in town. This represents an increase of 206 units (14%) over the 1990 figure of 1,487. The earlier increase from 1980 to 1990 was 45%. Annual building permits issued for new housing units since 1980 are shown in Figure 8. The number of building permits peaked between 1985 and 1989 with an average of 77 dwelling units per year. The average from 1990-1999 was much lower at 19 dwelling units per year. In the last 10 years (2000-2009), the average was 21 dwelling units per year. In 2010, the Affordable Housing Committee commissioned a Housing Needs Assessment by consultants, John Ryan and Peter Richardson. This study provides data on what types of housing units we have now and a projected analysis of future needs.

Figure 8
Building Permits For New Housing Units, 1980-2010



Source: Hinesburg Zoning Administrator

As described in the 2000 Census, housing units are owner or renter-occupied and are categorized as single-unit detached, attached and mobile home (Table 1). Note that owner-occupied attached units

generally are in condominium projects; however, the 2000 Census numbers for multi-family units are not very useful as explained in the note below Table 1. Renter-occupied attached units may be in condominiums or apartment buildings.

TABLE 1
Occupied Housing Units by Type

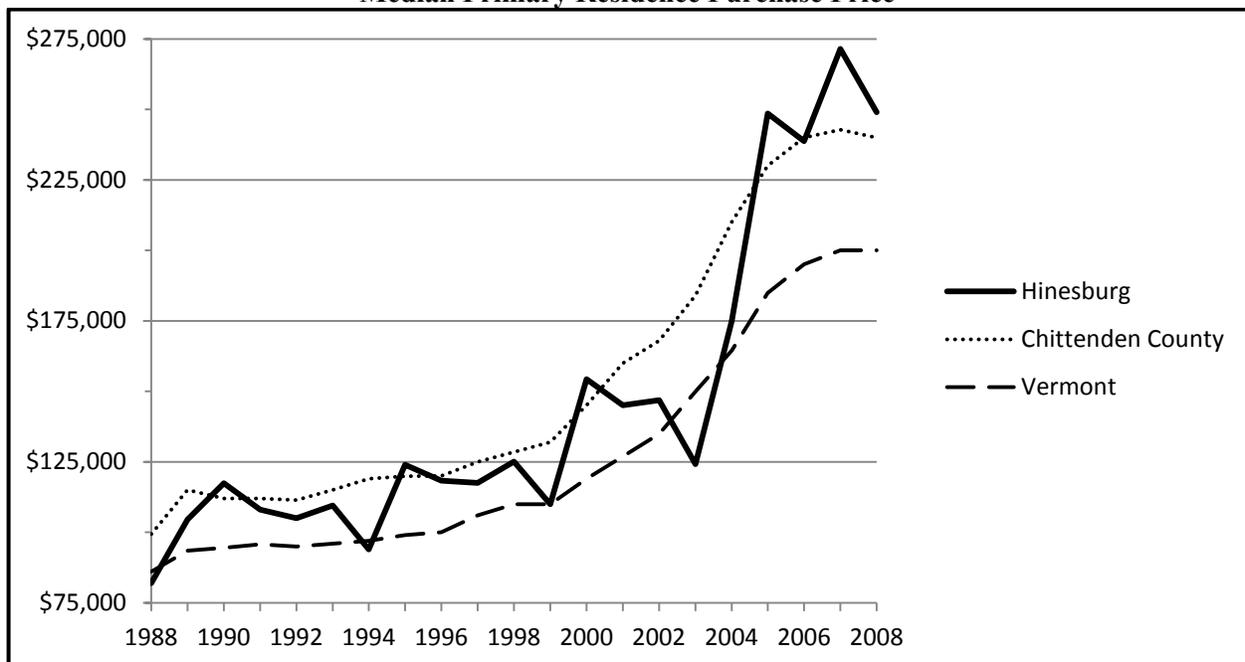
	Owner-Occupied	Renter-Occupied	Total
Single-Unit Detached	1095	107	1202
Attached*	33	134	167
Mobile Home	174	56	230
TOTAL	1302	297	1599

Source: 2000 U.S. Census via VT Housing Data website – www.housingdata.org – 2/1/2010

* Units in multi-family dwellings separated by walls extending from ground to roof (e.g., Lyman Meadows condos) were counted in single-unit detached category for 2000 Census.

Housing prices in Hinesburg reflect both the Town's desirability as a bedroom community of the Burlington area and the limitations of various site features. Poor soils for on site septic disposal, difficulty in finding water in some areas of Town, and large lot patterns of development contribute to the higher costs of housing. According to the VT Housing Finance Agency (VT Housing Data, Homeownership Costs, www.housingdata.org), the median price of primary residences (single-family homes, condominiums, mobile homes with land) sold in Hinesburg was \$249,000 in 2008. This is 3.75% higher than that of Chittenden County and 24.5% higher than the statewide median – see Figure 9 trend data.

Figure 9
Median Primary Residence Purchase Price

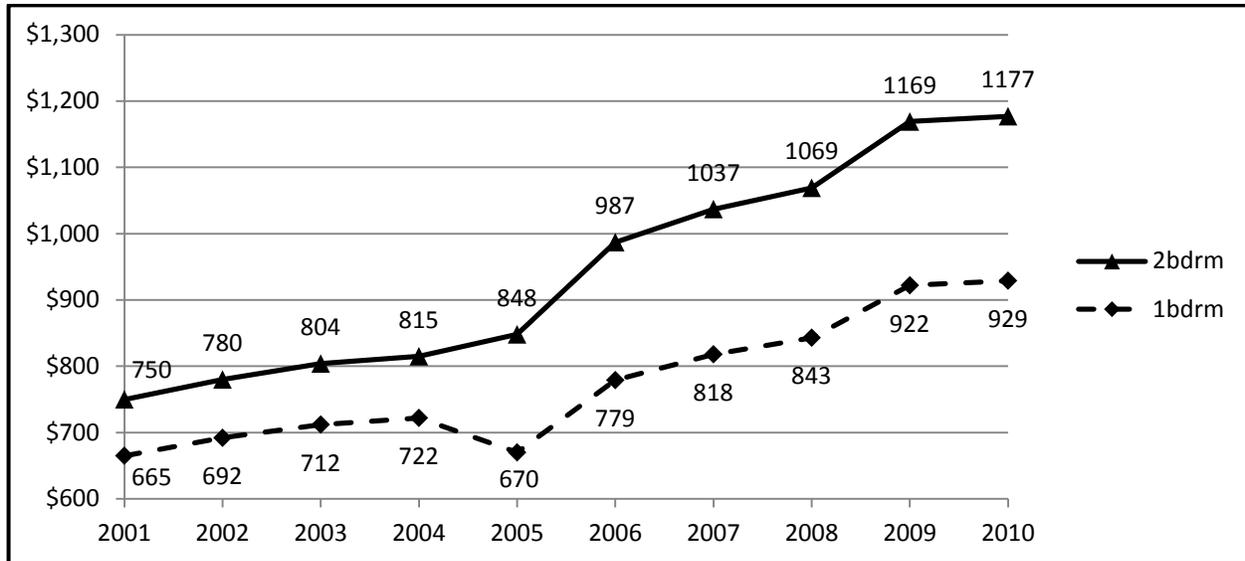


Source: VT Dept. of Taxes - VT Housing Data, Homeownership Costs, www.housingdata.org

Rental units provide an alternative to owned housing for many people. According to 1990 Census figures, there were 242 rental units in Hinesburg (227 occupied, 15 vacant). That figure had risen to 297

units in 2000 (294 occupied, 3 vacant). US Housing and Urban Development (HUD) rental cost data are at the county rather than municipal level. Figure 10 shows trends in rental costs for Chittenden County.

Figure 10
Median Chittenden County Rental Costs – 1 & 2 Bedroom Rentals



Source: Housing & Urban Development - VT Housing Data, Rental Housing Costs, www.housingdata.org

There is continuing concern in the State of Vermont about the gap between the amount that families can afford to pay and the actual cost of housing, be it new construction, purchase of an existing home, or rental. According to the State of Vermont definition, housing is affordable when households with incomes at or below the county median pay no more than 30% of their gross income on housing costs (mortgage payments, including principal and interest, insurance and property taxes). For renters, costs include rent and utilities.

With the 2008 median single-family home sales price of \$281,250 (VT Housing Data, Homeownership Costs, www.housingdata.org), lower-income families in Hinesburgh have few options other than mobile homes, since there are small numbers of suitable rental units and no condominiums for families of four or more. The problem is compounded by the scarcity of additional sites for mobile homes within existing parks.

Groups throughout the county and state are involved in seeking solutions to housing shortages and the rising cost of housing. The Vermont Housing Council annually updates its publication “Between a Rock and a Hard Place: Housing and Wages in Vermont”. Numerous housing statistics are available at the Vermont Housing Data website, www.housingdata.org. The Chittenden County Regional Planning Commission conducted a 2000 study of housing demand through year 2035. In 2004, the CCRPC endorsed municipal targets for additional/new housing between 2000-2010 in order to address the supply gap in an equitable fashion across the county. Hinesburg’s target was 299 new housing units, of which at least 30 should represent moderate income housing (affordable to households earning 80-120% of the Burlington MSA median household income) and at least 30 should represent affordable housing (affordable to households earning less than 80% of the Burlington MSA median household income). From 2000-2009, zoning permits were issued for 207 new dwelling units (see Figure 8). During this same period, the Development Review Board and Planning Commission approved development projects with a total of 291 proposed new dwelling units (DRB – 271, 2002-2009, from Town Reports; PC – 20, 2000-2001, from meeting minutes). The Town does not keep data on the sales price of new housing to

track affordability; however, we do know that none of the units approved during this period were permitted with legally binding affordability provisions.

Hinesburg planners recognize the need to provide reasonably priced housing in the town. A range of housing should be available to meet demand at all income levels, including those families earning below the county median income. The Town recognizes that there is a difference between “affordable housing” serving low income families under specific State and Federal criteria, and “reasonably priced housing” that serves all income levels. Currently, the Town defers to the State definitions of affordable housing, which are:

1. Owner-occupied – Housing owned by inhabitants whose gross annual household income does not exceed 80 percent of the state median income, as defined by the US Dept. of Housing and Urban Development (HUD), and the total annual cost of the housing, including principal, interest, taxes, and insurance, is not more than 30 percent of the household’s gross income.
2. Renter-occupied – Housing that is rented by its inhabitants whose gross annual household income does not exceed 80 percent of the state median income, as defined by HUD, and the total annual cost of the housing, including rent, utilities, and condominium association fees, is not more than 30 percent of the household’s gross income.

Provision for both reasonably priced and affordable housing are critical given the current housing crunch, and related rise in property values. The Town intends to examine zoning constraints and other factors that make housing more expensive. In 2006, the Selectboard authorized formation of the Affordable Housing Committee. Its mission, in an advisory capacity to the Selectboard, Planning Commission, Town staff and Development Review Board, is to prioritize plans to increase the availability of affordable housing in Hinesburg. Since its creation, the Affordable Housing Committee has primarily been involved in education and outreach. They have brought in numerous speakers to gain a better understanding of housing options and financing. As noted above, they have recently initiated a Housing Needs Assessment for Hinesburg. They are also actively involved in local-level development review, and provide feedback to the DRB regarding affordable components of new development proposals.

Goals and Recommendations

2.2.1) To encourage affordable and reasonably priced housing.

- a) Support higher density housing, especially affordable and reasonably priced housing, in the Village Growth Area.
- b) Encourage affordable and reasonably priced housing where suitable infrastructure exists or can be provided, while giving due consideration to important natural resources. Housing should not be encouraged in the Shoreline district due to its existing high residential density and environmental sensitivity.
- c) Facilitate public/private partnerships for the creation of affordable and reasonably priced housing, as well as the upgrading and rehabilitation of existing housing, through State and Federal grants, partnerships with non-profit organizations, or similar means.
- d) Consider establishing goals or targets for affordable and reasonably priced housing, especially where municipal services (e.g., water, sewer, etc.) make affordable housing projects easier to accomplish.
- e) Identify properties that could be developed with affordable housing units, as well as funding that could assist a developer to build affordable units. Note that an affordable housing project could be as small as one Habitat for Humanity home or as large as what would be feasible for a non-profit or for-profit developer to have the project be economically viable with housing that remains permanently affordable.

- f) Preserve the affordability of the existing housing stock by encouraging rehabilitation, restoration and weatherization.

2.2.2) To encourage housing for the elderly and disabled.

- a) Provide higher densities for affordable housing designed for the elderly or disabled in the Village Growth Area.

2.2.3) To use infrastructure to encourage a mixture of housing types and mixed use development within the Village Growth Area.

- a) Promote the establishment of affordable rental and owner-occupied housing within the Village Growth Area through the Town sewer allocation policy.
- b) Use sewer and water allocations to encourage a mixture of housing types and mixed-use developments within the service area.

2.2.4) To encourage continued affordability and to improve livability in mobile home parks.

- a) Modify zoning regulations for existing mobile home parks by permitting density bonuses in consideration of corrections to long-term deficiencies.
- b) Consider whether similar modifications should apply to the creation of new mobile home parks.

2.2.5) To use zoning and development review to support housing goals.

- a) Review and implement means of streamlining the development review process as a way of reducing housing costs. Remove unnecessary barriers to well planned housing projects.
- b) Establish guidelines on the type and amount of amenities that must be provided in new housing developments to address quality of life issues.
- c) Encourage the maximum development of projects in the Village Growth Area.
- d) Continue to explore existing and innovative zoning techniques to allow greater flexibility in the configuration of developments, and to preserve scenic, agricultural, and other natural resources.
- e) Consider density bonuses as part of PUDs as an effective tool to encourage the development of affordable and reasonably priced units. Open land should benefit the residents of the development, and also benefit the community at large. Ownership and design of PUD open land may be via any arrangement that ensures its important functions (e.g., farm land, forests, neighborhood or community facilities or use, etc.) are realized.
- f) Encourage housing developments that have a mix of market prices to create developments that serve a variety of income classes.

3. LAND USE

3.1 Pattern Of Development

Hinesburg's location at the juncture of the Champlain lowlands and the foothills of the Green Mountains has shaped its growth in the past and provides challenges for its future. The historical pattern of development in Hinesburg was a function of working with the natural resources and physical features of the Town to create a varied and thriving community. The diversity of Hinesburg's landscape and the patterns that developed from that landscape have been key to the Town's character. Townspeople's comments throughout the adoption of this and previous plans point to the importance of maintaining this historical pattern of compact settlements and open space while planning for growth. Understanding the source of this development pattern and the changes that have been occurring will be critical to planning for the Town's future.

Hinesburg lies within a bedrock basin of the Champlain lowlands that extends northward from Monkton. The Hinesburg-Oak Hill Thrust, which runs roughly north and south through the Town (roughly North Road), marks the boundary between the Champlain lowland and the Green Mountains. East of the thrust lies the first range of the mountains, which in Hinesburg is a series of hills from 1500 to 2000 feet in elevation. Slopes in this area regularly exceed 25%, a factor that restricts their use for development. Soils in this section of the town are shallow to bedrock, with many outcroppings. Although shallow, the soils do support dense and productive forested areas and have in the past been used in places for agriculture.

The western portion of Town, as part of the Champlain lowlands, contains surficial materials composed of sediments deposited during and following the last stage of the Great Ice Age. These sediments include till, outwash and recent alluvium. The silts and clays of the lowland are suitable for agriculture but can have significant limitations for the development of septic systems using current technology.

The eastern portion of Town, which includes Lincoln, Hayden, and Texas Hills, saw very sparse and scattered development, until recently, because of its steep slopes and limited access. The sharp change in elevation between the eastern and western halves of town provided the water power that attracted many of Hinesburg's early industries and the attendant settlements. Settlements such as Mechanicsville and Rhode Island Corners were the sites of numerous businesses throughout much of Hinesburg's past and still show this historic pattern with the high concentration of houses in these areas. The western portion of the Town, with its relatively level bottom lands of the LaPlatte River and Lewis Creek, developed as a predominantly agricultural area with development largely concentrated around farmsteads.

The Village, located between the two topographical extremes, grew as a focus for the manufacturing, commercial and agricultural economies of the Town and has been the social and economic center for Hinesburg. Lot sizes are varied in the Village and create a diversity of densities in housing and commercial activities. The combination of residential and commercial in close proximity keeps the Village alive throughout the day and some of the night.

The shoreline of Lake Iroquois has also been the focus of another area of concentrated housing and activity throughout Hinesburg's history. The shoreline is almost completely lined with camps on lots of one acre or less. Development of the shoreline of Lake Sunset has been slower to occur and the shoreline still has stretches of undeveloped land. Because Sunset was impounded and drawn down periodically to supply water power to industries in Mechanicsville, the lake's level and use for recreation and camp lots had been secondary up until the 1950's.

The pattern and pace of development in Hinesburg were relatively static until the building boom of the second half of the 20th century. Along with the surge in growth came a marked shift in the pattern of

buildings and house lots. Instead of a concentration of buildings in a few distinct areas, development assumed a more suburban pattern of houses on large lots along road frontage or along lengthy private right of ways. Sparsely settled areas, especially the hill roads, experienced some of the most rapid growth. Roads that had been built and maintained primarily as farm or logging roads saw steadily increasing traffic.

The 1989 Growth Study plotted the location of new residential development in Hinesburg between 1974 and 1988. Other than 80 units built in two multi-family projects in the Village, almost all of the residential development that occurred was outside of the service area of town water and sewer. Residential development continues to be dispersed widely throughout Town ; however, since 2005 a renewed interest in concentrated village area development has been seen as evidenced by Development Review Board approvals for over 130 new dwelling units in five village area development projects during the height of the housing market between 2005-2008.

The shift toward a more suburban pattern of residential development in Hinesburg's rural areas during the second half of the 20th century had many causes. The decline in the dairy industry and the strong market for rural lots in close proximity to Burlington led to increased development pressures in Hinesburg. Rural roads provided sufficient access for numerous lots. Prior to 2002 (when the State closed the 10 acre loophole for septic review), many of these lots were created with just over 10 acres to avoid state review of septic systems. The result frequently was arbitrary and haphazard lot placement. Cultural changes were likely also a factor with the increased availability of front wheel and four-wheel drive vehicles, and extensions in the average commuting distance to and from job centers in the Burlington metropolitan area.

A consistent concern expressed by citizens during Town Plan forums has been the threat to open space through the current trend of dispersed large lot subdivisions. Although the Town zoning bylaws contain provisions for techniques such as planned unit development that could conserve open space, this has only been used sporadically. A review of the Planning Commission's subdivision activity shows the distribution in size of the lots reviewed under the provisions of the Subdivision Regulations. Where Planning Commission review was part of the development process, the lots tended to be close in size to the zoning district minimum lot sizes in the 1980's. The proportion of 10 plus acre lots increased significantly in the 1990's. Close to half the lots created in Hinesburg during these decades were created without Subdivision Review. The State reformed its permitting for septic systems in 2002 in order to create a single set of septic rules and technical standards for the entire state. This reform closed the 10-acre loophole so that all new development lots (regardless of size) required a designed and permitted septic system. The new rules also expanded the types of allowed septic systems based on current and evolving technologies, which made proper septic disposal possible in some areas previously thought to have little development potential. Since these rule changes, the bulk of the new development lots created outside of Hinesburg's municipal sewer service area have been smaller lots – closer to the minimum lot sizes laid out in zoning.

Prior to October 1997 the subdivision regulations did not require Planning Commission review for the first three lots created and only minimal review for any lot accessed by a private right of way. In October 1997 the subdivision regulations were amended to establish a “minor subdivision” review process for any subdivision involving three lots or less.

A number of actions in recent years suggest that the pattern of subdivision of large, haphazard, rural lots seen in the 1980's and 1990's can be changed:

- The State now requires lots above 10 acres to be subject to the same wastewater regulations as smaller lots, thereby removing the previous artificial incentive to create large lots.
- There is a renewed interest in creating housing opportunities in the Village, especially given available sewer capacity and the Village Growth Area zoning adopted in 2009.

- The Planning Commission has and continues to explore a number of zoning and subdivision techniques in rural districts to cluster homes and to preserve larger, contiguous open space parcels.

These actions are described in greater detail in the balance of the Land Use Chapter and elsewhere in this Plan.

3.2 The Village

Overview:

Hinesburg's Village contributes greatly to the essential character of the Town. The Village we see today is a function of both the Town's early history and the Town's evolution over time. The Village serves as Hinesburg's hub of community activity by providing a rich mix of residential, commercial, municipal, industrial uses. As such, it helps frame the character of the Town by defining a compact built landscape that stands in contrast to the surrounding rural landscape. It is Hinesburg's primary growth center, where essential municipal infrastructure (e.g., sewer, water, sidewalks, etc.) are made available to both ensure the public's welfare and to provide for mixed uses at higher densities than the rest of town. It has also consistently been the focus for the majority of the commercial and industrial development in Hinesburg. In recognition of the village area's importance, and as a result of recommendations in the 2005 Town Plan, the Selectboard created a Village Steering Committee in October 2005. The mission of this seven-member committee is: 1) to gather, generate and prioritize ideas and plans which will help to enhance the quality of life in the village; 2) to bring these ideas forward in an advisory manner to the elected officials, appointed boards and commissions and town staff; 3) to serve as a voice for the residents and businesses located in the village area. Since its inception, the committee has helped garner Village Center designation from the State and has provided a host of valuable feedback and recommendations to other Town boards/commissions and Town staff. The Town is considering seeking the broader and more sweeping Growth Center designation from the State. This designation carries with it greater tax credits for businesses, fewer development costs related to development of agricultural soils, potentially streamlined Act 250 development review. Just as important, Growth Center designation is a pre-requisite to be able to create innovative funding mechanisms (i.e., Tax Increment Finance districts or TIF) to help pay for necessary capital infrastructure (e.g., sidewalks, roads, etc.) with a lesser impact on municipal property taxes.

The Village is currently comprised of a small historic "core", developed without a town green, surrounded by a larger, but still defined, "greater village area", which taken together constitute the Village Growth Area outlined in the Zoning Regulations. The current Village core is centered on the Charlotte Road, VT Route 116 intersection where Lantman's grocery store and the historic Town Hall are located. Essentially it includes the Village Zoning district, the Industrial 3&4 districts, and the Commerce Park portion of the Commercial district (see Map 2, Current Zoning). The greater village area extends primarily northward from the core to include the Village Northwest, Village Northeast, Residential 1, and Ballards Corner Commercial zoning districts. This northern portion of the Village Growth Area includes the Library, a variety of commercial uses at the intersection of Route 116 and Shelburne Falls Road (Ballards Corner), and the historic Mechanicsville Road area. South of the core, the Village Growth Area includes the Residential 2 district that extends just beyond the Route 116, Buck Hill Road West intersection.

The variety of residential types, businesses, and schools in the Village make it both a lively place and the economic, social and institutional center for the Town. The Village residents range in age and background, and it is this diversity that provides a rich source of community information, involvement, and participation. While several single-family homes remain, many of the larger homes have been divided into apartments and several businesses have created apartments in their buildings. The

condominiums at Lyman Meadows made ownership possible with the affordable pricing available to a larger scale development. The apartments at Kelley's Field offer safe and convenient elderly housing. Additionally, the Village is the location of the Town's public institutions. Much of the vitality of the Village stems from the core of most town services, public institutions and commerce that are within walking distance for those that live in the village as well as residents that drive to the village and then walk for shopping, recreation, public events, school, etc.

In May 2009, the Selectboard adopted a comprehensive set of Village Growth Area zoning and subdivision regulation revisions that were the culmination of a vision for a denser and somewhat expanded village that took shape over the last 20 years of community-level planning. Laying the foundation for this vision required much hard work, careful consideration, significant public input, and was not without some controversy. However, the Town recognized that in order to serve as Hinesburg's primary growth center, now and in the future, the historic village area needed to grow – both via in-fill and development in expansion areas. The Village Growth Area regulations established development density standards and significant bonus provisions that allow for the highest development densities in the village core area (approximately 8 residential units per acre including bonuses). Such densities are possible via innovative in-fill development; however, actual build out in the village core is likely to be less than the theoretical maximums for a number of reasons: 1) some landowners will choose not to subdivide their partially developed or undeveloped property; 2) some landowners may not want to increase the development density on their properties; 3) historic building and streetscape preservation may limit residential and larger scale commercial growth.

Allowed development densities are smaller but still substantial (approximately 4-6 residential units per acre including bonuses) in the expansion portions of the Village Growth Area. Two of these expansion districts represent mixed use districts, with the Village NW district envisioned for a similar mix of residential, retail, office, civic, and small scale industrial uses to the existing village core area, and the Village NE district focused on a mix of residential development and compatible employment opportunities as exemplified by NRG Systems. The other two expansion districts (Residential 1 & 2) are zoned so as to allow the creation of new residential neighborhoods with dense settlement patterns that are within easy walking distance of the village's employment, retail, office, and civic uses.

The closure of the Saputo Cheese plant in 2008 deprived the town of tax revenues and a significant number of jobs. As it appears increasing likely that a single use developer will not be investing in the property, the town has an opportunity to play an active role in the redevelopment of the property. Restoring the tax base and recovering the livable wage jobs are priorities. However, 15.5 acres in the heart of our village can be put to excellent use in achieving many of the goals outlined in this Plan including a walkable village, mixed use development and additional community space/facilities. This property's valuable role in the region's agricultural economy can be restored with careful and far-sighted development. Future plans for the Saputo property should recognize the importance of the Canal as a connection to Hinesburg's industrial history of mills and creameries.

Implementation of this vision requires much more than the purpose statements and framework laid out in Zoning and Subdivision regulations. Concurrent with the 2009 Village Growth Area regulation changes, the Selectboard also adopted Hinesburg's first Official Map (see Map 12), which is a powerful tool available to Vermont municipalities to identify the possible locations of future public facilities. The map, which shows future streets, planned trails and sidewalks, areas reserved for public buildings and facilities, provides a clear picture to property owners, developers, and the public of the Town's intentions with regard to its future physical form and design. The Selectboard also continues to improve the Town's capital budget and program, and adopted Hinesburg's first impact fees in 2009 to ensure that new development pays its fair share of the cost for new public infrastructure made necessary, in part or whole, by that development. The Selectboard began with police and fire impact fees, and is exploring impact fees for recreation, stormwater treatment, transportation infrastructure, etc. Additional work and

evaluation still need to be done on the wastewater allocation ordinance and service area, capital budget and plan related to concentrated village growth (recreation facilities, highway department needs, buildings and facilities department needs, stormwater treatment planning, etc.), Growth Center designation by the State, ongoing zoning and subdivision regulation revisions to refine and improve the Village Growth Area framework.

Public, private, non-profit partnerships will also play a significant role in the successful implementation of this vibrant village growth vision. The Town must continue to actively work with private and non-profit housing groups to attract and maintain a mix of housing, especially those types particularly in demand or in short supply – e.g., elderly housing and affordable housing. The Town must also continue to work with our economic development partners (both private and non-profit) to attract and maintain local employment, vibrant local enterprises, and retail opportunities that match Hinesburg’s rural village setting and bring value to the community. All of this must culminate in a complete development review process with ample citizen involvement to help ensure that new development is not simply possible, but also represents the best possible design and functionality for the community. Just as the current core and greater village areas have been defined by historical patterns of development, the future village area will continue to evolve with the Town’s growth and development trends. The challenge will be to integrate the new with what currently exists in such a way that the overall Town and Village character are preserved.

Enhancing and maintaining the various functions of the Village will be essential if its character is to be maintained. As the Town grows and demand for services increases several community facilities will need to be expanded or improved. The availability of municipal water and sewer will have a strong impact on the future direction of the Village's growth. The future location of facilities such as school, library, town offices and recreational facilities are also important considerations for the future of the Village. One noticeably absent feature in the existing Village is a sizable green or common. Such a community focal point would be a valuable addition to the Village by creating a public gathering space accessible and welcoming to all. Current recreation fields and the school playground in the Village serve specific user groups, but do not function as regular, day to day, community gathering places. Creation of a Village green may be problematic given the existing patterns of development, but possibilities exist and should be explored as part of the continuing planning process for the Village area.

Pedestrian access is fundamental to the sense of the Village. The proximity of a range of services makes the Village an especially appealing place for groups such as the elderly who have a more limited mobility. The density of the Village has reinforced the potential for pedestrian movement and future patterns of development in this area must be consistent with this. However, the volume of traffic through the Village has increased substantially and will undoubtedly continue to increase in the future. Along with increased traffic problems and safety hazards for pedestrians this increase has led to increased noise. To maintain the Village's access by a variety of transportation modes and to distinguish this portion of Route 116 as Hinesburg's "Main Street", consideration of these issues will be crucial.

The Village benefits from many natural areas and the agricultural lands around it. The farmland to the west and north define the edge of the Village and serves as a visual corridor leading to the Town's center. Other natural features such as Patrick Brook, the LaPlatte River and the hills to the East serve as important focal points that help define both the core village and the greater village area. These lands are a source of recreational and work opportunities and provide contrast and balance to the dense Village core.

Studies and Reports

A variety of studies have been conducted that shed light on critical Village issues such as wetland and flood hazard area delineation, growth center concepts, and transportation. These studies include:

- LaPlatte River Watershed Stormwater Infrastructure Study (prepared by the LaPlatte Watershed Partnership - 2010)

- Stream corridor plan and geomorphic assessment of the LaPlatte River and tributaries (prepared by the LaPlatte Watershed Partnership) - 2007
- West Side Road Feasibility Study – 2003
- Route 116 Hinesburg Village Scoping Study – 2002
- USGS Flood Study for the LaPlatte River, Patrick Brook, and the Canal – 2003
- Village area wetland delineation by Arrowwood Environmental – 2008
- UMASS Wetland Delineation – 1997 (based on 1993 aerial photography)
- Village Wetlands Delineation Project - 1995
- Growth Center Pilot Project – 1993

The LaPlatte River Watershed Stormwater Infrastructure Study (prepared by Milone & MacBroom 2010) analyzes the stormwater impacts on the LaPlatte River and tributaries in Shelburne, Charlotte and Hinesburg. The work includes both GIS analysis and field verification to identify primary stormwater impacts to water quality and stream geomorphology within the LaPlatte Watershed. Stormwater accumulation areas and collection systems discharging within the village area subwatersheds were identified for possible future stormwater mitigation projects. Contributing drainage area and amount of impervious surface were calculated to guide project implementation. The sources of unregulated and unmitigated stormwater are substantial in the watershed but because the LaPlatte River watershed is not yet designated as a stormwater impaired watershed according to EPA 303(d) list this report outlines the steps that should be taken to improve stream health and avoid a future impaired designation.

The West Side Road study examined the feasibility (pros, cons, major obstacles) of creating a new road along the West side of Route 116 from Charlotte Road to Shelburne Falls Road with a connection to Route 116 opposite Commerce Street. The purpose of such a road would be twofold: 1) to provide access to additional lands for higher density development in the greater village area; 2) to help alleviate traffic congestion and safety concerns throughout the Village (especially at the Route 116, Charlotte Road intersection) by providing alternate corridors for local traffic. The study mapped out a possible route and provided details on the likely hurdles for such a project. The evolving location and function of this road was further elucidated in the Official Map adopted in 2009, and during the 2009 & 2010 review of development projects on the Lyman and Bissonette properties. The road should help determine the western extent of development in the Village Northwest zoning district, and in so doing, help transfer the rural, undeveloped attributes that the community finds attractive on Route 116 to the West Side Road. With a northern terminus as far west on Shelburne Falls Road as possible (i.e., near or opposite Pleasant View Lane), it will avoid complications with the Route 116 intersection and the Ballards Corner Road intersection.

The Route 116 Scoping study took a more comprehensive look at traffic and pedestrian needs through the Village from the Shelburne Falls Road to Buck Hill Road. It provides substantial information on the existing conditions together with a variety of improvement alternatives. The recommendations focus on two basic areas - overall corridor improvements and intersection improvements. Overall corridor recommendations seek to strike a better balance between arterial and local road functions, improve aesthetics and encourage the use of sidewalks, bikeways, and public or shared (i.e., park & rides) transportation. More recently, public transportation came to the forefront when Hinesburg voter decided in 2010 (Town Meeting) to join the Chittenden County Transit Authority (CCTA), and fund the required local match in partnership with NRG Systems to begin commuter bus service – tentatively planned for 2012 pending necessary federal funding. The report emphasized improved pedestrian and bicycle facilities as well as traffic calming in order to provide alternatives to the automobile for residents to access local business and community facilities. Intersection recommendations were made for all of the

major Route 116 intersections in the Village area – Shelburne Falls Rd, Commerce St, Mechanicsville Rd, Charlotte Rd, Silver St. The study indicated that the Charlotte Road and Silver Street intersections were the most problematic, and VTrans improvements to these intersections has improved safety considerably. The Route 116, Shelburne Falls Road is the next intersection slated for major improvements – improved signalization and additional turn lanes. With the addition of two new Route 116 traffic lights, at Commerce Street and Charlotte Road, traffic backups have become more prevalent during the morning and afternoon peak hours, making proper signal timing and functioning a new area of concern.

The US Geological Service (USGS) Flood study was commissioned by the Federal Emergency Management Agency (FEMA) to improve floodplain and flood hazard area maps for the Village area, specifically with regard to the LaPlatte River, Patrick Brook, and the Canal. Previous FEMA maps were flawed in that no flood hazard area is shown for the lower portion of Patrick Brook, while an unusually large hazard area is shown around the Canal. Results from the USGS study and updated FEMA flood hazard maps corrected these errors and provided more accurate delineations and elevations for the flood hazard area in the Village area. The USGS maps depict the floodway along the LaPlatte River, as well as the 100 year and 500 year flood prone areas. This data is extremely important in evaluating public safety issues as well as areas for possible village expansion.

Wetlands are important natural resources that have received significant attention over the years that village area growth has been explored and planned. Hard and fast wetland delineations and determinations have been hard to replicate from one project to the next, in part because many presumably historic wetland areas in the village area were converted to agricultural use long ago. Long term agricultural use together with substantial changes to area hydrology (e.g., ditching, stream channel straightening, etc.) have led to varying interpretations about the location and extent of wetland areas today. It is clear that wetland issues will remain an important consideration for village area development and future fine tuning and changes to the Village Growth Area zoning districts.

In 2008 a wetlands delineation for several parcels of land within the Village Growth Area was completed by Arrowwood Environmental to help inform the development of the Official Map.

The University of Massachusetts (UMASS) wetland delineation was commissioned by the Hinesburg Conservation Commission and completed in 1997. The project involved a detailed identification of wetlands in Hinesburg using 1993 color infrared aerial photography (1:40000 scale). Although by no means a map of all wetland areas, the result was a more comprehensive and detailed delineation than the National Wetland Inventory (NWI) data that is typically used to identify wetlands in other towns. Landowners, municipal boards and staff, and even State wetland permitting specialists now use the UMASS wetland map to identify areas for further investigation both in site planning and development review here in Hinesburg. It should be noted that State and Federal wetlands regulations are still based on the official NWI delineation and classification, supplemented by field observations.

The Village Wetlands Delineation Project (1995) created a detailed wetlands map in and around the Hinesburg village area. It was completed as phase three of the growth center pilot project (see below) to better define growth center boundaries and identify potential locations of future roads and other public investments. Although the delineation is now out of date, it does emphasize the importance of planning for wetlands in the possible growth area west of Route 116. Many of the wetlands in this area are not federally protected since they were previously converted to agricultural croplands. The study found that these wetlands likely fall under State jurisdiction, but large portions of this area could potentially be developed without undue adverse impact on protected wetland functions. Given the existing agricultural uses and modified drainage, the consultant found that many existing wetland functions and values could be significantly enhanced rather than adversely affected by careful site planning and development design.

The Growth Center Pilot Project (1993) studied how new development could be incorporated in and around the Village. Thanks to funding from the VT Department of Housing and Community Affairs, the Planning Commission was able to hire design consultants, produce detailed base maps and build out scenarios, and solicit public input. In many ways, this project was the catalyst that helped bring about many of the other studies listed above. The project resulted in a number of key recommendations that are still relevant today, and are largely embodied in the formal Village goals and recommendations in this Plan and the Village Growth Area regulations adopted in 2009.

Goals and Recommendations:

3.2.1) Recognize the importance and complexity of Village area and growth center issues.

- a) Continue to have a standing Village Steering Committee appointed by the Selectboard, as long as there are community members interested in serving. The Steering Committee should work as a strong advocate on the goals of section 3.2 and other Village issues.
- b) Strongly consider applying for Growth Center designation from the State. If Growth Center designation is obtained, also consider the creation of a Tax Increment Finance (TIF) district to help re-direct State property tax funds from new development to Town infrastructure necessary to support well-planned village area growth and development.

3.2.2) To change the character of Route 116 to a "Main Street", and to create and reinforce "gateways" into the Village to give people a sense of arrival.

- a) Work aggressively with the CCMPO, CCRPC, VTrans, and Hinesburg's State Legislators to implement provisions of the Route 116 Hinesburg Village Corridor Study. Pay particular attention to intersection improvements at Shelburne Falls Road, Silver Street, Charlotte Road, Mechanicsville Road, and Commerce Street.
- b) Redesign the main portion of Route 116 through the Village to make it safer, more pedestrian friendly, more efficient, and more attractive. Overall, the roadway (traveled area plus shoulders) should be narrowed to reduce speeding, eliminate passing on the right, and provide more room in the right-of-way for pedestrian infrastructure, street trees, etc. Additional features should include: curbing, more sidewalks, bicycle lanes, street trees, improved lighting that is pedestrian friendly and attractive, and improved signage.
- c) Assess the pros and cons of the Town taking over the Village portion of Route 116 (e.g., Buck Hill Rd to Commerce St) from the State.

3.2.3) To create a truly "walkable" community by working toward safe and convenient pedestrian access to all portions of the Village.

- a) Ensure the continued safety of existing crosswalks through maintenance of signage, curbing, road striping.
- b) Make modifications to the Official Map as necessary to ensure village sidewalks and paths are connected and linked to significant destinations outside the Village. Coordinate this with efforts to create a system of footpaths and trails in the rural areas of town (see section 6.7).
- c) Continue to make regular improvements to pedestrian infrastructure using Municipal, State, and Federal funds.
- d) Plan for and install sidewalks on both sides of Route 116 through the Village area.

3.2.4) To address the overall traffic flow and road network in the Village area to ease congestion, offer new development opportunities, and improve safety.

- a) Develop the new West Side Road connecting Charlotte Road with Shelburne Falls Road as documented in the official town map, working with the Saputo Site Redevelopment Committee and private developers, and updating zoning regulations where necessary to insure implementation consistent with goals for development of the greater village area.
- b) Work with the CCMPO to continue tracking traffic count data in and around the Village area.
- c) Prioritize the enforcement of speed and other traffic laws in the Village to protect lives and promote Village character.

3.2.5) To guide growth and development so that the Village Growth Area can serve as Hinesburg's primary growth center for residential and compatible non-residential uses.

- a) Continue to refine and adjust Hinesburg's land use regulations, Official Map, capital budget and plan, impact fees, and other municipal tools to implement the Village Growth Area vision. Hinesburg's rural village character shall be retained and infrastructure needs shall be addressed. Compact affordable housing is a central goal for residential development throughout the Village Growth Area. Mixed use (residential and non-residential) is also a critical feature for expansion areas in the north of the Village zoning district as well as the Village Northwest and Village Northeast districts.
- b) Develop permanent zoning for the 15.4-acre Saputo property (now under interim zoning) in order to encourage and allow for uses that will bring value to the community (particularly economic development and employment) and be consistent with the surrounding mix of residential, commercial, and civic uses. Any permanent zoning strategy should respect the central location of this property, the historic nature of the Canal, and the need for future public facilities and infrastructure (e.g., public roads, sidewalks, trails, greenspace) as shown on the Official Map.
- c) Re-evaluate zoning regulations as necessary to encourage additional in-fill development in the Village core to better concentrate development within a 15-minute walk of Town Hall.
- d) Encourage the redevelopment of structures within the existing Village core that are underutilized. Facilitate landowner access and understanding of State, Federal, and non-governmental incentive programs for structural rehabilitation and historic preservation.
- e) Link zoning changes to sewer service area decisions and sewer capacity so that growth potential can be realized.
- f) Explore methods to prioritize Town sewer allocation within the village core and areas designated for expansion (see above). Consider revising the wastewater allocation ordinance so that a percentage of the residential and enterprise (i.e., commercial) allocation is reserved for development in these areas.

3.2.6) To ensure that allowed uses within the Village Growth Area are compatible with existing uses, and to encourage a mixture of commercial, institutional, and residential uses within the appropriate Village Growth Area districts.

- a) Investigate the optimum balance/ratio of commercial, institutional, and residential uses in the Village area. Keep track of Village uses and research other towns to find comparable examples of ratios that work well.
- b) From time to time, reassess existing and allowed uses within the Village Growth Area to ensure future uses will be compatible.
- c) Encourage the preservation of well functioning and historic existing streetscape patterns.

3.2.7) To maintain undeveloped areas (i.e., open spaces) within and adjacent to the Village, to maintain and preserve existing natural features (e.g., LaPlatte River) and a distinct Village edge.

- a) Consider modifying Village design standards in the Zoning Regulations to include open space preservation along the periphery of the village area.
- b) Explore the creation of a new zoning district around the Village with appropriate design standards and/or where innovation and clustering is encouraged in order to preserve open spaces.

3.2.8) To make available adequate community facilities and services to facilitate Village area goals.

- a) Continue to research ways to expand the capacity and efficiency of the Town's sewer treatment facility. Any future expansion should be of a size and scope to facilitate Village growth while preserving the ecological integrity of the LaPlatte River.
- b) Inventory and track (via GIS) the number and type of recreational facilities in the Village area. Town boards should work together to make sure adequate recreational opportunities will be available as the Village area population and usage grow.
- c) Explore possible locations for a Village common to serve as a community gathering space, including sites that may need redevelopment or redesign.
- d) Inventory and track (via GIS) the amount of undeveloped land (e.g., open spaces) in the Village area.
- e) Develop a plan for the linking and sharing of parking lots with access roads and sidewalks.
- f) Develop a comprehensive stormwater plan for the Village Growth Area.

3.3 Commercial And Industrial

The diversity of Hinesburg's economy is a key indicator of the nature of the Town and its future. This diversity will be essential in maintaining the desired character of the Town and will be a major component in determining the future of town services. Availability of local services and job opportunities are important issues for town residents. The environmental, social, and aesthetic impacts of the types, sizes and locations of commercial and industrial enterprises are other important issues facing the Town.

Historically, Hinesburg's economy was varied and included a sizeable industrial base. Throughout the 1900's, the decline of many of the local industries and the changes in the agricultural economy eroded the diversity of the economic base. Today, like many towns throughout the area, Hinesburg has moved toward becoming a bedroom community for commuters to the job centers of Chittenden County. 2000

Census figures show that 80% of the labor force living in Hinesburg commuted to work outside the Town. Of the out of town commuters, 72% commuted to the metro area – i.e., Burlington, Winooski, South Burlington, Williston, Essex. Of those traveling to Hinesburg for work, 58% originate their commute from outside of Hinesburg. Residents of the Burlington metro area constitute a large slice (approximately 31%) of the out-of-town commuters destined for Hinesburg.

Despite the high percentage of residents commuting out of Hinesburg, a number of employment opportunities remain within the Town. These places of employment represent not only local services and jobs for Hinesburg residents, but provide employment opportunities for students from the high school. Businesses with local employment also provide key personnel for municipal services, such as the volunteer Fire Department. Several firms based in Hinesburg serve a far broader base. NRG Systems, a developer and manufacturer of wind measuring instruments, is a leader in the rapidly growing wind energy industry, and has seen a number of expansions to its LEED certified headquarters here in Hinesburg that have resulted in additional employment opportunities. With over 110 employees, NRG is one of the Town's larger employers, second only to CVU Highschool. Nestech, a packaging machinery manufacturer; Iroquois Manufacturing, a manufacturer of truck bodies; Waitsfield and Champlain Valley Telecom, an independent, privately owned telecommunications company (phone, DSL, cable); the Champlain Valley Union High School and Hinesburg Community School provide products and services that reach many people beyond the Town's borders and draw employees to Hinesburg from the surrounding area. Hinesburg Sand and Gravel, one of the larger sand and gravel operations in the state, supplies many towns and businesses throughout the region. Clifford Lumber Company provides an important market for timber products. Other segments of the business community not only provide employment opportunities but offer goods and services. These include, grocery stores, automotive repair services, gasoline sales, auto parts, body shop, car sales, well drilling, hardware store, laundromat, restaurants, florist and gift shops, hair salons, health center, other health professionals, veterinary clinic, attorneys, etc. The future of these, and other local businesses and services, will have a direct impact on Hinesburg. Planning that affects many of these enterprises should also be considered for regional impacts as well.

On October 22, 2008, one of Hinesburg's historic industrial uses came to an end with the announcement that the Saputo Cheese factory would close, in part due to a fire on September 29, 2008 that destroyed a 12,000 square foot warehouse area. The Saputo property had been used for cheese manufacturing by a number of companies in the past (Stella Foods, International Cheese, Economou, etc.), and prior to that as a creamery dating back over 100 years. The 15.4-acre property and remaining 87,000 square feet of building space were formally put up for sale in October 2009. In response to the Saputo Cheese plant closure, and the significant community interest in the future of this key property at the heart of the village area, the Selectboard created the Saputo Redevelopment Steering Committee in January 2009. The mission of the steering committee is to propose redevelopment opportunities for the Saputo property that meet the needs of the Hinesburg community, including an adequate tax base, job creation and consistency with the Town Plan. Furthermore, in February 2009, the Selectboard adopted interim zoning for the entire 15.4-acre parcel, which previously comprised all of the Industrial 3 zoning district and a small portion of the Village zoning district. The purpose was to enable additional redevelopment options and require a reasonable review of any option by the Town, while at the same time providing time for the steering committee and the Planning Commission to conduct studies on redevelopment options and more permanent zoning solutions.

One of the important parts of a small town economy is the home-based business. These businesses provide a wide variety of services and are a valuable source of primary and part-time employment for many residents. Home-based businesses, while providing a key element in the Town's economic makeup, must also be monitored carefully to avoid undue adverse impacts, such as traffic or noise, on other residences. Zoning amendments in 1996 and 2003 broadened the options for home-based

businesses in Hinesburg. The Zoning regulations attempt to encourage the establishment of home occupations while reducing any negative impacts on surrounding properties.

One traditional component of Hinesburg's home-based business community has been the operation of construction heavy equipment and landscaping businesses. Recognizing the need for these services to be available locally, while at the same time acknowledging the possible adverse impacts to nearby residences, the zoning regulations addressed their existence in 1996 by grandfathering those heavy equipment yards in existence at that time, and, as well, including conditional use review standards for the location of new ones. However, those standards adopted setback distances from surrounding residences and boundaries that may be impossible to achieve in most areas given the development that has occurred since then. In 2010, the Zoning Administrator indicated that there may be as many as six heavy equipment operators that are not in compliance. Furthermore, landscaping businesses which rely on several smaller trucks and trailers may need greater flexibility than the current home occupation regulations allow. A combination of enforcement and regulation updates is warranted to find the right balance.

As a rural town, Hinesburg's economy also benefits from a variety of land-based businesses. In addition to agricultural and forestry-based businesses (described in sections 4.1 & 4.2), other private enterprises maintain open land, provide a solid tax base, and create local jobs. Large acreage private recreation areas such as Cedar Knoll Country Club, Sleepy Hollow Inn Ski & Bike Center, Taproot Horse Farm (and other horse/riding facilities throughout town) provide all of these important functions while also creating recreational opportunities. Attracting and maintaining compatible large acreage private enterprise (especially outdoor recreation and event areas) is an important goal and challenge in the face of constant development pressures stemming from Hinesburg's proximity to the Burlington metro area. See section 3.4 for several related goals & recommendations.

The current location of the commercial and industrial districts in Hinesburg reflects the existing locations of the main businesses. The Industrial District I, located on the southern border of the Town, is the location of Hinesburg Sand and Gravel and Clifford Lumber. Industrial District II in Mechanicsville is the site of Iroquois Manufacturing. Industrial District III on Route 116 in the Village, is the location of the former Saputo cheese factory (currently under interim zoning, with permanent zoning changes in the works). Industrial District IV, also on Route 116 in the Village, is the location of the Giroux Auto Body Shop. Village Northeast District (a mixed light industrial, residential district) located on Route 116 just north of the Village and adjoining the Commercial District is the location of NRG Systems, Inc. One part of the Commercial District adjoins the village, and encompasses Commerce Park and a small adjacent area on the north side of Patrick Brook. The second part of the Commercial District encompasses the commercial area at the corner of Shelburne Falls Road and Route 116. Additionally, the Village District provides a central location for many services and businesses, while the Village Northwest District provides an expansion area for the mix of uses characteristic of the Village District.

The location and use of commercial and industrial areas has a major impact on the Town's environmental and aesthetic resources, as well as its economic well-being. Throughout the development of this and previous plans, residents have expressed the desire to see a diversity of local services and job opportunities but not at the expense of other town features. This is seen as essential if Hinesburg is to maintain its rural character and to avoid becoming solely a bedroom community of the Burlington area. It will be important to maintain a core of businesses in the Village and surrounding commercial areas as a means of continuing the historic pattern of the Town. Home-based opportunities should continue to be permitted throughout the Town as long as they do not adversely impact other properties. To meet these objectives it will be important to consider the ways that the Town can encourage and support a broad range of businesses while integrating growth into the existing pattern of the community.

Goals and Recommendations:

3.3.1 To provide suitable locations for commercial and industrial development.

- a) Review zoning districts and regulations with a goal to foster the establishment of businesses that support the residential growth taking place in Hinesburg.
- b) Encourage commercial expansion in the core of economic activity within the Village Growth Area.
- c) Analyze existing commercial and industrial districts for their sufficiency and determine the feasibility of possible expansion areas.
- d) Study and develop permanent zoning for the 15.4-acre Saputo property that may encompass commercial, professional, municipal, and residential uses in addition to compatible industrial uses. See recommendation 3.2.5b.
- e) Review zoning regulations for contractor yards with a goal of developing performance standards that would allow the separation distances to be reduced to facilitate the review/approval of new yards that are compatible with the surroundings.
- f) Investigate allowing off site equipment storage for contractors and landscaping businesses to be included in farmyard areas of existing farms, which already have heavy equipment there.

3.3.2 To provide for home-based and land-based businesses throughout the Town that will not adversely impact neighboring properties.

- a) Review zoning regulations with a goal to continue to encourage home-based and cottage businesses.
- b) Study and develop methods that will encourage and support businesses related to agriculture and forestry.
- c) Develop appropriate conditional use standards for home occupation landscaping businesses.

3.3.3 To provide necessary facilities and services to support commercial and industrial development.

- a) Improve pedestrian walkways and vehicular traffic flow to help current and future businesses attract and retain customers.
- b) Continue working with Green Mountain Power and landowners to encourage the provision of 3-phase power to the Industrial 1 zoning district.
- c) Allow mixed residential uses as a conditional use in the Industrial 1 zoning district.
- d) Encourage the introduction and use of public transit.
- e) Work to create a public transportation system adequate to meet the needs of local employers.

3.4 Rural Regions

The regions of the Town of Hinesburg presently encompassed by the Rural Residential I, Rural Residential II and Agricultural Districts include most of the land area within the Town. Since the 1980's, stresses on Hinesburg's rural and agricultural areas have paralleled those experienced in many northwestern Vermont towns. Those stresses include increased pressure for residential growth and increasing land valuations; higher traffic density on rural roadways as both Hinesburg and the surrounding towns continue to grow; and the decline of dairy farming that has served as the principal agricultural use within Hinesburg for a significant portion of the last century.

In the next decade the accelerated growth being experienced by Chittenden County and northwestern Vermont as a whole is expected to continue. Hinesburg will continue to be challenged by the increasing pressure for residential development within rural and agricultural areas while encouraging the use and

viability of traditional, small scale, and hybrid agricultural, forestry and rural character /open-space-based enterprise uses within these regions. The character of the Town of Hinesburg and the identification of Hinesburg's Village as a distinct commercial center depend on the sense of separation and lower development densities provided by open spaces and rural vistas within the town. In order to preserve this character, particular attention should be paid to balancing growth pressures with preservation of rural vistas as well as the working forested and agricultural landscape. The permanently conserved private and public farmland and forests are important assets to the Town for their capacity to support a local economy and as natural infrastructure for ensuring water and air quality, recreation, and education. In addition to planning efforts targeting residential, agricultural and natural resource issues within the town, future planning should also consider the identification and preservation of wildlife corridors and habitat which contribute to both the rural character and recreation opportunities within the town as well as the preservation and restoration of the town's wetlands, streams, surface waters and ground waters.

In 2001, Hinesburg received a Municipal Planning Grant from the Vermont Department of Housing and Community Affairs to explore techniques for preserving the Town's rural character. Some of the identified types of regulations were "open space" subdivision regulations, zoning overlay districts, use and density standards, design review, Planned Residential/Unit Developments and similar clustering techniques, Transfer of Development Rights, and Right to Farm provisions. After spending several years focused on Village Growth Area rezoning, the Planning Commission began work in 2008 on land use regulation revisions with these techniques in mind. Public forums were held in February 2008 and November 2009 to get feedback and introduce the community to various strategies – especially ways to make rural development density allowances easier to understand and more predictable. This rural area zoning work remains one of the Planning Commission's priorities, and work continues. This review will include consideration of the location of various resources, particularly agricultural land, in relation to district boundaries and regulations. The regulations and zoning boundaries will be modified to ensure that they are consistent with the location of the Town's agricultural, forestry, and natural resources. A review of the regulations will also include an assessment of environmental constraints on the growth potential of each district so that allowed densities and uses are realistic and appropriate.

Other measures to manage and support agricultural, forestry and conservation uses are described in Chapter 4.

Goals and Recommendations:

3.4.1) To guide residential development into locations, densities, and groupings which preserve the sense of open space as well as the agricultural and forestry usefulness of the rural areas.

- a) Incorporate practices for area-based zoning, transfer-of-development rights and clustering into Hinesburg's zoning and subdivision regulations to encourage residential clustering, protection for access to and utilization of natural resources, protection of rural vistas, VT wildlife management areas, and wildlife corridors.
- b) Create a clearer system for determining allowed development density in the Zoning and Subdivision Regulations. An improved system should give landowners more predictability in the review process, while helping retain natural resources, ecological systems, and important farm and forest lands as the rural areas become more developed.
- c) Focus rural area development review on resource protection first, with development designed to integrate into and benefit from resource areas.
- d) Clearly distinguish between allowed development density and minimum lot size. Do away with outdated minimum lot size standards that hamper innovative subdivision design and fragment the rural landscape.

- e) Implement PUD and subdivision policies that encourage the creation of mixed lot sizes in a single development as well as the preservation of medium and larger size parcels for active forestry and agriculture as well as small to medium scale agricultural uses.
- f) Redefine Hinesburg's current agricultural and rural residential districts to more closely represent desired patterns of growth within the town, availability of sewer and the suitability of soils.

3.4.2) To guide development at the village – rural edge in order to preserve rural small town character and provide for open spaces adjacent to the village center

- a) Research the creation of a village-edge zoning district or village-edge overlay to steer development through the use of clustering, area based zoning and transfer of development rights.

3.4.3) To develop policies throughout the rural areas that preserve agricultural uses.

- a) Examine density in agricultural areas (e.g., AG district) for compatibility with the conservation of agricultural lands. Implement zoning using a form of area-based density for this district, which may consider changing the overall density.
- b) Implement or strengthen techniques that allow flexibility and conservation of agricultural lands. Encourage Planned Unit Developments (PUDs), which allow a greater density on one portion of a site while maintaining another portion as undeveloped land. Revise PUD regulations to include guidelines specifying the location and amount of open space to be provided in a subdivision. Require methods for the long-term protection of open space as part of any PUD proposal. Use density bonuses as an incentive for planning that preserves viable agricultural land where appropriate.
- c) Establish criteria for the placement of house lots, roads and utilities that will preserve a greater amount of usable agricultural land.
- d) Promote development in areas that are least disruptive of agricultural operations, maintain lands' eligibility for tax abatement programs and reduce conflicts between agricultural operations and residential areas.
- e) Examine uses in the agricultural district with the goal of recognizing non-traditional uses that may or may not be agriculturally related but that allow the land to remain open, used and available for future agricultural endeavors
- f) Recognize important agricultural land that is not being currently used for traditional agricultural purposes and propose methods of enabling that land to remain open.
- g) Study methods of transferring development rights and determine if any of those methods are appropriate for Hinesburg.

3.4.4) To develop policies throughout the rural areas that preserve forestry uses.

- a) Examine density in forested areas (e.g., RR1 & RR2 districts) for compatibility with the conservation of forest lands. Implement zoning using a form of area-based density for these districts, which may consider changing the overall density.
- b) Develop zoning techniques for the preservation of Hinesburg's forest resources. The techniques may include a separate forestry district, overlay districts for important forest land or other development and management standards specific to forest preservation.
- c) Direct development in areas with forest resources to land that is less suitable for active timber management because of poor soils, existing forest conditions or size and location of the parcel.
- d) Give strong consideration to preservation of wildlife corridors, viable wildlife habitat, groundwater recharge areas, and ridgelines in planning any development of lands with forest resources.
- e) Establish guidelines for placement of roads, utilities, and house lots in locations that do not disrupt the forestry or natural resource potential of a parcel.

- f) Site new development to minimize fragmentation of forest lands and to maintain access to forest lands
- g) Require development plans to preserve productive forestland in a size and shape that maintains its viability and eligibility for tax abatement programs.
- h) Ensure access and proper rights of way to preserve the viability of productive forest land.

3.4.5) To develop policies throughout the rural areas that preserve conservation lands for their ecological, recreational, and traditional uses.

- a) Revise zoning bylaws to create one or more conservation districts. Lands to be included within this district may include the Town Forests, Fred Johnson Wildlife Management Area, and other publicly owned lands to be protected from development or inappropriate use.
- b) Within conservation districts, permit only those uses that will preserve the natural and aesthetic values of these lands.
- c) Permit structures, roads and parking areas that further the recreational and education use of these lands only if their placement does not adversely impact sensitive areas.
- d) Ensure access and proper rights of way to preserve the viability of productive forest and other conservation lands.

3.4.6) To incorporate the preservation of Hinesburg’s rural character within future development guidelines.

- a) Encourage the master planning of existing larger parcels prior to subdivision through town planning assistance and policies, which provide density bonus incentives.
- b) Develop zoning policies and bylaws which allow land-based enterprises such as, but not limited to: community farms, farm-based Bed & Breakfasts and event-hosting facilities, cross-country ski facilities, game preserves or similar businesses.

3.4.7) To guide development within Hinesburg’s rural areas while preserving natural and wildlife systems.

- a) Complete natural resource and wildlife habitat inventories for use by the public, the planning commission and the DRB in creating and evaluating master plans, subdivisions and PUDs.
- b) Evaluate the Official Map, overlay districts, and other regulatory tools in both the agricultural and rural residential districts, which protect town infrastructure, adjoining properties, natural resources, natural systems, and rural vistas.

3.4.8) To establish processes and methods for monitoring the progress of the town in implementing the rural development recommendations within this plan.

- a) Develop and maintain a set of indicators that may include rural lot sizes, clustered vs. traditional subdivision approvals or other statistics as a measure of rural development directions in a timely manner (e.g. annual, bi-annual, every five years, etc.).
- b) Implement an annual review of Hinesburg’s development activity with the Development Review Board to assess the practical implementation of updated zoning bylaws and address any inadequacies or misinterpretations in an effort to tune zoning bylaws to Hinesburg’s planning goals.

4. NATURAL RESOURCES & ECOLOGICAL SYSTEMS

Hinesburg's natural resources are varied and abundant. Land resources, notably agriculture and forestry, contribute to the Town's economic vitality; but they are equally valued for their aesthetic qualities and for their support of wildlife habitat. Water resources, including surface waters and groundwater, must be protected for human health as well as wildlife habitat. Wetlands, flood hazard areas, wildlife corridors, natural areas, hills and ridgelines, and similar natural resources provide wide-ranging contributions to the Town's rural character, to townspeople's enjoyment of their natural surroundings and to the economic vitality of the community. Consideration for natural resources is essential for basic human health and safety. Natural resources and ecological systems are important assets to the Town and deserve to be considered and protected.

This chapter includes descriptions of various natural resource categories followed by recommendations in each section. Often, natural resource values are overlapping and complementary. Similar recommendations may occur in more than one section. The overall objective of these recommendations is to protect the town's natural resources with special concern for the biological diversity and natural processes that sustain life.

4.1 Forestry

Hinesburg has abundant forest cover throughout the Town and particularly east of North Road and Hinesburg Richmond Road. Hinesburg has over 4,500 acres of productive forestland growing lumber to meet our future needs (based on forest lands enrolled in the State's current use program). Hinesburg has favorable climate and soil to grow quality hardwoods and the topography makes for easy access to many forested lands. Many productive forest parcels encompass hundreds of acres, a fact that makes them desirable for long-term timber management. Proximity to sawmills also makes for economical logging operations. A large portion of Hinesburg forestland is under supervised forest management plans that are designed to promote growth of valuable merchantable timber.

Continued management of these woodlands is an important community goal. Forest land and its traditional uses (timber extraction, wildlife habitat, recreation, scenic resources, etc.) help define the rural character of the Town. The viability of our working forests is tied inextricably to adequate access and overall land base. Indiscriminate subdivision and development has the potential to fragment large blocks of forest land into smaller ownerships making long-term timber management more difficult. More importantly, even if large forest parcels are maintained, development along Town roads must be carefully planned to avoid isolating interior forest lands. Given low profit margins and site-specific constraints, working forests require suitable access for equipment and timber harvesting.

Most of the Town's forest resources are managed by private landowners. However, a small percentage is in public ownership (both Town and State). These lands include the Town Forests, the Fred Johnson Wildlife Management Area, and other streambank lands owned by the State along Lewis Creek (Map 11, Town Facilities & Conserved Lands). Timber management on these lands is used as a tool to implement the primary goals of providing wildlife habitat (State lands & Town Forests) and recreational opportunities (Town Forests). The continued protection of these parcels is important in that they serve as anchors for the extensive forest land in the eastern portion of Town, and the Lewis Creek corridor.

Planning for all of Hinesburg's forest resources could be improved through a more thorough evaluation of site-specific potential and value to the community. Frequently, during local development review, town boards find it difficult to assess the value of a particular area for residential development versus timber production versus conservation. Given the wealth of GIS data available, it may be possible to develop a system or model that better establishes the value of a particular area for a number of competing values.

Goals & Recommendations

Included at end of section 4.2 (Agriculture). Related land use goals and recommendations also included in section 3.4 (Rural Region land use).

4.2 Agriculture

Agriculture is a significant contributor to the character of the Town. The farmer is the one who has the ability to produce an income from the land and keep it open. However, the farmer is under constant pressure to sell or develop the land due to the discrepancy between income from production and what he or she could expect from real estate development. Once the land has been developed for nonagricultural purposes, it is forever lost to agriculture. Preserving agricultural land while maintaining the landowner's equity in that land is one of the foremost planning challenges facing the Town.

The importance of agriculture to Hinesburg's character is evident from community surveys and discussions in many public forums (Town Plan forums through the years, 2006 Community Visit process, etc.). Agriculture produces one of the most visible patterns on the land and can define the nature of a town. During the preparation of the Town Plan, participants have identified ways that agriculture contributes to the Town economically, socially and environmentally.

Economic Benefits:

- Property taxes paid and fewer services demanded.
- Provides jobs and housing for employees.
- Sale of agricultural products.
- Local jobs and services for businesses and industries.
- Helps to slow the development of farmland.
- Ready food supply.
- Direct and indirect contribution to the regional and state economy.

Social Benefits:

- Local food supply & community connections to farming
- Space for recreation.
- Educational opportunities.
- Scenic views.
- Makes Hinesburg an attractive place to live and work.
- Cultural Diversity.
- Retention of town heritage and rural character.

Environmental Benefits:

- Cultivation & maintenance of open land.
- Helps water recharge areas.
- Helps to maintain healthy forests.
- Provides wildlife habitat.

The Natural Resource Conservation Service, or NRCS, (formerly the Soil Conservation Service) has mapped and ranked soils in Hinesburg. 8,154 acres, or approximately 32% of the Town, are ranked as prime or statewide soils, compared to only 20% in the state as a whole. Prime and statewide are terms used by the Soil Conservation Service Natural Resource Conservation Service to designate the two most productive soil types. These two rankings qualify as prime agricultural soils for Act 250 review purposes. Of this, 1,148 acres are prime soils. These are suitable for almost any type of farming operation and are

essential for intensive agriculture. Statewide soils, and some of the lesser-ranked soils that have been improved with drainage, are also well suited for the production of food, feed, fiber, forage, and oilseed crops. These soils comprise the bulk of the land that supported Hinesburg's once extensive dairy operations. The majority of Hinesburg's good agricultural soils are located west of Route. 116, a fact that is evident in the existing pattern of land use in Town and by this area's designation as an agricultural zoning district.

One indicator of existing farm and forest use, and commitment to future use of land for agriculture and forestry, is enrollment in an agricultural or forestland tax abatement program – the Use Value Appraisal or Current Use Program. Of the approximately 26,640 acres in the town, 8,181 acres were enrolled in the State of Vermont's Current Use program (3,091 acres in forest use and 5,090 acres in agricultural use) in 1990. In 2001, the total was 7,960 acres in the Current Use program – 4,294 acres in forest and 3,666 in agricultural. In 2011, the total was 8,149 acres enrolled in the Current Use program (forest/ag split unavailable).

In keeping with trends throughout Chittenden County, the number of farming operations declined from 1989 to 2004 in almost every category. A 2009 survey by the Conservation Commission showed a reversal in this trend in all farming categories with the exception of dairy – see Table 2. For the latter half of the 20th century, agriculture in Hinesburg, consistent with most of the state, was primarily focused on dairy. Since the late 1990's, there has been a severe decline in dairy farming in Hinesburg such that only one traditional dairy (Garvey farm) and one small-scale, alternative dairy (Family Cow Farmstand, selling raw milk) were operating in 2010. At the same time, the beginning of the 21st century has seen a farming renaissance in Hinesburg with greater diversification, the creation of smaller and organic operations, and interest from young farmers – both in rejuvenating family farms and in establishing entirely new operations. By far the largest single agricultural use of land is in the form of hay production and forage (pastureland); however, it appears the most rapidly growing category of farm operations in Hinesburg, both in number and diversity, is row crops. This has been fueled by the diversification mentioned above as well as the popularity of local farmer markets and the Community Supported Agriculture (CSA) model in which farmers do direct sales to community members who typically buy a share of the farm's production at the beginning of the growing season.

TABLE 2
Types of Farming Operations

Type of Farming Operation	No. of Operators/Owners			
	1989	1997	2004	2009
Dairy	11	8	3	2
Horses	9	8	5	15
Hay and Forage	8	6	6	33 ¹
Livestock	18	11	7	11 ²
Nursery/Horticulture (incl. Xmas trees)	10	7	4	3
Maple sugaring	4	7	7	9
Row Crops	2	1	1	16 ³
Total	62	48	33	89

¹ 2009 Hay/Forage includes property owners who have fields in hay or forage even if the farming done by someone else. Prior year estimates included farm operators only.

² 2009 Livestock includes: beef (6), sheep (2), goats & llamas (3)

³ 2009 Row Crops includes: corn, other vegetables, vineyards

Sources: Estimates by Holly Russell, Jean Isham, Marshall Delaire, and Wayne Bissonette (1997 and 2004 data), and research by Bill Marks (2009 data).

Agricultural support businesses are a key component not only to the overall economic sector of Hinesburg but also to the continued vitality of the agricultural operations. Lack of ready access to equipment, supplies and repair services has hampered farmers in many rural communities. Although many of these problems are a factor for Hinesburg’s farmers as well, the Town does have a variety of services available such as machinery repair, equipment sales, and heavy equipment operators.

Goals and Recommendations (also see section 3.4)

4.2.1) To better assess the value of land for forest and agricultural uses.

- a) A land evaluation and site assessment system (such as LESA or FLESA) will be developed which will rank the importance and viability of agricultural, forestry, and natural resource lands in Hinesburg.
- b) Finite natural resources should be managed and used in a way that ensures their long-term availability.
- c) Adopt a method of assessing the agricultural value of the land which shall include soil type, and size of parcel needed for viable agricultural use. The assessment should recognize differences in agricultural soils and the type of agricultural uses they support.

4.2.2) To ensure that growth and development don’t negatively impact the viability of forest and agricultural uses.

- a) A committee should be established to work with existing agricultural and forest land owners to help with future planning of their land. This group would assist landowners in creating an orderly

plan for any potential future development of their land and would also assist with the development of management plans.

- b) Development planning should preserve the Town's valuable agricultural, forest and natural resources by directing growth to locations that do not impact these resources. Provisions will be made, through zoning techniques or voluntary preservation means, to preserve agricultural and forestry resources on land located outside of the agricultural and forestry zoning districts.
- c) Minimizing conflicts between residential and agricultural or forestry uses of land will be essential in maintaining these operations. The Town will adopt policies such as "Right to Farm" to address these issues for both agricultural and forestry uses.
- d) Ensure access and proper rights of way to preserve the viability of productive forest and agricultural land.

4.2.3) To support the working forest and agricultural landscape in Hinesburg's rural regions, and provide incentives for uses that keep these lands open and viable.

- a) Promotion of local agricultural and forest products and marketing of value added products will be encouraged as a means of fostering the economic vitality of local farms and woodlands.
- b) The Town of Hinesburg shall be encouraged to continue to offer a tax abatement program over and above the State of Vermont contract.
- c) The Town will continue to preserve priority resource land by promoting the use of the Town's Land Preservation Reserve Fund.
- d) The Town will work with the Hinesburg and Vermont Land Trusts, or other appropriate non-profit organizations, to encourage the voluntary protection of productive agricultural and forest lands. Techniques such as conservation easements or donation of land with retained timber rights will be explored as possible options.

4.3 Surface Waters

The topographic changes between the Champlain lowlands and Green Mountains have shaped the drainage patterns in Hinesburg. Lewis Creek drains a large area east and west of Hogback Mountain. Hollow Brook, a tributary of Lewis Creek, drains the deep, steep sided Hollow Valley and is thought to be the pre-glacial drainage of the Huntington River. The LaPlatte River drains the course of a deep pre-glacial valley now filled with glacial sediments, gravel, silts and clay. A tributary, Patrick Brook, drains the Lake Iroquois-Sunset Lake basin. The northeastern foothills area of Hinesburg drains to the Winooski River watershed via the Huntington River and Johnny Brook sub-watersheds. In addition to these named streams there are numerous unnamed streams. Although these are low volume or intermittent in nature, they serve important functions as seasonal drainage ways.

Lake Iroquois and Sunset Lake, also called the Lower Pond, are valuable water resources. Lake Iroquois straddles the boundary of Richmond, Williston and Hinesburg. The lake's surface area covers 244 acres, of which roughly half is located within Hinesburg. Sunset Lake's surface area is 61 acres. The combined watershed of both lakes encompasses several thousand acres, both in Hinesburg and in surrounding towns. Both lakes are impounded by controlled dams. Lake Iroquois has a small natural lake while Sunset has no natural lake. Both lakes contribute to the recreational resources of the town. The northern shore of Iroquois is the site of the public beach and also the site of a State managed boat access. Currently, these are the only public access areas available.

Because of historical patterns of development and the current one acre zoning both lakes' shorelines have a greater density than many other areas of Town. Although both lakes' shorelines have been primarily seasonal communities in the past, there has been an increasing trend toward conversion from seasonal to year round homes in recent years. This, coupled with the fact that all of the homes around both lakes are served by on site septic systems, has raised concerns for the water quality of the lakes. The beach has

been closed on occasion because of water pollution and water quality problems from erosion and runoff have also been experienced.

Hinesburg participated in a program to correct pollution problems in Lake Iroquois stemming from erosion and runoff. The Lake Iroquois Watershed Project, funded by an Environmental Protection Agency grant, also focused on educating watershed property owners about sources of pollution and the ways in which they can be avoided. Another source of concern for the long term health of both lakes is the presence of Eurasian water milfoil. Milfoil is established in both Lake Iroquois and Sunset Lake. This highly invasive aquatic plant can severely impair the recreational use of the lakes if it spreads beyond the current level of infestation.

The rivers, streams and lakes in Hinesburg have great value aesthetically, as wildlife habitat and corridors and for recreation. All of these waterways drain to Lake Champlain, which is an important natural, cultural, and economic resource for Hinesburg residents and the State at large. Access to these waterways is an important part of the enjoyment of the Town's rural setting. The use or misuse of surface waters also have an impact on all communities within a drainage basin. Recognizing the unique opportunity to plan for such regional resources, various non-profit watershed organizations (e.g., Lewis Creek Association, LaPlatte Watershed Partnership, Lake Iroquois Association) seek to plan, protect, restore, and identify important characteristics of these watersheds. The LaPlatte River is the largest watershed draining into Shelburne Bay. Drinking water for over 65,000 residents and businesses of Chittenden County is supplied by the Champlain Water District from the water supply intake pipe located in Shelburne Bay.

Water Quality & Stormwater

Surface waters are subject to many of the same sources of pollution as groundwater. These are generally divided into point and non-point designations. Point sources are those for which there is a clearly defined source, such as a malfunctioning septic system. Non-point sources are those that accumulate over a larger area, for which there is no single pipe, effluent stream or other focused source. Non-point sources, such as storm water runoff from roads, parking lots, lawns, agricultural fields, etc. are far more difficult to locate and control although their potential for damage is great. This is an important issue for a town such as Hinesburg where the two main watercourses, Lewis Creek and the LaPlatte River, as well as both lakes, have predominantly agricultural areas within their watersheds.

Surface waters are also subject to damage from erosion of stream banks and siltation. Current Town regulations attempt to mitigate these potential damages by requiring a 75' setback of all principal structures from named streams and bodies of water, with more variable setbacks and vegetation buffer requirements in the Village Growth Area. Riparian, or riverbank, forests and vegetation can contribute to the stabilization of stream banks, but riparian forest areas are few in Hinesburg and there are no requirements for maintaining vegetated buffer strips around water bodies outside of the Village Growth Area. The adequacy of the current regulations for both erosion and pollution control is a question to be addressed in planning for the protection of surface waters.

Depending on soil characteristics and the type of ground cover, the earth has a varying capacity to absorb water. When precipitation accumulates on the ground surface faster than it can be absorbed into the earth, the excess water becomes stormwater runoff. Particularly during major storms, the intensity and duration of rainfall can exceed the earth's capacity to absorb water. Impervious and hardened surfaces (such as rooftops, streets, and parking lots) totally prevent or greatly hinder water from percolating into the ground. Stormwater runoff flowing across the earth's surface absorbs chemicals and physically propels undissolved particles and other suspended material. Increased volumes of runoff tend to transport more absorbed chemicals and suspended material. Steep slopes and hardened surfaces with less friction increase the velocity of the runoff and the speed that it accumulates into greater volumes. Increased

stormwater volume and velocity enable runoff to scour larger particles and to transport them downstream. Vegetative groundcover and reduced slopes slow runoff, diminishing its ability to transport materials.

Goals and Recommendations

4.3.1) To protect, enhance, and restore the town's surface water resources.

- a) Require adequate vegetative buffers and erosion control along rivers, streams, and lakes to protect water quality, allow natural channel modification, and protect buildings. Consider differentiating buffers based on land use.
- b) Consider revising the zoning regulations to discourage new structures and the excessive enlargement of existing development in the shoreline district.
- c) Maintain stringent camp conversion oversight pertaining to septic performance and stormwater in the shoreline district.
- d) In coordination with local and regional groups, and the towns of Williston and St. George, develop a plan to regularly monitor water quality in Lake Iroquois and Sunset Lake, report the findings, and take action to reduce pollution from point and nonpoint sources.
- e) Continue working with the State and watershed groups to review and implement site-specific vegetated buffer and setback requirements based on geomorphological studies and fluvial erosion hazards. Encourage reforestation of native plants where appropriate along the riverbanks and within defined buffer areas. Encourage the preservation of existing vegetative buffers and reforestation of riparian buffers.
- f) Educate landowners about the value and fragility of vernal pools, how to identify them, and how to protect them.
- g) Work with the State to add vernal pools as State recognized wetlands.
- h) Continue as an active participant on watershed protection associations.
- i) Support the eradication of invasive plants that threaten ecological, aesthetic, and recreational values of surface waters.

4.3.2) To control impacts from storm water runoff.

- a) Insure clean and healthy surface water by making sure that storm water runoff doesn't adversely affect streams and rivers, and does not exceed their carrying capacity.
- b) Study the current and future impacts of storm water runoff on the town's surface waters, and consider writing tighter provisions in the regulations. Consider innovative and "low impact development" techniques that help minimize stormwater runoff.
- c) Consider establishing a storm water utility responsible for a town-wide systematic approach to storm water management.
- d) Study and address the contribution of town roads to storm water runoff.

4.3.3) To serve as a component of a greenway network.

- a) Use inventories of the Lewis Creek and LaPlatte River corridors to identify existing features that would contribute to a greenway network. Ensure that greenways providing wildlife habitat connectivity are not adversely impacted by improvements or use related to human activity (e.g., trails).

4.4 Groundwater

Groundwater is any subsurface water found in porous rock strata and soils. As the source of most of our drinking water, it is an essential resource. Groundwater is continually being recharged by precipitation

seeping or percolating through the soil to the aquifers beneath the surface. The aquifers are the geologic formations that store, transmit and yield useful quantities of water to a well. While all land is part of the groundwater recharge system, certain areas characterized by shallow, sandy or gravelly soils, or rock outcroppings, are the most porous and conductive of water, and therefore are the most significant aquifer recharge areas for a community.

Recharge areas serve either “public” or “general” water supplies. Public water supplies are considered those that serve 10 or more connections or 25 or more users. These aquifers are referred to as Source Water Protection Areas (SWPA). The Vermont Agency of Natural Resources has mapped the SWPAs in Hinesburg. See Map 8, Water Supply.

- Hinesburg Water Department #1 (behind Town Hall)
- Hinesburg Water Department #3 (behind Town Hall)
- Orchard Commons
- Lyman Meadows Condominiums
- Saputo Cheese USA, Inc. – West Well

Additionally, there are portions of two SWPAs in Hinesburg for wells located in an adjacent town.

- Lazy Brook Trailer Park
- Farmer-in-the-Dell

A three-zone source water protection area was delineated for Town wells #1 and #3 in 1997. The new SWPA is more extensive than the previously defined areas, showing the well’s recharge areas. The bedrock hills immediately east and southwest of the village are in “Zone 2,” aquifer recharge areas where contamination is most likely to affect the groundwater feeding the Town wells (see Map 8, Water Supply). In January of 2009 the Hinesburg Selectboard was informed by the State that tests of the Town’s main water supply detected a low level of the contaminant Methyl Tertiary Butyl Ether (MTBE). The State indicated that up to 40 PPB (Parts Per Billion; 1 PPB is equivalent to one penny in ten-million dollars) are acceptable in a drinking water supply before mitigation measures are recommended. Testing for MTBE is happening weekly, and tests in March 2010 showed total concentrations around 3.0 PPB. A notice was sent to all users of the Town’s water system in 2009. The Selectboard believes it is important for users of the system to be aware of the presence of the contaminant. Neither the State nor the Federal Environmental Protection Agency believes there is a health concern at the levels that have been detected. MTBE is a common additive in gasoline. Fuel leaks from storage tanks have contaminated ground water throughout the country. In 2005 the Vermont legislature passed a ban on the sale of gasoline containing MTBE. That ban went into effect in January 2007.

Aquifer recharge areas are particularly sensitive to contamination because they allow toxic substances from the surface to quickly, and in a relatively undiluted form, reach the aquifers, and thus our drinking water. Once the groundwater is contaminated, it is impossible to restore to its original state. Although some harmful contamination occurs naturally, by far the vast majority results from human activity. Many potential sources of contamination exist. Landfills, poorly functioning septic systems, road salt, underground fuel storage tanks, agricultural and industrial chemicals, waste byproducts of some businesses and household hazardous wastes can all contribute to pollution of groundwater supplies. Understanding the potential sources of contamination and the location of Hinesburg’s aquifers will be essential if future growth is to occur in locations and ways that do not harm groundwater sources.

Quantity of water is also an important consideration. Previous planning efforts used well drillers’ reports to map low yield areas (see Map 8, Water Supply). The map shows an area roughly bounded by Mechanicsville Road, Richmond Road, Buck Hill Road, and North Road in which well yields have

consistently been low. This area, which is partially beyond the current service area of the municipal water supply, has seen substantial growth in the past. Four of the SWPAs are also located in this low yield area. Accommodating the existing development and potential future development of this and other low yield areas will be another important issue in planning the protection and best use of Hinesburg's groundwater resources.

The two primary wells serving the Town water system are nearing their permitted capacity/withdrawal. The public works department is currently working with the State to increase the permitted capacity from these wells. The true maximum capacity of these two wells is likely far greater than what is currently being used. Future water needs will be addressed as listed below:

1. Make use of unused capacity of the existing Town well at Lyman Meadows that currently only serves that development.
2. Develop the requisite pre-treatment and distribution infrastructure to make use of the inactive Town well at Geprags Park.
3. Explore other potential sources.
4. Research increasing permitted capacity of the two primary Town wells now in use, considering such factors as contamination, etc.
5. Research drilling a new well near the two primary Town wells now in use, considering such factors as contamination, etc.

Goals and Recommendations

4.4.1) To protect the town's groundwater resources.

- a) Create a groundwater conservation overlay district that includes source water protection areas. Development in these areas should receive a higher level of scrutiny. Review the data already collected and supplement with field studies, if needed.
- b) Decide how best to provide information about low-yield well areas to the DRB: either review town-wide well-log data to update information about low-yield areas, or require developers to provide such information at sketch plan review.
- c) Expand the capacity of the Town water supply via the options listed above.
- d) Consider establishing a source water protection area around the inactive Town well at Geprags Park, to ensure that it remains a viable source for future water needs in the municipal water supply area.
- e) Encourage water conservation.

4.5 Wetlands

Wetlands are defined as areas inundated by surface or ground water with a frequency to support significant hydric vegetation or aquatic life. Wetlands can include marshes, swamps, bogs, wet meadows, and river or lake overflows. The wetlands of Hinesburg are perhaps the most underestimated resource we have. Wetlands have many important functions. They provide a measure of flood control, remove toxins in the water, provide important wildlife habitat and remove excess nutrients, which is particularly important in an agricultural community such as Hinesburg.

Wetlands can be threatened or destroyed by filling and draining. They are also damaged by runoff and pollution from surrounding land. . This, coupled with the fact that the current town regulations contain no specific regulations for protection of wetlands, has left Hinesburg's wetland resources vulnerable. While the Vermont Wetlands Rules protect the so-called "Class One & Two" wetlands as shown on the National Wetland Inventory (NWI) maps produced by the US Fish and Wildlife Service in the late 1980's, little or no protection is provided for the "Class Three" wetlands (i.e., wetlands not shown on

NWI maps). The need for education about the benefits of wetlands, as well as the threats to this resource, is a key issue in formulating a protection strategy.

The University of Massachusetts (UMASS) wetland delineation was commissioned by the Hinesburg Conservation Commission and completed in 1997. The project involved a detailed identification of wetlands in Hinesburg using 1993 color infrared aerial photography (1:40000 scale). Although by no means a map of all wetland areas, the result was a more comprehensive and detailed delineation than the NWI data that is typically used to identify wetlands in other towns. Landowners, municipal boards and staff, and even State wetland permitting specialists now use the UMASS wetland map to identify areas for further investigation both in site planning and development review here in Hinesburg. It should be noted that State and Federal wetlands regulations are still based on the official NWI delineation and classification, supplemented by field observations.

The 1997 UMASS wetland study and various village area wetland delineation projects (see Village section details) provide Hinesburg with better wetland information for town-wide planning than many communities. The Vermont Advanced Wetlands Planning and Protection Project Report of 2000, by the VT Dept. of Environmental Conservation, provides more detailed information on five priority wetland complexes that have a high functional significance and a moderate to high threat of future degradation. These wetlands include: Horse Farm Swamp, Upper LaPlatte Floodplain Forest, Carse Beaver Pond, Bissonette Swamp, and the Lewis Creek Corridor complex. In conjunction with the NWI wetlands used for State and Federal regulatory processes, the above datasets help identify areas where further on-site delineations are necessary. Although these datasets are extremely helpful for broad scale planning, wetland delineations in the field are still critical in the evaluation and planning for specific conservation and development projects.

Goals and Recommendations

4.5.1) To preserve wetlands within the town.

- a) Abide by existing or develop regulations to protect town wetlands that are essential for treating storm water runoff and protecting surface water quality and providing habitat.
- b) Continue to work to clarify the location of wetlands in Hinesburg. Utilize the UMASS and NWI wetland locations (Map 7, Wetlands & Floodplains), or more detailed site specific studies if available, for planning and development review with appropriate field delineation as needed.
- c) Conduct field studies to identify and better understand priority wetlands.
- d) Continue to strive to insure that wetlands are not adversely impacted by development or alteration to lands around them.
- e) Consider acquiring easements to, or acquiring outright, priority wetlands that are particularly vulnerable.
- f) Restore wetlands in a public/private partnership to improve water quality, habitat, and facilitate stormwater management with consideration to surrounding properties.

4.5.2) To serve as a component of a greenway network.

- a) Include wetlands as a component of a greenway network. Separate greenway features that connect wetlands and areas for wildlife habitat from trails and other human activities.

4.6 Flood Hazard Areas

Floodplains are natural landforms that prevent flood damage by detaining water, debris, ice, and sediment; and reduce flow velocity, and erosion. Floodplains provide many social, economic, and ecological benefits to communities such as reducing water pollution, enhancing soil quality, and

protecting natural communities. Floodplains are also places of known and avoidable hazard. Protection and sometimes relocation of existing structures and facilities in floodplain areas is important. Even more important is minimizing additional risk and the need for further private and public resources by avoiding further development in flood hazard areas.

Flooding is inevitable, but human injury, misery, and damage due to flooding can be avoided through good planning. Flood damages in Vermont currently cost more than \$16 million each year. By managing flood hazards so as to meet or exceed the requirements of the National Flood Insurance Program, the Town can ensure all Hinesburg residents have access to secure flood insurance, enable the municipality to receive disaster relief for damaged infrastructure, and be eligible for grant programs to prepare for the next flood event. See Map 7 (Wetlands & Floodplains) for the locations of these hazard areas.

When development encroaches into floodplains, streams can become unstable, flood depths increase, erosion increases, and flow can be diverted toward and onto other properties and existing buildings. Damage to public and private infrastructure often requires expensive and unsustainable channel alterations. These alterations further destabilize the situation leading to a greater risk to public safety in an unsustainable vicious cycle. Flood hazard areas related to inundation (i.e., rising water) have been mapped by the Federal Emergency Management Program's (FEMA) since the early 1970's. Areas at risk of inundation are referred to as Special Flood Hazard Areas and development there is regulated via Hinesburg's Zoning Regulations. A review by the Zoning Administrator of the Special Flood Hazard Area (version effective 8/4/2005) overlaid on 2004 high resolution orthophotos showed that there are 16 residential structures and 22 non-residential structures (primarily accessory structures) in this hazard area.

Hinesburg received a Flood Hazard Boundary Map on 1/31/75 and joined the National Flood Insurance Program on 3/5/76. FEMA updated Hinesburg's flood hazard maps on 8/4/2005. This update included flood studies to improve hazard mapping in the village area, corrected errors on previous maps related to Patrick Brook and the Canal, and transitioned Hinesburg's hazard area mapping to a digital product (DFIRM – digital flood insurance rate map). In 2009, FEMA began an update for all of Chittenden County with the goal of further improving hazard area mapping and providing DFIRMs for the rest of the county. This update is ongoing, and expected to be completed in 2011.

Inundation is not the only form of damage from flooding. Erosion from flash flooding is the most expensive form of flood damage in the state. Over time, streams meander laterally, and fill or degrade vertically as they adjust to their water levels, sediments, and slope. Stream channels may change suddenly and catastrophically. Vermont's Department of Environmental Conservation (DEC) emphasizes the importance of avoiding hazards and expensive interventions, and allowing streams and rivers the opportunity to come to a natural equilibrium wherever possible. The area of active stream channel movement is called the Fluvial Erosion Hazard Zone. VT DEC is studying rivers across the state to identify areas where stream channels are actively adjusting and there is risk of catastrophic erosion damage from flooding. In 2010, VT DEC provided Hinesburg with a Fluvial Erosion Hazard Zone Map for the Laplatte River, Lewis Creek, and several associated/major tributaries (e.g., Patrick Brook, Hollow Brook, and several un-named tributaries). FEH Zones are currently used to review and regulate development under Act 250 proceedings, and in 2009, the Planning Commission began working cooperatively with VT DEC on an update of Hinesburg's flood hazard regulations to address this hazard area.

Goals and Recommendations

- 4.6.1) Work with the VT Agency of Natural Resources and local watershed groups to develop, refine, and implement river corridor plans to address water quality, channel adjustments, riparian habitat, flood hazard avoidance, and to meet the requirements of pre-disaster mitigation.**

4.6.2) Revise Hinesburg’s flood hazard regulations to address fluvial erosion hazard areas in addition to inundation risks in the special flood hazard areas.

4.6.3) Review and revise flood hazard regulations as needed to ensure continued enrollment in the National Flood Insurance Program.

4.7 Wildlife Habitat

Wildlife habitat contributes to the rural character of Hinesburg and reflects the diversity of the Town's natural landscape. Wildlife species in all forms (both terrestrial and aquatic) are part of the broader ecosystem, and the health and function of both wildlife populations and wildlife habitat are essential to the proper functioning of the overall system upon which we all depend. All wildlife species require three elements for viable habitat - food, water and cover. Even with these elements, viable habitat for some species is dependent on contiguous tracts of undisturbed land (e.g., core wildlife habitat). Such areas not only accommodate core habitat species (e.g., scarlet tanager, hermit thrush, black-throated blue warbler, black bear, bobcat, spotted salamander), but also serve as species reservoirs that can serve to supplement more populations of more ephemeral wildlife species in smaller and more fragmented patches of habitat. Smaller tracts (especially forest) can serve as habitat if corridors connecting smaller and larger areas are preserved. Fragmenting habitat areas and the connecting corridors limits the availability and diversity of life supporting elements. As areas become isolated, species diversity may diminish, and certain species may be unable to recover when numbers become low. The status of viable and varied wildlife habitat is an important barometer of the Town's ability to maintain a healthy ecosystem, and the town’s rural landscape while accommodating growth.

Hinesburg's abundant forests contribute significantly to its wildlife habitat. The hilly eastern portion of Town contains the large tracts of unbroken forests that harbor many species. The Fred Johnson Wildlife Management Area, encompassing 800 acres in Hinesburg and 200 in adjacent Starksboro and the Hinesburg Town Forest of approximately 800 acres, together with private holdings, provide a continuous forest approximately 3,000 acres in size. This significant tract is almost entirely unbroken by roads or house sites. This area of Town has been identified by the State Fish and Wildlife Department as black bear habitat, the site of several deer yards, and is rich with non-game animal & plant species. Minimizing forest fragmentation by road building and development will be important if the rich diversity of this area is to be maintained.

The lowlands of the western portion of Town serve as a different type of habitat. This area is best described as a mosaic of different land uses. Forested areas range from many small woodlots to a few large areas of contiguous forest. The forests on these soils harbor some of the richest assemblages of plant species in all of New England and represent islands of high diversity amid the agricultural land. The variety of open field, early successional or transition shrub/forest, and forest habitat provides important habitat for certain game species, such as deer, grouse and wild turkey, as well as many nongame species. Although mixed habitat types are beneficial to some species, large tracts of open fields are also critical to a number of declining species. These species (e.g., Bobolinks) are declining regionally as more open field and transition shrub/forest habitat reverts to forest, as field production techniques have changed (earlier and more frequent mowing/harvesting of hay and alfalfa fields), and as lands have changed from agricultural to residential uses. Because this area of Town has also experienced development pressures, providing for the integration of continued growth and open space areas for habitat will be necessary if the area is to maintain its wildlife diversity.

Surface waters, wetlands and floodplains provide some of the richest habitat opportunities in Hinesburg. Some, such as the Carse beaver pond and the wetland forest along the LaPlatte, have been identified by the Natural Heritage Program as regionally significant natural areas. Wetland and riparian areas

throughout Town are important both locally and for adjoining towns as corridors for wildlife movement. These areas also merit protection for other reasons such as open space, water quality protection and recreation. A thorough look at the patterns of development, the potential impacts and the possibilities for preserving the multiple values of these areas will benefit wildlife habitat as well.

Given the vast array of wildlife species, from butterflies to salamanders to black bears, nearly every parcel of land in Hinesburg provides habitat to one or more wildlife species. Habitat types of special concern in Hinesburg include:

1. Large tracts of forest and wetlands with few, if any, roads or house sites – i.e., forest interior habitat or core wildlife habitat (see Map 14).
2. Deer wintering areas (see Map 9).
3. Aquatic habitat (i.e., streams, ponds, lakes) and associated riparian (stream bank) areas (see Map 7).
4. Wetlands (see Map 7).
5. Unique habitat related to rare, threatened, or endangered species (see section 4.8 and Map 9).
6. Corridors between the aforementioned areas (see Map 14).

All six of these habitats of special concern deserve attention. Hinesburg's land use regulations should address these habitat types through development design standards that prevent or minimize impacts related to new building and subdivision, especially in the rural parts of town. The extents of these habitats of special concern are generally depicted in the maps that accompany this plan. These maps, supplemented as necessary by on-the-ground information and updates by data providers, shall serve as a reference for development design standards within Hinesburg's land use regulations. Definitions of the relevant terminology (e.g., core wildlife habitat, wetlands, wildlife corridors, etc.) are included in the glossary of this plan, and should also be included in the land use regulations – potentially with minor refinements.

Two other habitat types also deserve mention: a) large tracts of open fields and meadows; b) early successional or transition shrub/forest areas. These two habitat types are largely ephemeral and dependent on land management practices. These two habitat types are best addressed through non-regulatory means (education, outreach, etc.).

Goals and Recommendations

4.7.1) To protect important natural areas, wildlife habitats of special concern, and overall biodiversity, with the help of landowners.

- a) Work with the VT Fish and Wildlife Department, UVM, and other partners to conduct and maintain inventories of natural areas and wildlife habitat, with the help of landowners.
- b) Protect areas of sufficient size and character to support continued preservation of wildlife habitat and hunting through mechanisms like landowner covenants, conservation easements, etc.
- c) When reviewing new development, encourage the preservation of the six habitats of special concern discussed above.
- d) Support the eradication of invasive plants that threaten the future of natural areas, forests, and farm lands.

4.7.2) To provide connectivity among natural areas and core wildlife habitat.

- a) Identify connections that would enhance existing wildlife habitat.
- b) When reviewing new development, encourage areas separate from housing sites to provide connectivity between core wildlife habitat, riparian corridors, and wetlands.

- c) Develop a greenway network with wildlife corridors separate from trails and human movement. Consider protection of these corridors via lower levels of development (also see sections 3.4.5 and 4.9 for related recommendations).

4.8 Sensitive Areas

Natural Areas & Significant Natural Communities

Natural communities are an integrated way of viewing the landscape that recognizes the connections between plants, animals, and their physical environment. They may be very large, such as the Northern Hardwood Forest in the eastern foothills of Hinesburg, or very small, such as a vernal pool less than an acre in size within the larger forest matrix. Significant natural communities and natural areas are areas of land or water that retain their natural character and contain unusual or significant flora, fauna, geological or similar features. These areas are the best examples of the various biological communities that presently or historically existed in town. The Vermont Natural Heritage Program identifies natural communities and areas within Hinesburg that are of statewide or regional significance. Currently these include:

1. Goldie's Colluvium. Northern hardwoods natural community and large population of two uncommon fern species.
2. High Rock. Cliff natural community and large population of uncommon smooth-stemmed cliffbrake.
3. Hinesburg Limey Cobbles and Swamp. Series of dolomite hills with good examples of northern hardwood forests and several uncommon plant species. Also a large wetland complex and site of an endangered species, bog wintergreen.
4. Lincoln Hill. Old growth red oak, cliff and outcrop natural communities and red pine woodlands.
5. Porcupine Hill. Very good example of an uncommon mature red pine woodland.
6. Upper LaPlatte Floodplain Forest. Unusual bur oak-green ash floodplain forest and population of rare nodding trillium.

Natural communities and areas of local, statewide, or regional significance contain some of the most significant and irreplaceable natural resources of a town. These areas are particularly vulnerable to the impacts of development or misuse. Ideally these areas should be large enough to act as biological refuges where human disturbance is kept to a minimum and should represent the diversity of Hinesburg's natural features. Planning for their protection, while accommodating landowners' needs, will be one of the main issues in planning for the protection of the Town's natural resources. See section 4.9 for specific recommendations.

Hills and Ridgelines

A ridgeline is defined as a line marking or following a ridge, top of a hill or ledged area, behind which is open space or horizon. Ridgeline development creates highly visible structures that become prominent features on the landscape, detracting from the natural beauty and nature of Vermont and rural Hinesburg. If the development is visible from a large area, it intrudes upon the rural contours and disrupts the natural environment.

The eastern portion of Town, with its higher elevations, contains the most visible of the Town's ridgelines. Although topography is not as dramatic on the western side of Town the hillsides are visually important because of their contrast to the surrounding lowland. A third area of importance is the land around both Lake Iroquois and Lake Sunset. The slopes rising from the lake shores contribute to the beauty of the settings for both lakes.

The hill areas of Hinesburg are important features for the Town for a variety of reasons covered throughout this plan. Their importance as natural areas and for the scenic values of their ridgelines should be considered as well. Uncontrolled or improperly planned development threatens the environment of hills and ridgelines. Wind energy and telecommunication towers, while supported elsewhere in this plan, require special attention if they are proposed on hillsides and ridgelines.

Goals and Recommendations

4.8.1 To protect ridgelines and hillsides from improperly planned development.

- a) Delineate ridgelines and hillsides requiring protection.
- b) Develop strategies, including development review standards in zoning and subdivision regulations, to protect ridgelines and hillsides.

Scenic Areas

The scenic resources of Hinesburg are numerous and varied - including steep wooded hillsides, streams and lakes, and vast stretches of mowed fields. Together these elements form a pattern that we see every day and have come to associate with Hinesburg's character. These areas also form the impression others have of Hinesburg and affect the way the Town is seen as a place to visit, work or live. Generally, changes to the scenic character of the Town happen incrementally. Although each change is small in itself, the cumulative impact over time is large.

An essential first step in protecting Hinesburg's scenic qualities is to identify those areas that are integral to the scenic landscape. Views from points along streets and highways, from public recreation areas and trails, from shorelines and watercourses, and from other areas where public access is available are a priority in a plan to preserve scenic resources in Hinesburg. An inventory should consider topographic variety, diversity of the landscape features and the length of the view as criteria in assessing priority scenic areas. Scenic resource inventories along public roads were conducted by a consultant in 2007 as part of the Conservation Commission's work drafting a Greenspace Plan. Additional inventory and assessment work was done by Planning Commissioners and community members in 2012. A compilation of potentially scenic vantage points along public roads was developed; however, more work is needed to refine this and other methods to identify important scenic resources. Furthermore, substantial public input is also necessary to ensure the areas identified correspond to resources important to the overall community.

4.9 Greenspace Planning

Greenspace (also referred to as open space) is defined as those areas of the Town's landscape that are valued for their natural resources, ecosystem services, agricultural or forest production, recreational opportunities, scenic views, or other public benefits. Greenspace lands are typically undeveloped and have no building structures in current service, with the notable exception of recreational lands and farmlands (active or not), maple sugaring operations, or other similar enterprises directly related to traditional farming practices. Size, spatial context and land use are key considerations in classifying greenspace. Greenspace lands may be actively managed or left in their natural state. They can be publicly or privately owned and may or may not be legally protected.

Regardless of size, ownership status, management, or landscape context, greenspace serves to protect sensitive ecosystems, air and water resources, wildlife habitat, scenic landscapes, and other important features of the natural environment. Examples of greenspace include (but are not limited to) agricultural lands, forestlands, shrub lands, ridgelines, wetlands, undeveloped shorelines, lakes, ponds, scenic views, public parks, and preserves.

The location and approximate boundaries of a variety of natural resources have been mapped by local, regional or State sources. With most of these mapped resources available as data layers in the Vermont Geographic Information System (GIS), they can be viewed collectively for any parcel or area within the Town. This system permits cohesive greenspace planning and gives Town officials the ability to protect significant natural resources both in the preparation of zoning regulations and during review of proposals for development.

The creation of a greenspace or open space plan has been a community goal included in the Town Plan stretching back many years. After the adoption of the 2005 Town Plan, the Planning Commission asked the Conservation Commission (CC) to take the lead in developing such a plan. The CC partnered with several consultants and natural resource professionals (e.g., VT F&W staff) as they researched and drafted the plan. The CC held a public workshop in 2007 and conducted a follow up survey in 2008 to both introduce the goals and purpose of the plan, and to seek preliminary citizen input. A draft greenspace plan has been prepared, and is currently being reviewed and refined cooperatively by the CC, the Planning & Zoning Department, and the Planning Commission. Additional public input and completion of the greenspace plan is anticipated in 2011. With that said, the CC views this document as an evolving and dynamic plan that will need to be reviewed and amended over time as additional public input, natural resource data, and updated management tools become available .

Greenspace planning and related natural resource overlay districts are distinct from the preservation of conservation lands mentioned in section 3.4.5 (rural regions). Greenspace planning takes a more comprehensive look at the entire town and adjoining towns to identify important land and natural resources and connectivity that allows for continued ecological function and value to the Town. High priority areas may receive special protections that seek to accommodate landowner uses while conserving the important functions these areas contribute to the community (e.g., flood control, improving water quality, open land for agricultural or timber production, critical wildlife habitat, etc.). Such lands and resources may become priorities for preservation via fee-simple purchase or the purchase of conservation easements, and as a result may end up as conservation lands like those envisioned in section 3.4.5.

Goals and Recommendations

4.9.1) To develop a greenspace plan for the Town.

- a) Identify and map priority natural resources and consider including them as overlay districts within the zoning regulations. The overlay districts will provide more specific guidelines for the protection of certain resources, including agricultural land, regardless of the zoning district within which they are found.
- b) Follow through on the Conservation Commission's work by completing the greenspace plan as noted above. This plan will include information on the location of significant agricultural and natural resources, high priority scenic areas, potential greenways, environmentally sensitive lands and water resources. The purpose of this plan will not be to exclude all development from these lands but to serve as a framework for prioritizing and developing a network of interconnected open space.
- c) Develop a program for the protection of significant features identified in the greenspace plan. This program will include means of protecting priority areas and may include conservation easements, purchase of development rights or acquisition of priority sites. The greenspace plan and conservation program will identify sites that are most vulnerable and that are not adequately protected through other regulatory or voluntary means so that conservation efforts and funds may be focused where need is greatest.
- d) Consider developing a method to assess the relative value of lands for agricultural, forestry, and natural resource preservation purposes. This method will be built upon local knowledge, local

values, and GIS data. Both the Planning Commission and the Development Review Board may use its results in their deliberations.

- e) Recognize that natural resources and ecological systems span political boundaries (e.g., town, county, etc.).

4.10 Geological Resources

Geological resources consist of raw materials like gravel, sand, and stone. These materials are finite commodities that are absolutely essential for our roads, schools, houses, etc. Although extraction can pose challenges due to pollution issues and impact on the surrounding environment, it is important that critical supplies of these resources be available for use.

Goals and Recommendations

4.10.1 Ensure that known areas of quality sand, gravel, and stone are protected for current or future use.

- a. Review zoning regulations to ensure the protection of these natural resources.
- b. Review zoning regulations to ensure appropriate and well planned extraction of these resources is possible in appropriate areas.

5. COMMUNITY FACILITIES AND SERVICES

Proper management of community facilities and services is critical to the day-to-day functioning of the Town and its fiscal health. Meeting townspeople's needs at a cost that they can afford is dependent on a thorough inventory of the present facilities and services, a review of future needs and a plan for meeting those needs in a fiscally balanced manner. Existing community facilities and infrastructure are shown in a number of the Plan maps (e.g., base map, sewer & water, town facilities). Future community facilities and infrastructure are described below, and shown on the Official Map (Map 12) – currently focused on the Village Growth Area. Community services also include non-governmental activities.

5.1 Roads (also see section 6, Transportation)

Roads are the second largest Town expenditure after schools. The Town maintained 21 miles of class 2 roads and 32 miles of class 3 roads in 2004, about the same as in 1990. Additionally the Town has approximately five miles of class 4 roads that are not maintained; some are privately maintained to support residential development, some are open as trails, and some are impassable. As of 2004 the Town employs four full time Highway crew members, owns four dump trucks, a one-ton pickup, a grader, a bucket loader, a rubber tired excavator, a road-side mowing tractor, and many smaller pieces of equipment. The Town Garage, built in the early 1970's and expanded in 1985, is inadequate for the projected future needs. The Town is investigating the construction of a new garage. The Town also owns its own gravel pit on North Road, which contains an estimated amount of sand and gravel to meet the Town's needs until 2030.

Summer and winter road maintenance costs have remained relatively constant at about \$500,000/year for the past several years. Increased development, particularly on the hill roads, has increased maintenance for gravel surfaces and has necessitated additional paving for more heavily traveled roads. Generally, when roads begin to serve 40-50 dwellings, paving may become more cost effective than maintaining a gravel road. Several of the hill roads are at, or nearing, this level. The Town recognizes the concerns of some residents that gravel roads help define the rural character of these areas. Furthermore, the Town recognizes that comprehensive cost/benefit analyses have not been done to fully understand the financial and environmental (e.g., stormwater runoff) ramifications of paving the hill roads. Community dialogue on these issues remains important.

In addition to the wear generated by increased residential development, truck traffic contributes to the increased costs of maintaining the Town's roads. Because of local industries and because Hinesburg's roads are a primary north-south route, the Town experiences a high volume of truck traffic. The Town has recently stepped up its efforts to enforce weight limits, and adopted a policy designed to channel heavy truck traffic on Route 116, particularly during the spring, when roads are susceptible to even greater damage.

Ditching, shoulder maintenance, and reconstruction of road bases have been identified as areas that would contribute significantly to better long term maintenance of the Town's roads. Attention to these and similar maintenance issues should prove cost-effective in the long term. In support of this philosophy, the Selectboard and the Road Foreman have established a road improvements schedule that is part of the capital program. Furthermore, the Town continues to review its long standing, but incomplete road standards in an effort to ensure new public and private roads are designed and constructed for the long term.

5.2 Water and Wastewater

The Town of Hinesburg currently owns and operates two water systems, Hinesburg Water System ID# 5070 and Lyman Meadow Water System ID# 20000, and a municipal wastewater system, Discharge Permit # 3-1172. Water and wastewater systems are funded by user fees but both benefit the community by providing necessary services for housing, businesses, schools and fire protection. Without these

systems, we would not have a grocery store, restaurants, car wash, and potentially our community school. These systems make local employment opportunities possible at businesses like CVU high school, NRG Systems, Iroquois Manufacturing, Lantman's Market, etc. These systems also contribute to the rural character throughout the rest of Hinesburg by making a concentrated village growth center possible. Without these municipal services, development pressure would be even greater in the rural areas where greenspace, agricultural and forestry uses, and natural resource conservation are paramount. Clearly, all residents have a stake in the continuation of these services.

The Hinesburg Water System consists of two supply wells and a well house, located off Stella Road, distribution piping throughout the village area and up Richmond Road to Piette Road. A 500,000 gallon storage tank and booster pump station is located on Piette Road. As of March 2010, the Hinesburg Water System supplied water to 651 residential and commercial units. Recent waterline extensions have been completed in the Creekside, Thistle Hill and Green Street residential housing developments as well as north on 116 to the NRG complex.

The Lyman Meadow Water System consists of a supply well, 40,000 gallon storage tank and control building with distribution piping throughout the condominium complex. The Lyman Meadows Water System serves 89 residential units. A recent engineering study evaluated options for combining the Town and Lyman Meadows water systems but this action has not been implemented.

The Wastewater System consists of collection piping throughout the village and up Richmond Rd, pump station beside the Fire Station and treatment plant located on Lagoon Rd. As of March 2010, the Wastewater System served 493 residential and commercial units. In 1989, the Town initiated the first wastewater allocation ordinance that apportioned the remaining capacity by the following uses: Residential – 45%; Enterprise (commercial/industrial) – 32%; Institutional – 23%. In 2004, the Selectboard adopted a revised Wastewater Allocation Ordinance that better defines the Wastewater Service Area (see Map 10, Sewer & Water). This area creates the geographic limits of the wastewater system, and helps to establish necessary capacity in conjunction with build-out analyses and growth considerations. Because of the limits on discharge into the LaPlatte River, wastewater capacity is a finite and valuable resource for the Town. Maintaining capacity for use in the Village Growth Area is an important consideration and periodic review of allocation policy is necessary to ensure that the Town's growth objectives are being met. Along those lines, the allocation ordinance and service area was revised in 2010 in light of the Village Growth Area rezoning that was adopted in 2009. This revision also modified how the remaining capacity would be allocated with certain amounts held aside for redevelopment of the Saputo property, for development in the village district, and for institutional uses. After these set asides, the remaining capacity is now allocated 70% for residential projects and 30% for enterprise (commercial/industrial) projects.

Saputo Cheese was the largest wastewater customer; their allocation was 127,500 gallons per day (gpd) of the plant's 250,000 gpd permitted discharge capacity. With Saputo's closure and subsequent surrender of their allocation back to the Town, there appears to be adequate capacity for future growth in the Village area. Recent wastewater line extensions have been completed in the Creekside, Thistle Hill South Farm and Green Street residential housing developments. A significant upgrade of the wastewater treatment plant and pump station was completed in 2010. The project consisted of replacing outdated equipment past its useful life and will result in better treatment and lower energy costs. If necessary, an application could be made to the state to increase discharge capacity from 250,000 gpd to 274,000 gpd. With additional permitting through Act 250, that number could increase in the future up to 308,000 gpd without adding any additional treatment processes. The \$1.62 million project received an American Recovery and Reinvestment Act grant (federal economic stimulus money) in the amount of \$822,000 with the balance funded by current and future wastewater system users.

5.3 Public Safety: Police, Fire, Rescue

The Town currently relies on three full time officers and five part time police officers to provide the allotted coverage for the Town. Plans are currently in progress to reduce the number of part-time personnel and replace them with full time officers. The Hinesburg Police Department operates four police vehicles. The Hinesburg Volunteer Fire Department provides fire protection and emergency medical service for the Town, and has an Insurance Services Inc rating of a 6/9 for its fire protection capabilities. The fire station was built in 1972 and expanded in 2000. As of 2010, the Department operates two Class A attack pumpers, one tanker, one heavy rescue, one mini attack pumper (for bad driveways), and one medical response unit. The Town is exploring the possibility of enlarging the Fire Station so that the Fire and Police departments could be co-located in a single building with improved facilities and capacity for planned future growth. With the 2005 donation (by David Lyman) of an additional 1.85 acres of land behind the Police and Fire Stations, a variety of other municipal uses are also being considered for this area.

Medical First Response is provided by the Hinesburg Fire Department. Ambulance service is provided St. Michael's Rescue and other area rescue squads. Hinesburg coordinates its overall public safety at the regional level via pre-disaster mitigation planning that deals with natural or man-made disasters and the necessary emergency response. Hinesburg Fire Dept. is a member of the Chittenden County Fire Mutual Aid System.

5.4 Culture and Recreation

Culture

The Town of Hinesburg has an active cultural scene. Listings of cultural events appear in every issue of the Hinesburg Record, the Town's newspaper that is issued ten times per year. The Hinesburg Artist Series provides concerts of choral, orchestral, or band music. The Summer Concert Series, held at the Wainer Community Park, is a pleasant way to picnic and hear local musical groups. Good Times Café also provides a venue for live music. The Town is also known for the number of resident artists that include landscape and portrait painters as well as photographers. Many Hinesburg artists open their studios in May during Vermont's annual Open Studio Weekend. A harvest festival held in the fall at the Town Hall features artists showing their work along with live music, a farmers market, and other activities.

The Carpenter Carse Library hosts many programs in the community room including art exhibits, hand-made quilt, rug, and other craft displays, as well as programs for adults, families, and children. The Library also sponsors a book discussion group.

Both CVU and the Hinesburg Community School produce well-done plays and musicals. The Performing Arts of Hinesburg group has also produced very enjoyable theater. Other notable cultural and community events include the July 4th celebration and Green Up Day.

Hinesburg Village's historic "Main Street" encompasses the section of Route 116 running generally from Mechanicsville Road to Silver Street. This area represents an important cultural resource for the Town, and presents an opportunity for the Town to help landowners preserve or refurbish historic structures.

Library

The Carpenter-Carse Library is administered by an elected Board and receives a significant portion of its funding from the Town. The Library Staff consists of part-time employees, the equivalent of 3.7 FTE's. The original 1947 brick building south of the Town Hall on Main Street housed the library until 1997,

when library operations moved to a renovated store on Ballard's Corner Road. The current facility provides staff and patrons with 5,000 feet of space, with an additional 1,000 square feet for future expansion. The library is accessible to people with disabilities and has sufficient parking. The library is located on Ballards Corner Road in the Town's northern most commercial zoning district, a destination area for the community for a variety of services.

In 2009, the Library's collection numbered 25,244 print and non-print materials. Overall circulation of books and other media increased to 37,162 transactions annually. A variety of library services drew 22,724 patron visits during the same period. During the economic downturn, Hinesburg librarians saw growth in use of the seven public access computers for job searches and resume writing, an increase in the use of Wi-Fi and noticeably longer library visits by young families. In most categories statistics reflected increases of 6% - 15.9% over the previous year.

The Library continues to offer reference, reserve and reader advisory services as well as Internet instruction. It provides access to the Vermont Online Library: 22 databases of full-text periodicals, supported by the Vermont Department of Libraries. Carpenter-Carse belongs to a county-wide lending system that allows eligible patrons to borrow at any member library. Using the interlibrary loan network, the library provides 35 – 65 books to other libraries each month, and borrows 15 - 40 items from other libraries for Hinesburg readers.

Services are available 24/7 from home or work through <http://www.carpentercarse.org>. The site includes an online catalog, listings of upcoming programs and many valuable links. The library's membership in Vermont's recently formed Green Mountain Library Consortium has put expensive services within reach of Hinesburg library patrons: Patrons now have online access to downloadable audiobooks via Listen Up! Vermont as well as new access to Mango, an online language learning system offering instruction in 36 foreign languages and 14 English as Second Language courses. Both are funded by Town tax dollars with no additional cost to end-users.

The Community Room is available to non-profit groups within policy guidelines. Multiple use of the room by 34 non-library groups resulted in a total of 1,850 people at meetings and functions during 2009. The Library's Community Room's primary function is for library-sponsored programs for all ages. In 2008/09 156 programs were presented at the Library, saving real family entertainment dollars. Attendance at programs was 2,279. Adult Services Library Staff assembled a wide array of quality adult programs, often using local talent. The Library also offers instruction and entertainment year-round to children of all ages. Families with babies, toddlers and preschoolers were treated to 77 storytimes in 2008/09; extra pajama storytimes were added and became popular. Youth Program Staff crafted a lively and creative Summer Reading Program. Special pajama storytimes for children ages 3-7 were added and became popular. In total, 123 youth events, including 24 for young adults were held at the Library.

Recreation

With the Town's population in 2010 approaching 5,000 people, the need for more recreational facilities and programs is becoming increasingly apparent. Currently the Town has two active recreation parks. Lyman Park behind Lantman's Store provides a combination soccer field and baseball diamond, which cannot be used simultaneously. The Wainer Community Park and Playground behind the Hinesburg Community School (HCS) provides a playground, a combination soccer field and baseball diamond, a pavilion where summer concerts are held, two tennis courts, a basketball court that doubles as an outdoor ice rink in the winter, and a walking trail. Both parks are within the village. The need for park facilities in other parts of the Town should be evaluated.

A part time recreation director was hired in 1995, establishing the Hinesburg Recreation Department. The Department now offers a wide range of recreational programs for children and adults, making full use

of Town facilities. Outdoor field space is especially in demand. Fields for municipal recreational use include the field at Lyman Park (when not being used by HCS programs, which have priority) and a relatively small field behind the Town Office. The availability of field space at the United Church fields (next to Town Office field), HCS, and Champlain Valley Union High School is extremely limited. The Recreation Commission has identified the lack of municipal recreation field space as their most pressing issue, and is seeking to locate available space for at least two or more adult, full-size playing fields plus multi-use space.

The Town owns three significant areas of land suitable for outdoor recreation. An 800-acre Hinesburg Town Forest on the eastern side of the Town was created in the mid-1900's. While this Forest is largely undeveloped, it does have a developed trail system (maps available at www.hinesburg.org). This Town Forest has the potential of serving as an important conservation and recreational resource. An integrated management plan, both for forest and recreation management should be adopted.

The second parcel is the Geprags Park just west of Ballards Corners consisting of approximately 85 acres. It provides trails for walking, a sledding hill, areas for picnicking and conservation education opportunities in close proximity to the Village and schools. The Conservation Commission has the responsibility for developing the facilities and managing the park. An integrated management plan, for field, forest, and recreation management should be adopted.

The third parcel is the Laplatte Headwaters Town Forest (LHTF) in the western part of Town (maps available at www.hinesburg.org). This 301-acre parcel was donated to the Town with conservation easements held by the Vermont Land Trust and the Vermont Housing and Conservation Board as part of a larger project in cooperation with other local, state, and federal organizations and agencies to conserve the 600-acre Bissonette Farm. The LHTF is representative of the western part of Hinesburg's rich and unique natural heritage in the Champlain Valley, which includes its geology, ecology, and cultural history. It contains a diverse mix of open and forested land that is home to a wide variety of plant communities and organisms – some of which are rare or endangered within Hinesburg and even North America; includes the headwaters of the LaPlatte River; has an established network of trails and history of use by the public for walking, snowshoeing, skiing, hunting and education and it is less than a half-mile from Hinesburg Village and its Community School at its northernmost boundary.

A Management Plan for the LHTF was approved by the Selectboard December 7, 2009. That plan provides specific guidelines for the LHTF management including vision and goals, permitted and restricted uses, background and description as well as management objectives, guidelines and action and said plan is hereby incorporated by reference as a part of the Hinesburg Town Plan. The Management Plan will be implemented by a permanent Town Forest Management Committee, appointed by the Selectboard, and working in cooperation with the Conservation Partners and other Town committees.

The State-owned Wildlife Management Areas (primarily the Fred Johnson WMA) contain over 1,500 acres of land and several miles of river. This State land together with the two Town Forests, and private lands (with landowner permission), serve not only Hinesburg residents but are also a resource for the greater region for hunting, fishing, and other recreational uses.

The Town jointly manages the Lake Iroquois public beach with several other communities – Williston, St. George and Richmond.

A multi-use path is proposed to link the Village to Ballards Corners by way of Mechanicsville Road and CVU HS. This project was selected for funding by the State in 1993. The final design and right of way negotiations are complete with construction anticipated to begin in 2011.

Through surveys and at public forums, Hinesburg residents have often expressed the desire to have a town common that can serve as a visual and social center for the community. While Lyman Park has been suggested as one possible candidate for a Town Common, it is currently in use as a playing field, both for the elementary school and for the Town's recreation programs. When evaluating the recreational facilities of the Town, a suitable location for a Town Common should also be considered (see section 3.2 and 3.2.8).

Private recreation areas also add value, local jobs, and outdoor recreational opportunity. Although privately owned and operated, most of these areas in Hinesburg are open to the public for a use fee. Areas such as Cedar Knoll Country Club, Sleepy Hollow Inn Ski & Bike Center, Taproot Horse Farm (and other horse/riding facilities throughout town) help maintain large acreages that bolster the rural landscape while providing a solid tax base and creating local jobs.

Trails (also see section 6, Transportation)

In 2007 the Select Board established the Hinesburg Trails Committee, charging it with the mission “to support the development and maintenance of an interlocking set of trails and dirt roads for recreational and non-motorized transportation uses. The Committee will work to assure that Hinesburg is a community where sidewalks, trails, and unpaved roads provide a safe way for residents to travel, to connect with each other, and to enjoy both the village and surrounding rural area by foot, bicycle, and on horseback.”

Within and proximate to the village area, sidewalks and bike lanes provide alternate transportation options between the village and commercial centers, creating a friendly, walkable community. Outside the village area, unpaved roads and trails provide opportunities for walking, biking, horseback riding, skiing, and snowshoeing. Both formal and informal trail networks exist within both state owned and locally conserved parcels and between village and rural residential centers. The primary trail networks are within the Hinesburg Town Forest, the new LaPlatte Headwaters Town Forest and VT Fish and Wildlife Copp-Welch areas, the Russell Trails, and Geprags Park. With the exception of the many mountain bike trails in the Hinesburg Town Forest created and maintained by the Fellowship of the Wheel, and the snowmobile trails created and maintained by a member club of VAST (VT Assoc. of Snow Travelers) most trails came into being gradually and informally over many years without a plan and without adherence to any trail standards. In addition there are many trails on private land that can only be accessed with permission of the landowner. Connectivity between these various trail networks is limited. A major transportation and recreation challenge facing Hinesburg is to stitch together the existing sidewalks, unpaved roads, public trails, and private trails into a safe, well thought out, interconnected system.

Future sidewalks and trails in the Village are shown on the Official Map, first adopted in 2009. In 2004 a sub-committee of the Recreation Committee began the process of planning a town-wide trail network. Among other things, this sub-committee prepared a 2006 report and series of maps identifying major gaps in the existing system. In 2007, the Selectboard-appointed Trails Committee picked up where the volunteer committee left off. In 2009 the Committee sought public input via a trails charrette, which focused on identifying residents' priority recreational destinations and connections. What has begun to emerge is the vision of a trail network that looks a bit like a wagon wheel with the village being the hub, a peripheral trail near the town boundaries as the rim, and connections between the village and the peripheral trail serving as the spokes. The “rim” trail would connect popular destinations such as the Hinesburg Town Forest, the LaPlatte Headwaters Town Forest and adjacent conserved lands, the Raven Ridge Preserve, and Geprags Park. The “spokes” would emanate from the Village out to these same destinations via the Russell Trails, Buck Hill Road, Gilman Rd., Baldwin Rd., Leavensworth Rd., and future trail segments and paved roads improvements. This vision for a town-wide network of trails is manifested on Map 13, entitled “Trail Network Vision: Existing Routes and Gaps.” Implementing this

vision will rely heavily on the permission and goodwill of many private landowners. The Town should consider revisions to the Subdivision Regulations to help implement this vision.

Goals and Recommendations

5.4.1) To optimize management and use of existing Town recreational facilities and programs.

- a) Expand the Official Map to include present and desired future recreation areas, fields, facilities, and trails.
- b) Evaluate Town recreational needs and staffing levels to support future use. Create a municipal recreation strategic plan that addresses Hinesburg's wide range of recreational uses – e.g., indoor and outdoor organized sports, playgrounds, hunting and fishing, hiking, biking, etc.
- c) Maintain existing facilities including the ice rink, tennis courts, basketball courts, and playing fields.
- d) Continue to work with St. George, Williston and Richmond to manage the Lake Iroquois public beach, and continue to support productive efforts to manage non-native species.
- e) Maintain ownership and control of the Town Forests and the Geprags Park areas. Develop and implement management plans that balance recreational use of the Town Forests and Geprags Park with the protection of natural resources. Improve mapping of the recreational access to these areas.
- f) Investigate posting or other measures to reduce the adverse impacts of ATVs, mountain bikes, horseback riding, hiking, and similar recreational uses in the Town Forests during periods of thaw and heavy rain.
- g) Continue to offer a range of recreational opportunities through programs, the arts, and sports to serve all ages in the community.
- h) Make Recreational activities easily accessible to pedestrians by linking the resources of the Town Hall, playing fields, schools, parks, and the Library.
- i) Recognize that class 3&4 dirt roads are used extensively for recreational activities such as walking, biking, and horseback riding. Ensure that these uses are considered when road improvements are made. Maintain public access to all town road corridors, active or inactive.
- j) Work with the VT Department of Fish and Wildlife to facilitate use of state-owned land for recreation and hunting, including the development of trails.
- k) Develop a trail system connecting all public lands and public trail easements, with landowner approval where connections across private land is needed.

5.4.2) To seek additional recreational facilities to serve Town residents.

- a) Locate space for and develop at least two or more adult, full-size playing fields plus multi-use space. Be sure to consider all appropriate Town owned lands first and foremost.
- b) Pursue opportunities for valuable lake and stream access as they arise.
- c) Conduct a study of current and future recreational needs and identify locations for parks, fields and other facilities, paying particular attention to high density residential areas.
- d) Identify and plan for recreational paths that link residential areas to the Village (see also 6.7).
- e) Develop legal mechanisms and landowner incentives for securing public trail access to private lands, e.g. revocable landowner permission and permanent trail easements.
- f) Explore mechanisms for making private unpaved roads available for public, non-motorized recreation.
- g) Work with the local snowmobile club (Iroquois Sno-Beavers) to explore the possibility of opening snowmobile trails in Hinesburg to skiers and snowshoers.
- h) Keep recreational offerings and facilities at pace with growth in population.
- i) Continue to support recreational and cultural programming that provides entertainment in the performing arts.

5.4.3) To maintain and improve library services.

- a) Emphasize access to the library: Seek ways to improve the Hinesburg community's access to the library by roadways, walking and bike paths, bus service. Continue to enhance online access to library services.
- b) Explore ways to become a greener library by doing an energy audit. Contact Efficiency Vermont and also have discussions with the Energy Task Force and NRG about positive steps we can take in the right direction.
- c) Keep abreast of and adapt to new formats and technologies as we develop library collections of materials. Work to stay relevant.
- d) Present at least one local history program each year.
- e) Continue bookmobile service at three mobile home neighborhoods in Hinesburg, if there is a way to operate at low cost, as is done currently. Look at options such as used Vermont state vehicles auctions or used school buses when searching for a replacement van or bus to convert.
- f) Maintain a keen interest in the Library's location, neighborhood and its future composition.

5.5 General Government

General government services include those provided by the Town Clerk's office, Town Administrator, Planning and Zoning and Listers. Town employees in these departments include the Town Clerk, Assistant Town Clerk, the Town Administrator, Zoning Administrator, Director of Planning & Zoning, a 0.4 FTE administrative assistant for Planning & Zoning, and a 0.4 FTE assistant for the Listers. The Selectboard, Planning Commission, and Development Review Board are all volunteers. The Listers are paid an hourly rate; however the majority of the work of the elected Listers is completed by their assistant and a contracted professional assessment service. In 2004 the Town contracted with a professional appraiser for a town wide reappraisal which was completed in May 2006 and is updated yearly. For the 2010-2011 fiscal year, Hinesburg's overall grand list (total value of all property) represented 94.41% of actual fair market value according to the State tax department.

As the Town continues to grow, additional public infrastructure and services will be needed to ensure the public's health and welfare, and to ensure a vibrant, active, and connected community. Capital budgeting and planning is one way to delineate future infrastructure and service needs while including cost estimates for these projects. Long term operating and maintenance costs are generally the responsibility of the Town as a whole, but the initial cost of construction should be partially borne by those creating the additional demand that necessitates the improvements. Beginning in 2007 the Town enlisted the services of consultants to assist in the process of updating the capital budget and plan, and explore the feasibility of instituting impact fees. In 2009 the Town adopted an impact fee ordinance, and initiated a public safety impact fee, which levied fees on new development which are proportional to the development's expected impact on the public safety capital improvement investments.

The Town Hall was built in 1901 and contains 6,000 square feet of space. In the main floor is a large general meeting hall. The historic Town Hall was renovated in 1993 to correct structural problems, improve accessibility and modernize facilities. The renovation appears adequate to meet the Town's general government needs for the foreseeable future. The Town purchased the Miner property adjoining the Town Hall property in 1996. Renovations of the Miner house were not feasible, and it was removed to allow for improvements to the Route 116/Charlotte Road intersection. It is anticipated that future Town Hall expansion would be accommodated by the property.

Goals and Recommendations

5.5.1) Keep the capital budget and plan, and public safety impact fees up to date, and consider implementing additional impact fees (e.g., recreation, road, stormwater, etc.) or other comparable

mechanisms to recoup a reasonable proportion of the cost of capital improvements from new development.

5.5.2) Continue communications and meetings of all boards and commissions to discuss general concerns, share information, and assess staffing needs.

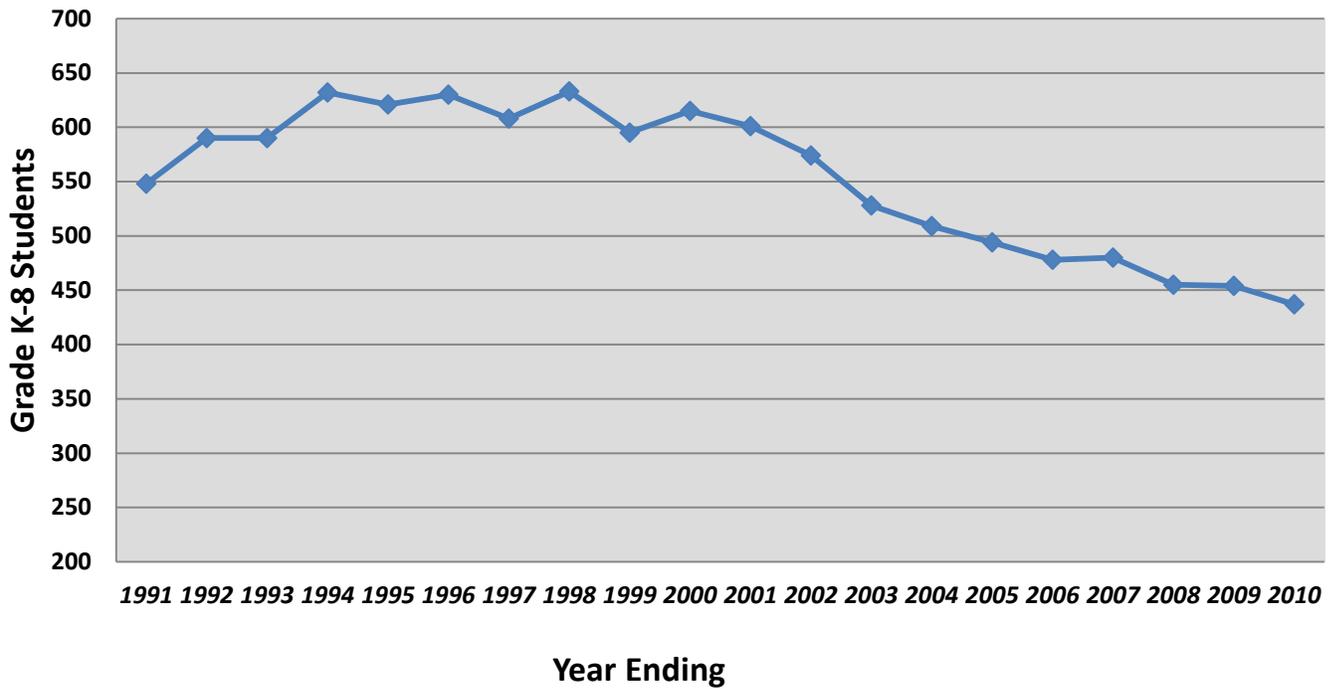
5.5.3) Create a volunteer or self-funded (via grant overhead/administration budgets) grant coordinator position to lower the tax burden for existing projects as well as new projects that benefit the community.

5.6 Schools

Hinesburg residents are served by the Hinesburg Community School (HCS, a Pre K-8 school) and Champlain Valley Union High School (CVU). HCS was expanded in 1985 in response to the rapid housing and population growth of the early 1980s. As Shown in Figure 11, enrollment at the facility continued to grow, though more slowly, until reaching a high of 633 students in 1997-98. At that time, town boards were very concerned about continued residential growth. The Planning Commission maintained a strict residential phasing policy, and the Selectboard was reluctant to grant additional sewer allocations for residential development. A task force in 2000-2001 included a modeling effort by a CVU teacher to determine the impact of housing starts and other factors on the growth of school enrollments. The model's surprising conclusion was that an aging population (see Chapter 2) would lead to fewer school-age children unless there was a dramatic increase in housing construction. The model, in fact, predicted the sharp decline in K-8 students that began in 2000 and continues to this day. The 2010 enrollment at HCS is 437. Forecasts are that the decline will continue and then level off at about 410 students.

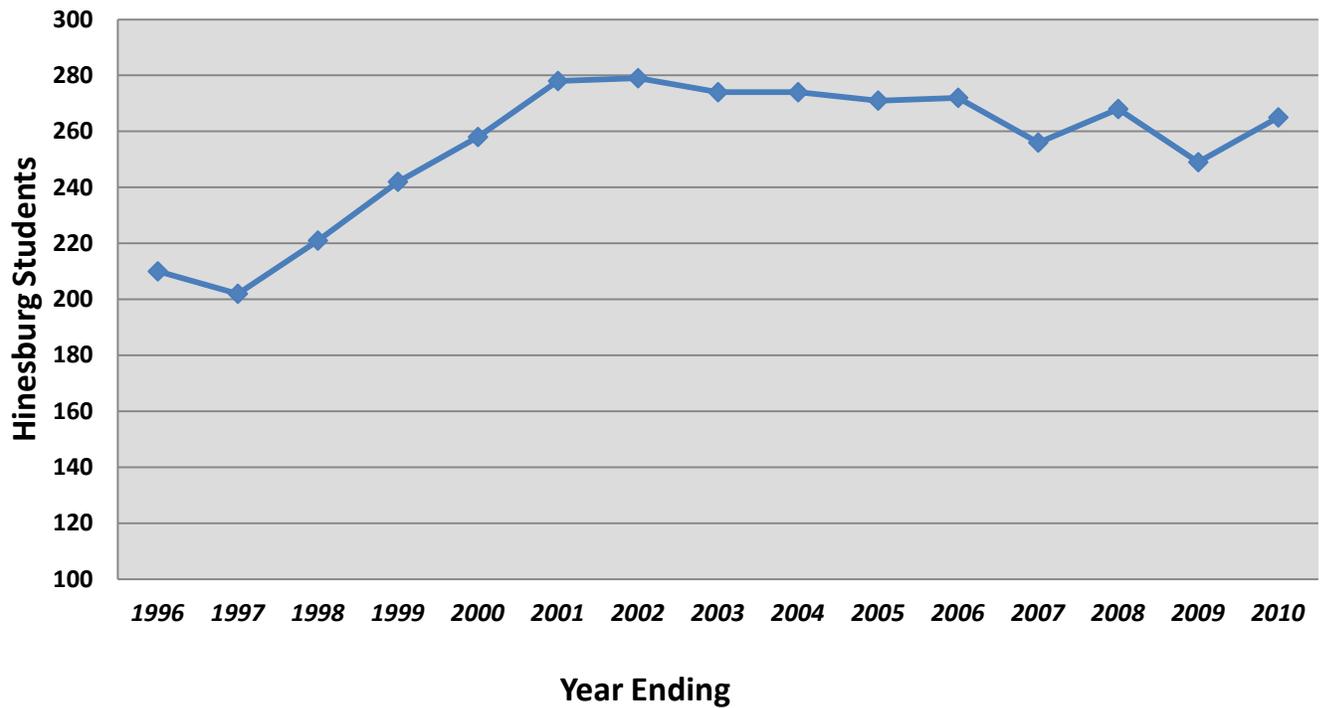
CVU completed an expansion in 1994 and 2005, both of which provided classroom space and support facilities for anticipated enrollment growth. In addition, the Carpenter-Carse Library continues to provide space for the Life Program, an alternative educational program for high-school aged students. High school enrollments increased to a high of 279 Hinesburg students in the 2001-2002 school year (Figure 12).

**Figure 11
Hinesburg Community School Enrollment**



Source: Chittenden South Supervisory Union

**Figure 12
CVU High School Enrollment**



Source: Chittenden South Supervisory District

Goals and Recommendations

5.6.1 To encourage cooperation between town and school officials in the planning and use of school facilities and programs.

- a) Encourage the continued use of school facilities as focal points for a wide range of community activities.
- b) Work with the schools to monitor growth and its impact on school facilities and services. Include capital expenditures for schools in a capital budget and plan.

5.7 Child Care

In addition to school-aged education, child care and early childhood education are important components of the overall Hinesburg community and its future. Ensuring accessible, affordable, quality child care is integral to the community's success and its economic development. Child care is an issue of statewide and national importance as evidenced by the Vermont Legislature's decision in 2003 to add it as the 13th goal to be addressed by local, regional, and statewide planning efforts.

As of 2004, the Vermont workforce includes approximately 37,500 working parents who rely on the availability of affordable and reliable child care, and approximately 40,000 children (birth through age 12) receiving child care in Vermont. Furthermore, child care is the seventh largest occupation in Vermont, employing 5,000 state-regulated child care providers. As of the 2000 Census, Hinesburg had 390 children under the age of six, approximately 67% (261) of which had all parents in the labor force. Similarly, Hinesburg had 560 children between the ages of 6-12, approximately 67-75% (375-420) of which had all parents in the labor force.

As of June of 2010, data from the Child Care Resource of Chittenden County indicated that Hinesburg has nine family or home-based child care programs with a total of 74 slots. Child care capacity has declined by about 8% from 2004 when there were 83 slots in 10 programs. Of these 74 slots, 17 are for infants with two vacancies, 32 are for preschoolers with four vacancies, and 23 are for school-aged children with four vacancies. A total of 41 families were using home-based child care in Hinesburg, 63% (26) of which are Hinesburg families.

Full-Day Center-Based Child Care: Annette's Playschool is Hinesburg's only full-day child care center. It is a large, licensed center with a capacity of 95 children at one time, which offers full-day care for children ages birth to five as well as after-school care. As of June 2010, it has: 16 infant slots with one vacancy; 10 toddler slots with one vacancy; 34 preschool slots with one vacancy; 35 after-school slots with one vacancy. Annette's serves a total of 85 children, 65 (76%) of which are from Hinesburg. Since 2004, Annette's has reduced preschool slots, discontinued providing a full-day kindergarten program, and increased its infant and toddler slots. Its afterschool slots have remained the same.

Part-day Preschool: There are two preschool programs in Hinesburg; the Hinesburg Nursery School and the Hinesburg Community School Early Education Program. The Hinesburg Nursery School operates from 8:30-12 and has part-week and full-week options. It has a capacity of 15 preschoolers per day, and currently has one vacancy. The Nursery School serves 25 families, 84% (21) of which are from Hinesburg. The Hinesburg Community School is a Head-Start funded program open to eligible families from Hinesburg. It operates two shifts: 8am - 11:15 shift or 11:45 - 2:30 shift. It has capacity for 14 preschoolers and no vacancies.

After-School Only Program: There is a YMCA (Live Y'ers) afterschool program at Hinesburg Community School which serves 40 children and currently has three vacancies.

Based on the above 2010 numbers for home-based, center-based, and school-based care, there were approximately 88 children enrolled in some sort of after-school care. Child care during the summer months is supplemented by a number of summer camps offering part-day opportunities. Throughout the year, the Town's Recreation Department also provides a wide variety of programs for younger children. Although not child care in the traditional sense, these activities represent part of the Town's investment in the enrichment, care, and education of children.

Overall, Hinesburg has an adequate supply of child care facilities and openings to meet the present demand. As indicated in the section 2.1 (Population), Hinesburg's overall population should continue to grow, but the relative proportion of children is on the decline. Although home-based care will continue to fill an important niche for certain families, attention should be paid to future needs for additional center-based care.

Goals and Recommendations

5.7.1) To help address difficulties in child care financing.

- a) Participate in local and regional forums to explore ways the Town can assist child care providers.
- b) Encourage the continued use of "Average Daily Membership" State education funds to help pay for preschool child care in qualified home-based and center-based facilities.

5.7.2) To ensure that adequate opportunities exist for the creation and maintenance of child care infrastructure.

- a) Encourage the continued use of municipal and school facilities for private and public child care opportunities.
- b) Work with developers of major subdivisions and residential developments on child care issues and possibilities (e.g., allowing home-based child care businesses). In the Village Growth Area, encourage major developments to include community facilities that could be used for child care.
- c) Work with the schools, the Town Library, the Town Recreation Department to ensure quality after-school programs are available.

5.7.3) To ensure the provision of quality child care via appropriate business assistance and work force development.

- a) Assist child care providers by developing local referral system or supporting existing regional referral systems and agencies.
- b) Include child care referral information, agency links, and training opportunities on the Town's web site.
- c) Promote accreditation and child development credentials, particularly for home-based care providers, by providing facilities and logistical support for training opportunities.

5.8 Services for the Elderly and Disabled

Hinesburg's population of adults over the age of 55 is growing. (See Figure 5) It is important that the community support older adults in their wish to remain healthy and independent by ensuring that older and disabled residents have access to programs and services in Hinesburg that promotes their quality of life.

The Town currently has Kelly's Field, an elderly housing community with 24 dwelling units in the center of the Village. Food services include Meals on Wheels, a hot lunch program delivered by volunteers, and a weekly senior lunch held at the United Church, both sponsored by the Champlain Valley Agency on

Aging. The Hinesburg Community Resource Center offers a weekly Food Shelf to those who have a need as well as the Hinesburg Rides community transportation program that utilizes volunteer drivers (and other methods when necessary) to provide transportation to medical appointments, shopping, etc. The Visiting Nurses Association, and Home Health Care Aids provide services and contact to those who are home bound.

As more residents get older, demands for convenient access to health care, more housing for the elderly, and a senior center to enhance that population's health and social well being will grow. Hinesburg needs to plan for this.

Goals and Recommendations

5.8.1) Explore infrastructure needs and additional services to address the elderly and disabled population.

- a) Create a task force to study the needs for and then implement ways to deliver services to the Town's growing elderly and disabled population. Needs to be considered may include a senior center, additional health care centers or some combination, as well as additional housing for the elderly. Planning for safe and easy mobility for seniors is also important.
- b) Work with the Hinesburg Community Resource Center to enable additional programs and services to the disadvantaged and elderly.

5.8.2) Promote healthy living and active participation in the community.

- a) Promote healthy living efforts and education among the elderly to delay the onset of chronic conditions and /or disease related complications such as hypertension and diabetes by providing regular exercise and weight management programs as well as convenient access to health care.
- b) To encourage active participation by seniors in the community.

5.9 Solid Waste

In 1992, the Town completed the closure of its long-time landfill, located northwest of the Town Garage off of North Road. As part of the post closure plan the Town monitors and analyzes several test wells, two stream locations and several nearby residential wells twice yearly for twenty years.

Hinesburg is a member of the Chittenden Solid Waste District (CSWD). CSWD is the regional authority responsible for the oversight and regulation of solid waste generated by its members pursuant to the District's Charter which was enacted by the Vermont legislature on March 3, 1987. Its authority and responsibilities are described in the District's current Solid Waste Management Plan. CSWD's solid waste management system is based on the following hierarchical priorities: 1) reduction of the toxicity of the waste stream, 2) reduction of the volume of the waste stream, 3) reuse, 4) recycling and composting, and 5) disposal. Membership in CSWD satisfies the municipal solid waste planning requirements of 24 V.S.A., 2202a.

The Chittenden Solid Waste District operates a full-service transfer station near the Town Garage (Map 11, Town Facilities & Conserved Lands). Household solid waste, recyclables and some hazardous wastes are collected weekly at this facility and transferred to district facilities for disposal and/or further processing. As an alternative, many residents contract with private haulers for solid waste disposal.

5.9.1) Retain the CSWD drop off center in Hinesburg.

5.10 Utilities

Electrical service for Hinesburg is provided both by Green Mountain Power, west of Rt. 116, and Vermont Electric Co-op for the remainder of the town. The town is traversed by a major Vermont Electric (VELCO) transmission line, running west of Rt. 116 from north to south. Vermont Gas extended its natural gas lines to Hinesburg in 2009, and now provides service within much of the Village Growth Area. Waitsfield Champlain Valley Telecom provides telephone service to the entire town and offers DSL (broadband or high speed internet) service to most residents. Cable television service also is available to parts of the town.

5.10.1) Promote the installation of DSL, or other high speed internet connections, to all sections of town in order to encourage efficient home businesses in all areas of Hinesburg.

6. TRANSPORTATION

Throughout much of Hinesburg's history, the transportation network has served to integrate the town into a self-sustaining entity; connecting historic town centers of Mechanicsville, Rhode Island Corners and the lower village, the agricultural areas to the west and south of the village, and the hill regions on the town's eastern flanks. In the almost 250 years since Hinesburg was chartered, the town's transportation network has evolved from sparsely marked trails into more than 100 miles of automotive thoroughfares and numerous sections of sidewalks, trails and informal footpaths. Transportation infrastructure within the town of Hinesburg varies from high-use public roadways such as Vermont Route 116 to privately maintained cul-de-sacs. The transportation network may be roughly classified into seven categories:

Arterial Highways: Route 116 is the only arterial highway in the town of Hinesburg and serves not only as a conduit for traffic commuting between central Vermont and the Burlington area, but also as our Village main street and central connector for many lesser town roads.

Local Arteries: Many of Hinesburg's secondary roads serve not only to connect the town's outlying areas to the village, but also serve as connectors to the neighboring towns of Shelburne, Charlotte, Monkton, Huntington and Williston. Many, but not all, of these local arteries are presently classified as class II roads and many link with Route 116 at or near the village center.

Village Roads: Village roads include non-arterial corridors within, or proximate to, the village center, which serves residential, commercial, industrial and institutional uses.

Rural Town Roads: The majority of roads in the town's inventory are rural town roads that serve the agricultural and outlying residential areas of the town. For the most part, these thoroughfares are currently classified as class III and class IV roads.

Private Roads: Many of the town's newest roads are privately owned and maintained thoroughfares permitted by the town and required to be built to town standards. Within the last decade, all transportation development within the town has been accomplished with private roads.

Sidewalks and Bike Lanes: Within and proximate to the village area, sidewalks and bike lanes provide alternate transportation options between the village and commercial centers, creating a friendly, walkable community.

Rural Footpaths/Trails: Outside the village areas, both formal and informal networks of trails exist within both publicly owned and locally conserved parcels and between village and rural residential centers. One important component of these networks is the VAST (VT Assoc. of Snow Travelers) trail system for snowmobilers.

In 2006, the Selectboard appointed an Ancient Roads Committee to research old town records looking for information regarding old roads that are no longer in use but were never officially discontinued in Hinesburg. This was in response to the VT Legislature's passage of Act 178 in 2006, which provided a timeline for the discontinuance of "ancient roads". Until Act 178, State law dictated that towns retain the rights to these old roads whether they have remained in use or not. Since many of these roads were established in the late 1700's and early 1800's, the only evidence of their existence is often old handwritten surveys that are in the town vault. The Ancient Roads Committee read through these old records and used them to map these old roads. As a part of this research, the committee also used on-the-ground observations to assess whether there was any physical evidence of where these roads were located. After presenting the Selectboard with evidence of six ancient roads, and after numerous public hearings, the Selectboard voted to formally discontinue these ancient roads on March 8, 2010. In addition to providing clarity to both the Town and landowners on the location of public rights of way, this effort

compiled an incredible amount of historical information about the Town's road network. One unexpected finding was that the Town actually owns a 66' wide (4 rods) right of way along portions of some north/south roads (see list below) rather than the 49.5' wide (3 rods) right of way standard used when there is no other evidence. The committee identified these wider rights of way on portions of the following roads: Baldwin Rd, Silver St, Gilman Rd, Pond Rd, Mechanicsville Rd, Magee Hill Rd, Route 116, Lavigne Hill Rd, North Rd, Pond Brook Rd, Shelburne Falls Rd.

Since the early 1980's, Hinesburg and many adjoining towns in both Chittenden and Addison County have experienced significant growth. Additionally, they have shifted from being predominately self-sustaining communities to being, at least in part, satellite communities of greater-Burlington. As a result, the town's transportation infrastructure, which once served primarily as a connection to Hinesburg's village center now serves as a major commuter conduit to Burlington, Essex and Williston. Commuters include not only Hinesburg's residents, but an increasing number of residents in adjoining southern Chittenden County and Northern Addison County towns.

As development continues, multiple stresses on Hinesburg's transportation infrastructure are becoming evident. Peak traffic and increasing average speeds have increased on Route 116, creating safety hazards within and proximate to the Village center. As an increasing number of Hinesburg residents and residents of adjoining towns commute through Hinesburg, pressure mounts on our local arteries. While attempts have been made to improve access and safety within the Route 116 corridor within the past five years including the installation of traffic signals at both Commerce Street and Charlotte Road and realignment of the Silver Street intersection, traffic congestion on Route 116 proximate to the village and including the Shelburne Falls Road, Commerce Street, Charlotte Road and Silver Street intersections remains a serious concern with signaling devices creating large backups on Route 116 during rush hour.

Additional pressure on Route 116 has been generated by the lack of local transportation infrastructure within the Village Growth Area. This lack of infrastructure adds to arterial congestion and excessive energy use, and limits residential and commercial possibilities within the Town.

Development pressures, which contribute to arterial congestion, are also taxing Hinesburg's gravel roads. With increased residential development on our class III and class IV roads, road maintenance becomes more costly. Despite increasing usage on many of our gravel roads, which increases maintenance costs, there is consensus to preserve the character of Hinesburg's gravel roads; however, there is little consensus on whether to begin paving of the most troublesome sections of highway.

To some extent, development pressure on town roads and on the town road budget has been offset by the proliferation of private roads throughout the Town. Private roads place the burden of transportation development on the developer. However, they also serve as a barrier to strategic transportation planning at the town level and further compartmentalize Hinesburg's transportation infrastructure due to their planned lack of connectivity.

While the majority of transportation concerns challenging Hinesburg are due to motor vehicle traffic, alternative transportation networks such as sidewalks, bike paths, footpaths and trails also must be addressed to create a more walkable, friendly, and sustainable community. In many instances paved roads are impediments to non-motorized transportation because they provide no accommodation for pedestrians, cyclists, etc.

Attention to Hinesburg's transportation infrastructure is critical in improving the viability of a self-sustaining town and village center, as well as in encouraging a greater density of development within the Village Growth Area. This town plan seeks to outline transportation and policy directions that allow for town growth, improve the safety and serviceability of our transportation network, and strike a balance between automotive and alternative transportation to build a system for the people of Hinesburg, not just their automobiles.

In 2008, a grassroots effort supported by the Town resulted in the creation of community transportation initiative called Hinesburg Rides, which is organized by volunteers as a program of the Hinesburg Community Resource Center. Hinesburg Rides is helping community members, local workers, and local/regional employers gain access to necessary transportation with a special emphasis on ridesharing and alternative forms of transportation (e.g., vanpooling, public transit, etc.). Hinesburg Rides operates a successful volunteer driver program that provides rides to the elderly, disabled, and others without a vehicle or the ability to drive. Hinesburg Rides has also created an on-line rideshare program to bolster the State of Vermont's rideshare program with a locally based system built on small town social networks. Hinesburg Rides also spearheaded an effort to bring public transit to town. At the 2010 Town Meeting, voters agreed to move public transportation forward by joining the Chittenden County Transit Authority (CCTA) and budgeting local matching dollars to help fund commuter bus service – potentially starting in 2011. The Town continues to support Hinesburg Rides through annual donations in the Town budget to leverage State funding for elderly and disabled transportation, and through coordination with Town staff on grant funded projects and annual Way to Go Week efforts to encourage Hinesburgers to try alternative transportation options.

Goals and Recommendations

6.1) To update and develop transportation policies and plans which align with Hinesburg's village and rural development directions.

- a) Develop a comprehensive road plan for the Town that recognizes the existing multi-use functions of roads, build out analysis for Hinesburg and the surrounding towns and projected changes in Hinesburg's zoning districts to guide and complement future development.
- b) Coordinate changes to the transportation infrastructure within the village to properly stage improvements at the Silver Street, Charlotte Road, Mechanicsville Road, Commerce Street and Ballard's Corners Intersections.
- c) Update the road standards to improve differentiation between the different types of roads in the town (arterial, local arterial, rural residential, private) and to allow for different widths, turning radius, etc. in an effort to not over-design rural roads.
- d) Explore revising right-of-way/road width requirements to allow for updated utilities and flexibility in road improvement.
- e) Update lighting on Route 116 and significant village roads to conform to scoping study recommendations and provide aesthetic value. Lighting should not contribute to light pollution.
- f) Enforce policies that discourage lighting on rural roads for both new and existing development.
- g) Support Hinesburg Rides efforts to promote ridesharing, public transportation use, and other alternative transportation options.
- h) Minimize speeding through speed enforcement, and seek lower speed limits in densely settled areas.

6.2) To drive the improvement of Hinesburg's arterial highways, insuring the safety and efficiency of both vehicular and pedestrian traffic throughout the town and particularly, inside the village.

- a) Work with the State to improve traffic light timing and sequencing to reduce congestion in the Route 116 corridor within the village.
- b) Work with the State to Implement the Route 116 Scoping Study Recommendations for Route 116 from Buck Hill through to Silver Street, as well as curbing, roadcut limitations, sidewalks, parking, utility and street tree recommendations throughout Hinesburg Village. These recommendations address traffic calming through street and intersection narrowing, environmental factors and intersection modification.

- c) Whenever improvements to major paved roads (e.g. Route 116, Silver Street, Richmond Road, etc.) are undertaken, include appropriate accommodations for pedestrians and cyclists such as sidewalks, bike lanes, or widened shoulders.
- d) When appropriate, coordinate road improvements and path development with adjoining towns (e.g. Charlotte).
- e) Consider taking over responsibility for Route 116 through the village area - assess the pros, cons, and fiscal implications.
- f) Work with the State to implement scoping study recommendations for Mechanicsville Road.
- g) Investigate the addition of park and ride facilities on Route 116 in South Hinesburg to stem increased commuter congestion from southern towns.
- h) Prioritize enforcement of development permits, which include the installation and upkeep of vegetation barriers along village and rural roadways to aid in traffic calming.
- i) Support the installation of street trees for traffic calming by investigating the possibility of town support for interim watering systems for new vegetation.

6.3) To guide the maintenance and improvement of Hinesburg’s rural arteries to mitigate increasing traffic congestion and reduce pressure on arterial highways.

- a) Investigate efficacy of locating park and ride facilities in neighboring town centers, at or near the town edge and near the village center. Implement park and rides as appropriate, working with the state, CCTA, and Hinesburg Rides where necessary.
- b) Encourage master planning of undeveloped lands along local arteries to limit road cuts, maximize roadcut visibility / safety and implement appropriate signage.

6.4) To guide improvements to the village transportation infrastructure which encourage a more pedestrian and business-friendly community while improving the efficiency of vehicular traffic flow.

- a) Complete the construction of sidewalks and pedestrian crossings on the east and west sides of Route 116 in the commercial and village districts between Commerce Street and Lyman Meadows Road.
- b) Require that new development provide public transportation access points as appropriate.
- c) Develop the new West Side Road connecting Charlotte Road with Shelburne Falls Road as documented in the official town map, working with the Saputo Site Redevelopment Committee and private developers, and updating zoning regulations where necessary to insure implementation consistent with goals for development of the greater village area.
- d) Investigate connectivity between VT Route 116 south of the village and Mechanicsville Road to provide the village East Side connectivity.
- e) Correct deficiencies in business curb cuts in proximity to the Commerce Street intersection, which affect traffic flow at this intersection.
- f) Implement current plans for bike paths between Commerce Street and Ballard’s Corners.
- g) Develop a sidewalk or recreation path system along Richmond Road from CVU to Texas Hill Road to connect existing high density residential areas to village infrastructure.

6.5) To develop policies that solicit community input on maintenance and improvement of Hinesburg’s rural roads, balance rural transportation improvements with Hinesburg’s rural planning goals and augment Hinesburg’s arterial highways and rural arteries.

- a) Begin holding public meetings to review significant proposed changes or improvements to class III roads prior to their inclusion in the town budget.
- b) Investigate more cost effective methods of maintaining gravel roads and reducing run-off
- c) Link planning for future road improvements with build-out analyses.

- d) Implement a new classification system for the town's rural roads which allows for classification as a function of use, traffic density, terrain, rural character and the areas significant features and update the town's road standards accordingly.
- e) Evaluate improvements to selected Class IV roads to function better as recreation and alternate transportation paths as components of the town-wide trail network.

6.6) To improve the quality of Hinesburg's private roads and encourage transportation connectivity throughout the town.

- a) Develop policies and incentives, which encourage developers to plan for and create interconnected transportation networks as part of future development. Incentives such as town assumption or maintenance of privately developed roads should be considered.
- b) Adopt a uniform set of standards for private roads with town enforcement

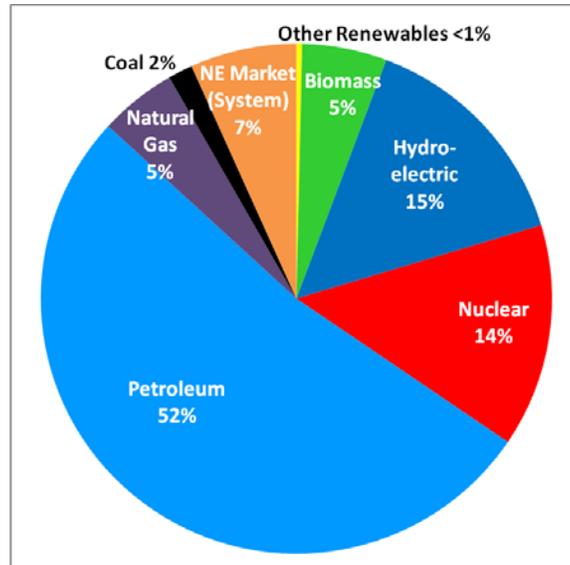
6.7) To encourage the development and use of alternative transportation networks throughout the rural areas of Hinesburg.

- a) Develop a system of footpaths and trails throughout the town in conjunction with the rural development portions of this plan.
- b) Include provisions in the Subdivision and Zoning Regulations to protect or conserve right of ways for current or future trail connections identified as important by the Town. Develop a map of current and desired future trail networks with substantial public input to aid this process.
- c) Work cooperatively with private land/road owners to develop legal mechanisms to allow public non-motorized recreational use of private roads to facilitate connectivity between existing and planned trail segments.

7. ENERGY

As the population of Hinesburg grows, so will the town's energy needs. Non-renewable fossil fuels are currently the primary source of energy used by Vermont town's to serve transportation, electricity, heating, and cooling needs (see Figure 13). The town's reliance on fossil fuels pose risk to the health and well being of our local economy, our community and the environment.

Figure 13: Total Vermont Energy Consumption – By Supply Type
Source: VT Department of Public Service, Utility Facts (updated July 2008)



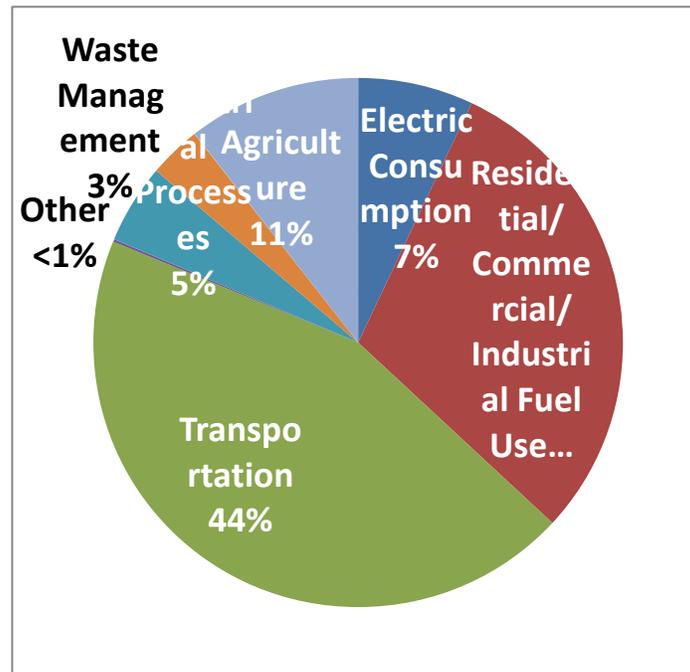
The effect on our economy will be seen as the price of fossil fuels rise and their availability falls. Non-renewable fossil fuels are finite. Our community will face increased costs to doing business and meeting life's basic needs as resources become more expensive and scarcer. The affect on our environment will be seen as the realities of a warming planet surface, due to the release of greenhouse gases, primarily CO₂, as fossil fuels are burned, trapping the sun's heat. The costs of climate change can be measured in changes to Vermont's winter with impacts on ecosystems, the maple industry, agriculture, and tourism. We need to develop goals and values that take present and future generations into consideration, to protect our environment and ensure our energy security.

Because nonrenewable forms of energy are produced outside our community, most money spent on their acquisition is exported from our local economy. Increasing local energy production capabilities will deliver monetary benefits back to the town, reduce our impact on the environment and build a more sustainable community.

Transportation accounts for a large percentage of the state's overall energy usage, and is the leading producer of greenhouse gases in Vermont and Hinesburg (See Figure 14). This includes not only driving done to commute to work, but also daily driving done by residents and providers of services within the town such as school buses and delivery trucks. Automobile ownership and use has grown dramatically over the last 20 years. In 1980, the ratio of one to two car households in Hinesburg was close to 1:1. In 2000, there were nearly three times as many households with two versus just one vehicle (UVM Transportation Research Center & Census data). As the number of vehicle trips in Hinesburg increase over time, it is important to note that as of 2009, approximately 35% of the daily trips in Hinesburg represent pass through traffic – i.e., both the origin and destination are outside of Hinesburg (UVM Transportation Research Center, 2009). Energy use related to Hinesburg's cross-roads and commute-

through location on VT Route 116 is further exacerbated by the high percentage of single occupancy vehicles, which represented 91% of the morning peak travel during surveys in 2009 (UVM Transportation Research Center).

Figure 14: Gross Greenhouse Gas (GHG) Emissions by Sector for Vermont, 2005
 Sources: VT Department of Public Service, Utility Facts (updated July 2008); and, VT Governor’s Commission on Climate Change

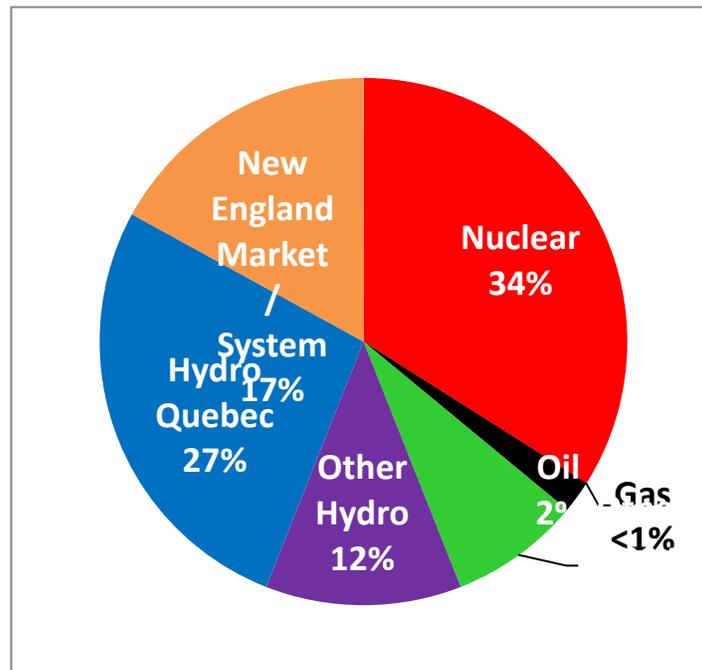


Currently, Hinesburg’s local electric distribution is provided by Green Mountain Power and the Vermont Electric Cooperative. The power supply for Vermont’s electric utilities comes from many sources including Hydro Quebec, Vermont Yankee (Entergy) nuclear, small hydro, the New England power grid (market), biomass, wind, and solar (see Figure 15). The Town’s Subdivision Regulations require that new lines to end users be underground. Although substantially more expensive to install, underground utility lines make sense given the community’s interest in maintaining the Town’s rural character and aesthetics.

The Vermont Electric Power Company (VELCO) also maintains a high voltage (115kV) transmission line running north/south on the western side of the town. This line is part of VELCO’s statewide network of transmission lines that serve to bring electrical power into the state and to distribute it. Although VELCO has no immediate plans to upgrade this line, it will require re-examination in approximately 5-6 years (2015) if the demand for electricity continues to grow at the current rates. Recently VELCO upgraded the Tafts Corners Williston transmission substation, to ensure adequate capacity in the region. The Town has a stake in future improvements to the VELCO line, especially given that much of the transmission line is located in the rural agricultural portion of Hinesburg.

Figure 15: Sources of Vermont's Electric Power, 2006

Source: VT Department of Public Service, VT Comprehensive Energy Plan - May 2008 (Draft)



Vermont Gas brought natural gas to Hinesburg in 2009. Pipes were laid to serve most of the greater village area. Approximately 500 homeowners and businesses have the option to use natural gas; a rate-regulated, fossil fuel that burns more cleanly than fuel oil.

The town has already identified the need to create programs, processes and systems to foster sustainable procurement and use of energy. Several initiatives have contributed to this effort.

- The Hinesburg Sustainability and Energy Planning task force was formed in November, 2006 as part of the Vermont Council on Rural Development Community Visit program.
 - Members achieved community cost-effective electric savings through their Hinesburg Light Switch program and replaced over 9,000 incandescent bulbs with compact fluorescent light bulbs.
 - Other task force activities include the formation of Low Carbon Diet Eco Teams. The Team's volunteers commit to reduce household carbon dioxide emissions by a minimum of 5,000 pounds. At least 20 households have made the commitment in Hinesburg, resulting in 52.5 fewer tons of the greenhouse gas carbon dioxide.
 - A home energy savings workshop called Button Up Vermont, was held at the town hall to help our community learn about how to improve home energy efficiency in the most cost effective manner.
- Hinesburg Rides was formed in 2008 to address the need for better transportation systems to serve the high percentage of Hinesburg residents who commute to work and others who need transportation for daily errands and appointments. As a program area within the Hinesburg Community Resource Center, Hinesburg Rides is a volunteer run effort that partners with the Town on a variety of initiatives. Hinesburg Rides includes a volunteer driver program, a rideshare program with a local online matching system, as well as partnerships with area employers to seek creative solutions for bringing workers in and out of Hinesburg. Hinesburg Rides also spearheaded an effort to bring public transit to town. At the 2010 Town Meeting, voters agreed to move public transportation forward by joining the Chittenden County Transit

Authority (CCTA) and budgeting local matching dollars to help fund commuter bus service – potentially starting in 2011.

- The Town joined the EPA Municipal Energy Challenge and pledged to save at least 10% more energy and to explore the use of renewables. The survey of energy usage intensity (EUI) of the town owned buildings showed that the two schools scored very well but the police station and highway garage rated poorly. There are plans to replace or modify these two buildings in the near future. The other buildings were rated at an average level of energy consumption. The program will continue the effort to reduce energy uses by better sealing and insulating the structures, installing more efficient lighting, installing motion detectors to turn the lights off when not in use, and installing some alternative energy systems (see Figure 16).
- Other notable Town projects include a new park and ride facility with solar powered parking lot lights, as well as a wind turbine in Geprags Park that produces about 10% of the energy used at the town library.
- Renewable energy resource use is very evident in Hinesburg. NRG Systems, a global leader in wind measurement technology based in Hinesburg, is home to a wind turbine and one of the largest solar installations in Vermont. CVU, the regional high school, is heated by wood chip boilers. In the residential sector, the green built South Farm development (New South Farm Road) homes have solar roofs and heat with geo-thermal systems. Installations of solar technology (especially solar panels mounted on trackers) on existing residential properties are becoming more and more common.
- Efficiency Vermont, created by the Public Service Board in 1999 consolidates the energy conservation programs formerly offered by individual utilities into one state wide energy efficiency utility. Their programs are financed by the Vermont’s electric utilities through an “energy efficiency charge” that is passed on to rate payers. To find programs available to Hinesburg residents go to www.encyvermont.com.



NRG Systems Solar Tracker Array, photo by Carrie Fenn



Solar lights at Town park & ride, photo by Carrie Fenn

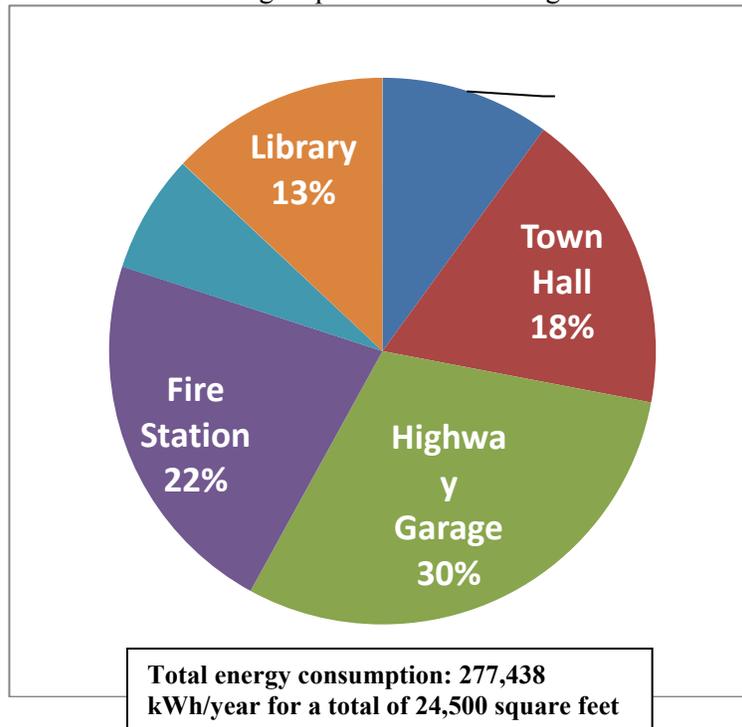
Municipal wind turbine at Geprags Park, photo by Carrie Fenn



South Farm solar homes, photo by Alex Weinhagen

Figure 16: Municipal Building Energy Use (All Fuels), 2006-2008 Annual Average

Source: Hinesburg Department of Buildings & Facilities



Goals and Recommendations

7.1) To develop a comprehensive understanding of municipal greenhouse gas emissions.

- a) Use established EPA Municipal Energy Challenge benchmarking as baseline upon which to set measurable goals for emission reductions.
- b) Set emissions reduction targets for the Town to meet by 2015.
- c) Collaborate with the Hinesburg Energy Task Force to identify strategies for the Town to meet reduction targets and to develop a program and strategies for achieving those targets.
- d) Encourage the use of life cycle costing by the town in evaluating energy related capital expenditures as appropriate.

7.2) To support the development of alternative energy sources and business opportunities.

- a) Encourage the use of renewable energy systems for onsite electricity generation or to add to the power grid.
- b) Investigate the creation of Town offered tax incentives or loans that support the purchase of renewable energy systems by residents. The Property Assessed Clean Energy, or PACE program allows the town to borrow funds under favorable terms to lend to landowners to install renewables and make energy efficiency improvements, and to repay the funds on the property tax, at no cost to other taxpayers..
- c) Promote smart grid systems
- d) Support local agriculture to maintain and increase the supply of locally produced food.

7.3) To preserve any existing or potential renewable or solar energy resource.

- a) Explore amending zoning and subdivision regulations to protect open areas on a building's southern exposure to make sure landscaping and new structures do not interfere with valuable solar gain.
- b) Encourage plantings that both allow for solar heating in the winter and provide shade in the summer.
- c) Work with energy professionals to find suitable sites for wind turbines and solar panels that do not obstruct scenic views or cause non-reparable damage to the land.
- d) Encourage ongoing forest management to maintain a local source of fuel wood (biomass).

7.4) To support the creation of a Hinesburg Energy Commission.

- a) Assist in the execution of Town Plan energy goals and recommendations.
- b) Monitor and progress toward reduction goals
- c) Identify federal and state incentives to support energy conservation efforts and efficiency improvements.
- d) Conduct community outreach to share incentives for energy conservation and efficiency improvements.

7.5) To encourage a balanced approach between the placement of utility services and the character of the rural and village areas.

- a) Continue to require new utility lines serving end users be underground, barring site limitations that make underground lines impossible. Seek to relocate existing above ground lines underground within the village core, especially along the "main street" portion of Route 116 from Mechanicsville Road to Friendship Lane.

- b) Participate in public review processes (e.g., via the Public Service Board) related to any substantial improvements to VELCO's transmission lines. Seek to preserve the Town's rural character while recognizing the important function these transmission lines serve.
- c) Encourage cooperation between the town and Green Mountain Power to find a suitable site for a substation that would increase power supply and reliability so that adequate electric power is available for both new development and three phase service for the Industrial One Zone in South Hinesburg.

7.6) To reduce residential, commercial and municipal energy use of Town.

- a) Maximize the energy efficiency in town owned buildings and vehicles.
- b) Promote the use of energy efficient lighting, appliances, automatic set-back thermostats and motion detecting light controls to save energy.
- c) Promote the services of Efficiency Vermont, the state owned energy efficiency utility.

7.7) To reduce transportation related energy demand.

- a) Promote cost-effective energy efficiency in future transportation planning.
- b) Increase the efficiency of all town vehicles.
- c) Consider bicycle paths, pedestrian walkways, and mass transportation access in the review of all proposals for commercial development and new Town facilities.
- d) Encourage compact development within the Village Growth Area with appropriate sidewalks and paths, with bicycle racks that allow non-motorized travel to jobs services, and recreation.
- e) Promote additional park and ride facilities to be built in the North and South ends of the village to promote carpooling.
- f) Promote more awareness of the community carpool program.
- g) Limit development in the least accessible rural areas of the town to minimize reliance on private automobiles.
- h) Support the efforts of the Hinesburg Rides committee to bring bus service to town through CCTA.

8. OTHER RESOURCES/ISSUES

8.1 Historic Resources

The Vermont Division of Historic Preservation's Historic Sites and Structures inventory for Hinesburg reflects the early commercial and residential pattern of development in the town. This list, as well as maps showing the locations of these structures, may be found in the Chittenden County Regional Plan. Two areas, Mechanicsville and the Village, contain the highest concentration of historic buildings with Silver Street being the site of several historic structures as well. Outside of these areas most of the historic buildings are farmhouses dating from the mid 19th century.

A study conducted in 1990 inventoried changes to the historic structures throughout Hinesburg and found that 66% of the buildings had been changed between 1977 (when the State's historic buildings register was compiled) and 1989. Although many of these changes, such as siding, windows, porches and decks, were minor in themselves the study pointed out that the overall impact was large. Of equal, or greater, impact to these historic structures is the changing context in which they exist. This impact has been especially noticeable as the Town moves from its past pattern of development to a more suburban look. Construction in fields surrounding the Village and in outlying areas, new housing complexes and industrial development, and the demolition of historic structures all contribute to the change in context that erode the historic resources of the Town. Because most of these impacts affect more than historic structures, meeting the social, economic and environmental goals of this Plan will help preserve the Town's historic resources as well.

An inventory of the Town's archeological resources has not been conducted. Generally, archeologically sensitive sites may be identified by certain environmental settings, particularly areas along watercourses and lakes. When these sites are identified, either through a town wide inventory or individual development reviews, they may be managed by leaving the area undisturbed or by conducting an archeological survey to pinpoint and assess the resource.

8.2 Light Pollution

Goals and Recommendations

8.2.1) The Town recognizes the value of the night sky, and feels it is important to ensure light pollution doesn't unnecessarily impact this resource. Furthermore, the Town recognizes the importance of personal privacy with regard to excessive light from adjacent properties. The Town should explore ways to minimize light pollution that also maintain public and private safety and convenience with regard to outdoor lighting.

8.3 Wind Energy/Telecommunications Towers

The Town should enable economic opportunities through the use of telecommunications and wind energy technologies, and support the enhancement and expansion of such technologies and networks when such facilities do not have significant adverse environmental, health, or aesthetic impacts.

8.4 Solar Energy Technologies

The Town should enable economic opportunities through the use of solar energy technologies, and support the enhancement and expansion of such technologies and networks when such facilities do not have significant adverse environmental, health, or aesthetic impacts.

9. IMPLEMENTATION

A Town Plan, by nature, offers wide-ranging recommendations on a variety of issues affecting a town. Without specific implementation efforts, these recommendations may remain no more than well-intentioned general goals. This chapter of the plan suggests specific actions, responsible parties, and timelines for many of the goals and recommendations from earlier chapters. These lists are not intended to cover all possible actions by the town. However, it does offer some of the more important steps that may be taken to implement this plan.

Top Priority Goals & Recommendations

(NOT listed in priority order – i.e., all listed constitute top priority goals & recommendations)

- Develop permanent zoning for the 15.4-acre Saputo property (now under interim zoning) in order to encourage and allow for uses that will bring value to the community (particularly economic development and employment) and be consistent with the surrounding mix of residential, commercial, and civic uses. (3.2.5b, 3.3.1d)
- Create a clearer system for determining allowed development density for the rural areas that gives everyone more predictability in the review process, while helping retain natural resources and important farm and forest lands. Refine and fine tune this system as natural resource assessments improve, priority resource areas are identified, and as a Town Greenspace Plan is developed. (3.4.1b, 3.4.3b, 3.4.4b, 4.9.1)
- Study the current and future impacts of storm water runoff on the town's surface waters, and consider writing tighter provisions in the regulations. Consider innovative and "low impact development" techniques that help minimize stormwater runoff. Since roads are a major contributor to stormwater runoff, start these efforts with Town and private roads (3.2.8f, 4.3.2b)
- To encourage affordable and reasonably priced housing, in part by pursuing opportunities to bring affordable housing units to Hinesburg, with consideration of impacts to public services. (2.2.1)
- To guide transportation program maintenance and improvement to mitigate increasing traffic congestion (especially on the Route 116 corridor within the village) and bolster economic development, while also supporting efforts to promote ridesharing, public transportation use, and other alternative transportation options. (6.1g, 6.2a,6.3)
- Evaluate Town recreational needs, and create a strategic plan for the future that includes present and desired future programs. (5.4, 5.4.1b)
- Require adequate vegetative buffers and erosion control along rivers, streams, and lakes to protect water quality, allow natural channel modification, and protect buildings. Consider differentiating buffers based on land use. (4.3.1a)
- Improve existing and future transportation network connectivity for pedestrians and vehicles. Develop policies and incentives, which encourage developers to plan for and create interconnected transportation networks as part of future development. Evaluate improvements to selected Class IV roads to function better as recreation and alternate transportation paths as components of the town-wide trail network. (5.4.1j, 6.4c, 6.5e, 6.6a)

- Develop zoning policies and bylaws which allow open space enterprises such as, but not limited to: community farms, farm-based bed & breakfasts and event-hosting facilities, cross-country ski facilities, game preserves or similar businesses. (3.4.6b)
- Encourage sustainable economic development in Hinesburg that embodies the values expressed in this Plan, benefits of which include job creation, broadening of the tax base, and a local & sustainable economy. Although mentioned in various sections (e.g., 1.5 – Goals 2.3 & 2.4; 3.2; 3.3), economic development deserves more attention in the next Town Plan – perhaps as a new standalone section with more specific goals and recommendations.

Overall Implementation Strategy

Actions, Responsible Parties, and Timeline	Goals and Recommendations to be Addressed
Update Zoning and Subdivision Regulations; Planning Commission with subsequent review by Selectboard; ongoing.	2.2.1.a) Support higher density housing, especially affordable housing, in the Village Growth Area.
	2.2.2.a) Provide higher densities for affordable housing designed for the elderly or disabled in the Village Growth Area.
	2.2.4.a) Modify zoning regulations for existing mobile home parks by permitting density bonuses in consideration of corrections to long-term deficiencies.
	2.2.5.d) Continue to explore existing and innovative zoning techniques to allow greater flexibility in the configuration of developments, and to preserve scenic, agricultural, and other natural resources.
	2.2.5.e) Consider density bonuses as part of PUDs as an effective tool to encourage the development of affordable units.
	3.2.5.b) Develop permanent zoning for the 15.4-acre Saputo Property.
	3.2.7.a) Consider modifying Village design standards in the Zoning Regulations to include open space preservation along the periphery of the village area.
	3.2.7.b) Explore the creation of a new zoning district around the Village with appropriate design standards and/or where innovation and clustering is encouraged in order to preserve open spaces.
	3.3.1.a) Review zoning districts and uses with a goal to foster the establishment of businesses that support the residential growth taking place in Hinesburg. Also see recommendations b-f) under 3.3.1.
	3.3.2.a) Review zoning regulations with a goal to continue to encourage home-based and cottage businesses.
	3.4.1.a) Incorporate practices for area-based zoning, transfer-of-development rights and clustering into Hinesburg’s zoning and subdivision regulations to encourage residential clustering, protection for access to and utilization of natural resources, and protection of rural vistas and wildlife corridors. Also see recommendations b-f) under 3.4.1.
	3.4.2.a) Research the creation of a village-edge zoning district or village-edge overlay to steer development through the use of clustering, area based zoning and transfer or purchase of development rights.

Overall Implementation Strategy (cont'd)

(Continued) Update Zoning and Subdivision Regulations; Planning Commission with subsequent review by Selectboard; ongoing.	3.4.3.a) Examine density in agricultural areas (e.g., AG district) for compatibility with the conservation of agricultural lands. Implement zoning using a form of area-based density for this district, which may consider changing the overall density. Also see recommendations (b-g) under 3.4.3.
	3.4.4.a) Examine density in forested areas (e.g., RR1 & RR2 districts) for compatibility with the conservation of forest lands. Implement zoning using a form of area-based density for these districts, which may consider changing the overall density.
	3.4.4.b) Develop zoning techniques for the preservation of Hinesburg’s forest resources. The techniques may include a separate forestry district, overlay districts for important forest land or other development and management standards specific to forest preservation.
	3.4.5.a) Revise zoning bylaws to create one or more conservation districts. Lands to be included within this district may include the Town Forests, Fred Johnson Wildlife Management Area, and other publicly owned lands to be protected from development or inappropriate use. Also see recommendations b-c) under 3.4.5.
	3.4.6.b) Develop zoning policies and bylaws which encourage land-based enterprises such as but not limited to community farms, farm-based Bed & Breakfasts and event-hosting facilities, cross-country ski facilities, game preserves or similar businesses.
	4.3.1.a) Require adequate vegetative buffers and erosion control along rivers, streams, and lakes to protect water quality, allow natural channel modification, and protect buildings. Consider differentiating buffers based on land use. Also see 4.3.1.b.
	4.6.2 & 4.6.3 Revise flood hazard regulations to address fluvial erosion hazard areas. Review and revise regulations as needed to ensure continued enrollment in the National Flood Insurance Program.
	4.8.1.b) Develop strategies, including development review standards in zoning and subdivision regulations, to protect ridgelines and hillsides.
	4.9.1.a) Identify and map priority natural resources and consider including them as overlay districts within the zoning regulations. The overlay districts will provide more specific guidelines for the protection of certain resources, including agricultural land, regardless of the zoning district within which they are found.
	7.3.a) Explore amending zoning and subdivision regulations to protect open areas on a building’s southern exposure to make sure landscaping does not interfere with valuable solar gain.
	7.7.g) Limit development in the least accessible rural areas of the town to minimize reliance on private automobiles.
	3.4.1.c) Focus rural area development review on resource protection first, with development designed to integrate into and benefit from resource areas.

Overall Implementation Strategy (cont'd)

Actions, Responsible Parties, and Timeline	Goals and Recommendations to be Addressed
Apply development review standards; Development Review Board; ongoing.	3.4.1.e) Implement PUD and subdivision policies that encourage the creation of mixed lot sizes in a single development as well as the preservation of medium and larger size parcels for active forestry and agriculture, as well as small to medium scale agricultural uses.
	3.4.3.d) Promote development in areas that are least disruptive of agricultural operations, maintain lands' eligibility for tax abatement programs and reduce conflicts between agricultural operations and residential areas.
	3.4.4.c) Direct development involving forest resources to land that is not suitable for active timber management because of poor soils, existing forest conditions or size and location of the parcel. Also see recommendations d-e) under 3.4.4.
	4.3.2.a) Insure clean and healthy surface water by making sure that storm water runoff doesn't adversely affect streams and rivers, and does not exceed their carrying capacity.
	4.7.1.c) When reviewing new development, encourage the preservation of the five critical wildlife habitats (see list in section language).
	4.7.2.b) When reviewing new development, encourage areas separate from housing sites to provide connectivity between forest blocks, riparian corridors, and wetlands.
	4.8.1.b) Develop strategies, including development review standards in zoning and subdivision regulations, to protect ridgelines and hillsides.
	6.3.b) Encourage master planning of undeveloped lands along local arteries to limit road cuts, maximize roadcut visibility / safety and implement appropriate signage.
	6.4.c) Develop the new West Side Road connecting Charlotte Road with Shelburne Falls Road... working with the Saputo Site Redevelopment Committee and private developers...
6.6.a) Develop policies and incentives, which encourage developers to plan for and create interconnected transportation networks as part of future development. Incentives such as town assumption or maintenance of privately developed roads should be considered.	

Overall Implementation Strategy (cont'd)

Actions, Responsible Parties, and Timeline	Goals and Recommendations to be Addressed
Amend Sewer Allocation Policy; Selectboard; ongoing.	2.2.3.a) Promote the establishment of affordable rental and owner-occupied housing within the Village Growth Area through the Town sewer allocation policy.
	2.2.3.b) Use sewer and water allocations to encourage a mixture of housing types and mixed-use developments within the service area.
	3.2.5.f) Explore methods to prioritize Town sewer allocation within the village core and areas designated for expansion (see above). Consider revising the wastewater allocation ordinance so that a percentage of the residential and enterprise (i.e., commercial) allocation is reserved for development in these areas.
	3.2.8.a) Continue to research ways to expand the capacity and efficiency of the Town's sewer treatment facility. Any future expansion should be of a size and scope to facilitate Village growth while preserving the ecological integrity of the LaPlatte River.
Determine Transportation Improvements and Obtain Funding; Selectboard working with developers, the Chittenden County MPO and VT Agency of Transportation; ongoing.	3.2.2.a) Work aggressively with the CCMPO, CCRPC, VTrans, and Hinesburg's State Legislators to implement provisions of the Route 116 Hinesburg Village Corridor Study. Pay particular attention to intersection improvements at Shelburne Falls Road, Silver Street, Charlotte Road, and Commerce Street.
	3.2.2.b) Redesign the main portion of Route 116 through the Village to make it safer, more pedestrian friendly, more efficient, and more attractive. Overall, the roadway (traveled area plus shoulders) should be narrowed to reduce speeding, eliminate passing on the right, and provide more room in the right-of-way for pedestrian infrastructure, street trees, etc. Additional features to be considered should include: curbing, more sidewalks, bicycle lanes, street trees, improved lighting that is pedestrian friendly and attractive, improved signage.
	3.2.4.a) Develop the new West Side Road connection Charlotte Road with Shelburne Falls Road as documented in the official town map...
	3.2.3.b) Make modifications to the Official Map as necessary to ensure village sidewalks and paths are connected and linked to significant destinations outside of the Village.
	3.3.3.a) Improve pedestrian walkways and vehicular traffic flow to help current and future businesses attract and retain customers.
	6.2.a) Work with the State to improve traffic light timing and sequencing to reduce congestion in the Route 116 corridor within the village.
	6.2.b) Work with the State to Implement the Route 116 Scoping Study Recommendations for Route 116 from Buck Hill through to Silver Street, as well as curbing, roadcut limitations, sidewalks, parking, utility and street tree recommendations throughout Hinesburg Village. These recommendations address traffic calming through street and intersection narrowing, environmental factors and intersection modification. Also see recommendations c-e) under 6.2.

Actions, Responsible Parties, and Timeline	Goals and Recommendations to be Addressed
	6.4.a) Complete the construction of sidewalks and pedestrian crossings on the east and west sides of Route 116 in the commercial and village districts between Commerce Street and Lyman Meadows Road.
	6.4.c) Develop the new West Side Road connecting Charlotte Road with Shelburne Falls Road as documented in the official town map...
	6.5.e) Evaluate improvements to selected Class IV roads to function better as recreation and alternate transportation paths as components of the town-wide trail network.

Overall Implementation Strategy (cont'd)

<p>Prioritize Town Expenditures for New or Upgraded Services/Facilities; Selectboard; ongoing</p>	3.2.2.c) Assess the pros and cons of the Town taking over the Village portion of Route 116 (e.g., Buck Hill Rd to Commerce St) from the State.
	3.2.3.c) Continue to make regular improvements to pedestrian infrastructure using Municipal, State, and Federal funds.
	4.3.2.c) Consider establishing a storm water utility responsible for a town-wide systematic approach to storm water management.
	5.4.2.a) Locate space for and develop at least two or more adult, full-size playing fields plus multi-use space.
	5.4.2.b) Conduct a study of current and future recreational needs and identify locations for parks, fields and other facilities, paying particular attention to high density residential areas.
	5.5.1 Keep the capital budget and plan and public safety impact fees up to date...
<p>Prepare natural resource inventories and an open space master plan; initiated by Conservation Commission; ongoing.</p>	3.4.7.a) Complete natural resource and wildlife habitat inventories for use by the public, the planning commission and the DRB in creating and evaluating master plans, subdivisions and PUDs.
	4.3.3.a) Use inventories of the Lewis Creek and LaPlatte River corridors to identify existing features that would contribute to a greenway network. Separate greenway features that provide connectivity for wildlife habitat from trails and other human movement.
	4.4.1.a) Create a groundwater conservation overlay district that includes source water protection areas. Development in these areas should receive a higher level of scrutiny. Review the data already collected and supplement with field studies, if needed.
	4.5.2.a) Include wetlands as a component of a greenway network. Separate greenway features that connect wetlands and areas for wildlife habitat from trails and other human movement.
	4.7.2.c) Develop a greenway network with wildlife habitat corridors separate from trails and human movement.
	4.9.1) Develop a greenspace plan for the town. Also see recommendations a-e) under 4.9.1.

APPENDIX A: TOWN HISTORY

Hinesburg was granted a town charter on June 24, 1762, by Benning Wentworth, Esq., Governor of New Hampshire, to 65 persons, most of whom were from New Milford, Connecticut. One of these was Abel Hine who acted as proprietor's clerk for many years and in whose honor the name "Hinesburgh" was derived. The Town of Hinesburgh formed a perfect square enclosing a tract of 36 square miles. The town was divided between the low flat lands of the western portion and the eastern hill section.

Before the Revolution the town was occupied only by the Isaac Lawrence and Abner Chaffee families. After the war, Mr. Lawrence was quoted as stating that "for one season the only food to eat was dried pumpkins with a little mouldy flour that the children scraped from inside of a wet barrel." They sold out to Epaphras Hull and moved to Canada. By 1785 a fifth family, Mr. and Mrs. George McEuen, moved to Hinesburg on an ox-drawn sled. There were very few roads to the area. Much of the time they followed marked trees and had to clear trails. For lack of a local doctor, Mrs. McEuen acted as midwife to the first child born in Hinesburg. The boy was Hine Meacham.

Ebenezer Bostwick opened a pottery shop in 1790. This was the beginning of a long history of small industries in Hinesburg. There were at various times saw mills, woolen mills, creameries, cheese factories, grist mills, cabinet makers, carding and clothing mills, distilleries, an ashery, an iron foundry, a starch factory, box making factories, excelsior manufacturing, blacksmith shops, wagon shops, etc. The site of the present International Cheese Company has previously served as a grist mill and skating rink. In 1858 there was a stove and tin shop where the old fire station now stands. The present Lantman's IGA Store, built in 1860 by Elijah Peck, was originally the first tavern in town. Some of the industries collapsed, a few burned, one stopped because of the 1837 financial crash, and many frequently changed ownership.

Most of the industries made use of the vital water power chiefly afforded by the Pond Brook which ran down from Upper Pond, or Hinesburg Pond, now called Lake Iroquois. Early in the Town's history a dam was built at the outlet of Hinesburg Pond to provide water power for a saw mill below it. Before the present dam was built the water area was smaller and island larger. In 1867 the saw mill moved down just below the Reservoir, now named Lake Sunset, and a dam was built there. The area previously was covered with forest growth. In 1882 it is recorded that Spruce Island, lying near the eastern side of Pond Brook, was quite a resort for picnic parties. The brook joins the LaPlatte River in Hinesburg which empties into Lake Champlain at Shelburne. Baldwin's Brook, a stream located about one and a half miles southeast of the Lower Village, was named for Edmund and Orange Baldwin, who in 1798 built a successful saw mill on the second of three high falls in the brook.

The prospering town emerged in roughly three individual sections. "Mechanicsville" formed the northern part of Hinesburg on Pond Brook. It was the setting for many mills, factories, shops, and about 28 homes in the late 1800's. Formerly it was called Patrick and Murray Corners, after Orrin Murray and John S. Patrick who formed a partnership and built, bought, rebuilt, and sold various mills, factories, and shops from 1823 to 1857. At various times it was also called Factory Corners, Factory Village, and Upper Village. One church and six homes made up the northeastern section of Hinesburg called "Rhode Island Corners" because those originally settling there were from Rhode Island. The "Center Village", or Lower Village, held many shops and stores, the Masonic Hall, a high school, about 400 inhabitants, and four churches.

The Hinesburg Congregational Society, located in the Village, was organized by Rev. Nathan Perkins of West Hartford, Connecticut, May 20, 1789, with eleven members. Their first church was built of wood in 1800 and replaced with a brick church in 1839. In 1930 it was given to Patriot Lodge and remodeled for a lodge and dining room. In 1950 it burned and was replaced by the present Masonic Temple in 1954. The Baptist Church of Hinesburg was organized in the Village on May 30, 1810, by Pastor S. Churchill and eight members. The wooden church was built in 1826 and outlasted two other churches later built of

brick. A Free Will Baptist Church was formed in 1817 with 19 members, all from Rhode Island Corners. A church was built in their neighborhood in 1859, to which Moses Dow financially contributed a substantial amount. Nearby Dow Hill is named for him. The Methodist Episcopal Church was organized by Rev. Noah Levens in 1831 with ten members. The church was built in 1857 on the site of the present Community Park and burned down in the early 1900's. The Christian Advent Church organized by Rev. A.A. Hoyt on August 3, 1874 started with ten members. St. Jude's Parish was organized in 1944, with the members meeting in Woodman's Hall until a church was built in 1948. That building was replaced by the current church in 1990. The church's first settled priest was Rev. John Mahoney, who arrived in 1946. In 1915 the Congregationalists, Methodists, and Baptists formed a federation and met in the Baptist Church, currently the United Church of Hinesburg.

In 1800, thirteen common schools having three male and sixteen female teachers and 327 pupils existed in Hinesburg. Mr. C.G. Peck was superintendent. In addition, the Hinesburg Academy was established on November 12, 1824. It was housed in a two-story structure in the center of the Village. Noted for its mineralogical collection and reference library, it was attended by people from all over Vermont. In 1871 the Academy became the town high school until it was removed and used as a garage when a new high school was built in 1915; that high school building is currently part of the elementary school. In 1947 the Sarah Carpenter Memorial Library was erected on the former Academy site. In 1810 a literary society was formed in the town. It greatly encouraged debates, lectures, and essays on topics of science, literature, politics, history, and religion. Its functions were absorbed by the Academy around 1860.

In 1803 the first official post office emerged. The mail was delivered on foot. Before the coming of automobiles, a horse-drawn stage carried mail and express to and from Burlington once a day. For many years a half-mile horse-racing track was maintained at Lower Village. In the winter this sport was enjoyed on the Reservoir and Hinesburg Pond. Other entertainment was provided by the 12 piece Hinesburg Cornet Band which rehearsed every Saturday in the Town Hall beginning in 1863. On the corner of Main Street and Friendship Avenue (now Route 116) was the Whipping Post used before prisons were built and when courts met infrequently. It was also used as a bulletin board. A debtor's jail was across the street. The most notable crime in Hinesburg occurred on October 3, 1868, when Henry Welcome murdered Perry Russell. After admitting guilt, he was hanged at Windsor, Vermont. The first hard surfaced road was made through part of the main village in 1890. In 1901, the big event was the raising of the present Town Hall.

In 1790 the population of Hinesburg was 454, and in 1800 it was 1330. For this period Hinesburg can boast a higher population than existed in Burlington. In 1850 the population reached its peak with 1834 residents, but declined to 954 in 1925. In the 1800's, Hinesburg was depicted as a very pleasant town with neat shops and homes, plank and gravel sidewalks with railings, many maple and locust trees, and very cordial inhabitants.

GLOSSARY

Act 250: Vermont Land Use and Development Law 10 V.S.A. Ch 151; the state environmental review process conducted by a District Environmental Commission to consider a proposed development's impact using 10 established criteria.

Affordable housing:

(A) Housing that is owned by its inhabitants whose gross annual household income does not exceed 80 percent of the county median income, or 80 percent of the standard metropolitan statistical area income if the municipality is located in such an area, as defined by the United States Department of Housing and Urban Development, and the total annual cost of the housing, including principal, interest, taxes, insurance, and condominium association fees is not more than 30 percent of the household's gross annual income; or

(B) Housing that is rented by its inhabitants whose gross annual household income does not exceed 80 percent of the county median income, or 80 percent of the standard metropolitan statistical area income if the municipality is located in such an area, as defined by the United States Department of Housing and Urban Development, and the total annual cost of the housing, including rent, utilities, and condominium association fees, is not more than 30 percent of the household's gross annual income.

Building envelope: A specific area on a lot, delineated on a survey or plan, within which some or all structures shall be located.

Build-Out Analysis: A study that examines an area's capacity for development.

Cluster Development: A development design technique that concentrates buildings in specific areas on the site to allow the remaining land to be used for other purposes (e.g., recreation, common open space, and preservation of environmentally sensitive features, community facilities); often associated with a planned unit development (PUD).

Core Wildlife Habitat: Significant forest and wetland areas that are removed from roads, house sites, and other similarly developed areas as shown on map 14 of the Town Plan. Specifically, a subset of the overall habitat blocks delineated by the VT Fish and Wildlife Department in their 2011 "Habitat Block and Connectivity Analysis" dataset:

1. Habitat blocks of 700 acres or more – these blocks comprise the largest and most contiguous habitat areas.
2. Interior portions of smaller habitat blocks that are at least 100 meters from the edge of the habitat block (typically the edge of human disturbance).

Note – The extent of these core wildlife habitat shall be as described above and as conditions on the ground existed as of 9/9/2013 (date of Town Plan adoption), such that incremental reductions in habitat blocks do not result in currently mapped habitat blocks losing the core designation - e.g., a large block becoming less than 700 acres, or the reduction interior area of a smaller block due to edge encroachment.

Cottage Business/Industry: A commercial, manufacturing, or light industrial use such as a woodworking shop, arts/crafts studio, food processing kitchen, or computer service shop, that operates on the same scale and intensity as a home occupation but is a principal use on the lot. See Zoning Regulations for a more detailed description.

Deer Wintering Area: White-tailed deer in Vermont live near the northern limit of their range in eastern North America. To cope with Vermont's severe climatic conditions, deer have developed a survival mechanism that relies upon the use, access, and availability of winter habitat. These habitat areas are known as deer wintering areas, deer winter habitat or, more commonly, 'deer yards.' Deer winter habitat is mapped by the VT Fish and Wildlife Department and defined as areas of mature or maturing softwood

cover, with aspects tending towards the south, southeast, southwest, or even westerly and easterly facing slopes. It is shown on Map 9 of the Town Plan.

Flood Hazard Area or Special Flood Hazard Area: The land in the flood plain within a community subject to a one percent (1%) or greater chance of flooding in a given year. These areas are mapped and designated by the Federal Emergency Management Agency (FEMA).

Floodplain: Any land area susceptible to being inundated by water from any source.

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot at any point. Please note that Special Flood Hazard Areas and floodways may be shown on a separate map panels.

Geographical Information Systems (GIS): A computerized mapping system utilizing datasets that have geographic location information.

Growth Center: An area providing for a concentration of housing, commercial services, employment opportunities and government uses, and served by basic infrastructure.

Home Occupation: A home-based business that does not change the character of the neighborhood. See Zoning Regulations for a more detailed description.

In-fill: New development that increases the density within partially built up areas; typically on vacant parcels or unused portions of other parcels.

Mixed-Use: A mixture of residential and non-residential uses within a given development, parcel, or area.

NWI Wetlands: Wetlands delineated via aerial photography interpretation through the National Wetland Inventory (NWI) by the U.S. Fish and Wildlife Service. Generally, this delineation is the basis for State and Federal wetlands regulations. However, these wetland locations are for general planning purposes only, and are not suitable for site-specific design or planning, which requires on-the-ground wetland delineation.

Overlay District: A zoning district that is superimposed on other zoning districts, typically due to its town-wide extent. Often used to identify natural features that are not restricted to a single location or area.

Planned Unit Development (PUD): A method of innovative land development defined in the Hinesburg Zoning Regulations. A PUD allows a different arrangement and/or density of housing units than otherwise possible under the Zoning Regulations. See Zoning Regulations for a more detailed description.

Plat: Otherwise known as a survey. The plat represents the final drawings on which subdivisions are presented to the Development Review Board for approval and which, if approved, shall be filed for record with the Town Clerk.

Rare, Threatened, or Endangered Species Habitat & Significant Natural Communities: Known locations for these habitats are documented via the Heritage Database that is maintained by the VT Fish and Wildlife Department. This database does not represent a complete town-wide inventory, so other undocumented occurrences are possible and should be considered if properly identified. These data are

made available to municipalities for planning purposes, and are one of the many Geographic Information System (GIS) datasets utilized in Hinesburg's development review process.

Riparian: Of, pertaining to, or situated on, the edge of the bank of a river or other body of water.

Transfer of Development Rights (TDR): The transfer of the right to develop or build, expressed in dwelling units per acre, from land in one district to land in another district; a relatively new land development tool used to preserve open space by shifting development to areas better suited for growth.

UMASS Wetlands: Wetlands delineated by the University of Massachusetts via a project commissioned by the Hinesburg Conservation Commission in 1997. This delineation was done using 1993 aerial photography, and provides a more comprehensive and detailed wetland delineation than the National Wetland Inventory data provided by the federal government. These wetland locations are for general planning purposes only, and are not suitable for site-specific design or planning, which requires on-the-ground wetland delineation.

Village Growth Area: An area comprised of the following zoning districts: Village, Village NW, Village NE, Commercial, Industrial 3, Industrial 4, Residential 1, Residential 2. See section 3.2 of this plan for more details, and section 3.1 of the Zoning Regulations.

Watershed: An area of land that drains water, sediment, and dissolved material to a common outlet at some point along a stream channel or water body.

Wetland: For the purpose of this plan, the definition of a wetland, as well as the types of wetlands actually regulated, shall be the same as the State of Vermont wetland rules and regulations. A wetland is an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands are delineated pursuant to protocols established by the Federal and State government, which focus on soil type, hydrology, and vegetation. Class 1 and 2 wetlands tend to be larger, more significant wetlands and are regulated by the State. Class 3 wetlands are smaller wetlands that may or may not be regulated by the State depending on their significance and proximity to other wetlands. Regulated class 3 wetlands are functionally intact enough to provide for wildlife habitat, water quality, or flood prevention. Vernal pools fall into this category. Unregulated class 3 wetlands do not serve these functions in a meaningful way, typically due to: small size, isolation from other wetlands and hydrological features, or past land use practices that have altered the hydrology of the area (e.g., agricultural drainage ditches, tiles, etc.).

Wildlife Corridor: Stream/riparian, wetland, or forested areas that provide connections between patches of significant wildlife habitat types listed in sections 4.7 and 4.8 of the Town Plan – see map 14 from the Town Plan. Stream/riparian and wetland wildlife corridors are easily identified while upland forest corridors can range from highly constrained to more diffuse. The width and effectiveness of wildlife corridors vary widely, both being highly dependent on the wildlife species and habitat type in question. Smaller, unmapped wildlife corridors (particularly smaller stream/riparian corridors) should also be considered if their importance is substantiated by scientific research study or field assessment by a qualified expert (e.g., VT Fish and Wildlife assessment, university research, etc.).