

CLARENDON TOWN PLAN



Photo courtesy of John David Geery

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INTRODUCTION AND OVERVIEW

Clarendon's new Town Plan is a framework and guide for reaching community goals. This introduction explains the purpose and use of a Town Plan and describes the steps followed in its preparation. The statutory authority for Town Plans and some of the important statutory requirements are also mentioned.

Preparation and Use of the Plan

The primary purpose of this Town Plan is to create a blueprint that shows what people want Clarendon to be like in the future and to set out goals, objectives, and priorities for action that will help the community's hopes for the future to be realized.

It also attempts to balance the wide range of competing interests and demands found in the Town, coordinate the pattern of development and the use of important natural resources, and address both current and long-term needs.

The Plan can, and should, be used in a variety of ways. First and foremost, the Plan should be a basis for community programs and decision-making. For example, it should influence the Town's capital budget, community development efforts, and natural resource protection initiatives. As required by law, it should also serve as a foundation for local land use controls such as zoning, subdivision, and health regulations. Furthermore, the Plan should be given full effect in all appropriate regulatory proceedings, such as Act 250 and the Act 248 (Certificate of Public Good) process.

Because it is not able to address every important local issue fully, the Plan should also be looked at as a source of topics for further study. Some aspects of the Plan are based on limited evaluations or on evaluations that should be updated. Finally, the Plan should be used as a source of local information. It contains information that can be valuable to citizens, businesses, and members of local boards and commissions.

Preparation of the Plan

Responsibility for the preparation of the Town Plan rests with the Planning Commission. In the course of developing the Plan, the Planning Commission and the town contracted for technical assistance with the Rutland Regional Planning Commission. After reviewing the Rutland Regional Plan, the Commission finds that the Clarendon Town Plan is compatible with the Rutland Regional Plan.

This plan has been updated using 2010 Census data and other relevant and up-to-date information. Additional information was gathered by distributing a community-wide survey to gain feedback on town wide interests and concerns. This activity aided in the updating of the Plan's various elements and in the redrafting of the Town goals, objectives and strategies laid out in this Plan.

Statutory Authority and Requirements

Preparation of Town Plans is guided by Chapter 117 of Title 24, Vermont Statutes Annotated. This section of law specifies not only what a Plan may or must contain, it also specifies how a Plan must be adopted.

As for the content of a Plan, section 4382(a) requires that all plans contain 12 items or elements. These elements include: a statement of objectives, policies, and programs; a land use plan; a transportation plan; utility and facility plan; a statement of policies on the preservation of rare and irreplaceable natural areas; an educational facilities plan; an implementation program; a statement indicating how the Plan relates to development trends in adjacent communities; an energy plan; a flood resilience plan, economic development plan, and a housing plan. While all 12 elements must be incorporated into a Plan, communities are not prohibited from combining closely related elements, such as the element for educational facilities and the element for other utilities and facilities.

In addition to containing all the required elements, plans must also be consistent with a series of statutory goals listed in Section 4302. Consistency with the goals means that the goals have been considered and addressed in the process used to prepare the Plan, not that the Plan include all the goals. Furthermore, where any of the goals do not apply to the Town or are incompatible with it, the Plan need only document the goal's inapplicability or incompatibility with local desires.

CLARENDON YESTERDAY¹

Located south of the City of Rutland, the town of Clarendon has its own distinct history and identity. The first residents of the area were Native Americans, who moved north after the last glacier receded roughly 10,000 years ago. White settlement accelerated after the Crown Point Military Road of 1759 was blazed through the Green Mountains to Clarendon, where it followed the Otter Creek Valley north. European settlers began to farm "The Flats" along the creek and established the village of Clarendon by 1800. West of a ridge that divides the town the Clarendon River provided waterpower for a number of small industries centered in the neighborhood of Chippenhook. In the northwest corner of town a mineral springs became the site of a fashionable resort hotel prior to the Civil War, creating the hamlet known as Clarendon Springs. Clarendon was one of the most prosperous towns in Rutland County. As elsewhere in rural Vermont in the latter 19th century, population in the town declined.

Land Grants Controversy and Early Settlement

The land grants controversy between New York and New Hampshire settlers led to violence in Clarendon, where Ethan Allen and the Green Mountain Boys vandalized the homes of New York grantees in 1773. After the Revolution, most land claims and confiscations were settled, and residents began building permanent dwellings. In 1791 Clarendon was the most populous town in Rutland County with 1,478 residents.

The village of Clarendon developed after 1790 on a low ridge east of the Otter Creek. Farms along the Otter Creek provided the economic base for the social life and commerce of Clarendon village. Contrary to then accepted farming lore that recommended high ground over flood plains, "The Flats" along the creek proved superior for livestock and cash-crop farming. After 1820, some farmers in the area had become quite wealthy.

On the other side of town, the village of Chippenhook on the Clarendon River developed around 1800 with a sawmill, gristmill, tannery, and several workshops. An iron works, which produced stoves, operated until 1817 south of the hamlet on the Clarendon-Tinmouth town line. A rubblestone blacksmith shop and a wood frame cabinet shop in Chippenhook date from this early industrial era. Theophilus Harrington, the Addison County judge who freed a black slave because the owner could not produce "a bill of sale from God Almighty," was a resident of this neighborhood during these years.

¹ This section was adapted from the history of Clarendon included in [The Historic Architecture of Rutland County](#), Curtis B. Johnson, Editor and Elsa Gilbertson, Asst. Editor (Montpelier, VT: Vermont Division for Historic Preservation, 1988) pp. 101-104. Persons interested in obtaining additional information about the history of the town are encouraged to consult the following: [Centennial Year of Clarendon Springs, Vermont](#), Rutland, Vermont: Title and Company, 1876; [Clarendon, Vermont 1761-1976](#), Rutland, Vermont: Academy Books, 1976; and Vermont Historical Records Survey, [Inventory of the Town, Village and City Archives of Vermont, No. 11, Rutland County, Volume 5, Town of Clarendon](#), Montpelier, Vermont: 1940.

As wool growing became the major occupation of Vermont farmers in the second quarter of the 19th century, a new industry came to Chippenhook. In 1826, Daniel Ewing of Pittsford began manufacture of teasels, a tool for carding wool, in the hamlet. In 1830, Russell Fish of neighboring Ira built a rubblestone mill on the river for Ewing. Now in ruin, the wool manufactory site is a small reminder of the extensive Vermont woolen industry of these years.

Suzie Peak, bordering the Ira line, is the highest point in Clarendon, commanding a 360 degree view of a majority of towns in Rutland County with noteworthy views to the south and east of the Tinmouth Channel and the Clarendon River Valley. Clarendon Cave, a large limestone cave consisting of 3 rooms, exists on the east face of Suzie Peak. These caves have been known since the Battle of Hubbardton when it was rumored that residents concealed some of their property in this and other caves in the mountainside to avoid confiscation by the invading British. A large historical Marble Quarry also exists on the east face. Operated in the 1870's to 1880's by William Barnes, the quarry hole is surrounded by large marble block remnants. A Revolutionary War road called the Star Route runs from Manchester to Rutland, also traverses the east face of Suzie Peak.

Resorts, Railroads, Mills, and Quarries

Mineral Springs, already recognized for their restorative powers by Native Americans, were discovered in the northwest part of the town near the Clarendon River in 1776 by Asa Smith, who is said to have been led to the site by a prophetic dream. The first hotel in the springs, The American House, was built in 1798, and it became increasingly popular as a health resort. The Green Mountain House was built by Silas Green about 1820. Capitalizing on the success of the earlier hotel, about 1835 Thomas McLaughlin financed the construction of the large brick Clarendon House hotel.

The completion of the Rutland and Whitehall Railroad through West Rutland in 1850 aided business at the resort by providing a close rail connection for its out-of-state clients, who were mainly from Virginia and the Carolinas. But the Civil War closed the resort while destroying the wealth of its southern clientele. In 1866 McLaughlin sold his hotel at a loss to Byron Murray, who had a smaller hotel, the Murray House built c.1870. Although Murray and his sons enjoyed some success and attempted to expand the focus of the spa, it closed permanently in 1898 when it could no longer compete with more popular resorts in Vermont and elsewhere that offered a greater variety of activities.

The latter half of the 19th century witnessed other changes in Clarendon. The milling settlements of North and East Clarendon increased in size and importance after they became stops on the Rutland and Burlington Railroad in 1849. Three turning mills and a chair factory utilized the waterpower of the Cold River in North Clarendon by 1869, and a number of new homes were built in the village beginning about that time. In the hills east of the village, Hiram B. Spafford ran a number of wood turning shops, building and converting for his own use outbuildings on a farm formerly occupied by his brother Eldad Spafford, a blacksmith.

The small village of East Clarendon had long been the site of a gristmill owned by members of the Kingsley family. After the arrival of the railroad in 1849, the depot served as a loading point for farm and dairy produce, and the hamlet became something of a neighborhood social center. After

a fire destroyed the original mill building, covered-bridge builder Nicholas M. Powers built for John J. Kingsley, a new turbine driven gristmill which operated for over fifty years.

At least two quarries have been operated in the town. The larger of the two, known as the Clarendon quarry, was run by a West Rutland marble company. It was operated in the 1800's, closed, and reopened in 1909.

Agricultural Development

Dairying became increasingly important in Clarendon after the Civil War. Farmers had large dairy barns built to house and milk their profitable herds. Nicholas Powers built a cheese factory next to his home, and a cheese factory and creamery that processed milk from over 360 cows was erected in North Clarendon. Cheese, butter, and grain were loaded at the North and East Clarendon depots. In the 20th century, bulk milk supplanted cheese and butter as the produce of Vermont dairy farms.

The Twenty-First Century

Twenty-first century development in Clarendon largely has been concentrated in North Clarendon, near the intersection of U.S. Routes 7 and 103, at the Rutland-Southern Vermont Regional Airport, an adjacent industrial park, and the 2 megawatt (MW) Clarendon Solar Farm.

Just south of Rutland Town and the City of Rutland in North Clarendon, the town also has seen new development with the growth of retail businesses along U.S. Route 7. The village of North Clarendon remains the unofficial town center with the location of the Elementary School, Community Center, Fire Station, Library and Post Office and has been identified as a potential area for Village Center Designation.

The hamlet of Clarendon Springs has the potential for low impact commercial development which could be aided through a Village Center Designation as well. Chippenhook and the Suzie Peak area remains a small hamlet in the south west corner of Clarendon, situated on the floor of a beautiful glaciated valley surrounded by valued high peak areas. This area provides rich historical and recreational value as well as continuing the tradition of agriculture in the town. Suzie Peak Conservation Area borders with the town of Ira and represents a significant asset for the town of Clarendon.

With this rich historical, natural, and architectural legacy, Clarendon offers a variety of insights into a pace of life from the Route 7 limited access highway, which routes traffic through town to commercial centers and rural agricultural and residential areas. The Town also is interested in adding to its rich historical, natural and architectural legacy by increasing its recreational, conservation and historic resources.

The Southern Vermont Regional Airport is a significant feature in the town. Future airport growth will depend on the continued evaluation of airport design standards to accommodate a more demanding aircraft fleet mix and increased safety and reliability as an airport service area for the central and Southern regions of the state of Vermont.

Agriculture is still an important economic sector in the town of Clarendon. However, the economics of farming in recent years have caused many of Clarendon's farm businesses to make major production decisions which have typically included change in farm size, adoption of new technologies, and new marketing initiatives. Shifting economic and workforce conditions, such as the decline in the number of dairy farms, has freed up good land for other agriculture ventures, such as orchards, vegetables, beef, pork and maple.

Home-based and small sole proprietor businesses have become increasingly prevalent in the town. These types of business represent opportunities for businesses which can then grow to have a positive economic benefit to the Town in the form of increased tax revenue and employment opportunities.

Meanwhile, although the population of Clarendon is growing, overall the population is aging and households are becoming smaller as a result. As reflected in the Town Survey and in public forums, residents fear that the town suffers from a reputation of being anti-business due to a lack of specific economic goals for growth. Recent applications for businesses to use existing infrastructure have met resistance due to a lack of a clear community standard regarding development in the town.

It is a goal of the Clarendon Town Plan to support application for Village Center designations. Village Center designations are an important tool that can be utilized to protect and enhance the characteristics of areas valued by the community. Clarendon, like other Vermont communities, needs to actively manage economic growth to ensure the future of its tax base and quality of life. Economic growth should be targeted for certain areas of the town and discouraged in others to promote a vibrant village center, maximize existing infrastructure, utilize multi-modal transportation mean, and preserve the rural, working and forest lands that surround the town.

CLARENDON TODAY

Clarendon's Population

A thorough analysis of a community's population, housing, and economy is an important feature of any well-written municipal plan. For example, besides helping to determine how much a community has grown, information on population allows a municipality to: estimate whether or not (and if so, how much) it is likely to grow in the future; identify what impacts growth (or lack of growth) could have on its services and land use; and decide how best it might respond to growth trends. Having a community profile is the backbone for land use and economic development issues and policies.

How large is Clarendon's population and how much has it grown?

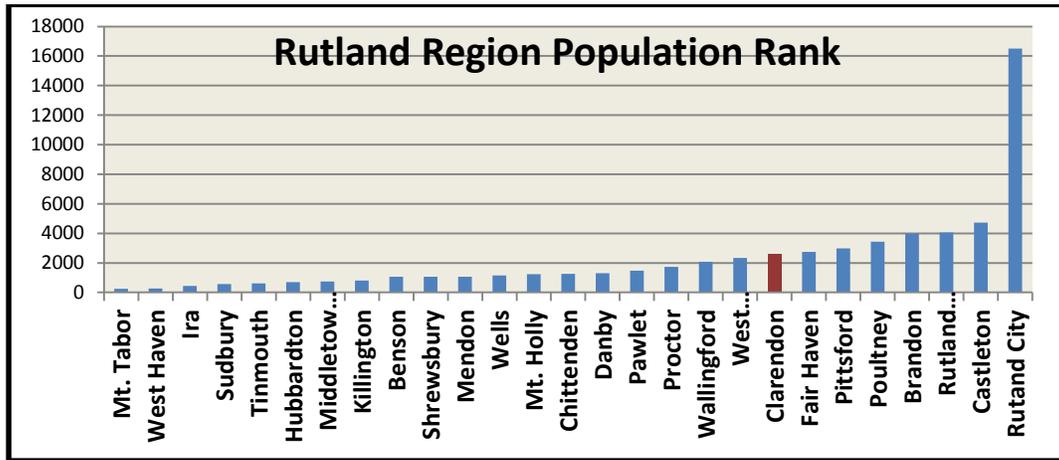
According to the 2010 U.S. Census, Clarendon's population stands at 2,571, the 8th largest (out of 27 communities) in the Rutland Region. The size of the town's population has been declining in the last 20 years; since 1990, Clarendon has lost 10% of its population. This contrasts sharply with the steady growth the town experienced between 1960-1990, at which time the population increased 61.5%, or by an average 58 persons per year. See Table 1 and Figure 1 below.

TABLE 1- Population Change Since 1960

	Year					2010
	1960	1970	1980	1990	2000	
Population	1,091	1,537	2,372	2,835	2,811	2,571
Absolute Change (since 1960)		446	1,281	1,744	1,720	1,480
Percentage Change (since 1960)		41%	117%	160%	158%	136%

Source: US Census.

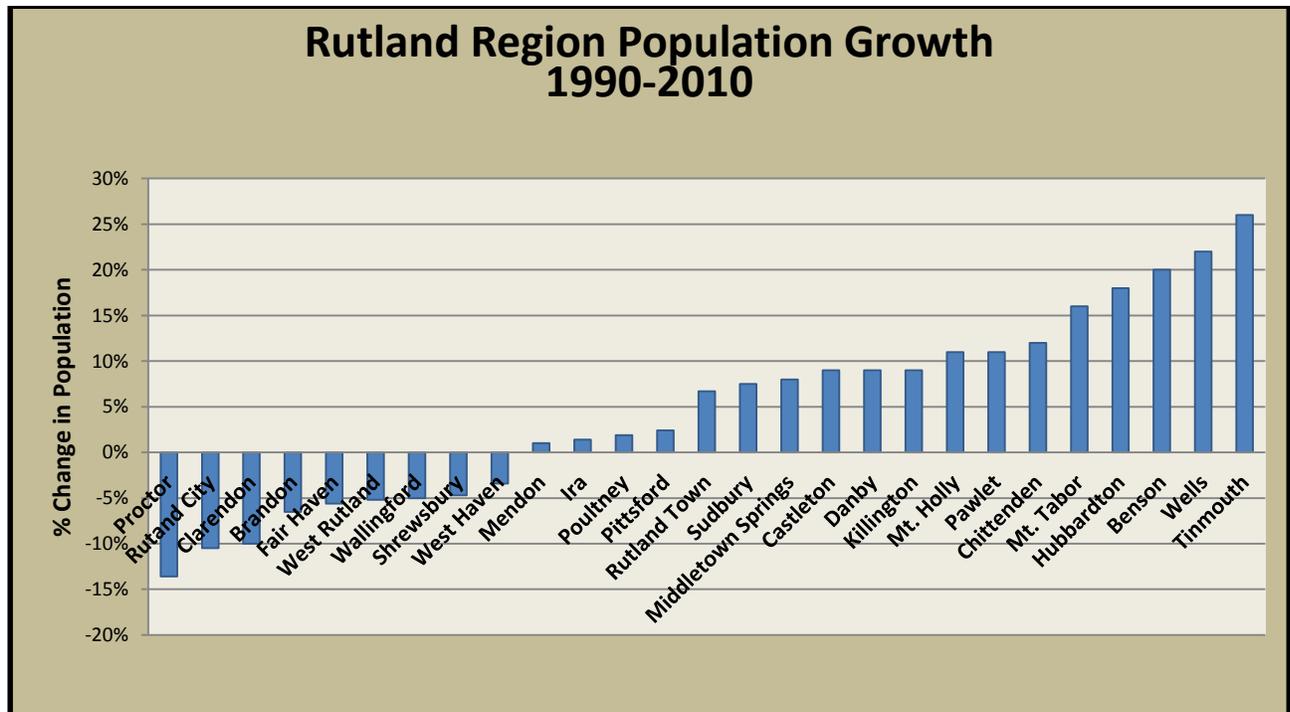
FIGURE 1 - Population Rank 2010



Source: US Census 2010

Compared to other communities in the Rutland Region, Clarendon has the 3rd largest percentage decline in population since 1990. It was one of nine municipalities that saw negative population growth; 18 communities in the region saw an increase in population.

FIGURE 2 - Population Growth Rank 1990-2010



Source: US Census 1990/2010

How else is Clarendon's population changing?

In addition to becoming smaller, Clarendon's population is becoming older. For example, median age rose from 33.0 in 1990 to 46.2 in 2010, largely as a result of significant increases in the elderly and middle age segments of the population. Reasons for this change include the natural aging of residents who have lived in Clarendon at least since the 1970's, and the in-migration of persons at or about to reach retirement age.

Clarendon's media age is higher than for Vermont (42.5) and the U.S. (37.5).

The aging of the population is a development with significant planning implications. For example it suggests that the town should anticipate increased and changing demands for community and health-oriented services. The decrease in population is significant, and could mean each individual within town must contribute more to support existing infrastructure such as educational facilities and highways. See Table 2 below.

TABLE 2 - Change in Age Categories, 1990-2010

Age Category	Year		
	1990	2000	2010
< 5	190	124	84
5-19	681	580	484
20-64	1735	1816	1637
65+	229	291	366

Source: U.S. Census, 1990-2010

The distribution of Clarendon's population within the community is in flux as well. The average household in the community is becoming smaller; average household size fell from 2.67 in 1990 to 2.40 in 2010. During the same time, the number of households in the town increased by nearly one percent even as the population decreased by 10%. See Table 3. More detailed assessments of the present and future population will be presented in the education and community facilities portions of this Plan.

TABLE 3 - Occupied Households, 1990-2010

Number of Households	Year		Absolute Change	Percent Change
	1990	2010		
Clarendon	1,062	1,071	9	.8%
Rutland County	23,690	25,984	2,294	9%
Vermont	210,650	322,539	111,889	4%

Source: U.S. Census, 1990/2010

How much will Clarendon population grow in the future?

Looking at Clarendon’s historical growth trends, the town’s population can be expected to increase, but at a slow rate. While the population has increased considerably from 1960-1990, (see Table 1) and has been on the decline since 1990, the Town of Clarendon has capacity to accommodate future growth, especially in its schools.

Clarendon's Housing

According to the U.S. Census, more than half (52%) of town residents moved into their current homes between the years 2000 and 2013. This is reflective of age 5 and over lived in their current homes five years earlier.

The 2010 U.S. Census reports that Clarendon's housing stock consists of 1,166 units, down slightly from 1,172 units in 1990. See Table 4.

TABLE 4 - Change in Housing Units, 1990-2010

	1990	2010	1990-2010 Absolute Change	1990-2010 Percent Change
Clarendon	1172	1166	-6	.5%
Rutland County	31181	33768	2587	8%
Vermont	271214	322539	51325	16%

Source: U.S. Census, 1990-2010

Lacking a major commercial/recreational feature such as a lake or ski area, Clarendon's housing stock consists overwhelmingly of year-round units. Of 1,166 units recorded in 2010, only 39 (3.3 percent) were occupied seasonally. Perhaps reflecting Clarendon's location within the Rutland suburban ring, the number of seasonal units has declined steadily in recent years. Some seasonal units have no doubt been converted to year round use.

According to the U.S. Census, in 2010, 8% of the town's housing units were vacant, compared with 10 percent in 1990. Of the town's occupied housing units in 2010, 82% were inhabited by their owners, up slightly from 80% in 1990.

According to the 2010 Census, the median housing value in the town was \$168,000, an amount that would require purchasers of the median household to earn an annual income of \$67,200². In comparison, median rental cost in 2010 was \$837 per month. A household needs to earn an annual income of \$30,132 to afford the median priced rental housing in Clarendon³

As shown in Table 5, 19% of the owner-occupied housing units in Clarendon have values of less than \$100,000, while 66% are valued at \$150,000 or more. Housing will be discussed more thoroughly in the housing section of this plan.

TABLE 5 - Value of Owner-Occupied Housing, 2010

	<\$50,000	\$50,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000+
Number	80	83	130	250	307
Percent	9%	10%	15%	29%	37%

Source: U.S. Census 2010

Note: Specified Owner-Occupied Units excludes mobile homes, houses containing a business or medical office, houses on ten or more acres, and housing units in multi-unit buildings.

Clarendon's Economy

Clarendon's economic base grew exponentially from 1980 to 2014, even after leveling off in the 1990s. Between 1980-2014, the total taxable value of commercial, industrial, utility, and miscellaneous properties increased from \$41,184 to \$271,611,400. In 1990, the total was \$299,534

² A common calculation in the banking industry, used to determine a household's ability to afford a home, is 2.5 times the household's annual income.

³ A second commonly accepted indicator of an affordable home is that a household is spending no more than 30% of the household income on rental or homeownership costs.

(unadjusted for inflation). Taxable value is equal to one percent of fair market value. See Table 6.

Table 6 - Selected Grand List Values

Category	1980	1990	2015
Commercial	\$ 18,091	\$148,524	\$279,911
Industrial	\$8,102	\$21,941	\$129,285
Utilities	\$878	\$34,271	\$149,421
Miscellaneous	\$14,113	\$94,798	\$42,930
Total	\$41,184	\$299,534	\$601,547

SOURCE: Clarendon Grand List/Form 411 (2015)

However, the size of the town's work force is in decline, contrary to the trends in Rutland County as a whole or the state which both are experiencing growth in the workforce. In Clarendon between 1990 and 2013, the number of workers declined from 1,541 to 1,443, or by 7%. See Table 7 below. This is in stark contrast to the 45% increase in the workforce between 1980 and 1990.

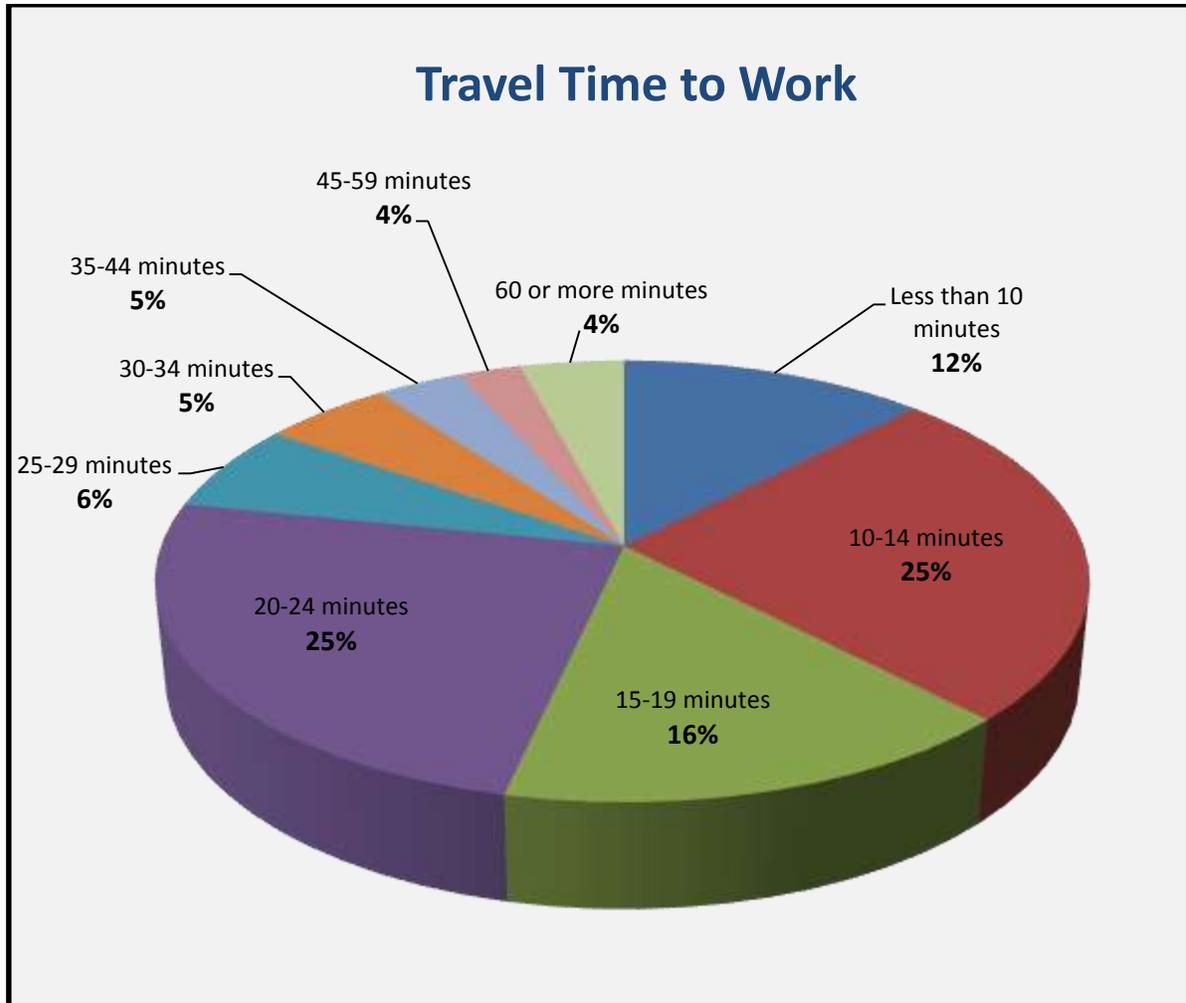
TABLE 7 - Residents in Workforce

	Year		Absolute Change	Percent Change
	1990	2013		
Clarendon	1,541	1,443	-98	- 7%
Rutland County	30,588	33,166	2,578	+ 8%
Vermont	283,146	342,858	59,712	+ 21%

SOURCE: U.S. Census, American Community Survey 2009-2013

According to U.S. Census data, the vast majority of Clarendon residents work relatively close to home. For nearly 80% of residents, the commute time to work is less than 24 minutes. See Figure 3 below. The mean travel time to work is 19.8 minutes.

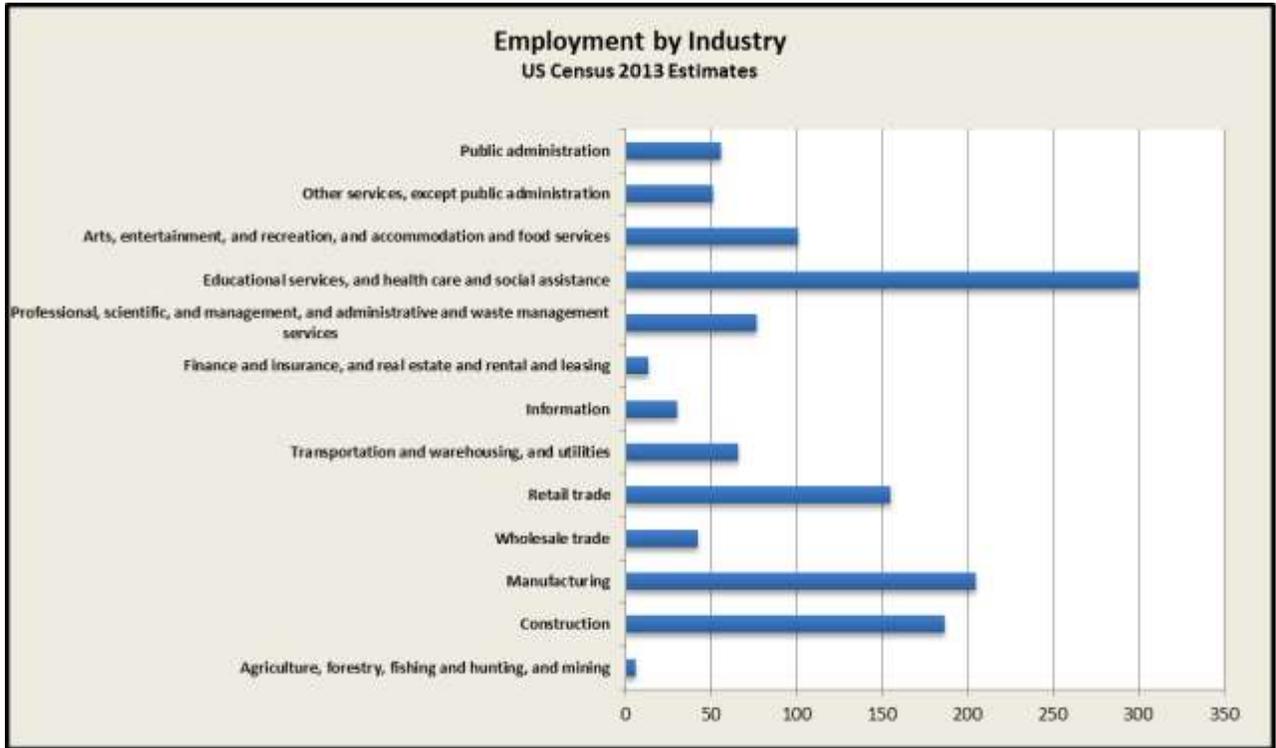
FIGURE 3 - Travel Time to Work, 2013



SOURCE: U.S. Census, American Community Survey 2009-2013

The industries in which Clarendon's work force is employed are diverse, yet are increasingly dominated by educational services, health care and social assistance. See Figure 4.

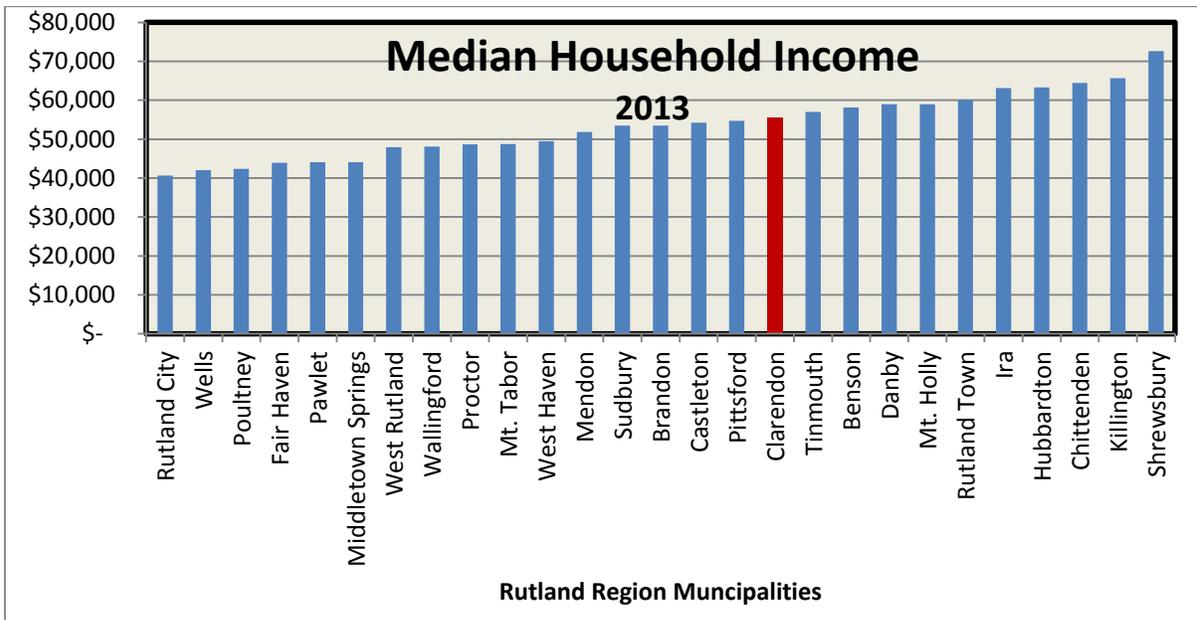
FIGURE 4 - Employment by Industry



Source: U.S. Census, American Community Survey 2009-2013

In 2013, the estimated median household income in Clarendon was \$61,538, \$22 above the Rutland County average. The estimated median earnings for workers were \$28,958 compared to \$26,637 for Rutland County; or \$2,321 higher than the county median. Clarendon ranks 11th in the Rutland Region for median household income. See Figure 5.

FIGURE 5 - Median Household Income 2013



Source: U.S. Census American Community Survey 2009-2013

The percentage of Clarendon residents whose income was below the poverty level was 11.7% in 2013 compared to 13% for Rutland County. However, 8.3% of all *families'* earnings in the town were below the federal poverty level. This is significantly more than the 6.8% of families that earned below the federal poverty level in the Region as a whole. Since 2000, the number of individuals in Clarendon living in poverty has risen sharply - 4% percent - and the number of families living in poverty has gone up 1%.

Table 8 - Population Change, Town of Clarendon

	1960	1970	1980	1990	2000	2010
Population	1091	1537	2372	2835	2,811	2,571
Absolute Change		446	835	463	-24	-240
Percentage Change		40.9%	54.3%	19.5%	-0.8%	-8.5%

Source: US Census

Population growth is increasingly local in origin. In the 1970's, only one quarter of the increase in population was the result of "natural increase" (increase in the number of children born to town residents and decrease or stability in the number of deaths). The remaining growth was

the result of in-migration (increase in the number of people moving into the town and decrease or stability in the number of people moving out).

FIGURE 6 - Population Rank 2000

Source:
US
Census
2000

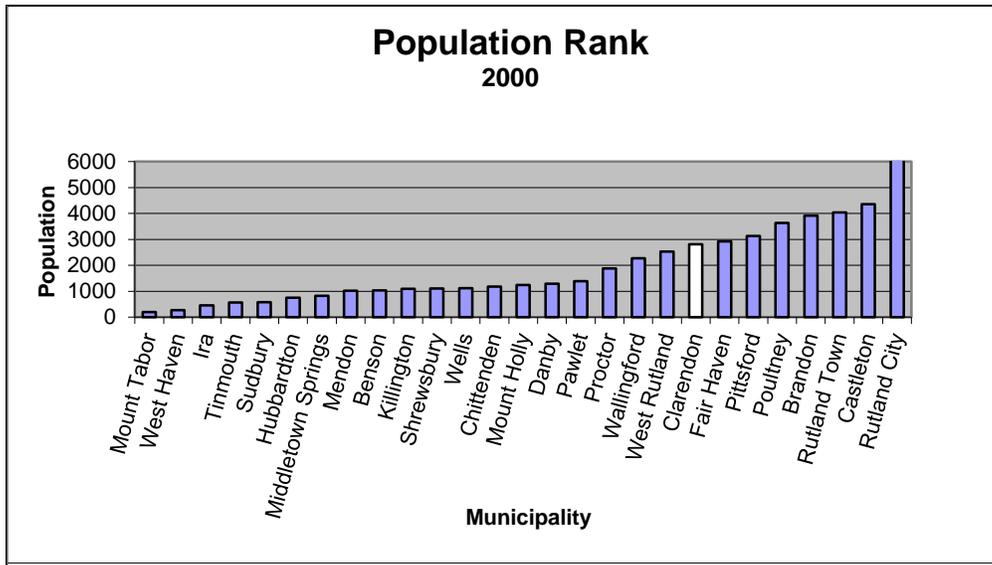
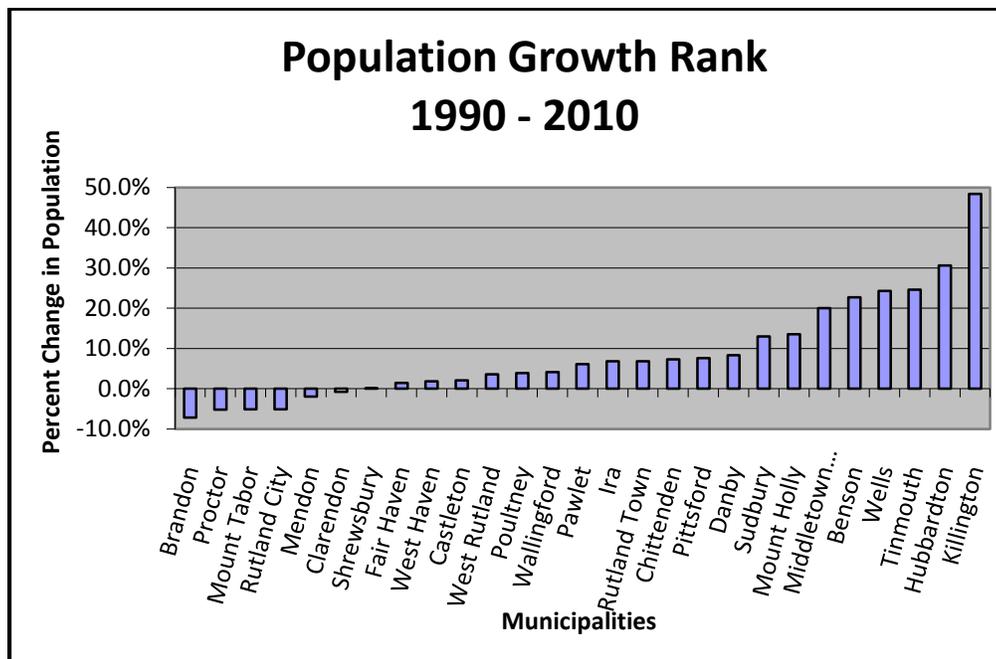


FIGURE 7 - Population Growth Rank 1990-2000



Source: US Census 1990, 2000, 2010

CLARENDON'S NATURAL ENVIRONMENT

Before a community can plan for its future, it must first take stock of the resources it contains and assess their general condition. This section of Clarendon's plan presents information on the status of natural resources in the town.

Physical Setting

Clarendon is located within the Vermont Valley, a narrow valley area between the Taconic Mountains to the west and the Green Mountains to the east. It is bounded on the north by the Town of Rutland and West Rutland, on the east by Shrewsbury, on the south by Tinmouth and Wallingford, and on the west by Ira.

The town is situated upon varying topography. Elevation ranges from 600 feet to 2450 feet.

Geology

The geologic formations underlying the town of Clarendon are composed of metamorphic (changed in form) bedrock running in a north-south direction. The oldest rocks are the Precambrian gneisses. Chippenhook and the Clarendon Springs Valley, together with the Otter Valley, are chiefly underlain with carbonate rocks of the Cambrian period. These formations are relatively soft and hence more permeable to infiltration of groundwater. Suzie Peak and the mountain range west of Otter Creek are underlain with bedrock of the Cambrian and Ordovician periods. The older Precambrian and early Cambrian rocks were thrust over this bedrock from the east, presenting the irony of older stone on top of the newer stone. A significant geologic formation of Shelburne Marble underlies the eastern slope of Suzie Peak extending northward to Clarendon Springs.

Overlying the bedrock formations are surface materials of varying depth and compositions. Their deposition is primarily the result of glacial movement. As glaciers advanced, they scoured and plucked existing bedrock material. The mountains were rounded off and the two U-shaped valleys of the Clarendon River and Otter Creek were formed. Unsorted soil and stone material, called till, was laid down directly by glacial ice at this time and now overlies most of the town. As the glaciers retreated, they left deposits of soil, stone and rock with various composition and form. Clarendon has at least two moraines, which mark an extensive buildup of till material when the glacier front was stabilized temporarily.

Land Resources

Land Capable of Supporting Agriculture

Agriculture is an important economic activity, one that employs significant numbers of people and permits the production, manufacture, and distribution of a wide range of farm commodities. Agriculture is also the foundation of the highly valued rural lifestyle and a significant, positive factor in the appearance of the Vermont landscape. Not surprisingly, land capable of growing crops and pasturing livestock is essential to the practice of agriculture. As stated in Primary

Agricultural Soils and Vermont Agriculture, a report jointly prepared by the USDA Natural Resources Conservation Service (NRCS) and the Vermont Department of Agriculture,

Agriculture needs land that is conducive to agricultural uses. Such land typically has two attributes: (1) soils with high and good agricultural potential (primary agricultural soils); and (2) sufficient acreage of these soils in tracts large enough to justify the cost of current farm equipment (critical land mass).

Soils with high agricultural potential are designated "Prime" and are considered by the Soil Conservation Service to be of national importance. Prime soils have the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to acceptable farming methods.

Soils with good agricultural potential are designated "Statewide" and are considered to be of statewide importance. Soils denoted as statewide have good potential for growing crops, but have one or more limitations, which restrict the choice of crops. They require more intensive management than prime soils.

Table 9 - Clarendon Soils by Agricultural Productivity

Class	Acreage	Percent of Total Area
Prime Soils	4,632	22.9
Statewide Soils	3,305	16.4

SOURCE: Rutland Regional Planning Commission

As indicated in Table 9, prime agricultural soils make up 4,632 of Clarendon's 20,200 acres (23 percent) and are focused in the flatter areas of the community. "Statewide" agricultural soils constitute 3,305 acres (16 percent of the total) and are found in a range of circumstances.

Planning-related issues affecting land with the capability to support agriculture include the high burden of property taxes, low commodity prices, intensifying development pressure and spiraling land values, elevated interest rates, pollution, regulation, the aging of farm owners and operators, and the supply of farm labor. Few of these issues can be resolved in a Town Plan. However, a Town Plan can promote greater understanding of the issues, which may in turn lead to their solution.

Land Capable of Supporting Forestry

Like agriculture, forestry is an important activity in the state and region. And like lands capable of supporting agriculture, lands capable of supporting forests and forestry are critical to the support of the forest products and fuel wood industries. Forests also provide benefits such as wildlife habitat and places for recreation and relaxation. Few, if any, residents of Clarendon make their living exclusively from forests and forestland. Indirectly, however, local forests and

forestlands contribute to local jobs in agriculture, recreation, construction, and travel/tourism. Because so many different types of users use forests in so many different ways, their benefits are widespread.

As indicated in Planning for the Future Forests: The Forest Resources Supplement to the Planning Manual for Vermont Municipalities,

Just as some soils grow excellent crops with few supplements while others don't grow much at all, forest soils dictate woodland's potential for both plants and animals. (Page 5)

A soil's potential for commercial production is a function of factors such as: the amount and value of fiber that can be grown in a given period of time; the cost of any one-time improvements needed to minimize or overcome recognized limitations of the soil; and the cost of any recurring improvements needed to minimize or overcome recognized soil limitations. These criteria have been applied by the NRCS to produce a numerical ranking of the potential productivity for forestry of all Vermont soils. Numerical rankings range from 0 to 100 and correspond to one of seven forestland value groups. Generally speaking, a soil's rating indicates how profitable it would be in forest use relative to other soils in the state.

As shown in Table 10 below, high quality forest soils (which for present purposes are defined as soils with a soil potential index of 74 or more) occupy some 61 percent of the town's land base. Soils with a soil potential index of 74 or more occupy the top three productivity categories identified by the NRCS.

Table 10 - Soils in Clarendon, by Commercial Forestry Productivity

CLASS	ACREAGE	PERCENT OF TOTAL AREA
High (≥ 74) Soil Potential Index	12,278	60.7

SOURCE: Rutland Regional Planning Commission

Like high quality agricultural soils, high quality forest soils are scattered throughout the Town. High quality forest soils are not limited to any particular landform. It is important to note that many soils classified as having high potential for agricultural production may also have high potential for forestry. This is because many of the physical and chemical characteristics that make land productive for annual crops are also desirable for tree growth.

Planning-related issues facing lands with the capability of support forests and forestry include: subdivision and "parcelization"; development of forest monocultures; and changing attitudes of forestland owners. Subdivision for rural residences typically yields parcels too small to support certain activities or provide certain values. Management of forests for single species, such as sugar maple, has produced uniform stands of desired trees.

Mineral Resources

The extraction and processing of mineral resources is also a significant economic activity in Vermont and Rutland County. In Clarendon, economically valuable mineral resources include marble, sand and gravel.

Marble is used for many construction-related purposes. It is also used in manufacturing processes, such as in the manufacture of certain types of paper. Gravel and sand also are used widely in construction-related activities and processes. They are used in the preparation of cement, as well as in the building of roads and septic disposal facilities.

Economically valuable mineral deposits are located in the Town. Marble resources are focused in the western portion of the town, while sand and gravel resources are scattered.

There is currently one stone crushing quarry in the community as well as sand and gravel pits.

Planning issues associated with mineral resources seem to be dominated by the impacts that result when people extract them. These impacts, which can be either direct or indirect, include conflicts between landowners living near extraction sites and the operators of those sites, and uncertainty about the impact of extraction on the quality and quantity of local groundwater supplies.

Another issue surrounding mineral resources concerns the loss of resource value experienced when development takes place over or on top of mineral deposits. Unless buildings are relocated, they severely limit the amount of resource that can be extracted from an area.

Wildlife Habitats, Fragile Areas and Geologically Significant Locations

The benefits provided by wildlife habitats and other natural and fragile areas are numerous. They contribute to the economy by attracting travelers, recreation seekers, and wildlife admirers who purchase goods and services. They add to the community's character by influencing the "sense of place". Natural resources such as wildlife habitat and natural and fragile areas also serve as environmental barometers; certain species can reveal signs of environmental contamination before such contamination might become a threat to local residents.

For the purposes of this plan, wildlife habitats and other natural and fragile areas include places occupied or relied upon by game as well as non-game species. They include sheltered areas where deer find food in winter (commonly known as deer yards), bear habitat, migratory staging areas for waterfowl, fisheries, and sites of rare plants and animals. Other types of wildlife habitat include large forested tracts capable of supporting larger mammals and "wildlife corridors" such as streams and windrows that help connect the habitat areas of the Town together.

There are seven mapped deer wintering areas in the Town located predominantly in areas of low, south facing slopes and along watercourses. They cover 2,424 acres, or 12 percent of the Town's land area. Vermont is near the northern limit of white-tailed deer range in North

America, and adequate food and shelter must be available if deer are to survive the deep snows and cold temperatures. There are also 1,415 acres of bear habitat in the town. These occupy seven percent of the town's total land area. See Table 11.

Natural heritage sites are also located in the town. See the Education and Community Facilities map. Natural heritage sites incorporate rare plants and animals that are native to the state and considered rare for one or more reasons, as well as natural communities that are either rare habitat types in Vermont or among the best examples in the state of a common community type.

According to The Vermont Rivers Study, the Otter Creek and the Mill, Clarendon and Cold Rivers all contain fisheries for sport species such as brown trout and brook trout. Otter Creek also supports rainbow trout, northern pike and bass, while the Clarendon and Cold River also supports rainbow trout.

Migratory birds use wetlands in the area as stops along the Atlantic Flyway. This habitat is crucial during several periods in a bird's life cycle, supplying quality breeding grounds and resting or staging areas essential for migration.

As written in the town's previous plan, Clarendon has a national record tree, the Roundleaf Shadbush (Serviceberry) located southeast of Chippenhook, on the Potter farm. An area known as the "Cobble", located on the west side of the Creek Road just north of the Bromley Farm contains 31 acres owned by Castleton College. This has 36 species of ferns, including several rare hybrids, in a unique limestone cliff and small wetland setting.

Table 11 - Selected Wildlife Habitat in Clarendon

Type	Acreage	Percent of Total Area
Deer Yards	2,423.81	12
Bear Habitat	1,415.13	7

Source: Rutland Regional Planning Commission

Clarendon Cave, a large limestone three chamber cave, located on the lower eastern face of Suzie Peak has both recreational and natural historic value and therefore is a fragile and geographically significant location. Clarendon Gorge formed by erosion of bedrock by the Mill River, offers unique scenic, geological, and recreational opportunities. Clarendon also owns a 60 acre forest and wildlife area located off East Street in the Southeast part of town. This offers both recreational and resource value.

Water Resources

Watersheds

In order to discuss a community's water resources in a meaningful way, it is important to first understand the nature of the community's watersheds. A watershed is a distinct, topographically

defined land area that drains into a single river, river system, or standing body of water. Because rivers join to become larger rivers, many watersheds may be considered "sub watersheds" of larger watersheds. As one would expect, the activities taking place in a watershed play a critical role in the quality of the water draining from it. If a watershed is mostly agricultural, for example, then the quality of the water leaving that watershed will reflect prevailing agricultural practices. If a watershed is mostly forested, then the water leaving that watershed will reflect prevailing forestry practices.

Watersheds located within the town include those feeding the Mill, Cold, and Clarendon Rivers. The town as a whole (with the exception of the southwest corner) lies within the Upper Otter Creek watershed, which is also a component of the Champlain Basin.

Rivers and Streams and their corridors

Water falling as rain or snow is drained from watersheds by rivers and streams. The benefits provided by rivers and streams and their corridors are quite diverse. Historically, rivers and streams have served as important power sources and routes of transportation. Other values commonly associated with rivers and streams and their corridors include recreation and wildlife habitat. Within limits, rivers and streams can also "clean" surface waters by adding oxygen. (This benefit is a function of the amount of turbulence in the watercourse, water temperature, and the amount of water flow.) Finally, rivers and streams can also help recharge certain types of groundwater aquifers. The creation of undisturbed buffers along rivers and streams is often recommended to insure that these many benefits continue to be provided.

Some of the more prominent values associated with the largest watercourses in the Town have been documented by the Vermont Agency of Natural Resources. The Otter Creek corridor, as it passes through Clarendon, includes fisheries and wildlife habitat, recreation, and education; having been inhabited by Native American peoples, it is also an area of both known and expected archeological sensitivity. Similar assets are associated with the Clarendon River, the Mill River, and the Cold River.

Problems and issues relating to rivers and streams can be further understood by assessing how well rivers and streams attain state water quality standards. The Vermont Agency of Natural Resources Watershed Management Division currently assigns all surface waters in Vermont to classes as part of the state's water resource management efforts. Class A(1) waters are ecological waters managed to achieve and maintain waters in a natural condition; Class A(2) are managed for public water supply purposes so that the water is of a uniformly excellent character; and Class B are all other waters. Class B waters are managed for aquatic biota, wildlife and aquatic habitat, aesthetics, public water supply (with filtration and disinfection), irrigation of crops, swimming, boating and fishing.

All water classes are expected to meet Vermont Water Quality Standards. Once it is classified, a body of water is managed according to the standards that are associated with the class to which it belongs.

According to the 2014 Vermont Water Quality Standards, all waters in Clarendon were designated Class B. (It should be noted however that the town is immediately downstream from a Waste Management Zone in Wallingford on Otter Creek.) Certain Class B waters have an overlay Waste Management Zone for public protection below sanitary wastewater discharges. Wastewater management zones are Class B waters downstream from sewage treatment facilities.

A detailed study – a Stream Geomorphic Assessment 2 (SGA2) by the Vermont ANR - of the Cold River cited a healthy stream habitat in 2007. However, ANR has identified sedimentation production and delivery in the Upper Otter Creek, which also runs through Clarendon. A 2006 (SGA2) indicated “windshield surveys show significant adjustments in sedimentation due to intensive channel management.” This is a potential threat to the health of that river.

Lakes and Ponds

Vermont's lakes and ponds offer opportunities for recreational activities such as swimming, boating, sailing, and fishing. They also provide economic benefits by serving as a base for tourism, and they provide ecological benefits by supporting special wildlife habitats and by maintaining the hydrologic cycle.

"Public" lakes and ponds are generally defined as those ponds 20 acres and over in size. There are no public lakes or ponds in Clarendon; however, there are smaller ponds in the town providing some of the benefits mentioned above.

Wetlands

The term wetland refers to those areas of the state than are inundated by surface or ground water with a frequency sufficient to support plants and animals that depend on saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include marshes, swamps, sloughs, fens, mud flats, and bogs. In addition to providing important wildlife and plant habitat, wetlands include storing stormwater, purifying surface and groundwater supplies, recharging aquifers, controlling erosion, and providing areas for recreation. Wetlands also play critical roles in the reproductive cycle of many threatened amphibian species.

In Vermont, over 230,000 acres, or 4% of the land area in the state, have been identified as wetlands on the Vermont Significant Wetlands Inventory (VSWI) Map. Studies have shown that up to 39% of Vermont wetlands may not be mapped.

In addition, more than 35% of the original wetlands in Vermont have been lost. In recent years, residential, commercial and industrial development has been the primary causes of wetland loss.

In Clarendon, the area occupied by wetlands, as identified by the VSWI and the National Wetlands Inventory, is 1,649.09 acres, or 8.2 percent. As shown in Natural Resources 1 map, wetlands are found throughout the town.

Another way to identify wetlands or wetland-like areas is through the mapping of hydric soils. Hydric soils are soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile. They are developed under conditions sufficiently wet to support the growth and regeneration of hydrophytic (water loving) vegetation. According to data provided by the USDA Natural Resources Conservation Service, 1,108 acres, or 5.5 percent of the Town's soils, are classified as hydric. See Table 11.

Table 11 - Wetlands in Clarendon

Category	Acreage	Percent of Total Area
Vermont Class II wetlands	1,649.09	8.2
Hydric Soils	1,108.35	5.5

SOURCE: Rutland Regional Planning Commission

Like other water resources, wetlands have been classified for management purposes by the state of Vermont. There are three classes of wetlands. Class 1 and Class 2 wetlands are "significant" to the state and are protected by the state's rules. Class 3 wetlands - which have not been evaluated or when last evaluated were not considered significant to the state - include all wetlands not designated as Class 1 or Class 2. At the current time, all of the wetlands in Clarendon are classified as Class 2 Wetlands. There are no Class 1 wetlands in the town.

According to the Vermont Wetland Rules, Class 1 wetlands are wetlands considered to be "exceptional or irreplaceable in their contributions to Vermont's natural heritage." The majority of wetlands mapped by the National Wetlands Inventory are designated by the State of Vermont as Class 2 wetlands. Class 2 wetlands are less significant to the state as a whole and, when located near development, must be protected by a buffer zone of 50 feet.

State wetland rules control development in wetlands rather than prohibit it outright. According to the Vermont Wetland Rules, a Wetland Permit can only be issued for activities in the wetland or its buffer zone if it is determined that the uses will have no undue adverse impacts on protected functions, unless such impacts are mitigated. Mitigation measures include avoidance and minimization of wetland impacts. Farming and forestry uses, "soft" recreation, utility poles, and incidental residential uses are allowed as long as the outlet of the wetland or its pattern of flow is not altered and dredge and fill restrictions are met.

Federal law also governs the use of wetlands. Federal regulations are different from state regulations and are primarily implemented through the federal Clean Water Act. The Clean Water Act regulates dredging and filling of all public waters, which include the nation's wetlands.

The NRCS provides technical and financial support to help landowners with their wetland restoration efforts. Through its Wetlands Preserve Program and Agricultural Conservation Easement Program, the federal government offers considerable guidance exists to minimize harmful impacts and encourage wetland conservation.

Groundwater

Groundwater is a critical water resource. Sixty-six percent of Vermont's population depends on groundwater for their drinking water supply. Groundwater is also used for manufacturing, agriculture, and commercial enterprises. Planning to ensure adequate groundwater is necessary for protecting the health of area residents and insuring adequate supplies of water for the future. Without clean groundwater supplies, the community could incur significant costs in terms of health and/or in locating alternative supplies.

Groundwater is water that has infiltrated into the soil and filled the pores and spaces in sand, gravel, or rock. Groundwater is stored in aquifers, which are geologic formations containing enough water to yield significant quantities to wells and springs. In some situations (such as when a well from an aquifer serves a public water supply), the entire area surrounding an aquifer and having an influence on the quality of water in it is known as a wellhead protection area. There are seven wellhead protection areas in Clarendon, located as shown on Natural Resources 2 map. Only two have been mapped in detail with precise boundaries determined. The remaining aquifers are mapped generally using a 3000-foot radius from the location of the wellhead.

The precise locations of aquifers and recharge areas in Clarendon have not been mapped. (Rutland County VT Geological Survey 2010). However, a general idea of their distribution has been developed for this technical report through the study of geology and soils information.

Like other water resources, groundwater aquifers have also been classified for management purposes by the state of Vermont. According to the system used by the state of Vermont, aquifers are assigned to one of four classes (I, II, III, or IV), which are based on existing and potential use as well as risk of exposure to contamination.

Class I is suitable as a public water supply source with no risk associated with it. Class II is suitable as a public water supply source with some risk associated with it. Class III is suitable for private water supplies, agricultural, industrial, and commercial use. Class IV is considered non-potable, but may be suitable for some other uses.

All aquifers are initially classified as Class III aquifers. Individual aquifers may then be reclassified to prohibit activities or recognize influences within the area that threaten or affect its quality.

Groundwater-related planning issues facing the town include the potential impact of pollutants (particularly non-point pollutants) including road salt, sewage, gasoline from leaky underground storage tanks, hazardous wastes, and agricultural pesticides and fertilizers.

Stormwater Drainage

The Town of Clarendon lies within the Upper Otter Creek watershed. An effective system of stormwater management would reduce sedimentation and minimize erosion in local rivers (the Mill, Cold and Clarendon) and streams, as well as limit the movement of pollutants into more distant surface waters (including Lake Champlain).

To prevent erosion along town roads, a fairly extensive collection of culverts is required. Culverts are scattered throughout the town and a drainage infrastructure of catch basins and underground piping is concentrated along Route 7B in the village of North Clarendon.

The highway department removes debris from inlets periodically and cleans sediment from piping as needed.

Clarendon is in a favorable position to realize the advantages of a comprehensive, effective system of stormwater management that combines Low Impact Development (LID) and Green Stormwater Infrastructure (GSI).

LID is an approach to land planning and site design that tries to prevent and minimize environmental degradation. GSI refers to and relies on the physical elements of the landscape (natural or man-made) to address or minimize impacts from stormwater runoff.

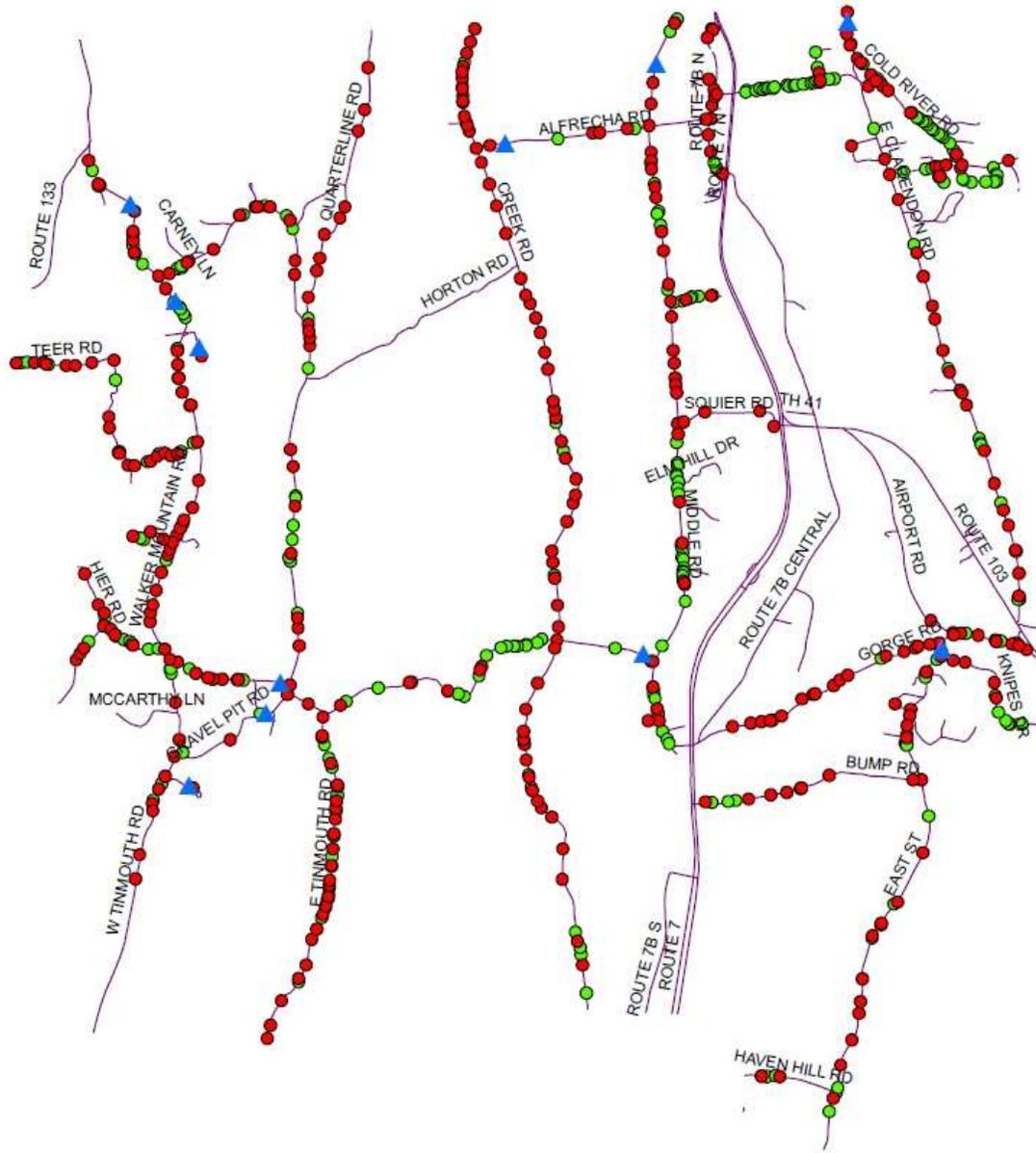
<http://lid-stormwater.net/background.htm>

http://www.vtwaterquality.org/stormwater/docs/sw_gi_2.0_green_stormwater_infrastructure.pdf

Besides LID and GSI, stormwater management improvements for the Town could include addressing road-related erosions sites, easements, plantings, bridges and culverts, river corridor encroachments and constrictions.

The Town's inventory of culverts will be maintained and updated as needed. In addition, a layer of storm drain data should be added to the Town's online GIS (Geographic Information System). The Town should also consider creating a Stormwater Master Plan.

Clarendon Bridges/Culverts 2015



Legend

- ▲ bridges (11)
- town inlets (351)
- private inlets (260)

Source: Rutland Regional Planning Commission

CLARENDON'S FLOOD RESILIENCE

Clarendon lies in the Upper Otter Creek Watershed, part of the Lake Champlain Basin. The largest streams in the town are the Mill, Cold and Clarendon Rivers and Otter Creek.

Flood events are Vermont's most frequent and costly type of natural disaster. There are two types of flooding that impact communities in Vermont: inundation and flash flooding. Inundation is when water rises onto low lying land. Flash flooding is a sudden, violent flood which often entails fluvial erosion (stream bank erosion). The combination of flash flooding and fluvial erosion cause the most flood-related damage in the state. According to the Vermont Division of Emergency Management and Homeland Security, with Tropical Storm Irene alone, the state incurred costs of more than \$850 million. Prior to and since Irene, Vermont has experienced more frequent and severe flooding and will likely continue to in the future.

Climate change will likely exacerbate flooding in Vermont. According to the Vermont Climate Assessment (2014), precipitation has and will continue to increase, particularly in the winter months. Since 1960, average annual precipitation has increased 5.9 inches; almost half (48%) of this change in rainfall has occurred since 1990. Because precipitation will likely occur in shorter, more intense bursts, it will likely produce precipitation that runs off the land rather than filters into it. Records across Vermont show that "flashy flows" are increasingly common in Vermont rivers. Also, the expected increase in precipitation during the winter may lead to added snowmelt and flooding in the spring.

Mapping Flood Hazard Areas

To meet the new state requirement of identifying flood hazard and fluvial erosion areas and designating areas to be protected, maps are an essential aid. Because the methods of mapping inundation and fluvial erosion corridors differ significantly, river corridor maps are a critical addition to existing flood hazard maps.

The National Flood Insurance Program (NFIP) was created by the Federal Emergency Management Agency (FEMA) to address inundation hazards. Flood insurance rates are based on Flood Insurance Rate Maps (FIRMs) or Digital Flood insurance Rate Maps (DFIRMs) which delineate areas of the floodplain likely to be inundated during a flood. These are identified as a Special Flood Hazard Area (SFHA) or with a 1% annual chance of flooding (100 year flood). Town participation in NFIP is voluntary. However, in Vermont, two thirds of flood damages occur outside of federally mapped flood areas.

Vermont's River Corridor and Floodplain Management Program, developed by the Vermont Agency of Natural Resources (ANR), delineates areas subject to fluvial erosion. River corridor maps are designed with the recognition that rivers are not static. A certain amount of erosion is natural when Clarendon floods because of the town's relatively steep terrain and frequent storms. Development in the river corridor and stream channel engineering over time has increased channel instability. While these management practices may create the illusion of

stability, these engineered channels when tested by a high flow, such as a flood, cannot be maintained. Special mapping and geomorphic assessments can identify fluvial erosion hazard areas along rivers, more comprehensively defining high hazard areas.

(Refer to:

http://floodready.vermont.gov/flood_protection/river_corridors_floodplains/river_corridors)

Four rivers and streams in Clarendon have undergone Stream Geomorphic Assessment (SGA). Surface waters covered are the Clarendon River, Mill River, Cold River and the Otter Creek. In the case of the Mill River, a River Corridor Management Plan has been developed (2009). These studies and plans are vital in determining river and stream alterations, which affect water flows and could potentially lead to future flood damage. The SGAs and River Corridor Plans suggest potential remediation actions that can be taken to reduce the risk of future flood damage including, planting stream buffers, stabilizing stream banks, removing berms, removing structures and restoring incision areas.

Mapping of river corridors for Clarendon is now available from the state and includes a 50' setback on small streams (those with a watershed of less than two square miles). The town included the new River Corridors in an upcoming update of its Flood Hazard Area Regulations. A map of River Corridors/Fluvial Erosion Hazard (FEH) Areas of the Town of Clarendon is included in this Town Plan.

The town and its partners are working to address the issues identified and implement projects outlined in the geomorphic assessments. Much of the livestock has been fenced out of streams and wetlands, the town culverts were assessed in 2015.

History of Flooding

The Local Hazard Mitigation Plan details the town's flooding as follows. The frequency of extreme weather events fluctuates from year to year. In recent years, Clarendon has experienced more frequent severe storms and flooding. In 1999, after five inches of rain fell, the town experienced flooding. In 2011, Tropical Storm Irene dropped more than four inches of rain resulting in town-wide flooding, causing at least \$238,500 in related damages. Otter Creek reached a record flood height. The Cold and Mill Rivers rose above their banks, flooding adjacent areas, and causing significant fluvial erosion. One home was destroyed by a bank failure induced by erosion. A portion of a US Route 7 bridge was also destroyed, and a bridge on Middle Road damaged.

Then in 2013, a round of severe storms and flooding resulted in isolated damages from flooding.

In Clarendon, road damage due to flooding usually occurs on narrow and steep roadways, low-lying roads that follow a frequently flooded waterbody, or road segments near curves in the river. Specific problem areas are:

- Alfrecia Road
- Creek Road
- Walker Mountain Road

Flood Hazard Area Regulations

The Town's Flood Hazard Area Regulations meet requirements for participation in the (National Flood Insurance Program (NFIP). The regulations do not exacerbate flooding and fluvial erosion and avoid new development/fill/removal of wetlands in the floodplain. These Flood Hazard Area Regulations are part of the Clarendon Zoning, and the purpose is to minimize and prevent the loss of life and property, the destruction of commerce, the impairment of the tax base, and the extraordinary public expenditures and demands on public services that result from flooding and other flood related hazards.

E-911 mapping indicates that 12 structures in Clarendon are within the SFHA (1% annual chance of flooding) as identified on the Rutland County DFIRM dated 2008. There are no critical or public structures (list) are in the SFHA or 0.2% flood hazard area according to E-911 mapping.

Local Hazard Mitigation and Emergency Operations Plans

The Clarendon Local Hazard Mitigation Plan (LHMP) was adopted in 2012. The LHMP identifies known hazard issues in town and allows the Town to seek FEMA Hazard Mitigation Assistance funds to reduce current risk levels.

The Town of Clarendon's Local Emergency Operations Plan (LEOP) was last adopted in September of 2004 and it is badly out-of-date. The LEOP encourages flood preparedness and identifies a process for response planning and shall be reviewed annually.

NFIP Participation

For Clarendon, the Flood Insurance Rate Map (FIRM) and Flood Insurance Study were first published in September of 1978 and the town joined the National Flood Insurance Program in 1980. The Rutland County DFIRM became effective in August 2008. The hydrology and hydraulics were updated in the DFIRM.

As of August 2015, there are 8 flood insurance policies through the NFIP covering more than \$1,000,000 in value for properties in Town. That represents 67% of the structures in the Special Flood Hazard Area. Flood insurance is available for any structure in town regardless of previous losses or location. The cost of flood insurance premiums rises in areas identified at a high-risk level.

Clarendon qualifies for an Emergency Relief and Assistance Fund (ERAF) rate of just 7.5% - the **lowest** rate for post-disaster funding.

Lands that Minimize Flooding

River corridor assessments aid communities in making knowledgeable and strategic decisions about how to best protect, manage, and restore watershed resources. Riparian buffers reduce flood hazards and stabilize stream banks, attenuate floods, provide aquatic and terrestrial habitat and wildlife corridors, filter runoff, absorb nutrients, and shade streams to keep them cool. Wetlands also prevent flood damage and are a vital component for maintaining the ecological

integrity of land and water. In addition, upland forests also moderate flood impacts and attenuate flood impacts. Steep slopes, on the other hand, can be a detriment during flooding by amplifying water volume and velocity in rivers and streams.

Because impervious surfaces prevent the infiltration of water into the soil, these man-made surfaces exacerbate flooding by increasing the amount and velocity of stormwater runoff, particularly in areas where these surfaces are prevalent.

Clarendon recognizes the value of having protected areas for water “calming” to minimize future flooding.

Goals

- Protect the citizens, property and economy, and the quality of the Town’s natural resources by using sound planning practices to address flood risks.
- Ensure the Town is able to recover from flooding quickly and in a manner that improves flood resilience.
- Encourage development in Town that does not worsen flooding, and restore natural river functions.
- Update Flood Hazard Areas and River Corridors by incorporating VT ANR River Corridor mapping into Town Plan and Zoning Regulations.
- Utilize the Phase 2 geomorphic assessment of the Clarendon, Mill and Cold Rivers as well as Otter Creek to reduce the risk of future flood damage, with measures such as: buffer restoration, reducing sediment loading, improvement of roadside ditches, re-orientation of culvert crossings, excluding livestock from direct access to stream channels, changes in cropping practices to reduce direct runoff, and addressing the high concentration of paved road surfaces and roof tops in the vicinity of the mill and gorge.
- Begin work on a Stormwater Master Plan
- Identify other lands to prevent flooding through such measures as:
 - Maintain vegetated buffer strips in riparian zones surrounding streams and rivers.
 - Maintain upland forests and watersheds for predominately forest use.
 - Require new development to preserve vegetated riparian buffer zones that are consistent with state riparian buffer guidelines.
 - Work to develop more consistent, accurate and thorough identification of wetlands areas through the use of best available data and the adoption of updated maps.
 - Enhance Flood Hazard Area regulations by requiring all development which impacts wetland areas to provide, restore and enhance additional wetlands to improve town’s flood resilience.
 - Prohibit fill, structural development or intensive land uses in wetlands unless there is an overriding public interest.
 - Encourage green infrastructure techniques in storm water regulations
 - Discourage new fill, construction and infrastructure in flood hazard and fluvial erosion areas
 - Prohibit new buildings within river corridors.

- Consider moving or abandoning roads in flood areas when there are more cost effective solutions or other routes.
 - Emergency services, wastewater treatment plants, power substations, and municipal buildings shall not be built in special flood hazard areas.
- Encourage green infrastructure techniques in storm water regulations.
- Consider regional watershed storm water management with other area jurisdictions.
- Emergency Management Planning
 - Develop and maintain a Local Emergency Operations Plan annually.
 - Work with first responders and the highway department to plan improved emergency response capacity (operations, training, and equipment) during natural disasters as identified in the Local Emergency Operations Plan.
 - Hazard Mitigation Planning - Recruit and support a community committee to pursue flood hazard mitigation efforts.
- Education
 - Establish and sustain a flood hazard area education and outreach effort to support flood damage mitigation and better insure community residents and property for future flood damage.

CLARENDON'S BUILT ENVIRONMENT

Before a community can plan for its future, it must first take stock of the extent and condition of local "public" facilities and services. This section of Clarendon's plan presents information on the status of "built environment" resources in the town.

Transportation

Transportation is the basic service which allows people to go to work, to go shopping, and to access all the myriad opportunities and activities available to them. It also provides the basic mobility for goods and services people need and want in order to live. A good transportation system is therefore necessary to reduce the cost of and remove the burden of accessibility, so that people can live as well as possible. Transportation cannot be considered in isolation from the land use. Transportation improvements provide greater accessibility to certain parcels of land, and thus increase the likelihood of their development. As land use becomes more intense, the amount of travel generated increases, causing the need for transportation improvements.

As provided in Vermont Planning Law, the general objective to be considered in planning transportation is:

To provide for safe, convenient, economic and energy efficient transportation systems that respects the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.

24 VSA 117 Section 4302

At the local level, transportation planning is concerned with the provision of safe and convenient accessibility, at a reasonable level, for all residents in a town, with the highest quality accessibility for concentrations of residents and businesses. Accessibility to the regional or statewide transportation network also is an important factor, as is the need to consider public transportation and bicycles, as well as other alternative means of transportation.

Highways

By far the most important component of the transportation system in Clarendon is the highway system. See the Transportation Network map. It provides for the movement of goods, as well as people. Thus, it has a significant impact on economic development. Typically, areas with better highway accessibility develop economically, and those with poorer highway accessibility do not.

In 2014, the Town accepted a segment of VT Route 7B which was relinquished by the state of Vermont and VTRANS accepted a segment of Airport Road (TH #7) to the State highway system. VTRANS met its commitment to repave the town controlled segment of VT7B under the Class 2 Town Highway Paving Programs. The town was responsible for the local share of this project.

Classification

Highways may be classified in several different ways. An inventory by administrative class is shown in Table 12, which shows the mileage of state and locally maintained highways in Clarendon. There are several classes of state highways, based on statewide usage, and four classes of town highways, as follows:

1. Class 1 town highways are those town highways which form an extension of a state highway route and which carry a state highway route number.
2. Class 2 town highways are those town highways selected as the most important highways in each town. As far as practicable they are to be selected with the purpose of securing trunk lines of improved highways from town to town and to places which by their nature have more than the normal amount of traffic.
3. Class 3 town highways are all traveled town highways other than Class 1 or 2 highways. The minimum standards for Class 3 highways are a highway negotiable, under normal considerations, all seasons of the year by a standard manufactured pleasure car. This would include, but not be limited to, sufficient surface and base, adequate drainage and sufficient width capable to provide winter maintenance.
4. Class 4 town highways are all other town highways including trails and pent roads. The Selectmen shall determine which highways are Class 4 town highways.

As can be noted from Table 12, there are 14.44 miles of state highways and 51.39 miles of local highways in the town.

Table 12 - Town Highway Mileage

CLASS	MILES
Class 1	0
Class 2	23.19
Class 3	25.88
Class 4	1.91
State Highways	14.63
TOTAL ALL HIGHWAYS	63.70

SOURCE: Vermont Agency of Transportation
ftp://vtransmaps.vermont.gov/Maps/Publications/MileageSummaries/2015HwyMiles_town.pdf

Another method of classification is the functional classification, in which highways are defined by function, as follows:

ARTERIAL - Primary function is to provide for through movement.

COLLECTOR - Serves both through movement and local accessibility; provides connectivity between local roads and arterials.

LOCAL - Primary function is to provide access to adjoining properties.

Based on these definitions, the functional classification of the roads in Clarendon is as follows. The major arterials in Clarendon are US Route 7 and Vermont Route 103. These highways are under state jurisdiction. Collector roads include Vermont Route 133 and Vermont Route 7B, as well as local highways TH1, TH2, TH3, TH8 and TH 22.

Improvements

In terms of highway improvements, the Vermont Agency of Transportation (VAOT) maintains a 1-year Capital program and a 4-year project development plan, which are lists of projects that are to be undertaken in the next 5 years on roads in the state. Shown in Table 13 are those state funded highway projects in Clarendon which involve bridge replacements or roadway reconstruction.

Table 13 - Major Clarendon Highway and Aviation Projects in the FY 2004 Vermont Agency of Transportation Capital Program and Project Development Plan.

PROJECT	COST	PROJECT COMPLETION DATE
Highway Swap	\$15,000	Completed
Replacement of BR 11 on TH3 over the Clarendon River	\$227,269	FY 16

Source: Vermont Agency of Transportation

Candidate projects, while not as high a priority as the projects listed above, are on the State's list of projects to complete in the near future.

Bridges

Bridges are critical components of the highway system, allowing travel over significant physical obstacles such as rivers, wetlands, and ravines. Bridges are also challenging to maintain and expensive to replace. Thus, they are a major focus of transportation planning and management.

Like highways, bridges may also be classified according to their state or local jurisdiction, with ownership generally determining responsibility for maintenance. Fortunately, repairs to many local bridges are eligible for at least some state funding under the state's local bridge assistance program.

Bridges with spans of 20 feet or more are generally eligible for federal support, while bridges (or culverts) with spans greater than 6 feet but less than 20 feet are generally eligible for state funding. Currently, there are over 15 bridges of 20 or more feet and over 10 bridges of between 6 and 20 feet in the Town, as well as one covered bridge.

The condition of local and state bridges is evaluated regularly by the Vermont Agency of Transportation. Using a system developed by the federal government, bridges are given a rating of between 0 and 100. Bridges with scores of less than 70 are considered eligible for non-local funding. However, due to demand, usually only bridges with much lower scores actually receive funding. Of Clarendon's many bridges with spans of 20 feet or more, only one is ranked in the top 100 (4th) on the state's priority list; only two are ranked in the top 300 on the state's list. The State's capital program currently includes one bridge in Clarendon (See Table 13).

Traffic Volume

Highway engineering and design professionals describe traffic volumes on both a daily and an hourly basis. To denote the usage of a road, and to compare roads, the Average Daily Traffic (ADT) is used. In its simplest form, the ADT represents the total traffic volume passing over the road in a year, averaged on a daily basis.

Shown in Table 14 are the estimated 2012-2014 ADT's for some of Clarendon's highways. As expected, the highest volumes are on US 7 and VT 103.

Table 14 - Clarendon Traffic Volumes

ROUTE	VOLUME (Annual Average Daily Trips)
US 7 (at Wallingford Town Line)	7800
US 7 (Rutland Town Line)	13,400
VT 103 (at Route 7)	12,300
Town Highway 1 (Middle Road)	1,100
Route 7B (At North Shrewsbury Road)	650
Route 7B (At Rt. 103)	570

Source: Vermont Agency of Transportation, 2012-2014
http://vtransplanning.vermont.gov/sites/aot_policy/files/Final%20Web.pdf

Accident Locations

Another way to identify deficiencies in the highway network is to examine accident records to ascertain locations where there appear to be more accidents than would normally be expected. Such locations would be an indication of "geometric" features that are deficient and need to be addressed. The State of Vermont Agency of Transportation examines sections of highways and intersections for accident rates. Those which exceed a critical rate, determined statistically, are considered high accident locations.

An examination of State accident studies indicates that there are no areas in Clarendon considered a high accident location by VAOT Standards.

The intersection of VT Route 7 and US Route 103 has been identified by the town as a hazardous intersection and the town has dedicated time and resources to develop plans to make the intersection safer. Select Board members participated in several meetings held at the local, regional, and state level. A \$10,000 study was initiated through the Rutland Regional Transportation Council. The Agency of Transportation indicated that a traffic signal was the best solution to fix safety issues and the signal has been installed. The AOT agreed to consider other solutions if future development around the intersection decreases the signal's effectiveness.

Highway Problem Areas

A discussion with Town officials did indicate there are some problem areas associated with highways in the Town: These include town bridges and heavily used but currently unpaved town highways.

Town Equipment

The Town of Clarendon maintains its own roads using the following equipment: three International dump trucks (2006, 2008, 2014 models), one Caterpillar Backhoe 307 (1995), one Galion Grader(2001), one Cone-head DC-50 Wood Chipper (2005), one Ford XL 4x4 (2001), one John Deere 524K Wheel Loader (2014), one Ford F550XL (2009) one International 7400 SFA 4x2 Diesel (2012), mowers, sanders, snow plows and miscellaneous equipment.

Impact of Regional Transportation Element

The transportation element of the Regional Plan also has an impact on local road decisions. A part of the regional plan is the designation of highways of Regional Significance. Those in Clarendon include Routes 7, 103, and 133. These are highways used by people of the entire region, and thus, have more than local significance.

Air

Clarendon is home to and is served by the Rutland Southern Vermont Regional Airport, which has two runways, a 5,000-foot north-south runway (with a 1000 foot extension approved by the

Federal Aviation Administration for the airport master plan of improvements), and a 3,200-foot east-west runway. JetBlue Connection, operated by Cape Air, offers three daily round-trip flights to Boston's Logan Airport. Companies such as Kalow Technology, Fed Ex, UPS, General Electric, and OMYA, provide a considerable amount of general aviation, including air taxi, instruction, and cargo services.

To qualify for federal aid, each airport must have a master plan of improvements with a 20-year horizon, updated every eight years detailing what improvements are contemplated. Facilities, especially runways, navigation aids and other air-related improvements, must be built in accordance with Federal Aviation Administration (FAA) guidelines and requirements. These are intended mostly for the safety of aircraft operations and the economic viability of the airport service area.

An airport master plan for the Rutland Southern Vermont Regional Airport has been developed and was last updated in 2009. A number of projects are envisioned in this master plan for expansion of the runways and taxiways, instrument landing systems, parking areas and relocation of the terminal. These improvements are intended to allow the airport to function better in the future.

The Master Plan Goals include evaluation of airport design standards to accommodate a more demanding aircraft fleet mix and increased safety and reliability as an airport service area for the central and Southern regions of the state of Vermont. It is imperative to protect the existing approaches and air space as well as future approaches in order to implement the master plan. Consideration to FAA form 7460-1 as well as the part 77 surfaces shall be referenced and adhered to when construction is considered within the airspace of the airport.

Other projects that are underway or just recently completed include:

- Runway surface temperature monitoring equipment for winter operations/safety (Completed)
- Installation of an Instrument Landing System (ILS) (Completed)
- Construction of twelve new private hangers on the western side of the airport. (Under development)
- Addition of three new aircraft ties-downs on the new west ramp area. (Completed)
- Installation of Doppler VOR to lower approach minima to as low as possible (Completed)
- Installation of perimeter fencing (Completed)
- Grooved runway for increased landing safety by decreasing hydroplane potential (Completed)
- New airport signs and painted markings (Completed)
- Construction of Runway 1 and 19 safety areas (Completed)
- Relocation of airport road with Route 103, (Completed)
- New taxiway Alpha and Delta (Completed)
- EMAS pad on the south end of runway 1-19 (Completed)
- Relocation of the Localizer antenna (Completed)
- New full parallel taxiway Echo (Partially Completed)

The Airport has seen significant improvements in the last ten years. These include runway relocations to improve landing accuracy, terminal building renovation, safety area improvements and grooving of the main runway, construction of a new ramp area for larger business aircraft, and construction of additional hangers. The most significant improvement is the complete installation of a new approach lighting system (MALSR) to Runway 19 (the main runway used during poor weather conditions). This lighting system improves the minimums and safety of the existing instrument approaches, thus lowering the minimum landing requirements. This enables the Airport to provide the airline users with greater reliability for landing during conditions of reduced visibility. It also increases the capacity to attract more business and vacation charter traffic.

In order to enable the Master Plan to be implemented, current and future approaches need to be considered. The implementation of an Airport Zoning Overlay District will help to coordinate the improvements of the Airport with development in the Town of Clarendon and surrounding communities.

Other Transportation Modes

Although Clarendon is home to the Rutland Southwest Regional Airport and its highways, thus dominating the local transportation network, other modes also need to be considered.

Public Transportation

Not all residents of Clarendon have automobiles or have access to them at all times. Of these, some are temporarily inconvenienced, but many are disadvantaged, whether by age, income, or handicap. To serve these people, public transportation services are sometimes necessary.

Marble Valley operates a Job Access/Reverse Commute (JARC) program, which is designed to provide transportation to and from employment opportunities. The Route 7 South Commuter route connects with the Green Mountain Express in Manchester, allowing passengers access to areas throughout Bennington County. Buses pass through Clarendon on their way to Manchester five times throughout the day. Busses returning from Manchester pass through Clarendon again on their return trip to Rutland. These routes operate 7 days a week, and no fare is charged.

Vermont Transit provides express services from Burlington VT to Albany NY or Boston MA. While these services pass through Wallingford, VT Transit does not have designated bus stops in Clarendon.

Social service agencies provide an extensive network of specialized transportation services, typically for each agency's clients. Social service agencies also tend to be restricted by rules limiting how they can obtain services and how much they can pay.

In an attempt to begin to organize and coordinate these wide-ranging and disparate services, the State of Vermont funded the development of a number of Transportation Development Plans

(TDP) in the public transportation zones throughout the State. The TDP for the Rutland region calls for the development of a central brokerage to be managed by MVRTD. A brokerage is a service which arranges rides for clients calling in. The ride may be by public transportation, taxi, volunteer driver, or whatever means is appropriate and cost efficient for the client. The TDP also recommends service extensions to MVRTD to the north, south and east.

Rail

Rail transportation continues to be vital to the economy of the State of Vermont. Rail transportation is necessary to move bulk commodities and other merchandise not conducive to highway transportation. Rutland is one of the primary nodes in the Vermont railroad network. To the west, the former Delaware and Hudson (D&H) line to Whitehall, now owned by the Clarendon and Pittsford (C&P), a Vermont Railway subsidiary, serves as the gateway for rail traffic entering the State of Vermont.

To the north, the Vermont Railway serves Burlington and communities in between. To the south, the Vermont Railway serves Bennington and Manchester. To the southeast, the Green Mountain Railway serves Ludlow, Chester and connects in Bellows Falls with the Central Vermont and Boston and Maine Railroads. The primary focal point for all this activity is Rutland, from which trains serving all these directions are originated and terminated.

The Vermont Railway line between Rutland and Bennington passes through Clarendon along the Otter Creek Valley parallel to US 7. A siding once was located along the tracks just south of Clarendon Village at a local lumberyard. The Green Mountain Railway cuts across Clarendon's northeast corner before becoming parallel with VT 103 and the Mill River Valley.

Bicycle

While bicycling is most often thought of as a recreational activity, it is also an increasingly important form of transportation. As recreation, bicycling may be viewed as merely exercise, where specific routes are secondary; or touring, where a variety of scenic and historic and cultural sites are desirable. In the latter case, the bicycle becomes a means of connecting such sites, and may be of local interest or of touring interest. In the local sense, bicycle paths to local recreational sites are germane. In a touring sense, bicycle routes are used to create a long circle tour for tourists.

As transportation, bicycling can be used for commuting as a substitute for the auto, but its most likely use is by children and teenagers for school, visiting and recreation purposes, in place of being transported for these purposes by adults. Local recreation and transportation use of bicycling implies that bicycle facilities should be initially concentrated in village and built up areas.

According to local officials, popular bicycle routes in the town include Walker Mountain Road, Creek Road, East Street, and Route 133. Widening of shoulders is necessary in most locations to support bicycling for commuting and recreation.

Education and Other Facilities

As outlined in the Planning Manual for Vermont Municipalities:

Community facilities and services are provided by the municipality (or are available within the municipality) for the health, benefit, safety, and enjoyment of the general public. They include schools, recreation facilities, community water supply and waste disposal systems, police and fire protection, solid waste disposal, and general town administrative services.

Community facilities and services have a significant effect on the municipality's ability to grow in an orderly and healthy way. Adequate, well maintained, and efficient services will enable homes, businesses, and public places to be accessible and have safe water supplies, sanitary waste disposal, and necessary governmental services.

Careful planning is essential for community facilities and services if they are to meet local health, safety, and welfare needs and community goals for future growth. If the facilities are at capacity, further development may strain them, causing financial burdens and environmental problems. If facilities are inadequate, they may prevent the municipality from meeting existing needs and encourage unplanned growth.

This section of Clarendon's Plan presents information on the status of community facilities and services in or available to the Town.

There is one Registered Home Care Provider that cares for no children currently, and two Licensed Providers in Town offered at the Elementary School. The school offers before-after school day care for our residents of Clarendon through its CEBA Kids Club and Clarendon Elementary School Pre-K Programs.

These two public providers have a total capacity of 78 children. Additional resources are accessed by families by traveling to Rutland City, Wallingford and Manchester. The Town should coordinate with the School District support the following goals:

- Affordable and accessible child care for all families, especially low and medium income families, working parents, and those with limited transportation.
- High quality child care services, including care for children with special needs.
- Training and education for child care professionals are available and well-funded, and that child care workers earn a living wage.

Education

Public education services are provided to Clarendon residents by two facilities, the Clarendon Elementary School and Mill River Union High School. For the FY 2015, 46% attend CES and 54% attend MRUHS. The Mill River Union High School is directed by a board, with board

members elected by the voters in the towns of Clarendon, Shrewsbury and Wallingford. Tinmouth, which has school choice for grades 7-12, is not represented on the High School Board. Like members of local school boards, members of the high school board also set policy and help prepare and present an annual budget.

Clarendon is also a member of the Rutland South Supervisory Union which provides administrative, special education and transportation services for the town and union schools. The Supervisory Union is made up of the Towns of Clarendon, Wallingford, and Shrewsbury and Tinmouth. It is a municipal compact formed by a vote of its member communities. Governance of the school is directed by a board, with board members elected by the voters in each of the Supervisory Union's three Towns

Currently, school leaders and board members are working to understand and implement the requirements of Act 46, School Governance Consolidation Act, passed in 2015.

Clarendon Elementary School

The Clarendon Elementary School is located in North Clarendon on a 27 acre lot. The population served by the school consists of all children of elementary school age (pre-K through grade 6) living in the Town of Clarendon.

An elected five-member school board governs overall operation of the school. The school principal oversees day-to-day operations. The school employs approximately 50 full and part-time people, including administrative personnel, support services, faculty and staff. There is an average of 24 students per grade level including the pre-K program.

Act 68 was passed in 2003 to govern school funding across the State. Its overall purpose is to simplify Act 60. The major change between the two is the elimination of the "Sharing Pool" under Act 60. Act 68 creates a direct connection between the local spending per student and the property taxes for homesteads. For non-homesteads it sets a statewide rate regardless of local spending. Under Act 68 the state sets a base amount that represents education spending per equalized pupils. Reviewed annually, the state sets this base tax rate. For FY2015 the amount is \$9,285. So each district compares their local spending per equalized pupil to the base amount and applies that ratio to the base tax rate to come up with the local tax rate. Since that is an equalized rate, it is divided by the Common Level of Appraisal. This results in the estimated local tax rate.

For 2015, primary homesteads are assessed at \$0.99 per \$100 of fair market property value, while secondary homes and commercial property are assessed at \$1.15. These figures are subject to change.

According to the Rutland South Supervisory Union, enrollment (Grades PK – 6th) has been decreasing for several years. However, a slight increase is occurring as shown in Table 15. As indicated in the Population Profile section of this Plan, the number of births has fluctuated since 1981, although national trends suggest the birth rate may increase. Projections for the Town

population as a whole indicate that the population should grow modestly over the next ten to fifteen years, likely resulting in at least some increase in the under 18 age population.

The capacity of Clarendon Elementary School is roughly 350. Classroom space is currently adequate, although gym classes must share space with the cafeteria. The elementary school was last expanded in 1989. This expansion increased the size of the school by roughly one-third.

Table 15 - Clarendon Elementary School Enrollment

School Year				
	2011-2012	2012-2013	2013-2014	Projected 2015
Pre-Kindergarten	24	26	14	29
Kindergarten	22	15	29	14
Grade 1	21	23	19	29
Grade 2	28	18	23	19
Grade 3	34	26	20	23
Grade 4	23	31	29	20
Grade 5	33	23	33	29
Grade 6	27	33	24	33
Total Enrollment	212	195	191	196

Source: Vermont Department of Education, Clarendon Town Reports

Improvements to the Clarendon Elementary School include updating the playground as well as a Peace Garden and major roof repair in 2002-2003. Capital equipment owned or controlled by the CES includes a tractor, playground equipment, computer and office equipment. Major repairs of the heating and ventilation systems took place during the 2003-2004 school year. The district is developing a long range capital plan for future facility and equipment needs.

Mill River Union High School

The High School was built in 1975 and occupies a forty-acre parcel on Middle Road in Clarendon. A major addition was completed in 1996-97, which helped address overcrowding noted during a State of Vermont's Public School Approval process. A variety of secondary, vocational-technical, and college preparatory classes are also offered. The facility also boasts a fully equipped drama unit and stage, music facilities, and home economics and industrial arts areas, including a kiln, a darkroom, printing presses and a small engine repair shop.

Paid staff at the school includes a principal, an assistant principal and approximately 86 teachers and staff.

Funding for the high school is raised primarily through local property taxes and from state aid to education/special education block grants. Money is raised by the towns and paid to the

Supervisory Union in the form of an assessment based on the number of high school students per town. The MRUHS budget for FY15 is \$9,504,861.

Attendance at Mill River Union High School is open to all children in grades seven through twelve who reside in the Towns of Clarendon, Wallingford, and Shrewsbury. To contain costs for member towns, the district has worked at attracting tuition students to Mill River. There were 130 tuition students attending Mill River during the 2013-2014 school year. Students from the school choice towns of Danby, Tinmouth, Rutland Town, Chittenden, Middletown Springs, Mt. Tabor, Ira, Dorset and Mendon are also eligible to attend Mill River Union High School and provide revenue through the payment of tuition.

Clarendon pays a share of the cost of operating MRUHS based on the number of students from the town who attend Mill River.

Table 16 - Member District Assessments to MRUHS

Member District	Enrollment	Percent	Assessment
Clarendon	206	43.8%	\$2,570,424
Shrewsbury	65	20.8%	\$1,193,371
Wallingford	161	35.3%	\$2,023,484
Total	432	100%	\$5,727,279
Per Equalized Pupil (2013-2014): \$14,180			
Non-resident Tuition Rate (2013-2014): \$15,513* *Does not included transportation, vocational, and special education costs which are funded separately by tuition districts			

Source: 2014 Annual School Report

Enrollment at the school currently stands at 522 students, of whom 186 are residents of the Town of Clarendon. Clarendon's share of the Mill River Union High School's enrollment represents 35.6% of the total. See Table 17.

Table 17 - Clarendon High School Enrollment

	School Year			
	2011-2012	2012-2013	2013-2014	Proj.2015
Grade 7	32	28	33	24
Grade 8	29	33	29	34
Grade 9	32	32	32	31
Grade 10	32	29	33	32
Grade 11	29	29	29	32

Grade 12	35	26	30	30
Total Clarendon Enrollment	185	177	186	183
Total Mill River Enrollment	563	539	522	503

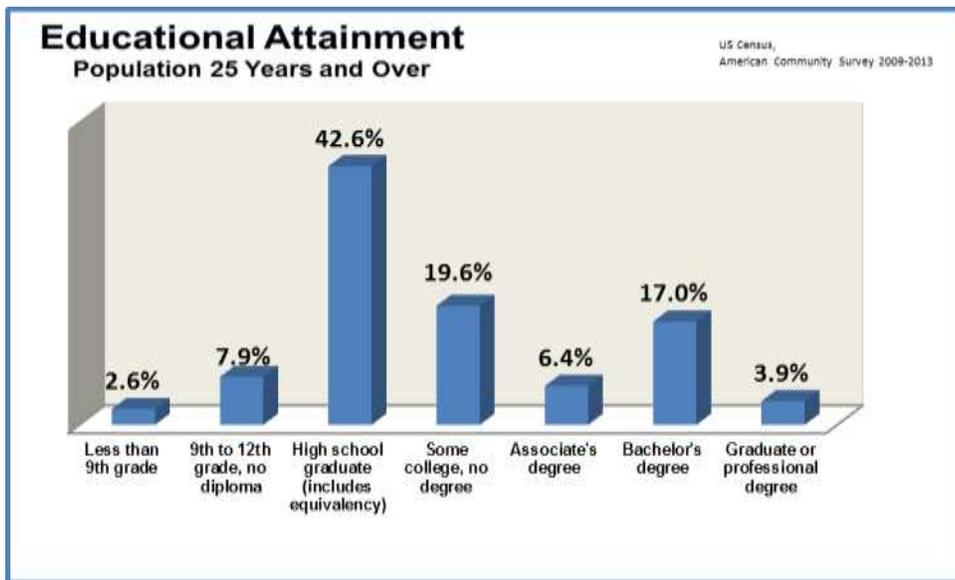
Sources: Vermont Department of Education, MRUHS Reports, Rutland South Supervisory Union

Declining attendance levels over the past five years suggest that enrollment at Mill River Union High School is likely to decline or remain stable over the coming years. Slight population decreases over the past five years and increasing elementary school enrollment suggests the number of high school age students in Clarendon will change similarly.

In the figure below (Figure 8) are the latest U.S. Census estimates for the highest education attainment for residents 25 years of age and older. Just slightly more than a quarter of residents have an Associate’s Degree or higher. Lifelong education is a critical element of vibrant and creative communities and workforces.

A number of educational opportunities exist for Clarendon residents – primarily through courses offered by schools such as Stafford Technical Center and Community College of Vermont in Rutland. Given the low Associate’s Degree rate for residents (noted above) and the importance of higher education for today’s job market, the Town of Clarendon should encourage and perhaps find ways to help its working age residents to finance Associate degrees and/or for technical certifications.

Figure 8 – Educational Attainment in Clarendon



Fire Protection

The majority of fire protection in Clarendon is provided by the award-winning Clarendon Volunteer Fire Association, a private organization formed in 1963. Affairs of the Association, which has seen an increase in active members, are overseen by a Board of Trustees and Chief elected by the Association's members.

The Association operates out of two fire stations, one in North Clarendon and the other in Chippenhook. Quick response time is provided to all areas of the Town. Equipment used by the Association includes two pumps (a 1991 Pierce capable of pumping 1250 gallons per minute and a newly acquired 2002 Freightliner FL80 Crew Cab Ferrara also capable of pumping 1250 gallons per minute), three tankers, related equipment, and several sets of turn out gear. Single pump-tanker combinations are maintained at each of the Town's fire stations.

The Fire Department received two grants in 2014. A Vermont Homeland Security grant for approximately \$12,000 enabled the purchase of Amplified Chargers, Mobile Repeaters and a Portable Radio which allowed the Fire Association to upgrade radio and pager receiving/transmitting capabilities. A Dry Hydrant Grant for \$4,000 was received to install a dry hydrant at Grembowicz's Farm on Creek Road to help make a faster water source set up in that part of town.

Training is an important part of firefighting. Soon after joining the Association, all members attend a basic firefighting course. In addition, all Association members drill regularly to maintain their skills. The quality of the Fire Association is widely recognized. It has taken first place at the Vermont State Fire Fighters Convention three consecutive years.

Funding for the Fire Association comes from locally organized fund raisers as well as from an annual allocation awarded by voters at Town meeting. The Town contributed \$67,000 to the

Department's overall budget in 2015. Support and assistance in fund raising are provided to the Association by the Clarendon Volunteer Fire Association Auxiliary.

The number of calls responded to by the Department was 86 in 2014. Most of these calls were motor vehicle accidents and false alarms. The Department also responded to three structure fires, several miscellaneous calls, two elevator rescues and stood by for the Mill River Union High pep rally bon fire

The Clarendon Fire Association maintains a mutual-aid network with fire departments in surrounding towns. In the event of major fires, neighboring fire departments provide assistance to or serve as back up to responding departments. According to the Chief of the Fire Association, the number of calls has remained stable--or perhaps even declined--in recent years despite a growing population and economic base. Much of this can be attributed to an increasingly successful public fire education program and growing understanding of the use of wood stoves.

According to the Chief, the most significant future needs facing the Association will be manpower and money. Manpower will become a problem as fewer and fewer people work in the Town and, thus, are unable to assist in firefighting, especially during the workday. Greater amounts of funds will be needed in the future to pay for new equipment such as the recent equipment purchases detailed above.

The Rutland City Fire Department also provides fire safety services in Clarendon. In order to comply with Federal Aviation Regulations (FAR part 139), the firefighters of the Rutland City Fire Department are available and fully trained to respond to the Rutland Southern Vermont Regional Airport during actual or potential aircraft emergencies.

Rescue

Emergency response service in Clarendon is provided by Regional Ambulance Service, Inc. (RASI or "Regional"), the largest ambulance service in Vermont. A board of directors representing its 11 member municipalities and the Rutland Regional Medical Center oversees it. Staff includes 6 full time and 7 part time paramedics.

Regional's headquarters are located at Stratton Road in the City of Rutland. It is on call for service 24 hours a day. Its average response time for calls in Clarendon is estimated at 4-5 minutes.

Regional's equipment includes 7 ambulances, which are replaced on a rotating basis, and a Dodge pickup truck. In 2006, two new ambulances were ordered to replace older models with more than 100,000 miles of service on each of them. Two of the ambulances are larger modular units and three are vans; all are supplied with the equipment needed to provide Advanced Life Support. Equipment for Mass Casualty events was purchased through Homeland Security Grants.

As with related services, training is an important part of maintaining an effective emergency response organization. The Staff of Regional undertakes ongoing advanced life support training to remain updated on current emergency pre-hospital treatment.

Funding for Regional Ambulance's operations comes from two primary sources. Roughly half of all funds are raised through per capita assessments levied on member municipalities (a per capita assessment rate of \$4.25). The remainder is raised through charges to users and through membership/subscriptions. (Households contributing \$45 annually become eligible for an unlimited number of free emergency calls and 2 non-emergency transfers.)

During the year ending June 30, 2014, the Regional Ambulance Service responded to a total of 8,482 ambulance calls in 12 member communities, and an additional 354 "Medic One" paramedic intercept calls. Call volume continues to increase across the service area.

According to its staff, Regional Ambulance maintains a careful capital budget. Needs are anticipated far in advance and purchases are programmed to avoid difficulty. However, growth in calls throughout the service area continues to increase, purchase of an additional ambulance may need to be considered in four to five years.

Public Safety/Police

Local constables, the Rutland County Sheriff's Department, and the Vermont State Police provide public safety services in Clarendon. The two elected constables, along with a Special Police Officer, have the authority to carry out police powers on an ongoing basis, while the Rutland County Sheriff's Department is under contract with the Town to patrol for violations of speed limits during daytime hours. The State Police, who are based locally at a barracks in Rutland, enforce state laws and conduct investigations of major crimes.

During 2014 the Rutland County Sheriff's Department switch to the Valcour Dispatch Platform. The switch was done for its ease of use but also save the taxpayers money. It is an internet based system that is better at statistical accounting of events than the old system, and it better tracks trends that are important to the towns served.

State law controls the level of authority granted to constables. Clarendon's constables have appropriate backgrounds for law enforcement and receive monthly training in areas such as firearms and radar operation.

Equipment owned by constables includes uniforms, badges, lights, firearms, and flashlights. Public safety related equipment owned by the town of Clarendon includes a radar gun and radios. Needs identified by the constables include an additional radar gun and town owned police cruiser.

The actual level of crime experienced in Clarendon is low relative to the rest of the Region and the state. See Tables 18 and 19.

Table 18 - Crime Rates for Clarendon, Rutland County and Vermont

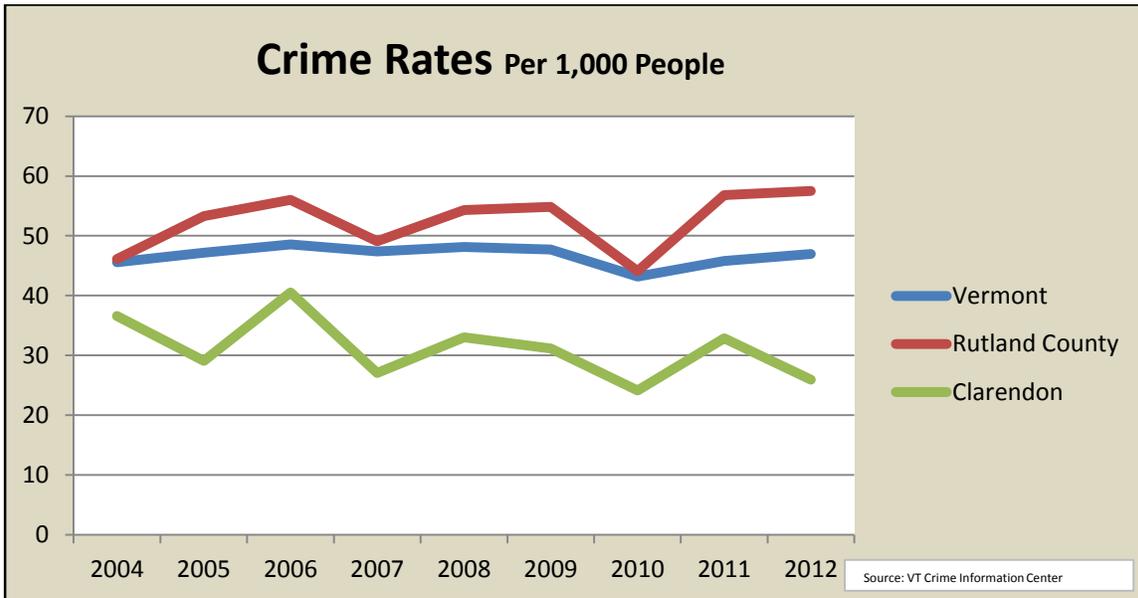
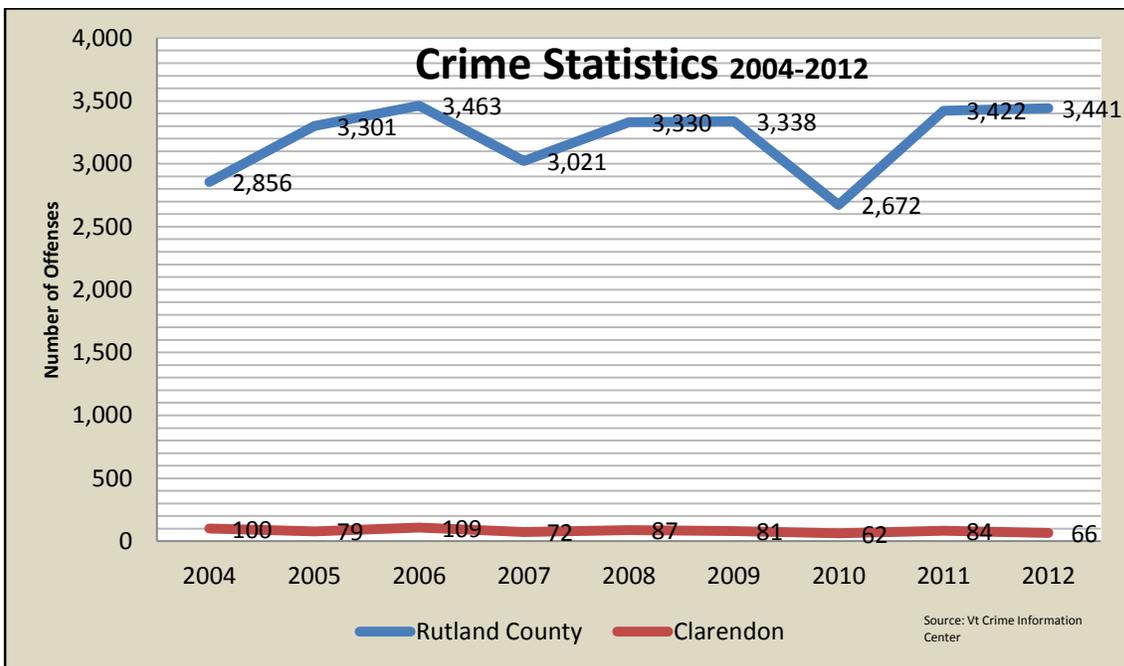


Table 19 - Clarendon and Rutland County Number of Crime Offenses



Source: DPS Annual Crime Reports

Crime rates are affected by numerous factors. One reason why crime rates in Clarendon are lower than in the region as a whole may be that, because of the agricultural community and the

associated numbers of people who work at home, criminal activity is deterred. In municipalities where large numbers of people work out of town, criminal activity is more difficult to detect.

In the future, the adequacy of public safety services could change if development increases in remote areas where the detection of criminal activity is more difficult.

Solid Waste

Currently solid waste generated in Clarendon is disposed of in several different ways. Some residents use the services of haulers who pick up trash and recyclables on a regular basis. Trash collected in this manner is hauled to disposal sites at the discretion of the hauler. Other residents "self-haul" their trash and recyclables to the Town's own transfer facility on Route 7B, which is serviced by Casella Waste Management, Inc. Still others choose to dispose of their trash and recyclables at the Rutland County Solid Waste District's (RCSWD or "District") transfer station in Rutland on Gleason Road.

Clarendon is a member of the District, a special purpose municipality overseen by a board of directors representing its member towns. The District has contracts in place to provide its members with access to lined landfill space, recycling, hazardous waste collection, electronic waste collection, appliances, tires and other waste.

Membership in the District essentially establishes a guaranteed waste disposal option for the Town. (In the event all other means of disposing of solid waste were closed off, the District would continue to provide services to the Town.) The District also provides unregulated hazardous waste collection services to both households and businesses.

Funding for the District comes from user fees/tipping fees on trash (fees are not charged on recycled waste). Fees at the district facility on Gleason Road vary from between \$2.00 to \$3.50 per bag of solid waste depending on whether you purchase an annual pass and what size bag you are disposing of. Fees for tires range from \$2.50 to \$40.00 and for appliances approximately \$12.50 to \$15. Fees are not charged for recycled wastes, burnable debris, or the majority of household hazardous wastes (although a proof of residence vehicle sticker is required). Items currently accepted for zero-sort recycling at the transfer station include magazines, junk mail, newspapers, magazines, catalogs, office paper, junk mail, tin/steel/aluminum cans, clean clear, green and brown glass, clear and colored #1 and #2 plastic, corrugated/non-waxed cardboard and box-board.

As of 2015, the Clarendon town transfer facility was charging \$1 to \$3 per bag of garbage depending on bag size. Zero-sort recycling was also available.

Clarendon is not one of the 10 towns in the region that belong to Solid Waste Alliance Communities (SWAC), formed under an interlocal contract. SWAC addresses waste reduction as well as public awareness and education.

Table 20 - Total Solid Waste and Recyclables Processed in Rutland County by RCSWD
(2014)

Trash Processed	Trash Processed Per Capita Per Day	Recyclables Processed	Recyclables Processed Per Capita Per Day
37,112 tons	4.22 lbs.	9,870 tons	1.20 lbs.

Act 148, Vermont’s Recycling Law, will greatly impact local and regional solid waste in the coming years. The intent of the law is to divert recyclable items, leaf and yard debris, and food scraps from landfills. By July 1, 2015, recyclables will be banned from landfills; by July 1, 2016, leaf and yard debris and clean wood waste will be banned; and by 2020, food scraps will be banned. Municipalities will be required to implement variable rate pricing (“pay as you throw”) based on volume or weight by July 1, 2015.

Another planning issue facing the town is the pending expiration of state certification of the town's transfer facility. Until the Solid Waste District amends its Management Plan to address the issue of non-regulated hazardous wastes management, the town transfer facility could be forced to close by the Vermont Agency of Natural Resources although this is highly unlikely. (A complete management plan is required before the facility could be recertified.)

Water and Sewer

Water and sewer services are obtained almost exclusively "on-site" in Clarendon, with the exception of the Rutland Airport Industrial Park and homes located in the Town's four mobile home parks. Sewer lines extending south from the City of Rutland serve the Industrial Park. The mobile home parks are served by community water and in-ground waste disposal systems (See Natural Resources 2 map) and the water resources section of this Plan for a discussion of the Wellhead Protection Areas associated with the community water systems). For the majority of residents, however, water is typically obtained from individual drilled and dug wells or springs, while sewage disposal is accomplished by using septic tanks and drainage fields or other similar in-ground designs, including "mound" systems.

Although there is capacity to extend Rutland City water and sewer service further south into Clarendon, current infrastructure is limited in how much more it can deliver and collect. It is not built out and improved for such an expansion.

In 2006, the Town of Clarendon initiated a sewer assessment study to investigate the need for and feasibility of installing a municipal sewer system in North Clarendon. Following the preliminary study, a public information meeting was held in 2011 to help town officials decide whether to proceed with a municipal sewer system. After the public meeting, the Clarendon Select Board decided to put the project on hold and not continue with the next phase of the study.

If the Town of Clarendon experiences rapid growth, a dense development pattern, or if groundwater contamination becomes widespread, the Town should consider taking another look at investing in a public water and sewer system.

Meanwhile, important issues remain. The use of on-site water depends on adequate quality and quantity of supplies. On-site water can be influenced by geological conditions and activities, such as outdoor storage of salt and overuse of pesticides that release pollutants that can contaminate water supplies. The quality of on-site sewage disposal hinges on the ability of soil to percolate and treat wastewater.

The potential for on-site water supply in Clarendon is discussed in this Plan's Groundwater section, while the capability of land for on-site sewage disposal is discussed in the Development Constraints section.

Recreation

Recreational opportunities are frequently classified according to their type of ownership and extent of development improvement. Extent of development influences the types of recreational activities that may be enjoyed in an area, while ownership affects issues such as access and cost.

"Developed" recreational opportunities in Clarendon include improved facilities like the Clarendon Elementary School, while "undeveloped" recreational opportunities incorporate features such as the Otter Creek corridor. "Public" recreational opportunities are owned by public entities such as the state agency of transportation, while "private" recreational opportunities take place on land that is privately owned and, in some cases, are commercial.

Municipally-owned land available for recreation includes walking trails in the Town Forest on East Street and along Horton Road, as well as a baseball field at the recreation area on Route 7B next to the transfer station. Other recreation opportunities in the Town include stream access to Otter Creek (on land owned by the Vermont Department of Fish and Wildlife), swimming at Mill River Gorge and Big Rock (on private land), playgrounds/athletic fields at Clarendon Elementary School (limited) and Mill River Union High School, baseball fields (on private land) in Chippenhook and Clarendon Village, camping at the Iroquois Land Family campgrounds (a private commercial facility) and picnic areas operated by the Vermont Agency of Transportation.

Less well-known private recreation opportunities include those provided by the many natural areas and extensive open space in the Town. Other municipally owned land available for recreation includes the Town Forest on East Street and currently unimproved land on Route 7B next to the transfer station.

Recreation opportunities in neighboring towns which are available to Clarendon residents include the Tinmouth Channel, Tinmouth Game Preserve and Ira High Peak Conservation District offering opportunities of natural outdoor experiences. Less well-known private recreation opportunities include those provided by the many natural areas and extensive open space in the Town.

Development of plans for town recreation facilities is the responsibility of the local Recreation Committee appointed by the Board of Selectmen. New recreation fields are currently under construction at the 7B recreation area. The planned facilities include an additional baseball field, a regulation sized soccer field and additional parking. Other goals of the Recreation Committee for the 7B recreation area include a volleyball court, open-air pavilion, walking path and bringing electricity to the field. Future plans may include construction of a complete facility to include restrooms and larger storage facilities. The greatest needs for recreation include funds and volunteers.

(NOTE: It is important to recognize that at least some of the current demand for recreation is met by facilities outside of the Town)

Community Facilities

Community facilities--which include sites such as the town hall/offices, town garages, grange hall/senior center, cemeteries, and library--are critical to the well-being of the town and its residents.

Clarendon's town hall, located in Clarendon village, has undergone many recent improvements. In the summer of 2001, a new bulkhead was installed to facilitate the installation of a new furnace, replacing the old 30-year old furnace. The town has also budgeted for town hall maintenance. Roof repair over the vault and completion of installation of one air conditioner for the Town Clerk's office has also been accomplished. In 2006, a new sign for the town hall was designed and donated by Nancy and Carroll Buffum. A new septic system for the Town Hall has been completed and a new porch was constructed.

A new building was recently added to Clarendon's highway maintenance complex. As a result, all town equipment can now be kept under cover and space has been created for a new town dog holding area.

The Clarendon Grange Community Center currently houses the Clarendon Senior Meal site and hosts occasional social gatherings. The Town of Clarendon maintains the building. There are several cemeteries in Clarendon. In recent years, funds have been obtained to construct chain link fences at cemeteries in Chippenhook and Clarendon Flats. Work has taken place to clean up cemeteries around the Town; however identification of persons willing to serve as cemetery commissioners has been difficult.

The recently established Bailey Memorial Library is located in the Clarendon Grange Community Center in North Clarendon. This has provided a larger and more accessible location for the community.

In summary, the town's facilities and services are adequate to accommodate moderate growth that is projected over the next 10-15 years in residential, commercial, industrial areas and agricultural areas.

ENERGY

The energy landscape is undergoing rapid change. Advances in renewables and efficiency are challenging the status quo for utilities and consumers alike.

Energy use is often measured in four categories - residential, commercial, and industrial and transportation. The residential category includes all of the energy directly used in the home. Commercial and industrial include energy directly used for service, wholesale, and retail trade, and manufacturing. Transportation includes energy used to move people and materials for residential, commercial or industrial purposes.

Green Mountain Power (GMP), the largest electric utility in Vermont, serves virtually all of Rutland County, including Clarendon.

Energy rates are significantly higher for Vermont customers than other users across the country. However, considerably less energy per capita is consumed directly in Vermont for commercial and industrial purposes since many energy-intensive products are imported from other states. This makes Vermont's rate of total energy use per capita about 60% of the national average. Transportation and residential applications consumed 65% of all the energy used in Vermont in 2010. These applications probably consume comparable amounts of energy used in Clarendon each year. For these reasons, local public policy should probably focus on the energy implications of settlement patterns and types, housing design and construction, and their relationships to the transportation system.

The energy savings resulting from one home's conservation efforts may seem inconsequential until they are added with the savings from other homes in the town, state, or nation. According to the Vermont Department of Public Service, in 2013 Vermonters consumed 29% of energy for residential purposes, while Transportation and Commercial and Industrial uses accounted for 71% of energy consumed.

Electricity

Electricity is an energy source in relatively high demand in Clarendon as well as the rest of the state, comprising 40% of Vermont's total energy use. Vermont has enjoyed relatively stable electricity prices over the last 20 years and at rates comparable to the rest of New England. However, electricity rates for residential, commercial and industrial uses in Vermont are 32-46% higher than the national average. (Energy Information Agency, 2014)

Electric energy demand in Vermont has been on the rise with the increased number of households, appliances, new information technologies, electric cars, and especially with the installation of air source heat pumps and air conditioning. Yet overall electricity use in the Rutland Region has not increased since the late 1990s, when Efficiency Vermont, the country's only energy efficiency utility was formed.

The Region's primary high-voltage transmission lines run from Ludlow and Mount Holly to West Rutland, and then northwards through Brandon into Addison County. A proposed New

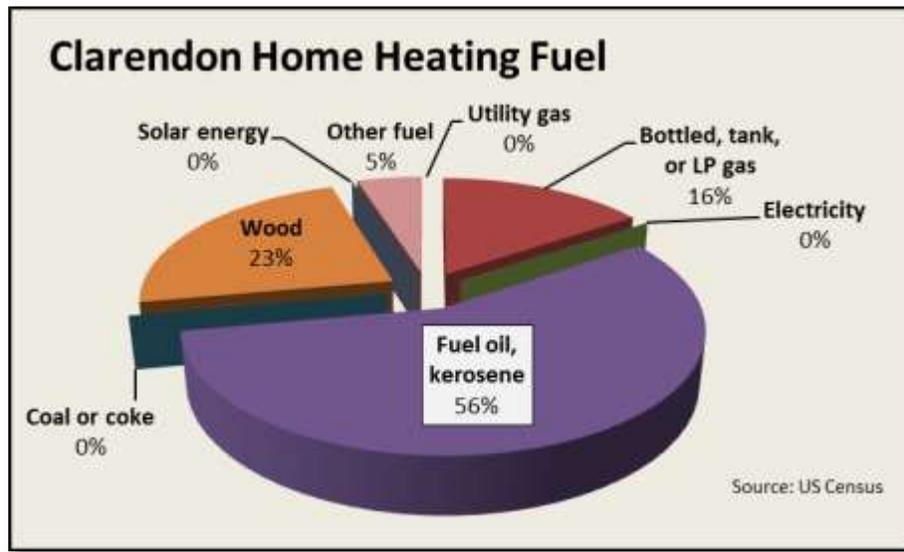
England Clean Power Link 1,000 MW High Voltage Direct Current (HVDC) transmission line from the Canadian border, would be submerged under Lake Champlain and run through Rutland County from Benson to Ludlow and will pass through Clarendon.

Residential Energy Demands

Vermont’s residential consumption of electricity is expected to grow at a slow and predictable rate. After relatively high demands in the 1980’s and 90’s, the state has seen dramatic reductions in residential electric demand due to the elimination of most of the electric space heating. This reduction, along with other significant demand side management efforts, reduced the rate of growth in residential demand in the 1990’s. Future growth in the residential sector is predicted to be related mostly to growth in population.

According to the 2008-2012 U.S. Census, fuel oil heated 66.2% of all homes in Rutland County. This makes the region vulnerable to fuel oil shortages and price spikes during the winter months. Wood heat represents 14% of home heating fuel source in the county, although some communities report that up to half of the homes have wood as a secondary option. Bottled, tanked and LP gas has fueled 12% of Vermont homes. U.S. Census figures for Clarendon are similar.

Figure 9 – Home Heating Fuel



In March of 2000, Vermont became the first state in the nation to have energy efficiency programs administered by a statewide entity funded through an energy efficiency charge on all customers’ bills. They believe improved energy efficiency would make homes more affordable and marketable. According to the Vermont Energy Plan (1991), simple, inexpensive energy conservation measures incorporated into new construction could make space and water heating demands of new homes at least 20% less than the current average. Adding insulation, better windows, sealing drafts, and upgrading water heaters could improve the heating efficiency of

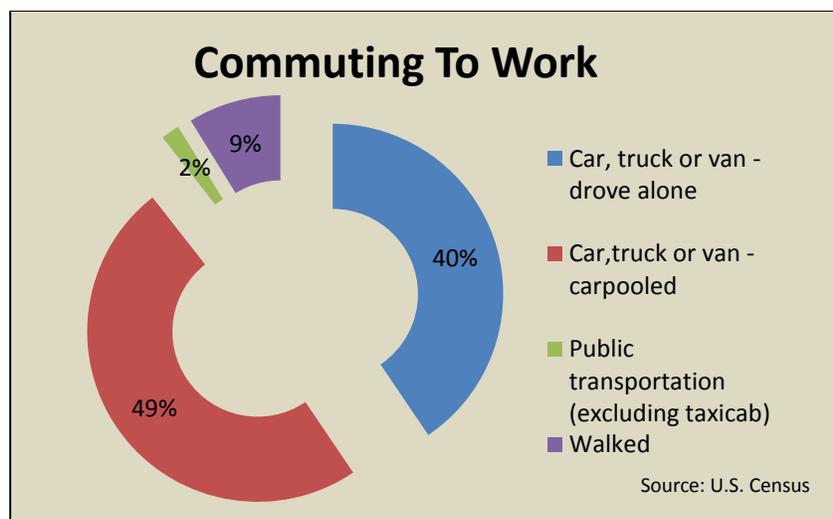
existing homes has been a state priority since 1999. The savings from continuing these actions would help to reduce increases in electricity use in the future. Additional energy savings would result from encouraging EnergyStar rate new homes and weatherization projects, such as improved windows, insulation, and the use of renewable energy sources.

Efficiency Vermont, the contractor serving the state’s energy efficiency utility delivers a set of seven statewide core energy efficiency programs to customers in the state. Reducing building energy use through greater efficiency normally involves retrofits, such as reducing air leaks, replacing heating system appliance and upgrading building insulation. The state has offered funding assistance through adoption of the PACE program which offers funding assistance to towns which have formally adopted a program. Clarendon has not adopted a PACE program. Options available to Clarendon residents for financing the energy efficiency of buildings include The Weatherization Assistance Program which serves low-income homeowners and renters and Neighbor Works of Western Vermont promotes energy efficient housing and community projects through education, technical assistance and financial assistance.

Transportation Energy Demands

Transportation currently accounts for 36% of end-use energy demand in Vermont and. Petroleum supplies two thirds of the energy used in the region for transportation. Clearly, effective transportation policy has great potential to affect Vermont's petroleum usage and overall energy demand. Vermont’s 2011 Complete Streets law requires municipalities to consider the safety and convenience of all roadway users when making transportation decisions. Infrastructure and road design that encourages walking, bicycling and public transit not only reduces the cost of driving by allowing residents to not rely on a car for transportation but can lead to improved community health.

Figure 10 – Commuting to Work



Mean travel time to work = 20 minutes

Clarendon hosts a Park and Ride off of Route 103 at the Regional Airport Park and Ride lots encourage carpooling, thereby potentially reducing the number of single occupancy vehicles on the road which saves energy, reduces traffic congestion, and cuts emissions. Park and Rides also benefit from available public transit service being offered along the major commuting corridors. Public transportation represents a very small portion (2%) of the energy used for residential transportation. This is particularly true in Clarendon since few public transportation alternatives exist.

A recent survey of Clarendon residents indicated that 60% of respondents support the study of biking and walking paths in the more populated areas of town. Concentrating development in villages through Village Designation Areas and residential clusters near major routes, increasing opportunities for pedestrian travel, promoting public transportation and creating appropriate mixes of jobs, housing, goods and services are some of the ways to reduce energy used for transportation.

Clarendon's Renewable Energy Sources

Nearly one-quarter of all energy consumed in Vermont in the Rutland Region comes from renewable sources including but not limited to wind, solar, hydroelectric and bioenergy. Vermont is promoting the development of renewable energy sources to address climate change and reduce reliance on fossil fuels, and increase energy options available locally. However, new energy generation must also avoid undue adverse impacts on the local community and the environment.

To carry the authority in a Public Service Board proceeding, a municipal plan must be clear, specific and consistent in expressing community standards.

Bioenergy

Bioenergy options are steadily becoming more attractive in the Vermont energy market, although most are at different stages of market development.

Bioenergy includes:

- Solid biomass from woody plants and agricultural crops, such as corn, grass and hemp.
- Liquid biofuels, including biodiesel, ethanol, are being developed from oil seeds, waste vegetable oil, and algae.
- Biogas, such as methane from agricultural digesters, landfills, or wastewater treatment plants.
- Bio heat or heat capture from biomass, usually compost.

Certain types of bioenergy, such as wood, can be used for energy without significant processing. On average, one in six Vermont homes, uses wood as a primary source of heat while 50% of

Vermonters use wood as a supplemental heat source. There is increasing interest in wood stoves and wood pellet furnaces for residential and small commercial applications, especially schools. Wood pellets are used in nearby schools in Wallingford and West Rutland. (Vermont Fuels for Schools Program). Nearly one-third of Vermont school children attend facilities that are heated by wood products, such as pellets or other biomass (EIA 2014). Although less convenient than other fuel sources, both cord wood and wood pellets are lower in cost per energy unit than any other traditional fuel. Households relying on wood as a primary heat source burn an average of 4.6 cords per heating season. Households supplementing another primary source with wood, burn an average of 1.9 cords. With the addition of the Vermont Wood Pellet Company, located in the Airport Industrial Park, use of locally produced biomass products is enabling Clarendon to contribute to renewable energy sources.

It is important that the sustainability relationship with bioenergy is addressed, so that the size of bioenergy projects match available resources and ones that are sustainable.

As the need for additional energy generating facilities continues to grow, facilities proposed for Clarendon that burn woody biomass to generate electricity shall be designed, constructed, and operated such that:

1. Biomass inputs (fuel) are sourced in accordance with a written procurement standard approved by the Vermont Agency of Natural Resources. If a standard is not available, a majority of fuel be sourced from lands managed under the Use Value Assessment program; or from harvests monitored by a professional forester.
2. The facility is designed and operated to utilize waste heat for an integral purpose, such as district heating of multiple buildings; manufacturing or processing; or agricultural production.
3. The facility shall be designed to avoid traffic through residential areas, provide safe access onto local or state highways, and not contribute to unreasonable congestion on area highways.
4. The facility shall use the least amount possible of water withdrawal and discharge by using latest technology, such as dry cooling.
5. The water that is discharged by the facility shall not increase the nutrient load on waterbodies in the area.
6. The use of wood waste shall be encouraged provided it does not contain toxic materials.

Solar

Less than 1% of Vermont homes use solar power for space and water heating needs, but solar is steadily increasing in importance as a future energy source for home heating, including in Clarendon. A limited and more uncertain use of solar energy, but one with great potential benefits, is generation of electricity via photovoltaic systems.

Vermont's climate provides enough hours of sunlight to offset 5-10% of the heating load of a new home if that home is built with property orientation and the design makes use of sun tempering. A sun-tempered home is one that has the long axis oriented within 30 degrees of true south and has an unobstructed net south-facing window area equal to seven percent or

more of the total floor area. Constructing a sun tempered house is a matter of design and generally requires no additional investment on the part of the homebuilder.

While sun tempering a new home is easy, cheap and effective it falls far short of taking full advantage of the sun's energy. For example, solar water heating has the potential to offset 50 percent, or more, of the energy used to heat domestic hot water and it is the most cost effective form of active solar application in Vermont. Presently solar systems can pay back the costs of replacing electric hot water systems in 6 to 7 years; payback is 7 to 9 years for replacing propane water heating systems and 10 to 12 years for replacing oil based hot water systems.

The Town of Clarendon supports responsibly sited and developed solar electricity projects within its boundaries. It recognizes that financial considerations require projects to be located in close proximity to electric power lines capable of transmitting the load proposed to be generated and easy access from major transportation networks for construction. However, it desires to maintain the open landscape and scenic rural views important to its tourism economy and rural cultural aesthetic.

Not all commercial or community scale solar electricity projects proposed can meet this standard. Projects must meet the following criteria in order to be supported by this plan:

Preferred Areas: New generation and transmission facilities shall be sited in locations that reinforce the community's traditional and planned patterns of growth, of compact village centers surrounded by a rural countryside, including working farm and forest land.

The following areas have been identified as suitable for the development of larger, utility-scale solar electricity generation and transmission facilities (150 kW or greater), consistent with this pattern of development, based on the municipal review of state energy plans, municipal participation in state energy plan development, an analysis of available renewable energy resources, technical facility requirements, and municipal resource conservation and development goals and objectives:

- Roof-mounted systems;
- Systems located in close proximity to existing larger scale, commercial, industrial or agricultural buildings;
- Proximity to existing hedgerows or other topographical features that naturally screen the proposed array;
- Reuse of former brownfields;
- Facilities that are sited and/or clustered at the edge of timber stands and core forest habitat, along property boundaries, and in otherwise disturbed areas, such as gravel pits, closed landfills, or former quarries.
- In agricultural areas, solar facilities are to be located and/or clustered on the least productive portion of the site. In nonagricultural areas, along field and forest edges, or on otherwise disturbed areas
- A location that accommodates Clarendon's setback and screening requirements and encourages the use of existing natural vegetation.

The Town of Clarendon endorses the minimum setbacks requirements for in-state, ground-mounted solar generation facilities included in Act 56, passed by the Vermont Legislature in 2015.

Table 21 – Vermont Setback Requirements

Minimum Setbacks	
From a state or municipal highway	100 feet for a facility with a plant capacity exceeding 150 kilowatts (kW); 40 feet for a facility with a plant capacity between 15 and 150 kW.
From each property boundary that is not a state or municipal highway	50 feet for a facility with a plant capacity exceeding 150 kW; 25 feet for a facility with a capacity between 15 and 150 kW.

The Town may also consider new bylaws or ordinances to require screening for solar generation projects, as outlined in Act 56.

Solar electric generation facilities sited outside of the areas delineated above would cause an undue adverse impact on the aesthetics or scenic beauty of the Town, its identified conservation needs, and its orderly development - based on the Quechee Analysis legal precedent.

Prohibited (Exclusion) Areas: Because of their distinctive natural, historic or scenic value, and special significance to the community, solar electricity facility development may be excluded from (prohibited within), or may not be supported by the town in the following locations (as mapped by the municipality or other official entity):

- Floodways shown on Flood Insurance Rate Maps (FIRMs);
- Fluvial erosion hazard areas shown on River Corridor Maps developed by the Vermont Agency of Natural Resources (ANR);
- Class I, II and III wetlands;
- A location that requires clear cutting or fragmentation of the Clarendon’s working landscape, including undeveloped forestland, open farm land and primary agricultural soils (as mapped by the U.S. Natural Resource Conservation Service);
- Rare, threatened, or endangered species habitat or communities as mapped or identified through site investigation, and core habitat areas, migratory routes and travel corridors;
- Susie Peak Ridgeline
- Steep slopes (>25%)
- Surface waters and riparian buffer areas (except for stream crossings);
- Topography that causes a facility to be visible against the skyline from common vantage points from public and private vantage points such as roads, homes and neighborhoods;

- A location where a "good neighbor policy" cannot be practiced. For example, where a site cannot be screened from the view of neighbors and thus prohibits them from exercising the peaceful enjoyment of their property;
- A site that causes significant adverse impacts to historical or cultural resources, including state or federal designated historic districts, sites and structures, and locally significant cultural resources identified in the municipal plan. Prohibited impacts of historical and cultural resources include:
 - removal or demolition;
 - physical or structural damage, significant visual intrusion, or threat to the use;
 - significant intrusion in a rural historic district or historic landscape with a high degree of integrity;
 - significant visual intrusion into a hillside that serves as a backdrop to a historic site or structure;
 - creating a focal point that would disrupt or distract from elements of a historic landscape;
 - a significant intrusion in a rural historic district or historic landscape that has a high degree of integrity;
 - impairing a vista or view shed from a historic resource that is a significant component of its historic character and history of use;
 - visually overwhelming a historic setting, or by being dramatically out of scale;
 - isolating a historic resource from its historic setting, or introduce incongruous or incompatible uses, or new visual, audible or atmospheric elements.

Site selection should not be limited to generation facilities alone; other elements of the facility need to be considered as well. These include access roads, site clearing, onsite power lines, substations, lighting, inverter sheds, and off-site power lines. Development of these elements shall be done in such a way as to minimize any negative impacts. Site clearing and roadways can have greater visual impacts than the energy generation facility itself. In planning for facilities, designers should take steps to mitigate the project's impact on natural, scenic and historic resources and improve its harmony with the surroundings.

New solar generation and transmission facilities that include multiple installations shall be sited to include equipment of uniform design.

Mass and Scale

Solar facilities should be limited in mass and scale, or have their mass and scale mitigated by screening and location, to fit in with the Town of Clarendon landscape.

Wind Power

Several large scale wind projects have been applied for and sited in Vermont during the past five years. All wind projects in Vermont face the same basic issues. To be cost effective, wind projects must be located on top of ridgelines, because that is where projects can capture the most wind. Unfortunately, ridgelines in Vermont are visually prominent, and locating wind turbines on those ridgelines is in conflict with ridgeline protection activities in the state of Vermont since the 1930's.

Facilities that generate electricity using the force of wind and designed with generation capacity of 100 kW or greater shall be designed, constructed, and operated such that:

1. Facility components, including towers, shall be located to minimize component visibility from beyond project boundaries.
2. The distance from a tower base to the nearest property line shall be at least 1.5 times the total height of the turbine structure as measured from mean ground level at the base to the top of its highest blade.
3. Any tower base shall be set back at least one mile per megawatt from any habitable structure (at the time of petition) that is not related to the facility. The owner of a structure within this setback distance may waive requirements for their property in writing.
4. Since wind turbines have a unique sound profile that is more annoying at lower decibel levels, facilities shall not exceed 35 dBA Lmax daytime/ 30 dBA Lmax nighttime measured from the property line.

Wind projects sited that do not meet the criteria listed above would cause an undue adverse impact on the aesthetics or scenic beauty of the Town, its identified conservation needs, and its orderly development - based on the Quechee Analysis legal precedent.

Hydro Power

Hydropower has many benefits. It is renewable, has relatively low emissions of greenhouse gases, and contributes to the stability of the electric grid.

Although more than half of all electricity consumed in Vermont is generated out-of- state, mostly Canadian and New York state hydroelectric dams, there are several dozen small hydroelectric dams around the state including some in the Rutland Region, producing about one-tenth of what Vermont consumes in electricity (Comprehensive Energy Plan, 2011). In the Rutland Region there is a potential for active dams to increase output. Current state policy supports the development of environmentally sound in- state hydroelectric projects despite initially high start-up costs.

Hydropower facilities proposed for the Town of Clarendon and used to generate electricity shall be designed, constructed, and operated such that:

1. The facility makes use of an existing impoundment or watercourse structure to generate electricity without changing the water quality, water temperature, upstream and downstream habitat of the facility. Vermont Agency of Natural Resources regulations for stream flow shall apply. The Plan recognizes the viability and importance of utilizing existing dams, including upgrading outdated equipment to maximize generation.
2. The facility does not increase flood hazard to public or private structures or public infrastructure.
3. The facility does not impair or inconvenience recreational users. Any portage is well marked, as short as possible, and features stable shoreline areas for landing and launching.

ECONOMIC DEVELOPMENT

This section supplements the information on Clarendon's economic base that is included in the Community Today section of this plan. The Clarendon Tomorrow section of this Plan presents specific goals and policies addressing economic issues.

According to U.S. Census estimates, the size of the Town's resident work force has declined since 1990, from 1,541 workers to 1,443 in 2013, a drop of 7%. Many Clarendon residents work either in town or nearby; more than half (53.5%) commute less than 20 minutes to their jobs.

The industries within which the members of Clarendon's work force are employed are very diverse with the largest shares held by educational services/health and social service assistance, manufacturing, and construction. In 2013, the estimated median earnings for workers in Clarendon were \$28,958, which is \$2,321 higher than the county median. See Community Today.

Clarendon is host to one industrial park located near the Rutland-Southern Vermont Regional Airport, which is named the Rutland Airport Industrial Park. This facility is an important element in the future economic success of the community. In addition, there are other areas in Clarendon zoned commercial and industrial that allow for limited industrial growth.

The Planning Commission shall make economic development a top priority. It will encourage growth and a balance of small, locally-owned businesses through-out town. Also promoting light industry in industrial areas to stimulate the local tax base and improve local employment opportunities.

It also will encourage new businesses to locate in Clarendon so that there is job growth and a reduction in the tax burden without requiring significant investment in additional infrastructure in the town or school system. At the same time, reasonable, functional, orderly development of facilities, utilities, services and infrastructure will be undertaken to encourage economic growth in targeted areas, such as the industrial park.

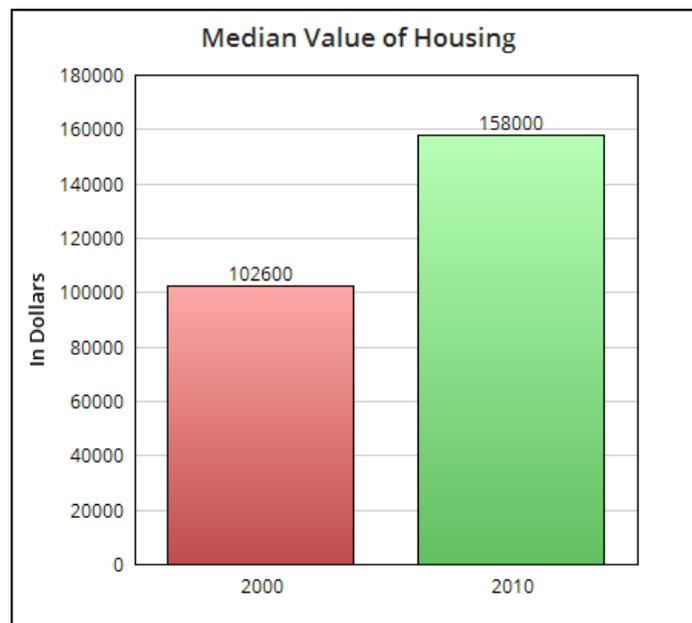
HOUSING

This section supplements the information on Clarendon's housing included in the Community Profile section of this plan. Specific goals, policies, and strategies addressing housing issues are included in the Clarendon Tomorrow section of this Plan.

As noted in the Clarendon Today section of this Plan, Clarendon's housing stock was made up of 1,166 units in 2010. Lacking a major commercial/recreational feature, the housing stock consists overwhelmingly of year-round units. Relatively few of the housing units in the community are vacant. The homeowner vacancy rate in 2010 was 1.4%; the rental vacancy rate was 9%.

Median housing values rose sharply from 2000 to 2010, according to the U.S. Census, increasing by \$55,400 in value. See Figure 11. The median value of housing in Clarendon in 2010 was \$158,000. A household would need to earn an annual income of \$63,200⁴ to afford these homes. Likewise, median rental cost in 2010 was \$802 per month, up from \$526 a month in 2000. A household needs to earn an annual income of \$32,080 to afford the median priced rental housing in Clarendon.⁵

Figure 11 – Median Housing Prices (US Census)

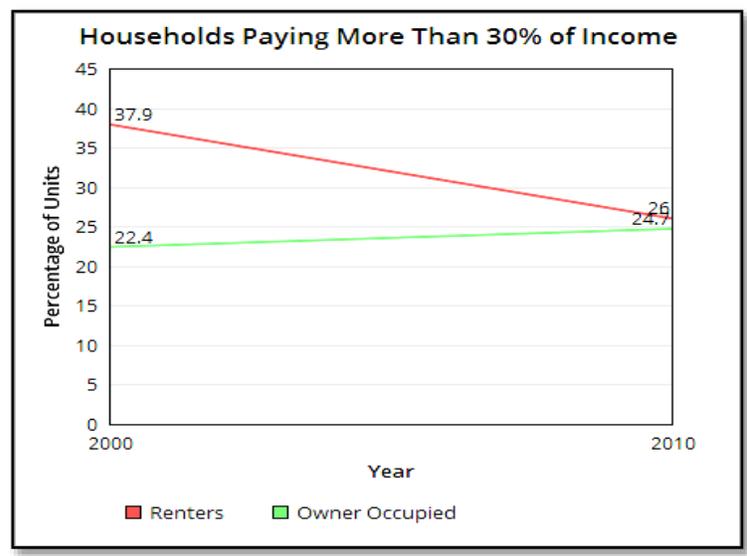


4 A common calculation in the banking industry, used to determine a household's ability to afford a home, is 2.5 times the household's annual income.

5 A second commonly accepted indicator of an affordable home is that a household is spending no more than 30% of the household income on rental or homeownership costs.

According to the U.S. Census, in 2010, some 187 households or 24.7% in owner occupied units paid more than 30 percent of their monthly income on housing (the accepted indicator of affordability). Fifty-five renters or 26% of Clarendon’s households occupying rental housing paid more than 30% of their income on housing.

Figure 12 – Number of Households Exceeding 30% of Monthly Income



Source: U.S. Census

Even though there has been a sizable drop in the number of renters paying more than 30% of their income on housing since 2000 when the rate was 37.9%, the data indicate all housing is unaffordable for a segment of the population.

Figure 13 – Year Housing Units Built



Source: US Census

Not indicated in the Community Profile section is the fact that as of the 2010 Census, 21.2% of Clarendon's housing units were built before 1940, and it estimates that that 19 housing units in town lack plumbing facilities, 19 lack kitchen facilities, and 37 have no telephone, 1.2% lacked complete plumbing facilities, and 1.4% had no telephone. These units may contribute to the number of unaffordable housing situations in the town.

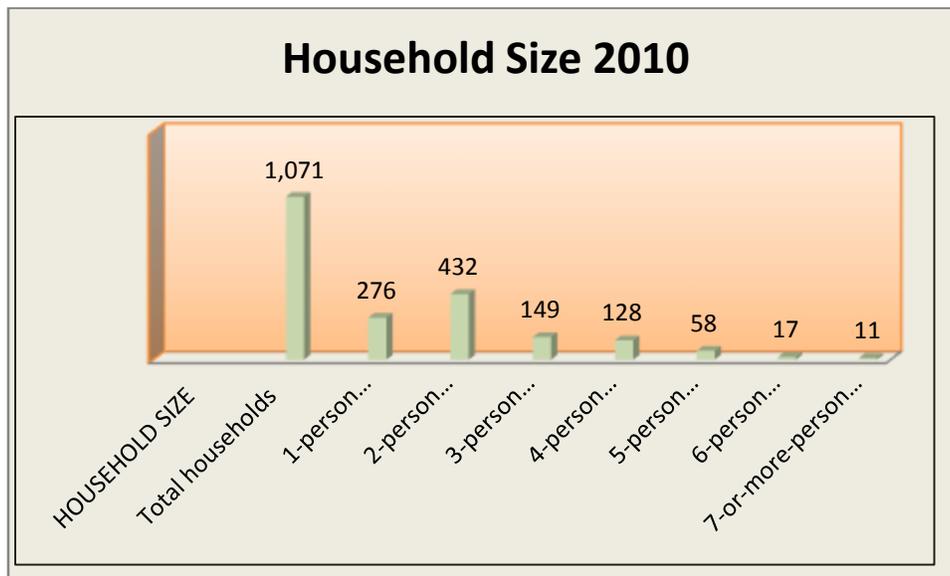
Also not indicated is the fact that Clarendon is host to two mobile home parks having a total of 19 units. The presence of mobile home parks helps provide affordably priced housing for many Clarendon residents.

Terrace Hills off the Creek Road closed in 2008. With this closing, the Town of Clarendon has lost three mobile home parks with 43 lots since 1999.

The town has actively participated in supporting affordable housing in Clarendon. The town partnered with the Vermont State Housing Authority, the Housing Foundation, Inc., and the Rutland Community Land Trust to acquire grant monies to implement infrastructure improvements to a mobile home park in town, as well as provide relocation funds for families leaving LaCasse Mobile Home Park.

Another area of possible concern for Clarendon is a continuing decline in the number of people living in housing units and the makeup of households. In 2000, the average household size was 2.56 according to U.S. Census figures. In 2010, it was 2.40. One and two person households make up two thirds of the households in town. See Figure 14.

Figure 14 - Clarendon Household Size



Figures 15 and 16 reflect the breakdown of household units in the Town of Clarendon. Family households make up 65.5% of the total. Yet people living alone now make up more than a

quarter of all households. More than 35% of those living alone (97 residents) are over 65 years of age.

Figure 15 - Make Up of Clarendon Households

Family households (families)	With own children under 18 years	Husband-wife family	With own children under 18 years	Male, no wife present	With own children under 18 years	Female, no husband present	With own children under 18 years	Nonfamily households	Householder living alone
702	248	567	176	58	31	77	41	369	276
65.5%	23.2%	52.9%	16.4%	5.4%	2.9%	7.2%	3.8%	34.5%	25.8%

Figure 16 - Household Living Alone in Clarendon

Male	65 years and over	Female	65 years and over
136	35	140	62
12.7%	3.3%	13.1%	5.8%

In addition to addressing the issue of affordability, the Town of Clarendon should also be concerned about safety of its housing as well as providing alternative housing for its aging population.

CLARENDON'S ROLE IN THE AREA AND POTENTIAL FOR GROWTH

A major focus of a community's plan is development--both existing and proposed. The location, design, and intensity of development in Clarendon is influenced by many factors. These factors include development constraints, the town's location within the Region, and its potential for development.

The Town's Role in the Region

Clarendon's role within the Region is another major factor affecting growth and development locally. This is because the role that a community plays affects the way that its land is presently used and also how it will likely be used in the future.

Indications of the role Clarendon plays within the Region can be found in classification studies that characterize municipalities in Vermont according to their type.

A community classification study was conducted by Prof. Malcolm Bevins of the University of Vermont (1991). This study designated Clarendon as a "residential limited commercial" community due to the relatively high--and relatively balanced--total value of residential and commercial property in the Town, along with its above-average population density. Other classes identified in Prof. Bevins' system include "residential commercial center" (e.g., Rutland City), "residential noncommercial" community (e.g., Shaftsbury) "residential rural" community (e.g., Middletown Springs), "recreation commercial" community (e.g., Sherburne), "recreation non-commercial" community (e.g., Wells) "agricultural" community (e.g., West Haven), and "lowest population density" community (e.g., Mt. Tabor). Compatibility with surrounding areas is key to orderly development.

Development Constraints

The degree to which development constraints affect development depends largely on the number and severity of constraints on the sites where development is proposed. Conventional types and amounts of development may be possible where development constraints are relatively minor, while only limited or carefully engineered development may be possible where development constraints are significant. The main reason for this relationship is that areas with severe development constraints are often environmentally very sensitive.

What are development constraints? In general terms, development constraints are environmental features and processes that play a significant role in the location, design, and intensity of development. By affecting whether or not, where, and how buildings are built and land uses are conducted, some development constraints can make development impractical, if not impossible.

Slope

Areas with steep slopes are difficult and costly to develop. Simply put, development of steep slopes requires developers and landowners to attempt to defy the forces of gravity. Removal of vegetation and grading of slopes for foundations can expose root systems and subsurface soils, increasing the amount of runoff and erosion. Erosion can lead to siltation of streams and rivers, resulting in nutrient loading and the degradation of fish habitat. Additionally, soil erosion can cause increased flood stage levels, clog drainage ways, and shorten the useful life of reservoirs.

Information on slopes in Clarendon is available from the topographic maps of the U.S. Geological Survey, as well as from the USDA Natural Resources Conservation Service. The NRCS, in the course of preparing county soil surveys classifies soils according to slope ranges. A soil designated with the suffix "A", for example, is a soil with very little slope, while a soil with the suffix "F" is extremely steep.

Using a geographic information system, the land area affected by steep slopes (≥ 15 percent) is estimated at 32% of the total. Over 3,980 acres (19.7 percent) has a slope of between 15 and 25%. Another 2,442 acres has a slope in excess of 25%. See Table 22.

Table 22 - Slope in Clarendon, by Soil Based Slope Class

CLASS	ACREAGE	PERCENT OF TOTAL
Class	Acreage	Percent of Total
Less than 15 percent slope	13,789.1	68.2
Slope of 15-20 percent	2,391.7	11.8
Slope of 20-25 percent	1,588.3	7.9
Greater than 25 percent	2,441.9	12.1

Source: Rutland Regional Planning Commission

Most of the steeply sloped areas of the Town are forested or open. Few have been developed due to the inability for these areas to support development. This pattern should be continued.

Ability to Support On-Site Septic Disposal

Areas with unsuitable soils are also difficult and costly to develop. Furthermore, if developed, they may threaten public health and safety. Unsuitable soils lack the capacity to drain water effectively. They include poorly drained soils that have low percolation rates so that water ponds on their surface.

The key to mapping septic suitability are soil ratings developed by the USDA Natural Resources Conservation Service (NRCS). In 2002, the State of Vermont adopted new regulations affecting

on-site wastewater systems. Some significant technical changes were made, including allowing for traditional and mound septic systems to be installed in more shallow, wet, and steep soils that would previously have been considered marginal or unsuitable. These changes have increased the amount of land available for residential development. In response to the 2002 regulation changes, NRCS developed new soil ratings. NRCS has noted the following kinds of soils that are now more likely to accommodate septic systems: floodplains; sloping, wet soils; and steep, moderately permeable soils.

In general, areas with the highest potential for disposing of septic wastes (classes 1 and 2) are most frequently found on level, alluvial areas, while areas with the lowest potential for septic disposal (classes 3 and 4) are found on higher, rocky hills and in low wet areas such as wetlands.

The areas of soils in the Town falling within the most suitable soils category are 2,788 acres, or 14 percent of the total land area. Another 12,856 acres are in classes 2 and 3, which are also potentially suitable for on-site waste systems. Roughly 20% of the Town consists of Class 4 soils, which are generally unsuitable for septic disposal. See Table 23.

Soil Ratings for Residential On-Site Waste Disposal

Class I - Well Suited—This group is composed of coarse textured, sandy and gravelly glacial outwash soils with moderate to high permeability. These soils are generally well drained.

Class II - Moderately Suited—This group is composed of several distinct types of soils: 1) soils with moderately slow to very slow permeability, 2) soil complexes with moderate depth to bedrock, 3) soils listed in Class I, but with slope ranges of greater than 20 percent, 4) soils with flooding limitations, and 5) soils that have seasonal high water tables at a depth of one-and-a-half feet or deeper.

Class III - Marginally Suited—This group is composed of soil map units that have a greater degree of limitations than Group II. They may require more intensive on-site investigations to locate suitable areas. Some areas of any of the soils in this group may not be suited for on-site waste disposal systems.

Class IV - Not Suited—This group is composed of soils that are generally too wet, rocky, steep or otherwise unsuitable for on-site waste disposal systems.

Class V - Not Rated—This group is composed of miscellaneous map units that have been filled, excavated, regarded or otherwise disturbed by human activities. They have a wide range of soil properties and require on-site investigations to determine their suitability for most uses, including on-site waste disposal.

Table 23 - Septic Disposal Suitability in Clarendon, by Class

CLASS	ACREAGE	PERCENT OF TOTAL
I	2,788.14	13.8%
II	9,954.28	49.3%
III	2,902.37	14.4%
IV	3,858.95	19.1%
V	707.78	3.5%
Total	20,211.72	100%

Source: Rutland Regional Planning Commission

Potential for Development

One of the most important measures of the potential for development in a community is its local Plan and implementing bylaws (e.g., zoning). In Clarendon, which has had zoning regulations since 1976, land is divided into four districts: the Residential and Commercial District; the Agricultural and Rural Residential District; the Commercial and Industrial District and the Conservation District.

Zoning districts allow specific types of development to take place at densities up to but not exceeding particular limits. Clarendon's zoning districts have resulted in orderly development of the town and should not be disrupted by incompatible projects and uses.

RELATIONSHIP BETWEEN PLAN AND AREA GROWTH AND PLANS

The relationship between this plan and the development trends in and plans for the surrounding area has been considered. (For the purposes of the plan, the surrounding area includes all municipalities adjacent to Clarendon as well as Rutland City, and the Rutland Region as a whole.)

Table 24 below contrasts the rate of population, housing, and property tax base growth in Clarendon with towns in the surrounding area and in the Rutland Region as a whole.

Table 24 - Recent Development Trends in Clarendon, Surrounding Towns, and the Region

	2010 Population	Population Change 2000-2010	2010 Housing Units	Housing Unit Change 2000- 2010	2014 Total Equalized Municipal Property Values
Clarendon	2,571	-9.3%	1,166	-3.5%	\$243,874,000
Rutland Town	4,054	.4%	1,871	6%	\$844,253,000
Rutland City	16,495	-5%	8,082	2%	\$1,066,952,000
Mendon	1,059	3%	683	10%	\$170,831,000
West Rutland	2,326	-9%	1,076	-.3%	\$176,806,000
Wallingford	2,079	-9%	1,088	4%	\$217,628,000
Ira	432	-5%	568	11%	\$44,195,000
Shrewsbury	1,056	-5%	568	11%	\$143,865,000
Tinmouth	613	7.5%	362	8%	\$74,905,000
Rutland County	61,642	-2%	33,768	4.3%	\$6,953,739,000

Sources: VT Dept. of Taxation/Division of Property Valuation and Review and U.S. Census.

It is the position of the Planning Commission and this plan that the future land use pattern promoted by this plan is compatible with those of Clarendon's neighbors. However, a few areas of potential conflict do exist and should be monitored on a continuing basis.

CLARENDON TOMORROW

The future of a community is not pre-determined by what has happened in the past. The future depends a great deal on the things we do now.

To affect the future in ways that will make a community a better place requires more than just action, however. It requires vision and shared goals to insure that the actions that are taken are truly consistent and compatible with the type of community the people living in it hope to create.

The following vision statement is presented as the focus for community goal-setting and action-taking used in the remainder of this Clarendon Town Plan.

Vision For the Future

In the future, Clarendon will be a place with the following characteristics.

A place with a vigorous economy.

Clarendon's favorable location, transportation access, skilled labor force, and strong community planning will all work toward creating a productive and diverse economy resulting in an increased tax base due to well-planned commercial/retail and light industrial development. This economy will provide opportunities for traditional businesses (like manufacturing, commercial/retail and agriculture), as well as for less traditional businesses (such as financial services and others that use telecommunications). Both small and large firms will be successful, and the quality of and value added to goods produced in the Town will be high. The Airport Industrial Park will be an important hub locally as well as regionally, taking advantage of the Town's excellent transportation access.

A place where residents enjoy a high quality of life.

The Town's excellent school system, access to health facilities, economy, diverse population, and planning activities will bring about a healthful and favorable quality of life for its residents. As a result of the high quality of life, people will feel safe and secure. Residents will actively participate in local affairs. A wide range of educational and employment opportunities will exist; cultural and recreational opportunities also will be close at hand. The scale of development within the Town will be consistent with the community's generally rural nature. Future growth will be encouraged in areas having a range of necessary public services. The possible designation of village centers using existing infrastructure will encourage development in already settled areas and discourage sprawl. The inclusion of walking and bike paths through smart road initiative will further support an environment where residents can enjoy a high quality of life.

A place with a well-cared-for environment.

A clean and attractive environment benefiting the population will result from a combination of factors, including townspeople's strongly held values, sense of responsibility, and continued cautious and balanced planning. The Town's historic resources will stand as reminders of Clarendon's rich past. Negative impacts on natural resources--including air, water, land, and wildlife in various forms--will be minimized and, wherever possible, mitigated. Much of the community will remain distinctly rural. High ridgelines, such as Suzie Peak and Herrick Mountain in neighboring Ira, and steep slopes will be protected and left undeveloped. Renewable energy demands should be held in balance with the protection of the natural environment.

Goals and Objectives to Guide Future Growth

The Town will work to achieve the following goals and objectives:

Encourage rural character by maintaining the historic settlement pattern of more densely settled villages and neighborhoods through Village Center Designations.

Encourage housing that is conveniently located to public facilities and services, and employment and commercial centers and meets the needs of a diversity of social and income groups.

Nurture economic activity that provides satisfying and rewarding job opportunities while maintaining high environmental standards.

Provide and maintain a transportation system that is safe and efficient, offers multi-use opportunities for pedestrians and bicycles and meets the needs of all segments of Clarendon's population.

Protect and preserve significant historic structures, sites, or districts, as well as archeological sites.

Minimize energy consumption. Reduce reliance on nonrenewable energy sources. Assure that energy development is environmentally neutral and does not impact the health of residents and does not result in a negative impact on property values. Provide guidance on the development of renewable energy generation that does not result in an undue adverse effect on the character of the town.

Policies for the Preservation of Natural and Cultural Resources

The Town will work to observe the following policies:

Agricultural and Forest Lands and Mineral Resource Areas

Encourage the continued use of agricultural lands for food production and other agricultural purposes. Support local farms by encouraging farm stands, supporting local food products and farmers' markets.

Support management of forestry resources.

Work in cooperation with owners of mineral resources to develop policies for resource use and extraction that would help insure that such activities do not adversely affect the quality of life enjoyed by residents of the surrounding area. Require that extraction areas are suitably graded and reclaimed with proper vegetation when operations cease.

Wildlife Habitat, Fragile Areas and Geologically Significant Locations

Preserve important identified natural features of the Clarendon environment, such as deer wintering areas and large, unfragmented forested areas and undeveloped ridgelines. Protect resources from uses and settlement that would reduce their vital functions. Minimize impacts of development on wildlife habitat, fragile areas and geologically significant locations.

Promote long-term protection of major habitats through conservation easements, purchase, lease, tax incentives, or other measures. Protect ridgelines from industrial development and associated infrastructure.

Rivers, Streams and Ponds

Discourage development in areas of high erosion potential, such as steep slopes and ridgelines and high susceptibility to surface water pollution that would disrupt the uses or ecological functions of stream corridors.

Encourage setbacks from rivers and streams and encourage flooding mitigation actions to protect these resources.

Coordinate with neighboring towns and with public agencies that have jurisdiction over Clarendon's surface water quality.

Promote the creation and maintenance of undisturbed, naturally vegetating buffer strips on the banks of surface waters.

Wetlands

Promote protection of wetlands of importance to the town; retain wetlands in their natural state and ensure new development is located and designed so that it will not impair the values and functions of wetlands. Discourage siting of energy projects in wetlands.

Groundwater

New development and land use activities should not impair groundwater quality or exceed the capacity to supply adequate groundwater yields or reduce the permeability of the groundwater supply recharge areas.

Energy Conservation

Encourage settlement patterns that reduce travel requirements for work, services, shopping and recreation. Promote opportunities for walking, cycling and other energy efficient, non-motorized alternatives to the automobile. Encourage energy efficiency in residential and public buildings so as to reduce dependence on energy sources through multi-use roads, clear community standards for energy siting and implementation of Village Center Designation.

Cultural Resources

Support the protection of historic sites and landmarks. Regard the town's cultural resources and historic settlement pattern as significant, non-renewable resources that create a special sense of place and community well-being.

Cooperate with historians and archaeologists researching Clarendon's past.

Policies for Facilities and Services

The Town will work to observe the following policies:

Education

- Offer assistance in developing visions for education, e.g. by soliciting input from the business community regarding its needs for graduates, and providing that input to school officials.
- Encourage communication and interaction within the community to establish education as a vital interest.
- Work with local school boards to develop the highest possible educational goals, which are consistent with the long-term needs of students and society. Encourage groups and communities to recognize their short and long term interests in education.
- Encourage provision of sufficient and accessible educational opportunities to meet the needs of all regional residents, e.g., vocational-technical training, adult education, community colleges, home schooling.
- Support the efforts of local and regional libraries to provide unrestricted access to their facilities and collections for individual and group learning and enjoyment.
- Look for alternative funding for public education to alleviate the burden on property owners. Assist schools with acquisition of educational grants from state, federal, and private sources.

Water and Sewer Utilities

- Use infrastructure such as water and sewer public utilities as a pro-active planning tool.
- Locate facilities such as public water systems, and sewage treatment plants in areas where they can best serve their purpose with least negative impact.

Solid Waste

- Encourage careful planning of hazardous waste disposal to minimize potential risks. Transport and storage should not take place near sensitive sites (population centers, schools, hospitals, water resources, etc.).
- Assist and encourage participation in household hazardous waste and e-waste recycling programs.
- Work with all levels of government to identify old waste disposal sites and urge evaluation of the hazards to health as they exist and during cleanup if any is recommended.
- Locate solid waste facilities in areas where they best serve their purpose with least negative impact. Educate population about recycling opportunities and requirements.

Public Safety

- Encourage volunteerism in all community services but especially in the vital services of fire and rescue.
- Promote and encourage educational programs for these volunteers regionally and locally.
- Promote adequate funding of public safety services including law enforcement and traffic control.
- Support and maintain regional public safety organizations that presently exist and encourage the creation of new cooperative agencies where appropriate.

Recreation

- Promote the maintenance and enhancement of recreation opportunities; encourage volunteerism to help provide these opportunities.
- Discourage land uses that would significantly diminish the value and availability of outdoor recreation activities. Support the use of recreation areas for multiple recreation purposes ("multiple use management").
- Facilitate coordination between the towns, schools, land trusts, private and non-profit entities active in the provision of recreation opportunities.
- Support the construction of shoulder recreation lanes as part of projects on all major highways where feasible.
- Facilitate public access to water recreational facilities.

Recommendations and Priorities for the Development and Improvement of Facilities

The following table summarizes this Plan's recommendations and priorities for the development and improvement of facilities in Clarendon. The recommendations and priorities are not listed in order of importance.

Table 25 – Recommendations and Priorities for Development and Facilities

Facility/Service	Potential Action
Transportation	<ul style="list-style-type: none"> * Repair town bridges * Establish bike/pedestrian paths * Improve transit service * Repair existing paved highways * Widen and build up shoulders * Install guardrails where deep ditches have been created.
Education	<ul style="list-style-type: none"> * Encourage alternative funding sources * Approach School Board regarding possible increased community use of facilities * Study options for mitigating future burdens on educational services
Facility/Service	Potential Action
Emergency Services: Fire Department Public Safety	<ul style="list-style-type: none"> * Assist in recruiting members * Fund equipment purchases * Encourage continued access to emergency services * Monitor need for increased police presence * Expand training opportunities
Solid Waste Management	<ul style="list-style-type: none"> * Educate residents regarding e-waste and recycling requirements * Enforce existing laws on backyard burning, illegal trash dumping, and junkyards
Water and Sewer Service	<ul style="list-style-type: none"> * "Remediate" contaminated areas by implementing long term solutions such as: <ul style="list-style-type: none"> - Establishing local water service in villages/densely developed areas - Establishing local sewer service in villages/densely developed areas - Obtaining water/sewer service from Rutland City for Commercial, Industrial, and Village districts -Expanding the access and utilization of the airport and industrial park sewer force main to encourage growth.

Other Community Facilities/Services:	
Recreation	* Establish Town recreation and picnic area * Support recreation committee * Protect undeveloped land in conservation areas
Town Offices	* Complete renovations
Library	* Expand hours of existing library
Technology	* Encourage continued development of high speed internet and cell phone and wireless communication access

Goals and Policies for the Economy and Economic Development

The Town will work to achieve the following goals and policies:

- Regulations implementing this plan should incorporate site plan review processes for non-residential development such as but not limited to light industrial and commercial/retail development.
- The Town should work to attract new industries and businesses, which will meet environmental standards and encourage village center designation to utilize existing infrastructure and settlement patterns in town.
- The Town should recognize and encourage agriculture as a traditional part of the local economy.

Strategy, Goals, and Policies for Housing

The Town will work to achieve the following strategy, goals and policies pertaining to housing.

Local Housing Strategy and its Basis

The median cost of a home in Clarendon is \$158,000, while the price of a home considered affordable (according to the formula described in the housing profile of this Plan) is \$63,200. It is the position of this Plan, however, that the number of practicable options available to the Town to address the affordability of local housing is small.

This position is in large part based on the fact that the Town of Clarendon has very limited financial resources available for the direct creation or retention of affordable housing. It is also based on the position that, as host to four mobile home parks and as a place receptive to residential development on relatively small building lots, the Town is already providing its fair share of affordable housing. Clarendon has multiple mobile home parks with less than 75 mobile home units within these areas.

Goals and Policies

- It is the goal and policy of the Town of Clarendon to:
- Allow the development of affordable housing, which will be harmonious with the character of the community.
- Encourage the retention of existing housing that is affordable.
- Coordinate between public and private agencies involved in planning, financing, and developing affordable housing.
- Affordable housing should be built in areas most suitable in terms of housing need, environmental impact, employment opportunities, public services, and transportation.
- Encourage education about housing concerns and the dissemination of information regarding housing programs and funding sources.

RECOMMENDED IMPLEMENTATION PROGRAM

Plans may be implemented in a wide variety of ways. It is the policy of the Town of Clarendon that this Plan be implemented using approaches such as the following:

Zoning

Zoning bylaws are among the most common ways to implement community plans. Zoning determines the type and density of development allowed in the Town, directly influencing future land use patterns. In doing so, it helps to insure that development does not overburden public facilities or destroy important resources. Zoning also serves as a sign indicating where intensive development is most desirable.

Specific recommendations for implementing this Plan through zoning include but are not limited to the following additions/modifications to Clarendon's existing zoning regulations:

- Encouraging more light/industrial, commercial/retail, wholesale and telecommuting uses in appropriate zones;
- Protecting historic and architectural character from conflicting uses and buildings;
- Restricting development at high elevation areas such as ridgelines and steep slopes;
- Encouraging compact and mixed-use development including but not limited to Village Centers;
- Participation in the Airport Zoning Commission and continued study of an Airport Overlay District;
- Establishment of Ridgeline Protection Overlay District;
- Establishment of criteria and locations for solar projects

Subdivision Review

Subdivision bylaws help insure that development is orderly. Such bylaws include necessary facilities such as roads, and services such as sewer and water.

Specific recommendations for implementing this Plan through subdivision review include but are not limited to the following:

- Enacting a subdivision bylaw to guide the creation of lots and development;
- Closely linking subdivision review criteria to Plan goals and objectives;
- Developing specific provisions for very large subdivisions;

Act 250 Review

Participation in the Act 250 development review process is a significant opportunity to shape large-scale development projects. Act 250 helps insure that development does not have an undue, adverse impact on important environmental resources and community facilities, and is in conformance with local and regional plans. The Town is automatically a party to Act 250

proceedings involving development in the community. Act 250 gives both the Select Board and the Planning Commission the right to present evidence and cross-examine witnesses.

Specific recommendations for implementing this Plan through participation in Act 250 reviews include but are not limited to the following:

- Establishing standing committee to review and comment upon applications;

Public Education

Regulation is neither the only nor necessarily the best way to implement a Town Plan. Successful implementation of a Plan also depends on the voluntary actions of residents and landowners. Many people will voluntarily contribute to the achievement of Town Plan objectives but cannot do so until they know what those objectives are. Public education regarding the Town Plan helps to convey the importance of local resources, facilities, and services and increases peoples' understanding of the need to plan for the future. Use of websites and interactive internet resources should be used to encourage public participation in Town Planning.

Public Investment

Public investment is one of the most direct means to implement a Plan. By investing in infrastructure, for example, a community can encourage development where and when it wants to. Public investment can include spending for sewer, water, transportation, education, solid waste, recreation, open space, housing, and more. Funds to pay for public investment can come from a variety of sources, including, but not limited to, taxation, user fees, and inter-governmental transfers and grants.

Specific recommendations for implementing this Plan through public investment include but are not limited to the following:

- investing in local playground/recreation area;
- investing in water/waste disposal improvements in village and other densely developed areas;
- widening shoulders of highways undergoing repaving to support use other than by automobiles.

Other means

The above is not an exhaustive list of possible implementation measures. Other measures include public policies such as differential assessment and taxation, and support of private efforts such as land trusts and advocacy groups. It is the intent of this Plan that the Town be open to and supportive of such alternative measures including but not limited to:

- tax stabilization for agricultural land;
- detailed mapping of resource areas;

FUTURE LAND USE

Land Use Plan

The growth of Clarendon is apparent; populations will increase, the use of the land will change and the demand and need for community services will increase. The principal objective of sound, rational land use planning is to accommodate this anticipated growth while minimizing the adverse impacts on the land, the environment and public and private investments. The Vermont Village Center Designation program is integral to allowing for the development of historically populated centers and will play an important part in revitalizing Clarendon's economy. Clarendon intends to research the State of Vermont Village Center Designation program in appropriate areas.

The following districts - displayed on the Future Land Use map - are proposed to ensure these objectives. They will also serve as the basis of zoning regulations in the Town of Clarendon.

Conservation District

The purpose of the resource district is to protect the critical and natural resource value of lands that are essentially undeveloped; are important to wildlife and wildlife habitat, and may be unsuitable for land development. This will include irreplaceable, limited, fragile or scenic resources that abut adjoining conservation areas. Extension and continued protection of existing conservation areas such as Potter's Farm and Ira's High Ridgeline Conservation District will be encouraged. Class 3 roads will continue to be maintained in their present state.

Residential and Commercial District

The purpose of this district is to maintain residential areas and allow business enterprises. The district will have adequate parking; suitable landscaping, screening, lighting and signage; and be designed to minimize traffic impacts in order to protect the character of the neighborhood.

An additional purpose of this district is to allow for residential and business uses at densities appropriate with the physical capability of the land and the availability of community facilities and services. Other uses incompatible with residential, commercial, and light industrial uses, such as industrial, will not be allowed for the health, safety and welfare of the community. Light industrial use as defined in the Clarendon Zoning Regulations will be allowed with a conditional use permit.

The village area of the town will be supported by the ideals of this district. The village has a role in our community by being a social and economic activity center. Village center designations are a goal of the Town. These areas will be able to provide for residential, commercial and other compatible development that serves the needs of the community. Such development should occur at densities and uses that will maintain the traditional, social and physical character of the village and that will not exceed the capability of the lands, waters, services and facilities. Light industrial use is allowed in the village area according to the provisions included in the Clarendon Zoning Regulations.

Commercial and Industrial District

The purpose of this district is to encourage uses including manufacturing, commercial/retail, warehousing and research and development. The district is to be served by good transportation facilities and so that surrounding districts shall not be adversely affected. Other uses incompatible with industrial uses, such as residential, will be discouraged for the health, safety and welfare of the community.

Agricultural and Rural Residential District

The purpose of the agricultural/rural residential district is to protect lands with an economic capability for agriculture that are now predominantly undeveloped except for uses associated with agriculture or forestry. In this district planned residential developments and land uses that do not remove the potential of the land for agricultural production, such as open space, conservation, and certain forms of outdoor recreation are encouraged. Only low-density residential and recreational development that is compatible with the district purposes and guidelines should be permitted.

Planned residential developments, village center designations, open space preservation, and other techniques for preserving the rural character of these areas are encouraged. Development should not take place in such a way that any irreplaceable, unique, scarce resources and natural areas are harmed. Light industrial use as defined in Article X of the Clarendon Zoning Regulations will be allowed with an approved conditional use permit. Industrial developments that are not compatible with residential and agricultural uses will not be allowed for the health, safety and welfare of the community.

Flood Hazard Overlay District

The purpose of the Flood Hazard Overlay District as established by the Clarendon Zoning Regulations of 2011 is to:

- Minimize and prevent the loss of life and property
- Minimize and prevent the disruption of commerce

It also should reflect Special Flood Hazard Areas, River Corridors, and Fluvial Erosion Zones.

Ridgeline Protection Overlay District

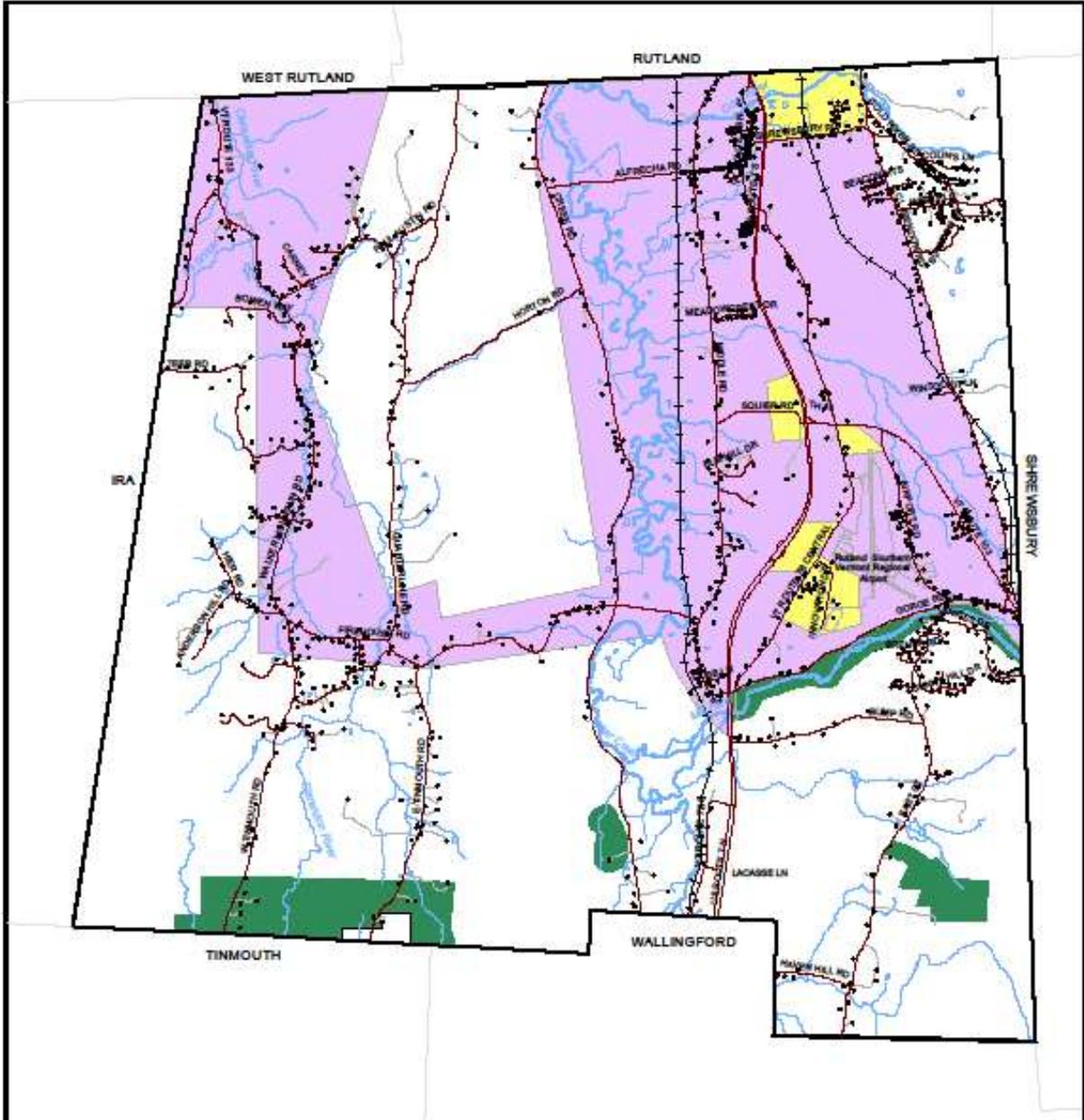
The 2015 Clarendon Town Plan designates a Ridgeline Protection Overlay District to restrict development in high elevation areas such as ridgelines and steep slopes to preserve an important identified natural feature of the town.

Specifically the new overlay district is designed to:

- Protect ridgelines from industrial development and associated infrastructure.

The proposed overlay district would not change existing use and land capability, and its impact on existing development, such as residential development, would be minimal.

See map on page 96.



Future Land Use
Clarendon, Vermont

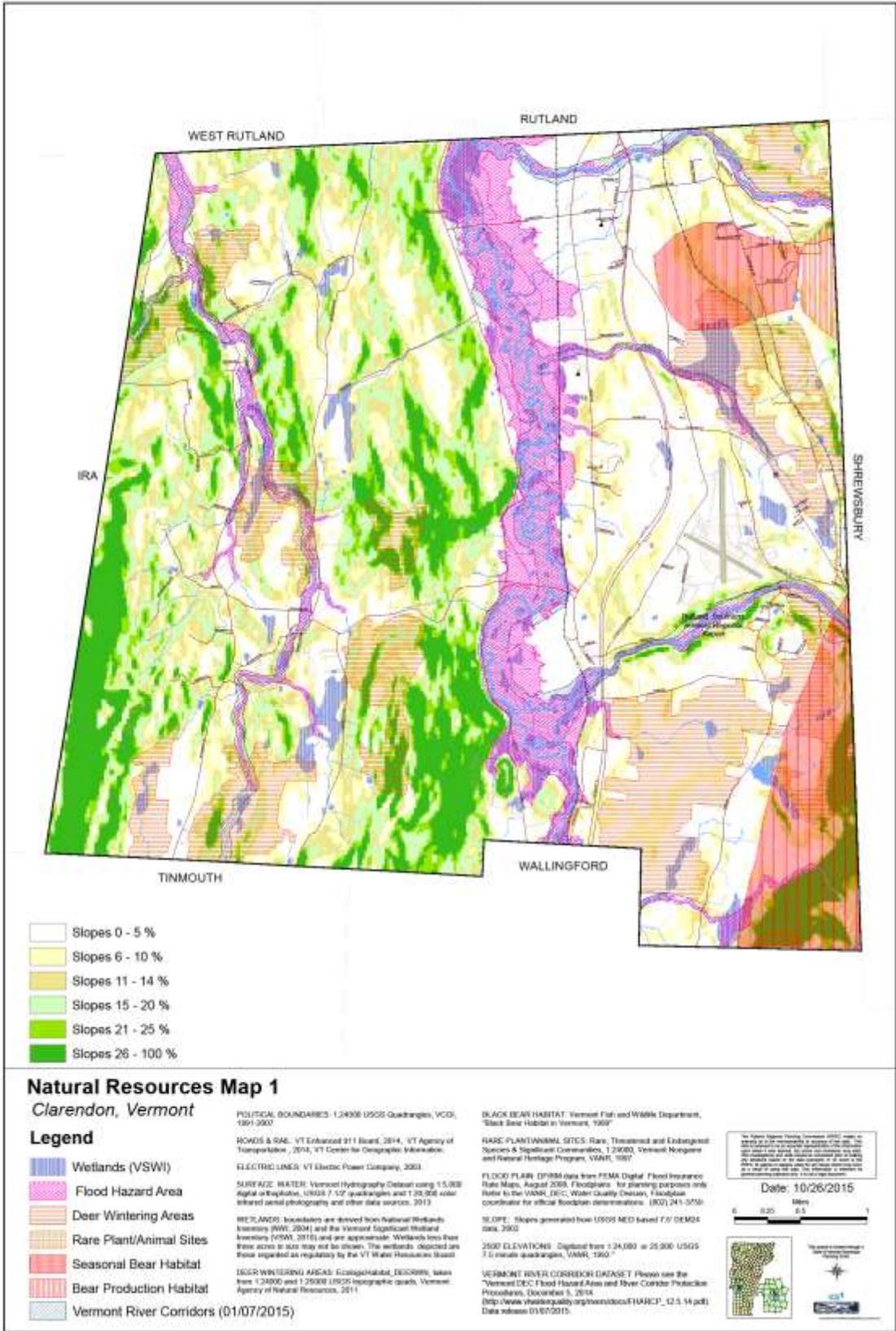
Legend

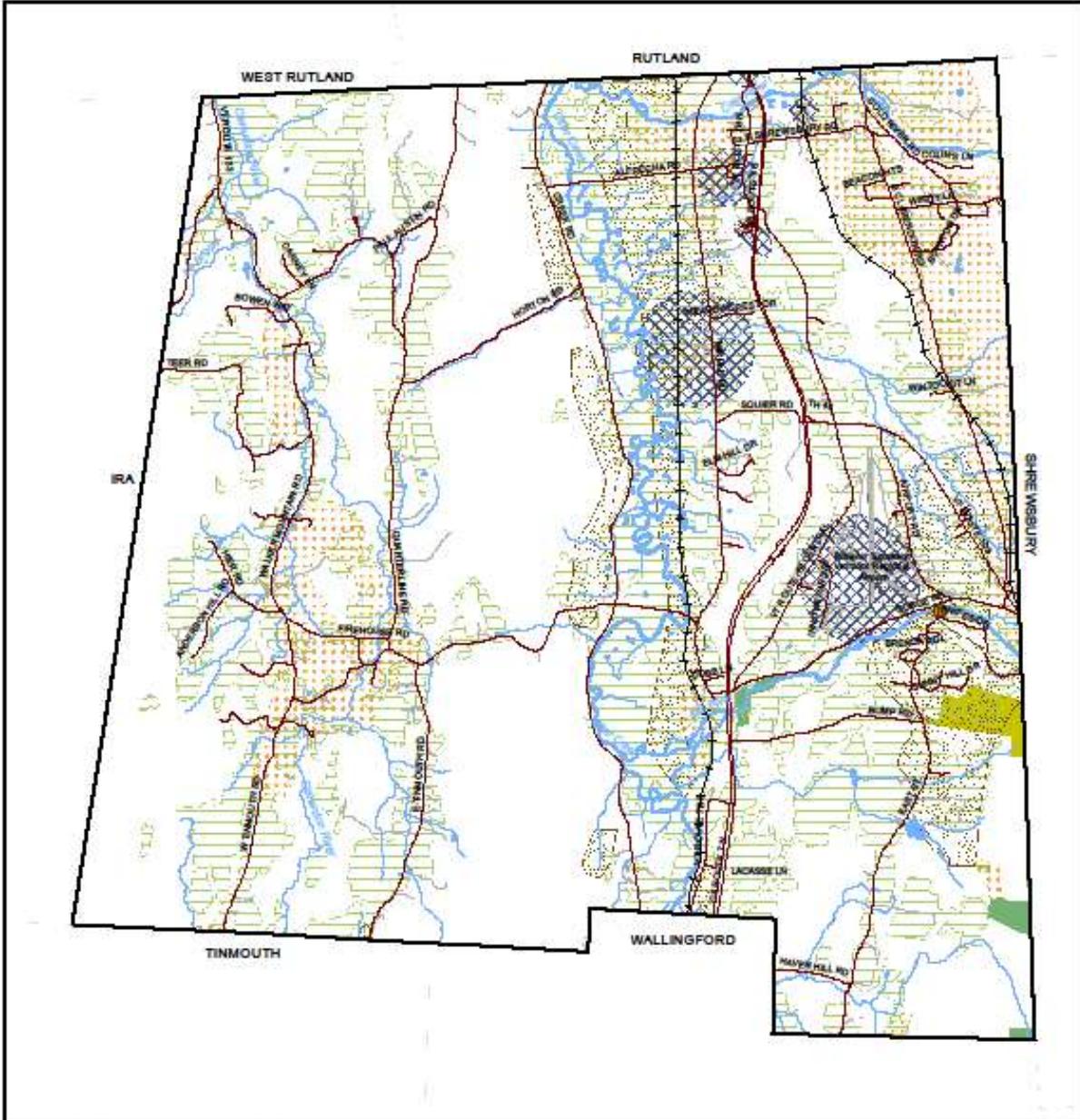
- Agricultural and Rural Residential
- Residential and Commercial District
- Commercial and Industrial District
- Conservation District

The National Standard Forest Plan (NSFP) is a plan for the management of the National Forest System lands in the State of Vermont. It is a plan for the management of the National Forest System lands in the State of Vermont. It is a plan for the management of the National Forest System lands in the State of Vermont.

Date: 6/3/2015

Scale: 0 0.25 0.5 1





Natural Resources Map 2
Clarendon, Vermont

Legend

-  Potential Sand Deposits
-  Potential Sand & Gravel Deposits
-  Well Head Protection Area
-  Prime Agricultural Soils
-  Public Conserved Lands
-  Private Conserved Lands

ROADS: VDOT database TransRoad_R08, taken from VTTRANS Information and VT SRM1, 2014.

ELECTRIC LINES: VT Electric Power Company, 2007.

SURFACE WATER: Data is from the Vermont Center for Geographic Information, no (VCGI), database Waterhydro_VHD of the Vermont Hydrology Database, 2004.

The VHD is a subset of the National Hydrography Data Set.

SAND AND GRAVEL: The classifications of sand and gravel resources are based on information developed by USGS Natural Resources Conservation Service. Soil data are accurate to a resolution of three acres, unwrapped "inclosures" up to three acres may exist in some areas. This information is generated. It should not be used for the evaluation of individual sites. Soils shown are based on national USGS-NRCS criteria and have good potential for sand and gravel deposits, 2005.

AGRICULTURAL SOILS: Prime, statewide and local are VT primary agricultural soils for Town and Act 250 planning, 2008.

PRIVATE CONSERVED LANDS: Land is full or partly owned by 501(c)(3) conservation organizations (V.I., TNC, GMC, and others), a subset of the Vermont Conserved Lands database, 1999.

PUBLIC LANDS: VDOT database Conserved/Publical, CONSPUB, 2004, a subset of the Vermont Conserved Lands database. It includes land owned by Municipal, State and Federal entities.

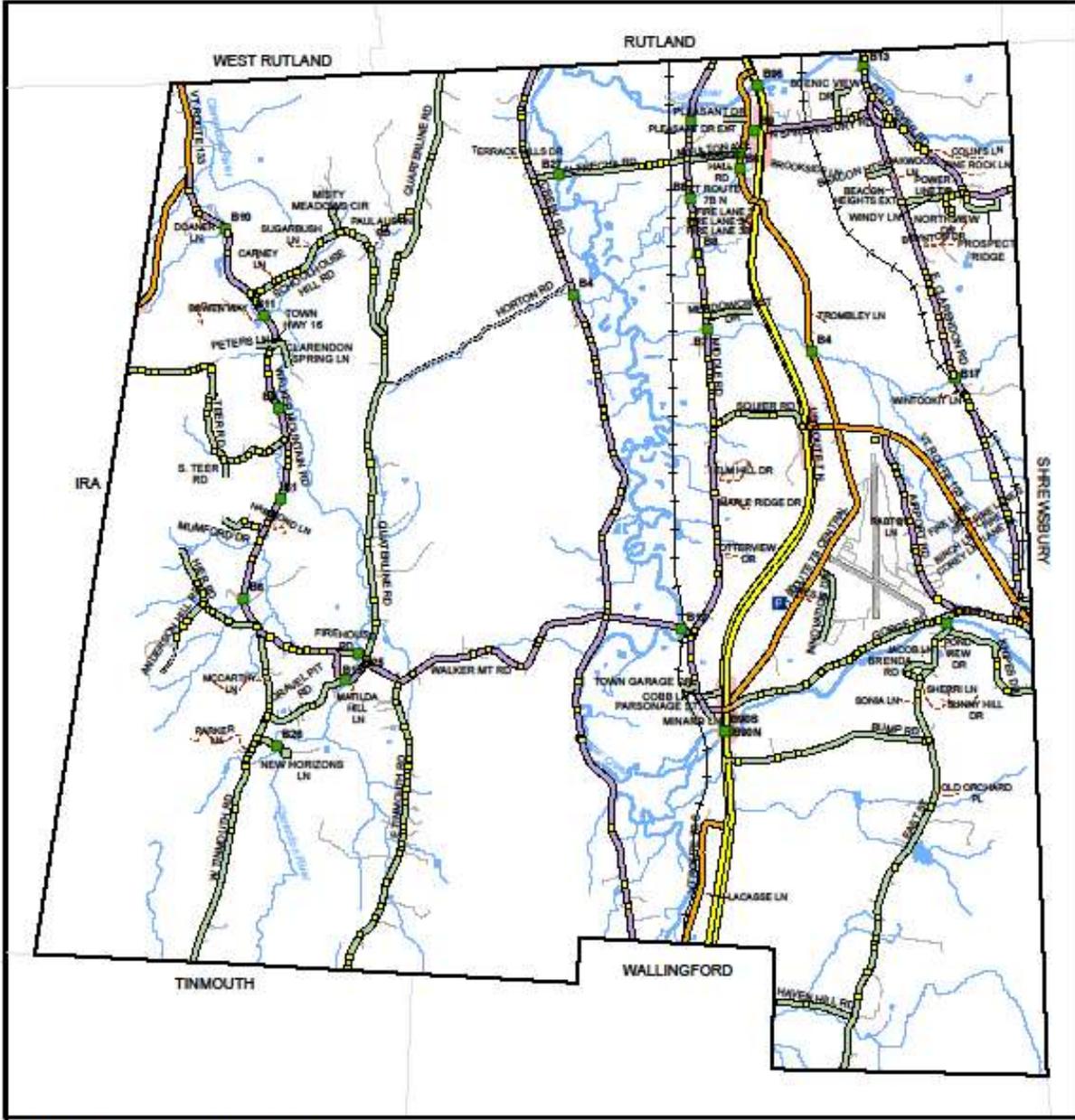
WELLHEAD PROTECTION AREAS: SPAs for groundwater sources (wells, springs), 1:24,000 USGS Quadrangles, WASH DC: Water Supply Division and the VT Department of Health, 2011.

The Vermont Agency of Natural Resources (ANR) is pleased to provide this information to the public. This information is provided as a service to the public and is not intended to be used for any other purpose. The information is provided as a service to the public and is not intended to be used for any other purpose. The information is provided as a service to the public and is not intended to be used for any other purpose.

Date: 5/7/2015

Scale: 0 0.25 0.5 1





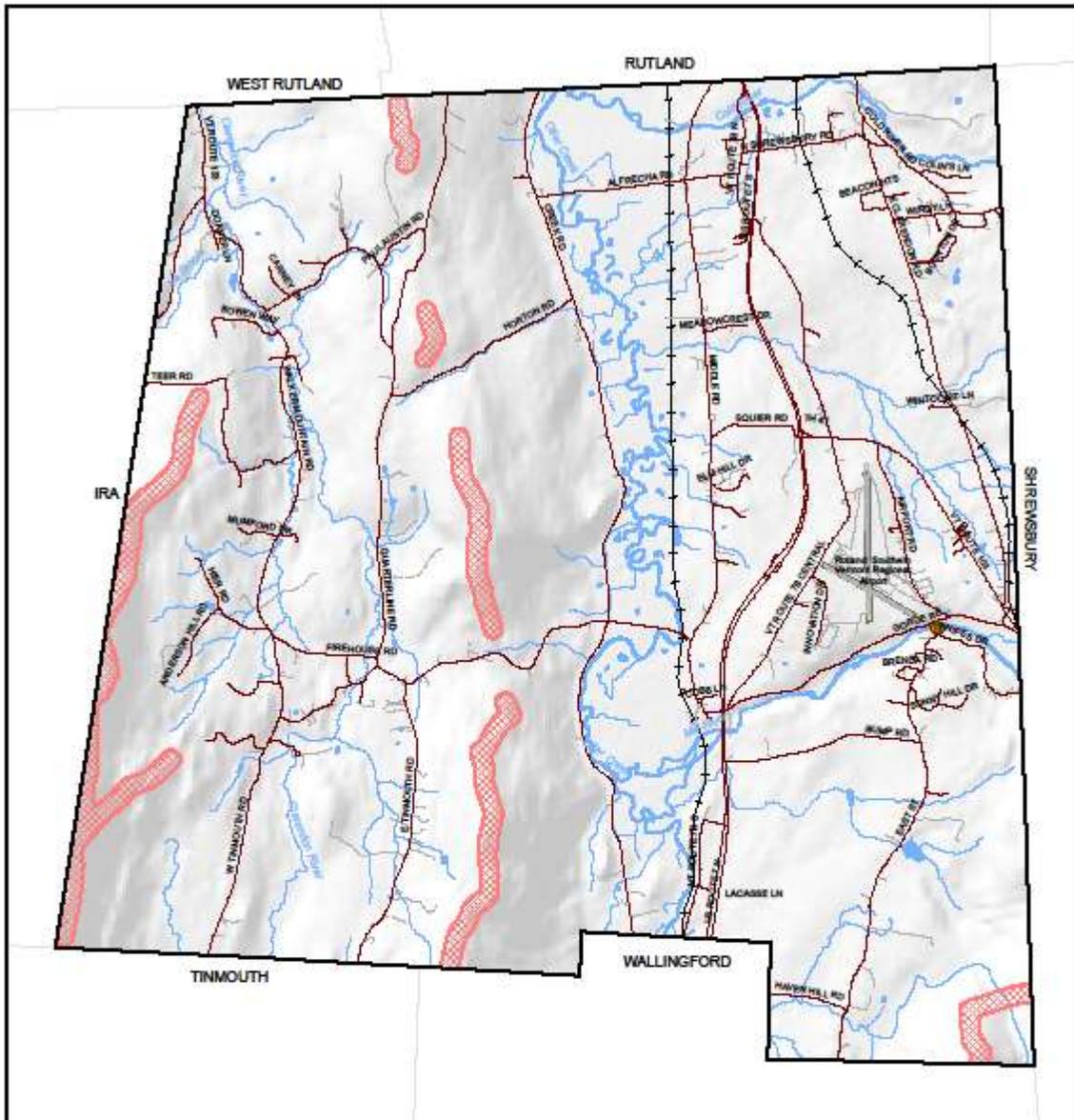
Transportation Network
Clarendon, Vermont

- Town Class Two
- Town Class Three
- Town Class Four
- State Highways
- U.S. Highways
- Private/ Unknown Roads
- Driveways / Other
- Bridges
- Town Culverts
- Park & Ride Lot
- VTRANS High Accident Segments
- Rail Line
- Rivers and Streams
- Major Rivers, Lakes and Ponds

Highway Type	Miles (Town)
Class 1	0.0
Class 2	23.27
Class 3	25.06
Class 4	2.73
State Highway	8.658
U.S. Highway	5.855
State Highway Ramp	0.137
TOTALS (Feb 15, 2014) <small>(Excludes Class 4, Legal Trails, and Unimproved roads)</small>	62.871

Date: 3/8/2015

Miles
0 0.25 0.5 1



Ridgelines
Clarendon, Vermont

Legend

 300 Foot Horizontal Buffer Zone

Funding for this project comes from a municipal planning grant, awarded by the Agency of Commerce and Community Development.

Ridgelines were delineated from USGS topographic maps. The horizontal buffer is 300 feet out from the ridgeline.

The Vermont Agency of Commerce and Community Development (ACCD) is a state agency that provides technical assistance and funding to local governments. This map was prepared for the Clarendon, Vermont, municipal planning grant project. The map is for informational purposes only and does not constitute a warranty or guarantee of accuracy. The map is based on USGS topographic maps and other available data. The map is subject to change without notice. The map is not to be used for legal purposes. The map is the property of the Vermont Agency of Commerce and Community Development and is loaned to the user. The user agrees to return the map to the ACCD upon completion of the project. The user agrees to hold the ACCD harmless from any and all claims, damages, or liabilities, including reasonable attorneys' fees, arising from the use of the map. The user agrees to indemnify and hold the ACCD harmless from any and all claims, damages, or liabilities, including reasonable attorneys' fees, arising from the use of the map. The user agrees to hold the ACCD harmless from any and all claims, damages, or liabilities, including reasonable attorneys' fees, arising from the use of the map.

Date: 2/10/2016

Miles
0 0.25 0.5 1

