

# Town of Jericho



## Comprehensive Town Plan

Adopted January 7, 2016

January 2, 2020

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## 1. INTRODUCTION, VISION AND GOALS

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The Comprehensive Plan is a policy document authorized in Title 24 Vermont Statutes Annotated, Chapter 117, Section 4381.

The Jericho Comprehensive Town Plan is a reflection of the aspirations of Jericho's citizens for the future of the town. These contributions are invaluable in the Planning Commission's establishing overarching goals which provided a broad philosophical base from which zoning and subdivision regulations were drafted.

For the 2016 Town Plan the following sources<sup>1</sup> were relied upon for this update:

- [The 2015 Jericho Transportation Study](#)
- [The 2015 Bike and Pedestrian Master Plan](#)
- [The Conservation Commission<sup>2</sup>](#)
- [The 2013 Science to Action Report](#)
- [Views To the Mountain: A Scenic Protection Manual](#)
- [The Energy Task Force<sup>3</sup>](#)
- [The 2015 Planning Commission Survey](#)
- [The 2019 Commercial District Master Plan](#)

The following “Vision Statement” is intended to be an expression of what we hope the Town will be like a decade hence.

“The Town of Jericho has a strong sense of community. Its residents participate in local events centered around its three vital traditional village centers and the Commercial District. The appearance and physical characteristics of these areas encourages pedestrians and bicyclists, and reflect the historic patterns of settlement rather than acquiescing to the dominance of the automobile. Convenient public transportation options are available within town and to connect with the surrounding communities. Municipal buildings, schools, and other public facilities such as libraries are in the Villages, drawing residents to these activity centers. In addition to businesses and services, the Village Centers also include a wide range of housing choices, allowing a diverse population to reside in Jericho.

Residential and sprawl-like development outside of the village centers and the Commercial District has declined as the environmental, social, and economic costs of such development have been recognized. Small agriculturally-based enterprises, home businesses, and tourism continue to thrive Jericho’s excellent schools, community facilities, and natural lands are integral parts of

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<sup>1</sup> <https://jerichovt.org/town-documents>

<sup>2</sup> <https://jerichovt.org/conservation-commission>

<sup>3</sup> <https://jerichovt.org/JETF>

the town.

These features attract new families and encourage residents to age in place. Jericho takes pride in its diverse natural resources. Citizens place tremendous value in protecting those resources to ensure health and connectivity of our natural ecosystems, to enjoy the outdoors, and plan growth and development. Residents work to balance these concepts of conservation, wellness, and growth. Village Centers serve as community hubs, where mixed-use development, with locally owned businesses and residences, is concentrated and linked by multi-modal transportation. Contiguous blocks of undeveloped lands which lie outside the village centers should provide important wildlife habitat as well as recreational opportunities for the community.”

From this Vision we derive the following Goals:

1. TO PROTECT THE NATURAL ENVIRONMENT AND PRESERVE THE RURAL CHARACTER.
2. TO PRESERVE HISTORIC CHARACTER OF JERICHO.
3. TO CONCENTRATE NEW DEVELOPMENT IN JERICHO’S THREE VILLAGE CENTERS.
4. TO ALLOW DEVELOPMENT OF THE COMMERCIAL DISTRICT IN A WAY THAT ENHANCES AND DOES NOT COMPETE WITH THE VILLAGE CENTERS
5. TO STRENGTHEN THE ECONOMIC HEALTH OF THE COMMUNITY.
6. TO DEVELOP LONG TERM ENERGY SOURCES PURSUANT TO THE STATE’S ENERGY GOALS.
7. TO PROMOTE SOCIO-ECONOMIC AND DEMOGRAPHIC DIVERSITY WITHIN JERICHO.
8. TO SUPPORT ACTIVE LIVING, HEALTHY EATING AND INCREASED ACCESS TO LOCAL FOODS WITHIN JERICHO.
9. TO SUPPORT A RANGE OF TRANSPORTATION OPTIONS, INCLUDING CONNECTIVITY WITHIN TOWN AND WITH THE SURROUNDING COMMUNITIES.
10. TO PROVIDE FOR LONG-RANGE TOWN PLANNING CONSISTENT WITH REGIONAL AND STATE GUIDELINES.

## 2. THE JERICHO COMMUNITY

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### HISTORY

Jericho has developed a wealth of history in the 235 years since Governor Benning Wentworth granted 23,040 acres to 66 grantees on June 7, 1763. In addition to the shares assigned each grantee, Governor Wentworth reserved 500 acres (2 shares) for himself, one share for the Incorporated Society for the Propagation of the Gospel in Foreign Parts, one share for a Glebe for the Church of England, one share for the first seeked minister, and one share for a school.

The geographical center of the grant was at the end of Bolger Hill Road; rocky, hilly land hardly suited for a village setting. Lewis Chapin, who had purchased a tract of "wild land" in 1786 and settled in town just south of Jericho Center, gave the town land for a green around which the present village grew.

There is strong evidence that original grantees came from the Long Island area and quite possibly the Town took its name from Jericho, Long Island. According to records, none of the grantees ever settled in town. The first three families, the Roods, the Messengers, and the Browns, came to settle from Berkshire County, Massachusetts, in 1774. The following ten years were marked by Indian raids and the backlash of conflict of the colonies with the British. The Brown family was captured by Indians and, for \$8.00 a captive, turned over to the British in Montreal. The Roods and the Messengers left for safer areas farther south.

Once peace was declared and life in the area became less risky, these families returned and more settlers arrived to start clearing the land for farming. Many of the earliest families came from Guilford, Connecticut. In October 1794 at a Town Meeting "it was voted to build a meeting house." This building was situated in about the middle of the present Jericho Center green and served as a meeting place for both church and town. In 1809 Pliny Blackman opened a business which is the oldest continually operated general store in Vermont.

As the wilderness that greeted the early settlers gave way to farms and supporting services, the waterpower provided by Jericho's three streams attracted settlement and industrial development along their banks. It was not long before saw mills, gristmills, woolen mills, and various factories and shops appeared. The Browns River, from Cilley Hill Road to the VT Route 15 bridge, provided the best mill sites and, as a result, Jericho Corners soon became the most active area in town.

In 1794 the first change in the Town borders took place. This was due to the loss of 5,000 acres at the southern end which along with land from Bolton, Huntington, and Williston were incorporated by Act of the Legislature to form the Town of Richmond. In 1926 the United States Government began acquiring land from Jericho, Underhill, and Bolton "for the military training camp and for military purposes and for all other purposes connected therewith..." This acquisition continued into the 40's, and now approximately 5,240 acres of

originally town-governed land lies within the Range Area. Two small parcels (20.457 acres) have been deeded to the Mt. Mansfield Union School District but still remain outside the taxable land.

In 1876 the Burlington and Lamoille Railroad made daily stops at the Jericho Depot carrying freight, mail, and passengers north to Cambridge and west to Essex Junction. When the town was unable to provide a high school, students took the train to attend the Essex Classical Institute in Essex Center. After 61 years of serving this valley region, the railroad gave way to increased travel by car and truck.

One-room school buildings were provided when the number of "scholars" within an area warranted such a facility. Eventually there were 16 independent district schools. In 1893 the Legislature enacted a bill which made the new town system compulsory, and the local autonomy of the district system was lost. The Village schools at the Center and at the Corners absorbed several of these smaller units. At this same session of the Legislature, the Incorporated District of Underhill (Underhill ID) was formed, including the Underhill Flats area and, in Jericho, the area including, and adjacent to, Riverside. Following reorganization, the remaining one-room schools were given up one by one and the children transported to the larger units.

Jericho Academy, now the Town Library in Jericho Center, was built in 1825 and provided "higher education" until 1845. After this, various privately run "select" schools operated intermittently until about 1890. One such school was available at the Corners in 1882 and continued for several years with some 50 "scholars". By the turn of the century there was sufficient interest in providing advanced schooling for the Town to support a vote to establish the Jericho High School which opened in 1905 using the upper story of what are now the Jericho Congregational Church offices in Jericho Center. Town growth in the 40's and 50's put pressure on the existing schools, which finally resulted in the building of the present elementary building on VT Route 15 in 1957. This new building accommodated all of the students in the lower grades and left the building in the center available for the expanding high school population. Within the past 30 years population pressures have brought about the formation of the Mt. Mansfield Union School District (1967) composed of the high school and the two middle schools (Browns River and Camel's Hump), and the expansion of the VT Route 15 Jericho Elementary School.

Jericho developed three distinct Village Centers – Jericho Center, Jericho Corners, and the Riverside area of Underhill Flats. Portions of each Village Center are on the National Register of Historic Places, and each Village Center is recognized as a "Designated Village Center," a state of Vermont program that recognizes and encourages local efforts to revitalize Vermont's traditional villages. Once designated, the community receives priority consideration for state grants and other resources. Recently, significant gains have been made in reestablishing the traditional importance of these Centers, with the influx of a variety of new businesses, renovation of historic properties, streetscape improvements, and upgrades to pedestrian infrastructure.

Significant changes occurred in Chittenden County in the second half of the 20<sup>th</sup> Century as major employers, most notably IBM, transformed the area's formerly agrarian economy. Significant residential development, as well as an explosion in national chain stores, altered the economic and physical landscape of inner Chittenden County towns. This development coincided with the construction of the first leg of the Circumferential Highway in Essex and expansion of the Burlington International Airport. Wider use of the automobile further encouraged development to spread into rural areas.

As the core towns of Chittenden County have built up, development pressure has increased on the county's outlying towns, including Jericho. At this juncture Jericho stands at a crossroads. While change is inevitable, the Town can plan for and direct these development pressures so that it complements and enhances, rather than detracts from, Jericho's existing character and community. The manner in which this Plan and the accompanying Land Use Regulations are developed and implemented will determine how the Town reacts to these inevitable pressures and their impact on the appearance of, and quality of life in, Jericho.

## **COMMUNITY PROFILE**

A 2015 survey of Jericho residents (with more than 280 responses) found that the majority of people value Jericho's rural area and lifestyle, scenic beauty and natural resources and the quality of the school system. People identified affordability as the main challenge facing Jericho in the next 5-10 years followed by transportation issues and the need to manage growth and protect natural resources.

### **Population Trends**

Population trends serve as an important indicator of the potential pressures and demands that a community must take into consideration in planning for its future. With the information on the people of the community one can better understand the growth trends in the municipality and the region, the future demand for services, facilities, and economic improvements, and environmental conditions.

Since 1960, Jericho has experienced a varying rate of growth that peaked in the early 1970's (Table 2.1). This population boom in the early 1970's is likely tied to the influx of workers to the region due to the opening of the IBM plant in Essex Junction in the 1960's and 1970's. Jericho's growth rate reached an annual rate of two and three times that of the county during the 1960's and 1970's, during which time Chittenden County shared the national post-war trend of a gradual dispersion of urban populations into suburban and rural communities. This trend continued through the 1980's and 1990's, as Jericho's population grew at a faster rate than the County as a whole. Based on the most recent 2010 population estimates, Jericho has experienced a small decrease in population since 2000. The Town has grown at slightly slower rate than that of the County as a whole over the past decade.

In 2012, the Town and the Chittenden County Regional Planning Commission (CCRPC)

conducted the [Town of Jericho Build Out and Common Impacts Analysis](#)<sup>4</sup>, an analysis to assist the Town with understanding how additional residential and commercial development will impact energy use, population, water use, auto emission and traffic. Six scenarios were developed to answer questions on how zoning may be implemented or changed in the futures and what effect those changes will have on the community. This information will be a helpful tool for future land use discussions related to housing, energy usage and transportation. Table 2.3 shows the most recent Population Forecasts developed and endorsed by the CCRPC. These projections show Jericho growing at a slower pace than the County as a whole over the next twenty years.

**Table 2.1 Population History**

Year	Jericho			Chittenden County	
	Population	Avg Annual % change	% of County	Population	Avg Annual % change
1900	1,373	---	3.5%	39,600	---
1910	1,307	-0.5%	3.1%	42,477	.7%
1920	1,138	-1.3%	2.6%	43,708	.3%
1930	1,091	-0.4%	2.3%	47,471	.9%
1940	1,077	-0.1%	2.1%	52,098	1.0%
1950	1,135	0.5%	1.8%	62,570	2.0%
1960	1,425	2.6%	1.9%	74,425	1.9%
1970	2,343	6.4%	2.4%	99,131	3.3%
1980	3,575	5.3%	3.1%	115,534	1.7%
1990	4,302	2.0%	3.3%	131,761	1.4%
2000	5,015	1.7%	3.3%	146,571	1.1%
2010	5,009	-0.01%	3.2%	156,545	0.7%

Source: US Census

**Table 2.2 Population Jericho and Contiguous Towns**

Town	2000 Census	2010 Census	Absolute Change 2000-2010	Annual % Change 2000-2010
Jericho	5,015	5,009	-6	-0.01%
Underhill	2,980	3,016	36	0.12%
Bolton	971	1,182	211	2.17%
Richmond	4,090	4,081	-72	-0.18%
Williston	7,650	8,698	1,048	1.37%
Essex (incl. Essex Jct.)	18,626	19,587	960	0.52%
Westford	2,086	2,029	-57	-0.27%
Burlington	38,889	42,417	3,528	0.91%
Chittenden County	146,571	156,545	9,974	0.42%

Source: US Census

**Table 2.3 Population Forecasts**

	1980	1990	2000	2010	2020(f)	% Change from 2010	2030(f)	% Change from 2010
Jericho	3,575	4,302	5,015	5,009	5,160	3.0%	5,417	5.0%
Chittenden County	115,534	131,761	146,571	156,545	174,348	11.1%	195,070	24.6%

Source: Chittenden County Regional Planning Commission and VT Data Finder

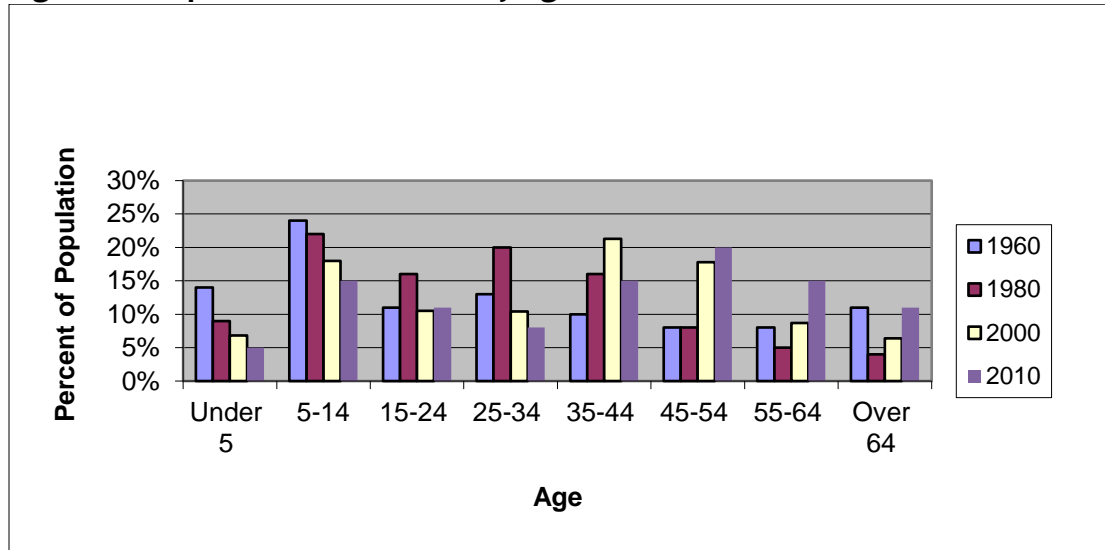
(f): forecast

<sup>4</sup> <https://jerichovt.org/town-documents>

## Age Distribution

Figure 2.1, based on U.S. Census data, shows changes in the age distribution of Jericho's population between 1960 and 2010. The effect of age distribution on school enrollments is indicated by Table 2.4, grade K-12 enrollments since 1995.

**Figure 2.1 Population Distribution By Age in Jericho**



Source: US Census

**Table 2.4 Total School Enrollments (K-12) for Jericho Students**

Year	Students				Total Students	Average Annual % Change
	Underhill ID	Jericho Elementary	Browns River Middle (5-8)	MMU (9-12)		
1995	158	515		197	870	
2000	130	479		286	895	2.9%
2005	126	282	229	261	898	.3%
2010	119	242	207	274	842	-6.2%
2015	108	246	193	235	777	-7.7%

Note: Kindergarten enrollments included 2005-2015, Underhill ID numbers include Underhill children.

Source: Jericho Town Annual Reports and Chittenden East Supervisory Union

During the 1960's schools experienced an increase of 95% in school enrollment. This is attributable to an influx of new families as part of the overall population growth in Jericho. Between 1970 and the late 1990's, school enrollments in elementary and middle schools were relatively level but high school enrollments continued to grow. A significant factor in school enrollment trends is the percentage of adults in the childbearing years between 25 and 44. This age group increased sharply from 23% of the population in 1960 to 36% in 1980. Between 1980 and 2000, a split occurred in this age group with a significant decline in the 25-34 age group and a continued increase in the 35-44 age group. Demographic trends suggest a continued aging of population in Jericho and all of Chittenden County.

As a result of the aging of the population, school enrollments have been projected to

decline. Enrollments have declined from their peak in the mid 1990's, and continued to decline between 2005 and 2015 for all grades.

## Origin of Population Increase

Figures on the sources of Jericho's population change (Table 2.5) shows that the high rate of new residents (people moving to the area) seen in the 1960's and 1970's dropped in the 1980's and continues to decline with the latest census figures. In fact as seen in the 2000's through the first three years of the 2010's, the in-migration numbers actually declined and even with the population increase found through births in Town the population decreased slightly before rising only slightly by 2013.

**Table 2.5 Population Origin**

Period	Population (end of period)	Total Change	Natural(1) Increase	New(2) Residents
1951-1960	1425			
1961-1970	2343	918	203	715
1971-1980	3575	1232	365	867
1981-1990	4302	727	451	276
1991-2000	5015	713	464	249
2001-2010	5009	- 9	204	-213
2011-2013	5021	12	72	-60

(1) Births minus deaths (2) Total increase minus natural increase  
Source: Jericho Annual Town Reports

## Race and Ethnicity

As shown in Table 2.6 below, over 97% of Jericho Residents identified themselves as white on the 2013 US Census. While this is a greater percentage than the United States as a whole, it is in keeping with Chittenden County and Vermont.

**Table 2.6 Race/Ethnicity, Percent; 2013**

	Jericho	Chittenden County	Vermont	United States
White	97.4	92.5	95.3	72.4
Black/African American	0.6	2.1	1.0	12.6
American Indian/Alaska Native	0.2	0.3	0.4	0.9
Asian	0.6	2.8	1.3	4.8
Native Hawaiian/Pacific Islander	0.0	0.0	0.0	0.2
Other Race	0.3	0.4	0.3	6.2
Mixed Race	0.9	1.9	1.7	2.9
Hispanic or Latino (all races)	1.4	1.8	1.5	16.3

Source: US Census, American Community Survey, 2013

## Resident Economic Status

Analysis of data from state income tax returns reveals that the people of Jericho have experienced substantial increases in personal income in recent years and that their incomes are among the highest in both the county and the state. As shown in Table 2.7, the median household income for Jericho in 2013 was \$92,212, higher than all but Charlotte and Shelburne. Further, this figure represents a substantial increase from 1999 when Jericho's



median household income was \$65,375.

**Table 2.7 Median Household Income, Chittenden County Towns; 1989, 1999 and 2013**

Town	1989	1999	2013
Bolton	\$42,620.66	\$62,910	\$71,875
Buels Gore	-	\$64,893	\$65,417
Burlington	\$32,609.10	\$42,855	\$42,677
Charlotte	\$65,164.55	\$82,929	\$110,344
Colchester	\$50,221.32	\$66,684	\$68,729
Essex Junction	\$51,872.02	\$69,363	\$56,463
Essex Town	\$56,691.26	\$75,848	\$75,503
Hinesburg	\$51,564.11	\$64,618	\$65,553
Huntington	\$47,330.03	\$64,321	\$71,719
Jericho	\$66,397.47	\$84,848	\$92,212
Milton	\$46,881.58	\$64,087	\$73,674
Richmond	\$53,886.85	\$74,951	\$74,011
Shelburne	\$66,834.42	\$88,373	\$94,643
South Burlington	\$54,118.11	\$66,926	\$64,756
St. George	\$44,717.26	\$57,142	\$59,063
Underhill	\$59,646.44	\$86,297	\$90,369
Westford	\$50,763.03	\$79,436	\$80,750
Williston	\$57,726.15	\$79,776	\$71,808
Winooski	\$34,353.08	\$39,704	\$44,971
Chittenden County	\$47,115.38	\$61,939	\$63,989

Source: 1989 and 1999 figures are from the US Census. 2013 Figures are from the US Census 2013 American Community Survey. All years are adjusted to 2013 dollars

Table 2.8 indicates that the poverty rate in Jericho is lower than the Chittenden County poverty rate. Also notable is that those under 18 have the highest percentage of the population below the poverty level in Jericho, where those between 18 and 64 have the highest rate in the county.

**Table 2.8 Jericho and Chittenden County Residents Income Below Poverty Level, 2013**

	Jericho	Chittenden County
All People	3.7%	11.2%
Under 18 years	7.0%	11.1%
18 years and over	2.4%	11.3%
18 to 64 years	2.7%	12.1%
65 years and over	0.7%	6.5%

Source: US Census, American Community Survey, 2013

## Employment

Table 2.9 identifies the distribution of workers by employment category and the changes between 1990 and 2013. The largest increases from 2000 and 2013 were in the transportation and services areas. Two service-oriented categories, manufacturing and

construction combined for a very small net change.

**Table 2.9 Number of Employees by Employment Category**

Category	1990		2000		2013		% Change 2000-2013
	#	%	#	%	#	%	
Agriculture/Forestry	46	2%	70	3%	53	2%	-24%
Construction	194	8%	142	5%	73	3%	-49%
Manufacturing	333	14%	555	20%	257	9%	-54%
Transportation	65	3%	67	2%	129	5%	93%
Wholesale/Retail	655	28%	348	13%	371	13%	7%
Services	980	42%	1403	51%	1,791	63%	28%
Public Administration	89	4%	151	6%	166	6%	10%
Totals	2,362		2,736		2,840		4%

Services include business and repair services, entertainment and recreational services, professional and related services.

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

The 2011 Town Plan described Jericho as substantially a bedroom community. Table 2.10 contains data from the 2010 US Census indicating that 69.1% of Jericho residents worked in five central Chittenden County communities – Essex, Burlington, South Burlington, Williston and Colchester, where the 2000 Census showed 73.2% in those five communities. A substantial 15.1% of residents worked in Jericho, an increase from 12.5% in 2000. 2010 Census data also indicates that 240 people or 7% of all Jericho workers either telecommuted or had a home business.

**Table 2.10 Employment Location for Jericho Residents, 2010**

Workplace	Count	Percent
Burlington	611	21.7%
Essex town	539	19.1%
Jericho	427	15.1%
South Burlington	390	13.8%
Williston	283	10.0%
Colchester	126	4.5%
Underhill	51	1.8%
Richmond	45	1.6%
Other Chittenden County	88	3.2%
Washington County	85	3.0%
Lamoille County	50	1.8%
Other Vermont	78	2.7%
Out of State	48	1.7%
Total	2,821	100.0%

Source: US Census: 2006-2010 5-Year American Community Survey

## Property Taxes

For years, Jericho's tax base has been dominated by residential property. As shown in Table 2.11, the percentage of residential property in the grand list has gradually increased from 79% in 1970 to over 90% in 2015. The greatest decline in Jericho property has been in farm property, down to less than half a percent in 2015 from 11% in 1970. Other categories have remained relatively steady, though there has been a noticeable increase in the value of commercial property since 1999.

**Table 2.11 Percentage Contribution to Grand List by Land Use Category 1970-2015**

Category	1970	1980	1990	1999	2010	2015
Residential(1)	79	87.6	83.6	82.4	88.6	92.8
Vacation	1	.7	0.6	0.3	0.2	0.1
Commercial	1	2.7	0.6	1.5	2.8	1.6
Industrial	5	0.0	0.0	0.0	0.0	0
Utilities	0	1.5	0.3	0.4	1.3	0.6
Farm	11	3.5	1.2	0.7	0.9	0.4
Other(2)	3	3.9	13.7	14.6	6.1	4.5

(1) Residential includes Residential I and II and Mobile Homes – U and L. (2) Other includes government, woodland, miscellaneous. Source: Jericho Grand List (1970-2015)

Previous versions of the Town Plan noted Jericho's high reliance on residential property for financing public services. In general, the cost of providing services to residential uses is higher than the property tax revenue they produce, while the opposite is true for commercial, industrial, and agricultural uses. As a result, Jericho has had a higher tax rate in comparison to other towns with more commercial and industrial property. However, with the passage of Act 60 and Act 68, school property tax revenues were distributed statewide rather than to individual communities. This has reduced the local financial benefits of commercial and industrial development. Table 2.12 provides the effective tax rates for Jericho and all other municipalities in Chittenden County. The residential total is made up of school homestead, municipal and local agreement taxes. In 2015 the Town Assessor began the process of updating property valuations in town and new appraisal values are expected in 2016.

**Table 2.12 Effective<sup>1</sup> Tax Rates in Chittenden County, 2014**

	School Homestead	School Nonresidential	Municipal	Local Agreement	Total (Residential)
Bolton	1.7483	1.5436	0.5435	0	2.29
Buels Gore	1.0235	1.5823	0.3537	0	1.38
Burlington	1.387	1.4574	0.6984	0.0034	2.09
Charlotte	1.5929	1.5104	0.1662	0.0008	1.76
Colchester	1.3732	1.4794	0.5513	0	1.92
Essex Junction	1.5203	1.5069	0.4028	0.0017	1.92
Essex Town	1.5155	1.5086	0.4842	0.0017	2.00
Hinesburg	1.5015	1.4646	0.447	0.0017	1.95
Huntington	1.4807	1.5254	0.5822	0	2.06

<b>Jericho</b>	1.4879	1.5004	0.4518	0.0124	1.95
<b>Jericho ID</b>	1.4988	1.497	0.4513	0.0124	1.96
<b>Milton</b>	1.3581	1.4488	0.5037	0.0019	1.86
<b>Richmond</b>	1.5219	1.5355	0.6329	0	2.15
<b>Shelburne</b>	1.4295	1.4973	0.3519	0.0008	1.78
<b>South Burlington</b>	1.5525	1.4961	0.4122	0.0006	1.97
<b>St. George</b>	1.6972	1.5134	0.3253	0	2.02
<b>Underhill</b>	1.4399	1.5106	0.4979	0.0346	1.97
<b>Underhill ID</b>	1.4885	1.4868	0.4965	0.0345	2.02
<b>Westford</b>	1.492	1.4929	0.6434	0.0019	2.14
<b>Williston</b>	1.4348	1.4902	0.2527	0.0006	1.69
<b>Winooski</b>	1.1421	1.2871	0.9983	0.0013	2.14
Source: Vermont Department of Taxes, Division of Property Valuation and Review, 2014 Equalization Study/2014 Annual Report The “effective” tax rate is the rate that would be in effect if all property within a municipality was appraised at full market value.					

### **3. LAND USE**

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This Comprehensive Town Plan envisions continued and future growth and development occurring mainly in Jericho's three Village Centers. These areas should develop into vibrant centers of culture, community, and commerce. The Village Centers should be interspersed with open, rural countryside, working agricultural and forestland, lands containing natural resources, and rural homes.

By implementing this vision, Jericho will preserve the community's sensitive natural and historic resource base and rural, open character, while providing for reasonable, responsible growth, sustainable economic development, and opportunities for active and healthy living.

The Land Use Districts below describe the various densities and development patterns envisioned for different areas of Jericho. These Land Use Districts shall be the basis for Jericho's Regulations. The Land Use areas should also be used to inform future capital investments.

#### **OPEN SPACE DISTRICT**

The Open Space District encompasses land in Jericho currently held by public or quasi-public organizations, which is designated for public recreational use, natural resource management or conservation. The Open Space District currently includes the University of Vermont Research Forest, Mobbs Farm, Mills Riverside Park, Old Mill Park, Wolfrun Natural Area and the privately owned Barber Farm. Open Space designation for future large public or quasi-public land acquisitions should be considered.

The Ethan Allen Firing Range is currently owned by the Federal Government and is also included in the Open Space District; however there is no public access to this property. Portions of the Range are heavily developed with numerous structures and significant infrastructure, while other areas remain largely undeveloped. The activities occurring on the site are currently outside the Town's jurisdiction. Should the Federal Government terminate its ownership of the Range in the future, the Range shall be considered part of the Open Space District, unless specific action to the contrary is taken, only after a significant public dialogue on the designation and future of this area has occurred.

#### **FORESTRY DISTRICT**

The Forestry District generally consists of undeveloped or sparsely developed forest land in the eastern half of Jericho and is part of a largely un-fragmented forest block in the Chittenden County Uplands.

The purpose of the Forestry District is to preserve productive forests as important parts of Jericho's local economy, and to maintain the rural character of Jericho by preserving significant aesthetic, recreational, and natural resources.

Some land in the District is unsuitable for development due to physical limitations such as steep slopes or high water table. Planned Unit Development provisions are recommended to preserve rural land and resources and to determine limited, appropriate sites for any new residential or other development. Lands within this district should receive high priority for conservation.

## **RURAL/AGRICULTURE RESIDENTIAL DISTRICT**

The Rural/Agriculture Residential District (Formally the Agricultural District) consists of open and wooded land through much of Jericho. Although there are forests within the district, there are more uses permitted in this District than in the Forestry District.

The purpose of the Rural/Agricultural Residential District is to provide land sufficient for agriculture and forestry, and for rural housing.

Prime forest and agriculture land indicated on the prime soils map, Map 3, should be protected, while allowing for limited, compatible development. Planned Unit Development provisions are recommended to preserve rural land and resources and to determine limited, appropriate sites for any new residential or other development. Linkages to other districts via trails and on road cycling are of particular importance in this district.

## **LOW DENSITY RESIDENTIAL DISTRICT**

The Low Density Residential District (formally the Rural Residential District) consists of areas further from the Villages, along higher volume town roads, particularly Browns Trace and portions of Lee River Road, Barber Farm Road, Nashville Road, Plains Road, Packard Road and northern Fitzsimmons Road. Several smaller side roads close to Browns Trace, including Ethan Allen Road, Morgan Road, Pratt Road, and the lower portion of Bolger Hill Road are also within the Residential District. Development in the Low Density Residential District has generally consisted of scattered, low-density residential development disassociated from surrounding neighborhoods.

The Rural/Agriculture Residential District serves as a break in between the Low Density Residential District and the higher density Village Center District along Plains Road to preserve a sense of open countryside between Jericho Corners and Jericho Center.

The purpose of the Low Density Residential District is to provide for a variety of land uses that preserve and are compatible with rural areas. This District creates a transition between the higher density Village, Commercial, and Village Center Districts and the lower-density Open Space, Forestry, and Rural/Agricultural Residential Districts.

Additional breaks within this District should be considered to preserve the open countryside. Linkages to other Districts via trails and on road cycling are of particular importance in this District.

## **VILLAGE DISTRICT**

The Village District includes areas between VT Route 15, the Lee River, and Orr Road not within the Village Center District or the Commercial District. The Village District also contains a portion of land bounded by Raceway and Cilley Hill Roads, VT Route 15, and the Browns River. Together, these areas are sometimes referred to as the “Village Triangle.” The residential neighborhoods of Lawrence Heights, Palmer Lane, and Foothills are also included within the Village District.

The purpose of the Village District is to provide a moderate-density residential area as a transition from the Village Center Districts. The Village District is intended to provide a variety of housing options, including a mix of single and multi-family housing, near the amenities provided by the Village Center District and the Commercial District.

Pedestrian linkages to surrounding neighborhoods and the Village Centers are of particular importance in this district. Small service-oriented commercial uses may be appropriate if they are compatible with the predominantly residential character of the district.

## **COMMERCIAL DISTRICT**

The Commercial District currently contains land along VT Route 15, between Raceway (near Packard Road) and Orr Roads. The District extends to the Browns River and includes portions of the Jericho East Development.

In 2019, with the assistance of a Municipal Planning Grant, the Planning Commission undertook a public engagement process for the Commercial District, which resulted in a [Master Plan document and map<sup>5</sup>](#) showing potential future development and street layout for the area. This study also resulted in the creation of a new vision/purpose statement for the district and developed new zoning language to help shape future development.

As determined by the 2019 Commercial district study, the primary purpose of the Commercial District is to connect Jericho Corners and Riverside village Centers and to provide a location for mixed-use development, including expanded commerce, at a scale appropriate for the community and which preserves the rural character, natural beauty of the landscape, and distant views.

The types of uses in the Commercial District are envisioned to be mixed use, with services, light industrial, small-scale retail, residential, community and recreational spaces integrated together at an appropriately rural, yet village-like scale that works in harmony with Jericho’s nearby villages. This vision for this area encourages higher density development (greater density than traditional 1 acre lots, which presumes shared infrastructure such as water and waste water), and allows multi-story buildings with the potential for different uses within one building.

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<sup>5</sup> <https://jerichovt.org/town-documents>

Within the Commercial District, development should be integrated into the landscape and have minimal impact on the rural character of the VT Route 15 travel corridor. Efforts should be made to minimize visual impacts through good site planning and design.

The topography of developable land in the Commercial District presents an excellent opportunity to encourage higher density, multi-story, mixed-use development while at the same time striving to protect the beauty of the surrounding area. This includes screening buildings and parking from the VT Route 15 corridor as appropriate, placing taller buildings in lower lying areas, and shared parking, all as to minimize visual impacts.

Suburban strip development shall be avoided. While roadside visibility is important for the viability of some businesses, strip development is prohibited in the district. Strip development is defined as linear commercial development along a VT Route 15 that includes three or more of the following characteristics: broad street frontage, predominance of single-story buildings, limited reliance on shared access to VT Route 15, lack of connection to any existing settlement except by VT Route 15, lack of connection to surrounding land uses except by VT Route 15, lack of coordination with surrounding land uses, and limited accessibility for pedestrians.

## **VILLAGE CENTER DISTRICT**

The Village Center District encompasses Jericho's three Village Centers – Jericho Corners, Jericho Center, and Riverside. The Village Center in Riverside generally consists of the water service area of the Jericho-Underhill Water District. The Jericho Center Village Center includes the Jericho Center Green and surrounding properties and extends south to the Jericho Center Cemetery and north to the Underhill-Jericho Fire Sub-Station on Browns Trace. Jericho Corners consists of areas along VT Route 15 from the Essex Town Line to the old Village water district parcel, as well as surrounding residential neighborhoods. The Jericho Corners Village Center extends down Lee River Road to Lafayette Heights. The boundaries of these three areas are generally considered to be sufficient at this time.

The purpose of the Village Center District is to encourage the concentration of people, commerce, and community-focused activities in these traditional centers.

Each of Jericho's Village Centers is listed as an Historic District on the State Historical Register. Jericho Corners and Jericho Center are on the National Register of Historic Places.

The Village Centers generally retain an architectural character that constitutes a valuable and unique part of our cultural heritage. In addition to the buildings themselves, the character of the villages is defined by the relationship of the structures with one another, with the roads, and with open land.

Pedestrian-scale development should be encouraged within the Village Center District. With attention to the location of buildings and connections between buildings, multiple use patterns within a village setting will be able to continue.



The orientation of new buildings should encourage walkability and reflect traditional patterns. Spaces within developments to encourage community interaction should be encouraged. Even small spaces for benches, tables, or green space, will enhance the Village Centers' roles as hubs. Connectivity, for vehicles, cyclists, and pedestrians, is important. See the Transportation Chapter for more details on Bike/Pedestrian considerations and plans.

Sufficient parking is necessary for commercial viability. However, parking should not be allowed to dominate the visual appearance of a parcel. Generally, large setbacks with parking in front of the building are less inviting to pedestrians than buildings close to the road with parking to the side or rear. Particularly along VT Route 15, parking lots should not be permitted in front of buildings. In general, on-site parking should be encouraged at the side and rear of buildings.

### **Jericho Corners Village Center**

Jericho Corners is made up of a mix of several small-scale commercial uses, residential uses, and includes the Jericho Elementary School, U.S. Post Office, and the Jericho Town Hall, located along VT Route 15. Many neighborhoods are located here, with access off of VT Route 15 and Lee River Road. These neighborhoods generally are within easy walking distance to commercial and public uses within the Village. Topography, current density and lack of public sewer place constraints on future development.

In Summer 2015, the Old Red Mill/Browns River pedestrian bridge on VT Route 15 was reconstructed to extend the sidewalk west, where it ends close to the Essex town line.

Additional pedestrian connections should continue to be encouraged. Jericho received a grant in 2015, to assess additional pedestrian facilities connecting residents to Jericho Corners.

Any commercial use or residential growth should be modest in scope and should be compatible with the historic Village character and neighboring parcels.

### **Jericho Center Village Center**

Jericho Center, on Browns Trace maintains a large Town Green, which plays host to a variety of events during the year. The Town Library, an important Town asset, and Jericho Community Center, are located in this Village. Growth opportunities may be more limited here, because of the lack of a public water supply and not being situated on a state highway.

Development may be more modest in scope than in the other Village Centers. Nonetheless, Jericho Center should continue to serve as a focal point for the Town. Reuse and expansion of existing structures may be the primary form of development in this area, though some modest amount of new construction may occur on larger parcels. Development in this area should be mindful of impacts on groundwater quality and availability and of existing historic features such as the Village Green.

Traffic calming and pedestrian circulation is of particular importance as development occurs along Browns Trace. A new sidewalk segment from Jericho Center to Pratt Road was constructed in the summer of 2015, as part of a phased plan to eventually provide a pedestrian pathway from Jericho Center to MMU High School. Pedestrian connectivity and safety throughout the Village and with nearby neighborhoods should continue to be encouraged.

### **Riverside Village Center**

Riverside Village Center spans VT Route 15 from Mills Riverside Park to the Underhill town line, and extends to River Road and Park Street. Browns River Middle School and the Deborah Rawson Memorial Library are located in this Village Center, along with several residences, small businesses, and larger parcels of land which are undeveloped, or minimally used for commercial activity.

In 2015 the Town adopted additional zoning for a portion of Riverside, the Riverside Flats Character – Based District. This is considered an overlay district and discussed below in the Overlay section. Outside of the Overlay, any commercial use or residential growth should be modest in scope and should be compatible with the historic Village character and neighboring parcels. Traffic calming and pedestrian circulation is of particular importance as development occurs along VT Route 15 and River Road. A new pedestrian crossing at the intersection of VT Route 15 and River Road is planned for the summer of 2016.

### **OVERLAY DISTRICTS**

Jericho has five Overlay Districts: The Riverside Flats Character-Based District, the Wetlands Overlay District, the River Overlay, the Natural Resources Overlay and the Wellhead Protection Area Overlay District. The purpose of the Overlay Districts is to identify the areas where protective measures will be employed to preserve or enhance the natural and aesthetic resources identified in throughout this Plan.

### **Riverside Character-Based Zoning District**

Over several years, Jericho officials evaluated Riverside, with assistance from public agencies, land use consultants, and public input. Jericho determined Riverside offered significant potential for development, based on several factors, including convenient VT Route 15 access, mixed-use character past and present, the relatively large amount of undeveloped or underutilized land, landowner support, and Jericho-Underhill Water District service.

As a result, in 2015, the Jericho Selectboard adopted new zoning regulations, which apply to a designated large portion of Riverside, to a) encourage development within this district and b) ensure that any development conforms to specific character-based zoning and development standards such as private frontage, building form, building placement, building

type, road, parking, civic space, driveway location and architectural standards. See Map 2 at the end of the plan for these boundaries.

The Character Based Zoning Ordinance is intended to foster growth on existing large parcels in a way that preserves and expands on the traditional village center type development. Redevelopment at a smaller scale also may take place on parcels fronting on VT Route 15 and other major roadways in this District. The new zoning will guide development to be compatible with historical patterns on nearby parcels.

A grid of streets throughout the Riverside Villiage Center with multiple connections to major streets will disperse traffic throughout the village and avoid congestion at any single point. On-street parking and other traffic-calming measures are intended to decrease vehicle speed and encourage pedestrian safety. Sidewalks and paths should be constructed along streets and from streets to buildings.

Development review should pay particular attention to bulk, setbacks, and relationship of buildings to parking and pedestrian amenities. Larger buildings can be successfully incorporated into the village centers through proper siting and the use of landscaping and architectural treatments to interrupt building bulk.

### **Wetlands Overlay District**

The Wetlands Overlay District consists of land areas identified as:

- “Class I and Class II Wetlands” on the most current “National Wetlands Inventory Map,”
- A buffer of fifty feet surrounding all Class II Wetlands; and
- A buffer of 100 feet surrounding all Class I Wetlands.

The purpose of the Wetlands Overlay District is to preserve public health and safety, wildlife and existing and future water supplies, and control pollution by maintaining the quality and level of the water table and surface waters.

### **River Overlay District**

The River Overlay District consists of the following:

- All 100-Year Floodplain Areas, identified as areas of special flood hazard pursuant to 10 VSA § 753 or all areas that are either within 100 feet measured horizontally of the outside edge of the area of special flood hazard or less than five feet above the base flood elevations , unless a survey prepared by a licensed surveyor demonstrates that the area is above the Base Flood elevation;
- All areas within the certain buffers along mapped rivers and streams; and
- Fluvial Hazard Erosion Areas mapped and defined by the Vermont Department of Environmental Conservation River Management Program.

The purpose of the River Overlay District is to protect life and property by minimizing new

development and inappropriate land uses in the floodplain, to protect valuable natural resources important for wildlife, recreation, and to protect Jericho's rural atmosphere. Development should be very limited and new dwellings should not be constructed in this district.

### **Natural Resources Overlay District**

The Natural Resources Overlay District (NRO) consists of the following tiers of ecological priority:

#### **Primary Ecological Priority**

These are the Natural Resources with the highest priority to conserve, preserve and protect, because they are rare, irreplaceable, unique, or otherwise essential to the town and/or the state, and their conservation requires the most stringent standards. The Natural Resources, as defined by Vermont's Agency of Natural Resources and Department of Fish and Wildlife, in this tier are:

- a) S1, S2, S3 Upland Natural Community types
- b) Vernal Pools plus 100' Buffer
- c) Documented habitat for State of Vermont Listed Rare, Threatened, Endangered Species
- d) Forested Riparian Habitats including the water course

#### **Secondary Ecological Priority**

These are the Natural Resources with the second highest priority to conserve because they are significant although they may not be rare. As a result, ensuring their continued function requires standards to minimize and mitigate Land Development impacts on the Resource. The Resources, as defined by Vermont's Agency of Natural Resources and Department of Fish and Wildlife, are:

- a) Ledge, Cliff, or Talus areas plus 100' Buffer
- b) State-significant examples of S4 or S5 Upland Natural Communities
- c) 100'-600' Buffer around mapped Vernal Pools
- d) Wildlife Road Crossings
- e) High Elevation Forest Blocks (defined in Section 2 of these regulations)

The Purposes of the Natural Resources Overlay District are to preserve and to protect specific Natural Resources of Jericho by preserving their ecological characteristics and scenic qualities and preventing degradation of their ecological functions. Map 9 shows the NRO.

### **Wellhead Protection Overlay District**

The Wellhead Protection Area (WHPA) Overlay District consists of three areas:

- The WHPA-1, a circle of radius 200 feet surrounding each of the water supply wells serving the Jericho Village Water District, the foothills water supply, and the Underhill Jericho Water District, the Jericho Heights water supply, and any other public water supply on the most recent “water Source Protection Areas” map prepared by the Vermont Agency of Natural Resources (ANR) Water Supply Division.
- The WHPA-2: Wellhead protection areas in active use identified on the most recent “Water Source Protection Areas” map prepared by the ANR Water Supply Division that are delineated as Zone 2 on the water system’s most recent Source Protection Plan.
- WHPA-3: Wellhead protection areas in active use identified on the most recent “Water Source Protection Area’s” map prepared by the ANR Water Supply Division that are delineated as Zone 3 on the water system’s most recent Source Protection Plan.

The purpose of the Wellhead Protection Area Overlay District is to promote the health, safety, and general welfare, to conserve the natural resources of the community, to protect the ground water and ground water recharge areas of the Town from adverse development or land use practices, and to preserve and protect present and potential sources of water supply for the public health and safety.

## **INSTITUTIONAL PROPERTIES**

### **Ethan Allen Firing Range**

Nearly 25% of Jericho's land area is property under Federal Government ownership, commonly known as the Ethan Allen Firing Range. The entire Range consists of 11,218 contiguous acres of land located in the towns of Jericho, Underhill, and Bolton. Jericho's portion consists of 5,248 acres lying north of Nashville Road and east of Browns Trace. This land was purchased from local residents in two stages, 2,218 acres in 1926, and 3,030 acres in 1941.

The overall management of the Range is conducted by the United States Army Armament Munition and Chemical Command, although the actual use of the property is divided between the Vermont Army National Guard, which utilizes the site to conduct personnel training maneuvers, and General Dynamics which leases a portion of the Range from the U.S. Government for weapons testing. The Range also has a biathlon course used for national and international competitions. This course can be made available to several school and community athletic organizations.

Although tours of the site are offered to local officials on a regular basis, the Town of Jericho has neither taxing nor regulatory authority over the Range land or its associated activities. It is generally felt that more interaction between Town and Range officials would be desirable, both to keep residents informed of activities occurring in the Range and how those activities might affect Jericho residents, as well as to explore possible beneficial

aspects of the Range.

### **University of Vermont (UVM) Jericho Research Forest**

UVM owns and maintains a forest research facility in Jericho, located adjacent to Mobbs Farm. Acquired by UVM in 1941, the Jericho Research Forest (JRF) is located on 478 acres of former agricultural land and managed by the UVM Rubenstein School of Environment and Natural Resources. The forest is utilized extensively for UVM research, education, and service-learning and in 2005 became host to the UVM Green Forestry Education Initiative. The public can access the Jericho Research Forest using the marked entrance and trails.

The forest itself includes a mix of natural stands of northern hardwoods and white pine and plantations of native and exotic conifers. Topography of the site includes steep slopes, sandy terraces, and visible bedrock.

While research and education are two of the primary purposes of the UVM Research Forest, construction or expansion of structures for these purposes is not currently permitted in the Open Space District. This could inhibit the expansion of programs and activities at the Research Forest.

### **ADJACENT MUNICIPAL AND REGIONAL PLANS**

The Town of Jericho is one of nineteen municipalities comprising the Chittenden County region. The general development of Chittenden County has occurred such that the “core municipalities” to the west of Jericho (Burlington, South Burlington, Winooski, Colchester, Essex, Williston, and Shelburne) contain the heaviest concentrations of commercial and industrial development, while the outlying towns, including Jericho, are more residential in nature. In addition to residential housing, the outlying towns also provide valuable forest, agricultural, recreational, historic, and natural resource opportunities for the region. In the past decade, commercial and higher density residential development has begun to occur in several outlying towns, including Milton, Hinesburg, Richmond, and Jericho. For the most part, these communities have attempted to focus this development into existing village centers

Jericho is represented on the Chittenden County Regional Planning Commission (CCRPC) by the Selectboard’s appointee.

Jericho’s Village Centers and other future land use districts are compatible with the village, rural and other planning areas from the [2018 ECOS Regional Plan](#)<sup>6</sup>.

While preparing this Town Plan 2016 update, Jericho planners have reviewed Future Land Use Maps in five adjacent communities. In general, Jericho’s Town Plan is compatible with the goals and objectives of all neighboring towns. Any concerns from adjacent towns’ residents and/or officials with individual proposals for development may be addressed

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<sup>6</sup> <http://www.ecosproject.com/>

during the Development Review process.

**Essex** lies to the northwest of Jericho. Along most of the shared border, the Rural/Agricultural Residential District in Jericho is compatible with Agriculture-Residential and Conservation Districts in Essex. Along VT Route 15, Jericho's Village District ends at the Essex Town line. This is a suitable ending point for the village, and no similar district is found on adjacent land in Essex. Further south, one portion of Essex's Industrial District extends to the Jericho Town line. The terrain in the easterly portion of this district appears marginally suitable for such use. No access should be permitted to the Industrial District from Jericho's rural Skunk Hollow Road. Jericho and Essex should continue to collaborate to preserve iconic scenic vistas in of hills, pastures, and Mount Mansfield, in the towns' adjacent lands along VT Route 15.

**Underhill** lies to the northeast of Jericho. Along most of the shared border, Forestry, Open Space, and Rural/Agricultural Residential Districts in Jericho are compatible with Rural Residential and Conservation Districts in Underhill. An overlap of land uses occurs in Riverside/Underhill Flats where the village is split between the Towns of Jericho and Underhill. The Towns share a state Village Center Designation for this area. Land use plans in both towns are compatible. Jericho and Underhill have a long history of shared services and organizations, including a joint fire department, land trust, park district, library district, water district, and elementary school. This close relationship makes collaboration and proactive communications between the two towns critical.

**Bolton** lies to the southeast of Jericho. Predominant land uses are rural residential and open space. Conservation and Rural I Districts in Bolton are compatible with Rural/Agricultural Residential, Forestry, and Open Space Districts in Jericho.

**Richmond** lies to the south of Jericho. Along most of the shared easterly border, Richmond's Agricultural/Residential District is compatible with Jericho's Forestry District. Along Browns Trace is Jericho's 3-acre Low Density Residential District which borders Richmond's 2/3-acre High Density Residential District. Although Richmond's residential density is higher, the uses are essentially compatible. Richmond's High Density Residential District encourages high density housing, where Jericho's Rural Residential and Agricultural district, on the other side of the town line allow much lower density residential development. At Richmond's northeast corner, along VT Route 117 and Governor Peck Road, two areas have been designated as Commercial and Commercial/Industrial Districts. The abutting areas in Jericho are primarily residential. Any non-residential uses in these areas in Richmond should be reviewed carefully for potential impacts on Jericho parcels.

**Williston** lies across the Winooski River to the southwest of Jericho. Most adjacent land in the two communities is in the floodplain – Floodplain District in Williston and River Overlay District in Jericho.

## GOALS, STRATEGIES AND IMPLEMENTATION

**Goal 3.1. Encourage development to occur in Jericho's three Village Centers and secondarily in the Commercial District. New development will reinforce and enhance Jericho's settlement pattern of compact villages interspersed with rural countryside.**

Strategy 3.1.1. Plan so that the majority of new growth over the next twenty years can be accommodated within the Village Center, Commercial, and Village Districts.

Implementation 3.1.1.1. Consider infrastructure investments and/or zoning incentives/revisions that will increase the likelihood that development will occur in these districts.

Strategy 3.1.2. Investments, including the construction or expansion of infrastructure, shall reinforce the land use and growth patterns articulated in this Plan.

Implementation 3.1.2.1. Determine appropriate balance for investing in transportation and other infrastructure improvements. Priority areas are in the Village Centers and secondarily in the Commercial District.

Strategy 3.1.3. Development on the periphery of the Village Centers and Commercial District shall reinforce traditional settlement patterns and provide for pedestrian access to those areas.

Implementation 3.1.3.1. Identify areas that are adjacent to the Village Centers, Commercial District or Village Districts that may be appropriate for inclusion in the these areas. Areas to be considered shall be required to have pedestrian access to one of the Village Centers and/or the Commercial District and have the potential to be served by appropriate infrastructure, or areas where appropriate capital planning could provide necessary infrastructure in the near future.

Implementation 3.1.3.2. Consider the impacts of the I-89 Interstate exit on development patterns along the VT Route 117 corridor and the surrounding road network and evaluate zoning revisions and other planning techniques appropriate for this area.

Implementation 3.1.3.3. Identify development opportunities in the area for commercial and light industrial development near the Interstate exit along VT Route 117.

Strategy 3.1.4. Maintain contiguous areas of open space and natural resource lands in the Rural/Agriculture Residential, Low Density Residential and Forestry Districts, while providing for appropriate areas for residential development.



Implementation 3.1.4.1. Promote the use of Planned Unit Developments as a tool to cluster residential development and maintain critical natural resources and open space.

Implementation 3.1.4.2. Work with local and regional conservation organizations such as the Vermont Land Trust and Jericho Underhill Land Trust to afford landowners the opportunity to conserve their property.

Implementation 3.1.4.3. Continue funding the Open Space Fund for conservation opportunities.

Implementation 3.1.4.4. Consider adopting incentives and programs to promote the protection of scenic areas.

**Goal 3.2. Jericho's planning efforts and zoning regulations shall aim to preserve the rural character of the Town.**

Strategy 3.2.1. Preserve the natural features including the historic landscape, scenic views and agricultural land.

Implementation 3.2.1.1. Ensure that natural resources, based on the most current Town natural resources inventory, are taken into consideration when development occurs.

Implementation 3.2.1.2. Continue to require setbacks of 50 feet from VT Route 15 in the Commercial District, for the purpose of protecting the aesthetics of the corridor and maintain consistency with existing development. For development within the Commercial District that does not directly access Route 15, setbacks should be reduced to allow for a more village-style feel as described in the 2019 Commercial District Master Plan.

Implementation 3.2.1.3. Update the documentation of agricultural soils in order to have the most accurate information to protect agricultural lands.

Implementation 3.2.1.4. Consider amendments to the Land Use and Development Regulations to protect, preserve and maintain the priority conservation areas identified by the Conservation Commission.

Strategy 3.2.2. Preserve the “character”, including the scale and building form, of each area of town.

Implementation 3.2.2.1. Consider zoning district description that includes “character of the neighborhood/district” definitions and criteria.

Implementation 3.2.2.2. As described in the 2019 Commercial District Master Plan, adopt Land Use Regulations for the Commercial District that limit new development along VT Route 15 and require new development to fit

the rural character of Jericho, providing site planning and design standards that addresses the character of development.

Implementation 3.2.2.3. Consider developing performance standards for the Commercial District to ensure that uses within the District are aligned with the character with the immediate and surrounding areas, as described in the 2019 Commercial District Master Plan.

Implementation 3.2.2.4. Consider reducing the minimum lot size for the Commercial District in the Land Use Regulations as described in the 2019 Commercial District Master Plan.

**Goal 3.3. Jericho's planning efforts will consider the regional context. Planning decisions will be made in part based on coordination with adjacent towns, entities within Jericho, and regional and State agencies.**

Strategy 3.3.1. Coordinate Jericho's planning efforts with those of adjacent towns, the region, and the state.

Implementation 3.3.1.1. In keeping with the Regional Land Use Plan and ACT 200 goals, work closely with the Regional Planning Commission and State agencies to preserve Jericho's natural, historic, and recreational resources, provide continued opportunities for agriculture and forestry, and provide for residential and mixed uses in Jericho's Village Centers.

Implementation 3.3.1.2. Communicate with adjacent towns through participation in regional meetings.

Implementation 3.3.1.3. Provide responsible input to Jericho's representatives on regional planning groups, particularly the Chittenden County Regional Planning Commission (CCRPC).

Strategy 3.3.2. Pursue opportunities for joint projects with adjacent towns aimed at addressing common issues.

Implementation 3.3.2.1. Continue joint planning efforts with the Town of Underhill related to the Riverside/Underhill Flats Village Center.

Implementation 3.3.2.2. Monitor development along the I-89 exit in Richmond, and coordinate transportation and facilities upgrades necessitated by such development with the Town of Richmond. Work with developers in this area to ensure that adequate protection for residential properties is provided when commercial or industrial development occurs across the town line.

Strategy 3.3.3. Improve communication and coordinate land use planning with major institutions within Jericho, such as the Ethan Allen Firing Range and UVM Research Forest.

Implementation 3.3.3.1. The Selectboard and Planning Commission should seek to meet annually in public session with Range and University officials.

Implementation 3.3.3.2. Consider revisions to the Land Use and Development Regulations to allow educational and research facilities within the Open Space District, subject to appropriate standards.

## 4. NATURAL RESOURCES

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### OVERVIEW OF JERICHO'S NATURAL RESOURCES

Jericho is situated in the foothills of the Green Mountains, a series of forested hills cut by the watersheds of the Browns River, Lee River, and Mill Brook. The Green Mountains lie northeast of Jericho, providing beautiful views of Mount Mansfield. To the southwest, the town is bordered by the Winooski River. Many different ecosystems and natural communities comprise the altitudinal rise from the Winooski River to the higher hills such as Bald Hill, Birch Hill, and South Mountain. Jericho developed into a fairly traditional New England small town with three village centers surrounded by farms and forest. It is an attractive place to live for many reasons, among which are the rural and open landscape of the town, its scenic qualities, and a certain nostalgia for the historic use of the land.

Critical to maintaining the rural and open space character of the town is the recognition and protection of its abundant natural resources. The first goal of this plan is “to protect the natural environment.” This chapter describes the natural environment and its various components and describes efforts that have been undertaken to protect that natural environment while also supporting appropriate economic development and growth. The chapter also suggests additional measures the town and/or residents can take to enhance and protect Jericho’s natural resources.

Planning and zoning have existed in Jericho for over 50 years in order to balance the natural setting and its resources, community needs, and the landowners’ property rights. Jericho seeks to focus development within the Village Centers and to cluster residential and commercial development into Planned Unit Developments, allowing for the greatest amount of open space and unfragmented natural areas. Additionally, in 2018 Jericho adopted a new Natural Resources Overlay (NRO) which provides specific standards to protect Jericho’s most important resources that could be impacted by development. Development should continue to be assessed at regular intervals to consider its overall impact within the town and to gauge the effectiveness of the NRO, and not just within the boundaries of one parcel of land, since protection of natural resources does not stop at property lines.

Identification of natural resources in Jericho is of paramount importance to the town’s goal of protection. To this end, the Jericho Conservation Commission has sponsored numerous projects in the last several years to study wildlife habitat, wildlife corridors, habitat blocks (called “contiguous habitat units” in a recent report), wetlands, vernal pools, riparian habitat, and significant natural communities. See Bibliography, in Appendix A for a comprehensive list. In 2013, a four-town effort called [Science to Action](http://arrowwoodvt.com/sta/)<sup>7</sup>, conducted in coordination with the Vermont Fish and Wildlife Department, the Chittenden County Regional Planning Commission, and the nearby towns of Richmond, Bolton, and Huntington, produced a lengthy and detailed report with new maps that portray natural resources in

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<sup>7</sup> <http://arrowwoodvt.com/sta/>

both a town-wide and region-wide context. The resulting map depicts all areas of the four towns based on a priority system that analyzes information from all these studies.

The Jericho Conservation Commission, with the help of the Vermont Fish and Wildlife Department, used the data from this comprehensive inventory to develop its own maps of priority conservation areas. These are described in detail in this chapter and the map is described and presented here. Jericho's NRO, adopted in 2018, was based primarily on these studies and maps.

## **GEOLOGY, LANDFORMS, AND VEGETATION**

The elevation of Jericho ranges from less than 280 feet at the Winooski River to over 1,900 feet on Bald Hill. The town straddles two biophysical regions, the Champlain Valley and the Green Mountains. The lowest elevations of town are the fertile bottomlands of the Winooski River where agriculture has long been the dominant land use. The highest elevations are the foothills of the Green Mountains. Topography is depicted on Map 4.

The underlying bedrock of Jericho is made up of mudstones, a general term for rocks that have their origins in deep or shallow sea sediments. The soft sediments laid down in the sea bottom were metamorphosed into rock over millions of years under the intense heat and pressure associated with tectonic activity, or the moving of continents. The mudstones in Jericho include schists, phyllites, metawacke, and greenstone, differing from each other in chemical composition and degree of metamorphism. Within each type, there is local variability explained by the specific conditions under which the original sediments were laid down. These rocks are mainly Cambrian in age, laid down around 500 million years ago, more or less.

Much more recently, glaciation changed the landscape in a succession of several ice ages. The Laurentide ice sheet was the most recent of perhaps 20 or 30 ice sheets that originated in northern Canada and spread across much of northeastern and north-central North America like a thin pancake. At its furthest extent, it reached Long Island and Cape Cod, and completely covered Vermont. Its development was related to a long slow cooling of the earth beginning about 100,000 years ago. Around 20,000 years ago, a rapid warming trend began the melting and retreat of the ice sheet. As the ice sheet melted, it was reduced from a massive sheet covering all of Vermont to narrower tongues occupying the valleys. Along the edges of these tongues meltwater flowed, carrying and depositing sand and gravel. Such deposits can be found in Jericho along Browns Trace between Nashville Road and Jericho Center. Indeed, the location of the road exactly traces this deposit, presumably because the coarse sediments provided a good roadbed. There are other ice-margin deposits along Nashville Road and Ethan Allen Road.

As the tongue of ice occupying the Champlain Valley retreated further north, the valley became a large freshwater lake known as Glacial Lake Vermont, a lake much larger than present-day Lake Champlain. Glacial Lake Vermont appeared around 13,500 years ago. The elevation of the lake surface near Burlington was about 620 ft. above sea level, and its

eastern shoreline reached almost to Jericho Center. The lake was filled with mud and other sediments carried by the glacier. These sediments were laid down at the bottom on the lake and form the basis for many of the soils in the western portion of Jericho, from coarse lakeshore sands to finer silts and clays laid down in deepwater areas.

While Glacial Lake Vermont existed, the water in it flowed to the sea via the Hudson River, and was contained and held from flowing north by a giant ice dam. This dam failed catastrophically 12,000 years ago, causing a vast wall of water to flow northward out of the Champlain Valley and into the St. Lawrence River. Within days or perhaps even hours, the level of the water dropped almost 300 feet, and in time saltwater entered the valley and began an era known as the Champlain Sea. The level of the sea was about 320 feet above sea level. A tongue of this sea lapped at the shore in the western part of Jericho, though its evidence is now mostly obscured by the activity of the Winooski River.

The soils in Jericho reflect all this history and the more recent postglacial erosion and re-deposition of sediments. We can see the lake sand and also deep lake finer sediments in the Jericho Research Forest in the southwest corner of town. A glacial sand delta, where a river entered the lake and deposited sands and gravels, defines the flat areas along VT Route 15 as well as the flat portions of Plains Road. Lake gravel can be found in Riverside/Underhill Flats. There is beach gravel along Plains Road above the Lee River. More recent deposits of silty alluvium can be found along the Browns River and especially along the Winooski on the western border of town. These ice-margin, lake, and alluvial deposits are all found in the lower elevations of town, below 750 feet in elevation. These are the places where most of the roads have been built, where the best agricultural soils are, and where most of the development has occurred.

The rest of the town, at higher elevations, is characterized by glacial till overlying bedrock. Soils in these areas tend to be stony and harder to work, and most of these areas have reverted to forest following the intense agricultural period of the 19<sup>th</sup> century. Roads in these areas have, in some cases, ceased to be used because of the difficulty of maintaining them.

The diversity of landforms in town is remarkable, and contributes greatly to Jericho's biological diversity and its variety of wildlife habitats. From rich floodplain forests along the Winooski River to Dry Oak Forests atop Huckleberry Hill and Red Spruce-Northern Hardwood Forest at higher elevations, the town is rich in a variety of natural vegetation types and wildlife habitat. The dominant natural community in town is Northern Hardwood Forest, a ubiquitous mix of sugar maple, red maple, American beech, and yellow birch. Other trees that are locally common are eastern hemlock, red spruce, white pine, and red oak. A number of uncommon natural communities are found in town, including the Dry Oak Forest and Floodplain Forests mentioned above, plus a large area of Hemlock-Northern Hardwood Forest in the western portion of town, as well as bogs and other interesting wetlands.

## WATER RESOURCES

### Surface Waters and Watersheds

Surface waters in Jericho include ponds, streams/rivers, and wetlands. Jericho is situated at the boundary of two major watersheds within Vermont's portion of the Lake Champlain basin. These surface waters are valuable sources of water supply, recreation areas, absorption areas for flood waters, habitats for wildlife, waterfowl, and vegetation, and aesthetic enjoyment. The northern portion of Town drains northward via the Lee and Browns Rivers to the Lamoille River. The southern portion of Town drains southward via the Mill Brook to the Winooski River. The boundary that separates these watersheds transverses town in an east-west direction; it lies at the mid-point of town, just south of Jericho Center Green. Each watershed drains approximately 50% of Jericho's land area. The Vermont Department of Environmental Conservation (DEC) has a Basin Planning Process for both the Lamoille and Winooski River drainage areas, as seen in the [Lamoille Basin Plan](#)<sup>8</sup> and the [Winooski Basin Plan](#)<sup>9</sup>. The objective of the Vermont Basin Planning Process is to protect the quality surface waters of the basins. As a result of the Vermont Clean Water Act (H. 35), passed in 2015, and through the assistance of DEC, Jericho will need to further plan, seek funding, gain technical assistance and public education for water quality improvement projects identified through the watershed planning process and further described in the Basin Plans.

Although no large natural lakes exist in Jericho, maintaining and improving the quality of Lake Champlain is of paramount importance to residents for several reasons and will assist in the current statewide concern of the Lake's water quality. Many residents now obtain their water from Lake Champlain through the Champlain Water District. The Lake also provides important wildlife habitat and has economic and recreational value to Jericho and the Region. Portions of Lake Champlain are currently considered "impaired" due to a variety of factors, excess phosphorus loads being one of note. Measures to protect and improve water quality in Jericho will ultimately benefit Lake Champlain, just as actions that damage water quality in Jericho will ultimately have a negative impact on the Lake.

Small man-made ponds and great wetland complexes exist all over Jericho. Although it is illegal in Vermont to construct a pond in a wetland or stream without a permit, prior constructed ponds are exempt from the Vermont Wetland Rules provided that they follow Section 6.14 of the VT Wetland Rules entitled Best Management Practices for Pond Maintenance. Ponds that have been recognized as constructed ponds in upland environments are exempt from these rules.

The value of surface waters can be diminished through pollution, alteration, and overuse. Jericho's water quality is currently very good with no impairments to merit inclusion on the

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<sup>8</sup> <https://dec.vermont.gov/watershed/map/basin-planning/basin7>

<sup>9</sup> <https://dec.vermont.gov/watershed/map/basin-planning/basin8>

state of Vermont's Clean Water Act required [list](#)<sup>10</sup> of impaired waters. Results from statewide monitoring of water quality and aquatic habitat are noted in the sections below.

Long-term settlement of the area has had measured impacts on waterways within Jericho, influencing both the quality of natural resources in and around surface waters as well as on our waterways' natural functions. It is important that we recognize the impact of our infrastructure investments like roads, bridges, culverts, fields, and buildings on our waterways. Adoption of the River Overlay District by the Town continues to protect our waterways from further impacts relating to encroachment by development on sensitive lands along waterways.

A number of resources exist for displaying data related to water resources and for providing guidance and planning for future development to protect those resources. Two examples include [the Vermont Agency of Natural Resources Atlas](#)<sup>11</sup> (a web-based mapping tool), and [The Vermont Standard River Management Principles and Practices guide](#)<sup>12</sup> which addresses some issues of management plans and construction along rivers and streams.

## **Riparian Areas**

Shorelands surrounding lakes, ponds, rivers, and streams are referred to as “riparian areas.” Undisturbed, vegetated riparian areas can prevent water pollution and preserve wildlife habitat, as well as provide open space and scenic beauty, minimize erosion and provide access to public waters. Riparian vegetation is a key biological component in maintaining water quality functions. Vegetation reduces the amount of erosion along a riparian buffer, filters runoff before it reaches a stream, provides habitat, and regulates water temperature. In order to maximize the effectiveness of riparian areas, a buffer of undisturbed soil and vegetation should be maintained in these areas.

## **Floodplain Protection & Resilience**

Jericho's current Zoning Regulations contain both a River Overlay District (to protect against flood erosion hazards) and a Flood Hazard Area regulation (to protect against flood inundation hazards). In the event of a flood event that causes a large extent of property damage, the adoption of these two protective regulations qualifies Jericho to receive monies from the Emergency Relief and Assistance Fund which is administered by the Federal Emergency Management Agency (FEMA) and the State of Vermont. Taken together, these measures set the stage for Jericho to continue to be resilient to damage caused by extreme precipitation events.

## **Inundation Hazard Protection**

Regulatory measures adopted by Jericho to protect property from direct inundation of

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<sup>10</sup> <https://dec.vermont.gov/watershed/map/tmdl>

<sup>11</sup> <https://anrmaps.vermont.gov/websites/anra5/>

<sup>12</sup> <https://dec.vermont.gov/content/vermont-standard-river-management-principles-and-practices>



floodwaters exceed the minimum standards established by FEMA. Minimum federal standards prohibit any construction within the designated “floodway” and require any development within the 100-year floodplain (Zone A) to be built on sufficient fill to avoid being subject to flood hazard. Jericho’s regulations further limit development within Zone A to: agriculture (not including structures), silviculture/forestry, farmers’ markets, recreation and wildlife management. The floodplains and flood erosion hazard (FEH) zones are depicted in Map 5.

The town participates in the National Flood Insurance Program, has an established Local Hazard Mitigation Plan (approved by FEMA 8/8/11 and valid for five years), and has a Town Emergency Operations Plan that provides a directive for emergency preparedness and response planning. However, due to development predating the regulations there are approximately 16 residences and 2 commercial/industrial structures located within the 100-year floodplain, according to an analysis performed for the 2011 Town of Jericho All-Hazards Mitigation Plan, making local emergency preparedness all the more important.

## **Erosion Hazard Protection**

The Town’s River Overlay District utilizes data from the [State of Vermont’s Stream Geomorphic Assessment](#)<sup>13</sup> to protect areas along waterways at risk to property damage from erosion caused by flooding. However, regulations resulting from the River Overlay District alone do not protect headwater streams draining watersheds less than two acres. Protection of headwater streams with a minimum 50-foot buffer will further ensure a higher measure of resilience for areas not covered by current regulations. In addition, implementation of the recommendations made in the [Browns River Phase 2 Stream Geomorphic Assessment Summary](#)<sup>14</sup> (Fitzgerald Environmental 3/30/2010) for streambank restoration and maintenance would further the goals of the River Overlay District and offer a higher level of flood protection on the Browns River.

Careful review of development proposals within the River Overlay District and Flood Hazard Area will ensure that any new man-made infrastructure within proximity to waterways avoid encroachment upon areas at risk of damage due to floods from more frequent and more intense precipitation predicted for the future.

## **Stormwater**

Land clearing and development alters the volume, velocity, and quality of surface runoff and is likely to adversely affect nearby streams, including the stability of stream channels and the health of the biological communities they support. Stormwater runoff is generated when precipitation from rain and snowmelt flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment or

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<sup>13</sup> <https://anrweb.vt.gov/DEC/SGA/finalReports.aspx>

<sup>14</sup> <https://anrweb.vt.gov/DEC/SGA/finalReports.aspx>

other pollutants that can adversely affect water quality. Heavy rain events create rapid discharges of stormwater which can adversely impact the hydrology of a water body, leading to erosion or flooding downstream and damage to the built environment. Sediment carried in stormwater can adversely affect aquatic wildlife, and may also be bound with pollutants such as phosphorous.

The State of Vermont regulates stormwater impacts from developments which create more than one acre of impervious surfaces. However, much of the development occurring in Jericho falls under this threshold. For this reason, Jericho requires medium sized developments that do not meet the thresholds for state stormwater permits to meet certain water quality criteria. In some cases, these criteria can be met using “Low Impact Development” techniques such as reducing the width of roads and driveways, directing runoff away from impervious surfaces and into vegetated areas, and infiltrating runoff into soil before it reaches surface waters through use of rain gardens or similar techniques. In 2015, the state legislature created a new municipal highway permit through the Vermont Clean Water Act (H. 35), regulating stormwater runoff from municipal roads. The state issued the Municipal Roads General Permit in 2018 and all towns will become subject to it by December 31, 2020.

In the future Jericho may become subject to the Municipal Separate Storm Sewer System (MS4) requirements of the Clean Water Act. This requires regulated communities to meet five minimum control measures, which include public education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post construction runoff control, pollution prevention and good housekeeping.

## **Wetlands**

Wetlands are defined as lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetland types in Jericho include hemlock swamps, beaver meadows, floodplain forests, bogs and fens, to name just a few.

The State of Vermont has a wetland database with wetlands that were mapped using aerial imagery. This remote mapping is understood to have limitations, so the Jericho Conservation Commission is in the process of improving those maps with on-the-ground inventory. For site-specific wetland identification and delineation, three parameters must be evaluated: vegetation, soils, and hydrology. All three of these parameters must meet the specific definitional criteria described in the [Wetland Delineation Manual](http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf)<sup>15</sup> (Environmental Laboratory 1987) and [Northcentral and Northeast Region Supplement](https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7640)<sup>16</sup> (Environmental Laboratory 2012).

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<sup>15</sup> <http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>

<sup>16</sup> <https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7640>

Wetland areas serve a variety of important ecological functions to society as a whole. Functions include but are not limited to stormwater management and flood control, surface and groundwater recharge and protection, and wildlife habitat. They are now protected under state, federal, and local regulations.

The Vermont wetland rules designate all wetlands in Vermont as Class One, Class Two, or Class Three wetlands based on their presumed functions and values. Class One wetlands are considered by the State to be exceptional or irreplaceable in their contribution to Vermont's natural heritage and are therefore so significant that they merit the highest level of protection under the Vermont wetland rules. A 100-foot buffer zone is required for all Class One wetlands. There are at present no Class One wetlands in Jericho. Class Two wetlands are all other significant wetlands, that provide wetland functions and values that are deemed by the State as significant, either taken alone or in conjunction with other wetlands. Some, but not all, of these are depicted on the Vermont Significant Wetlands Inventory. A 50-foot buffer zone is required around all Class Two wetlands. Class Three wetlands are any remaining wetlands and do not require protection under these rules because they do not have sufficient functions or values. Typically these are smaller than half an acre.

Although the State of Vermont Wetland Rules only protect Class One and Class Two wetlands, all wetlands are protected at the federal level by the Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act. Therefore, a wetland permit is needed from the State and the ACOE for impacts to any wetland. The nature and extent of permit type and cost varies dramatically based on the amount of impact and all proposed impacts must first show avoidance and minimization to the maximum extent practicable.

Jericho has extensive areas of wetlands, some of which are already mapped, but there are many areas that remain unmapped and require on-the-ground assessment to confirm location and size as wetland boundaries are subject to change over time. Therefore, it is recommended that site specific information and wetland delineations be required for the review of impacts associated with development. The elimination or encroachment of wetlands by uncontrolled development, drainage, or filling would be an irreplaceable loss to Jericho residents due to the important ecological functions that they provide to society as a whole.

## **Vernal Pools**

Vernal pools are seasonal wetlands, filling with snowmelt and spring rains, but often drying up by summer, creating a cycle of flooding and drying that prohibits permanent fish populations. These pools provide critical habitat for many salamanders and amphibians, including some “medium” priority Species of Greatest Conservation Need, such as the Blue Spotted, Spotted, Jefferson, and Four-toed Salamanders, wood frogs, and other vernal pool-dependent invertebrates such as fairy shrimp, and several freshwater snails and dragonflies.

Vernal pools are critical habitats of incredible diversity and productivity. In Vermont, vernal pools are recognized as significant wetlands under the 2010 Vermont Wetland Rules, and are

therefore protected from development within 50 feet of the pool. Vermont's Wildlife Action Plan identifies vernal pools and the threats to them as a high priority conservation concern. Vernal pools and a 100-foot zone around them are called out as Primary Conservation Areas. The areas within 600 feet of pools are called out as Secondary Conservation Areas.

## **Groundwater**

Groundwater is a finite and vulnerable resource. Since the majority of Jericho residents rely solely on wells for their water supply, the continued quality and quantity of water resources is very critical. In Jericho the amount of potable groundwater is affected by weather conditions, increased demand, decreased quality, decreased wetland area, naturally occurring radioactivity, and increased impervious cover.

Areas where groundwater naturally flows and collects are called recharge areas. Water within the recharge area may come from precipitation on upslope areas, from saturated gravel deposits, or from water-filled bedrock fractures. Every activity within that recharge area can directly affect the quantity and quality of the groundwater supply. Landfill leachate, leaking gasoline, road salt, sewage, industrial wastes, and other materials can all contaminate the groundwater. The quantity of water that actually reaches the water table may be reduced by an increase in impervious cover, including buildings, roads, and parking lots.

Areas around active public wells have been designated as Wellhead Protection Areas (WHPA's) for protection to maintain the quality and quantity of water from each of those wells. Currently designated Wellhead Protection Areas, including two areas with water sources in Bolton and Richmond, are depicted on Map 6. Although aquifer recharge areas have yet to be adequately mapped, source protection areas (SPAs) have been delineated as required by the state to protect public community water systems and non-transient, non-community public water systems.

Large areas beneath the Village Water District, the UVM Research Forest, and an area between Skunk Hollow and Schillhammer Roads have been documented as having groundwater recharge potential. A review of other wetland areas in the town suggests the possible importance of regions near and particularly east of the intersection of Lee River Road and Browns Trace, and the wetland area east and south of Cilley Hill Road. All these areas should be considered for WHPA designation. Additionally it is these recharge areas that sustain base flows for Jericho's rivers - Mill Brook, the Browns River, the Winooski, and other smaller tributaries. Recharge areas provide potable water supply to Jericho homes and businesses through a combination of private and small community wells and springs. While the Town benefits from generally abundant groundwater supplies, this dependence of scattered wells along VT Route 15 and in other areas, poses risks of potential groundwater contamination from a variety of sources. Once a groundwater source is contaminated, remediation, if feasible, is typically very expensive. The state requires remediation and/or monitoring of these sites to prevent further contamination of groundwater and potable water supplies.

Water from deep wells may have naturally occurring radioactivity. Little data as to the extent of the phenomenon in Jericho's water supplies exists. Long term health risks associated with exposure to such radiation highlight the need for more information for wells within Jericho.

Groundwater supplies are also affected by periods of drought. During droughts many shallow wells and springs may temporarily dry up. With climate change, weather patterns should be expected to change, but it is difficult to predict at the local level whether this will result in increased or decreased precipitation. Therefore, vital to the protection of groundwater sources is the protection of their recharge areas.

## **FOREST RESOURCES**

Over the last 100 years, farm abandonment and intermittent timber harvests have resulted in the considerable variety of forest types in Jericho. When viewed collectively, Jericho's various forest stand compositions are extremely diverse. They provide excellent wildlife cover and forage opportunities for numerous species most notably for various amphibians, native songbirds, and wide-ranging carnivores. Forest resources are depicted on Map 7.

Jericho has considerable acreage devoted to forestland, especially since the Ethan Allen Firing Range and UVM Jericho Research Forest are included within the town boundaries. The Firing Range is currently under the management of Forest Resource Associates of Shelburne, Vermont. The UVM Jericho Research Forest is owned by the University of Vermont and managed by the UVM Rubenstein School of Environment and Natural Resources. Other significant acreage in Jericho is under a variety of forest land-use programs. See Table 4.2 for acreage totals.

### **Forest Land**

Portions of the Mobbs Farm and two additional parcels formerly known as the Village Water District property nestled between VT Route 15, Griswold Street to the west and Packard Road on the east, comprise the forested, town-owned lands. Approximately two thirds of Mobbs Farm property is maintained as nine distinct forest stands totaling 160 acres. The 38-acre Water District lands include over thirty acres of forest in four distinct stands. Management decisions related to these resources are guided by comprehensive plans which are periodically updated by outside consultants at the request of the Mobbs Farm Committee or the Conservation Commission for the Water District parcels.

### **Forested Habitat Inventories**

The Jericho Conservation Commission identified and mapped priority large habitat blocks and the connecting lands that link them in and around the town of Jericho in 2011. Many wildlife species in decline are dependent on large contiguous blocks of habitat that often span town boundaries. These same species and numerous other species are dependent on connectivity between these contiguous habitat blocks. Connectivity is critical for both

species and populations. Many species annually, seasonally, or even daily migrate to find optimal feeding, denning, and breeding grounds; again, these functional habitat combinations regularly span town boundaries. Additionally, connectivity encourages species to disperse between neighboring populations, which can reduce the likelihood of population extinction and inbreeding.

More recently the town of Jericho participated in a four-town collaboration funded by the Chittenden County Regional Planning Commission called the [Science to Action](#)<sup>17</sup> (STA) Study. The resulting report published by Arrowwood Consulting in December 2013 included recent inventories of Jericho's forested resources in relation to the adjoining communities of Richmond and Bolton and extending to Huntington. The vast majority of Jericho forestlands are contained in 15 contiguous habitat units (CHUs), two of which are connected with CHU's in Richmond. Another four CHUs are primarily within the boundaries of the Ethan Allen Firing Range. The Arrowwood report defined a CHU as an assemblage of wildlife habitat features such as forested riparian buffers, ledges, deer wintering areas, wetlands, mast stands and early successional habitats which function together as a unit of diverse and relatively continuous wildlife habitat.

## **Forest Management**

Much of the forest land in Jericho is privately owned and managed. As of 2015 a significant portion of that land – nearly 4,000 acres in total – is enrolled in the State's Use Value Appraisal program ("Current Use"). Enrollment in Current Use ensures that the land will be managed responsibly under a Forest Management Plan approved by the County Forester. See Table 4.2 for acreage totals. Sound forestry practices provide enhanced wildlife habitat, natural water quality management, erosion control, landscape and community protection, employment, aesthetically appealing landscapes, recreation, biodiversity management, and a more dynamic 'sink' for atmospheric carbon dioxide.

Guides to the best management practices for logging and other silvicultural operations are published by the Vermont Department of Forests, Parks, and Recreation. "[Acceptable Management Practices For Maintaining Water Quality On Logging Jobs In Vermont](#)<sup>18</sup>", most recently published in 2009, spells out practices designed to protect water quality. "[Voluntary Harvesting Guidelines For Landowners In Vermont](#)<sup>19</sup>", published in 2015, helps landowners manage their forests for a variety of ecosystem functions beyond water quality alone. Jericho forestland owners should be encouraged to use these documents to maintain or improve the quality of the forestlands in Town.

## **Forest Fragmentation**

Division or conversion of significant forested lands into smaller acreages that results in remnant patches of habitat that vary in size and degree of isolation and are separated by

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<sup>17</sup> <http://arrowwoodvt.com/sta/>

<sup>18</sup> <https://fpr.vermont.gov/forest/managing-your-woodlands/acceptable-management-practices>

<sup>19</sup> <https://fpr.vermont.gov/forest/managing-your-woodlands/cut-with-confidence>

development or otherwise non-forested land is known as forest fragmentation. Such fragmentation can disrupt wildlife corridors and render core habitat or adjoining subcomponents of wildlife habitat unsuitable for certain species of plants or animals. Furthermore, fragmentation can reduce the viability of forests for subsequent forest management and hinder key ecological functions such as watershed protection.

Consequently, lot boundaries, development envelopes, and other subdivision infrastructure should be located and configured to avoid fragmentation of forestland in parcels greater than fifty acres. Methods for avoiding this type of fragmentation include clustered building envelopes, shared driveways and utilities, and siting infrastructure to follow existing roads, stone walls, tree or fence-lines. Subdivision within forested parcels should be configured to allow for ongoing forest management of the resulting parcel(s) after subdivision, including provision for forest management access in subdivision association bylaws and/or common land allocations. The Natural Resources Overlay stipulates measures to minimize and/or mitigate forest fragmentation. The Town should monitor the effects of the NRO on development and land use applications and subsequent development, for potential future regulatory improvements.

## SOIL RESOURCES

The soils in Jericho reflect the geology, topography, climate, the influence of plants, animals, fungi and microorganisms. Human activity, too, has a huge impact on soils, from agricultural activities that either improve or degrade soils, to development that can change soils dramatically.

### Agricultural Soils

The Chittenden County Regional Planning Commission has developed an Agricultural Lands Measure as part of their Open Space Inventory Phase II project to identify land area suited for agricultural use. The Agricultural Lands Measure considers the slope of the land, Natural Resource Conservation Service's (NRCS) rating of prime farmland and soil potential for agricultural productivity, access to surface water, compatibility of adjacent land uses with agricultural activity, and municipal zoning. The landscape was assigned a numeric score that expresses the degree to which the mentioned characteristics exist. All of the scores relating to the characteristics of agricultural lands were totaled and the scores representing similar degrees of suitability were grouped into four categories (Most Suited, More Suited, Suited, and Less Suited). Results are given in Table 4.1. See also Map 3 for the state rated agricultural soils.

**Table 4.1 Soil Suitability for Agricultural Functions in the Town of Jericho**

Suitable for Agricultural Use	Total acreage	Percent of Land
Most suitable	1,527 acres	6.7%
More suitable	2,482 acres	10.9%
Suitable	9,259 acres	40.7%
Less suitable	8,182 acres	36.0%
Not Rated	1,276 acres	5.7%

Source: CCRPC Open Space Inventory Phase II, 2003

## Forestry Soils

Vermont's soils with potential for forestry have been classified into four categories: Site 1, Site 2, Site 3, and Site 4. The Vermont Department of Forests, Parks, and Recreation recommends that sites 1 and 2 be considered as primary forestry soils. As is the case in agricultural soils, these classifications reflect only physical and chemical composition of the soils and do not consider location, current land use, and parcel size.

## Soil Suitability for Development

Several soil variables are useful considerations in planning. These include depth to bedrock, depth to seasonal high water table, and a soil's suitability for onsite sewage disposal. These are important factors when considering potential uses and intensity of development for a given area. It is worth noting that new technologies, evolving construction techniques, and changes in state wastewater regulations may make development feasible in areas previously thought to be undevelopable. Addressing these issues will require careful planning.

## PRIORITY CONSERVATION AREAS

The Jericho Conservation Commission has sponsored numerous projects in the last several years to study wildlife habitat, wildlife corridors, habitat blocks or contiguous habitat units, wetlands, vernal pools, riparian habitat, and significant natural communities. Rather than describe the specific natural features here, we refer the reader to the various studies<sup>20</sup>, available on the [Town's website](https://jerichovt.org/town-documents)<sup>21</sup>.

The Jericho Conservation Commission, with the help of the Vermont Fish and Wildlife Department, used data from various inventories to develop its own maps of priority conservation areas.

Tiered Conservation Priorities, as shown on Map 22, depicts all the conservation priorities identified in Jericho in three tiers of priority.

- **Primary Conservation Areas** are the most sensitive places: the rare natural communities, rare species, vernal pools, riparian areas, river corridors, and wetlands. These areas occupy a small percentage of the town and should not be developed.
- **Secondary Conservation Areas** are also very sensitive but some activities can occur within them without compromising their integrity. These include wildlife road crossings, a larger area surrounding vernal pools, significant (but not rare) natural communities, and ledge and cliff habitat that may be important for wildlife. In general, these places should be evaluated carefully when development is proposed within them for potential conflicts with the natural resource values.

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<sup>20</sup> <https://jerichovt.org/town-documents>

<sup>21</sup> <https://jerichovt.org>



- **Tertiary Conservation Areas**, which occupy a large percentage of the town, are the contiguous habitat units, or habitat blocks, that occupy the mostly forested areas of the town. Development can occur within these areas, but care should be taken to minimize the incursion of new roads and development to avoid forest fragmentation. The residents of the town continue to recognize the value of the forested landscape that forms a backdrop to nearly all activities in all seasons. The forests provide not only scenic views for residents and visitors, but also habitat for wildlife, opportunities for recreation, and a forest economy.
- **Additionally, the Natural Resources Overlay Map, Map 9, organizes some of the data from the Primary and Secondary Conservation Areas into the regulatory mechanism referenced by the Natural Resources Overlay.**

In collaboration with the Jericho Planning Commission in 2017, the Conservation Commission developed a table of proposed uses for each of the components of the Primary, Secondary, and Tertiary Conservation Areas. The Planning Commission then used an iterative editing process involving widespread public outreach and landowner feedback to subsequently establish the Jericho Natural Resource Overlay (NRO) District. The NRO Map and its accompanying specific guidelines for development activities in Jericho were adopted by the Selectboard in August 2018 ([Jericho Land Use and Development Regulations](#)<sup>22</sup>).

## Primary Conservation Areas

### Rare, Threatened, and Endangered Species

Rare, Threatened, and Endangered Species are plants and animals considered rare, threatened, or endangered in the state of Vermont by the Vermont Department of Fish and Wildlife. Only a few such species occur in Jericho.

The Vermont Natural Heritage Inventory maintains a database of the locations of rare plants and animals. In order to reduce the potential for poaching, the exact nature and locations of these species are not made available to the general public.

### River Corridors and Riparian Areas

These are critical areas for flood mitigation and wildlife habitat, and should be protected from any development.

### Forested Riparian Habitat

These are currently forested areas along rivers and streams that provide important habitat for certain species of wildlife, including green frog, northern dusky salamander, raccoon, long-tailed weasel, mink, belted kingfisher, and many others, and also provide travel

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<sup>22</sup> [https://s3-us-west-1.amazonaws.com/ehq-production-us-california/a3a2135bc7b2908f003b9e4665d00b8e260df9ea/documents/attachments/000/004/849/original/P\\_Z\\_REGS\\_5-15-19.pdf?1557940313](https://s3-us-west-1.amazonaws.com/ehq-production-us-california/a3a2135bc7b2908f003b9e4665d00b8e260df9ea/documents/attachments/000/004/849/original/P_Z_REGS_5-15-19.pdf?1557940313)

corridors for wide-ranging species as they move through otherwise open landscapes.

### Wetlands

All Class I and Class II wetlands plus a 50-foot buffer shall be protected from development or other alteration. Additionally all Class III wetlands plus a 50-foot buffer should be protected from development or other alteration.

### Vernal Pools and their Primary Life Zones

The area within 100 feet of the pool is the most critical zone for amphibian survival – this should be kept free of any management activity including logging, road building, or travel with wheeled vehicles.

### Rare Natural Communities

A natural community is an interacting assemblage of organisms, their physical environment, and the natural processes that affect them. There are several examples of rare natural communities in Jericho, including Dry Oak Forest, Dwarf Shrub Bog, and Poor Fen. These unique places should not be developed and should be minimally managed to protect their natural processes.

## **Secondary Conservation Areas**

### Vernal Pools and their Secondary Life Zones

The area between 100 and 600 feet of vernal pools is known as the secondary life zone. 600 feet is the average distance that amphibians travel from the pool itself, outside the breeding season. It is important that forest cover be retained in this area, though some timber management is compatible. Roads should be sited as far from the pool as possible.

### Ledge, Cliff and Talus

These areas, mapped based on slope and not all field-verified, may provide important habitat for a number of wildlife species, including bobcat, raccoon, porcupine, fisher, coyote, and ruffed grouse. Areas within 100 feet of field-verified cliff or ledge habitats should not be developed.

### Early Successional Habitat

This is forested habitat that is characterized by regenerating, young, often dense shrubs, saplings, or trees. These areas are important for many species of birds and mammals, including song sparrow, field sparrow, chestnut-sided warbler, snowshoe hare, white-footed mouse, shrew, red fox, gray fox, and bobcat, among others. A mix of early successional habitat with more mature forest provides a diversity of wildlife habitats on a landscape scale. Early successional habitat is not mapped in Jericho. Land management activities

should consider such habitat, but because it is not mapped it cannot be regulated.

#### Grassland Habitat

Open grasslands provide important breeding habitat for a group of birds that is in decline nationwide. These include bobolink, Henslow's sparrow, eastern meadowlark, and upland sandpiper, among others. Early mowing is especially challenging to the birds that breed in these areas. Grassland habitat is not mapped in Jericho. Land management activities should consider such habitat, but because it is not mapped it cannot be regulated.

#### Hard Mast Stands

These are areas where beech and oak are abundant, potentially providing important food source for black bear and other species. One to two dozen bear-marked trees in a given area is a significant stand, although a number less than that may be locally important for wildlife. Jericho does not currently have an accurate inventory of mast stands, so they are not depicted on the map.

#### Common but State Significant Natural Communities

Jericho has a few examples of natural communities that are common statewide, but are in especially excellent condition where they occur in the town. These need further analysis and field verification, so at present they are not regulated.

#### Wildlife Road Crossings

These are areas that have been identified through remote assessment as well as on the ground tracking data, and are highly likely to be critical in providing safe road crossings for mammals and amphibians moving through the landscape. Forested cover is critical in providing safe wildlife passage.

#### Contiguous Habitat Units

These are large, intact forested areas that provide critical habitat for shy species and those that require forest interior. We also refer to these areas as "core habitat." These large habitat units will be essential components of a resilient landscape as the climate changes and animals migrate and shift their ranges. These areas also comprise of the working forest land in Jericho, which is vitally important to the local and regional economy. Although some of these areas are public lands, the majority of the forestland in town is privately owned and privately managed. Many landowners have enrolled in Vermont's Use Value Appraisal Program ("Current Use"). The total acreage included Current Use can be seen in the table to the right. Large areas of the Contiguous Habitat Units are currently within the Rural/Agriculture Residential District; some of these areas might be better protected by being included in the Forestry District.

**Table 4.2 Jericho Conserved Land  
Enrolled in Current Use**

Total Parcels	Total Acres	Forest Acres	Agricultural Acres
48	3,963	3,160	803

Source: Vermont Department of Taxes, 2015

### Deer Wintering Areas

These are areas that may provide critical winter habitat for white-tailed deer. Ideal Deer Wintering Areas are dominated by softwood species and therefore have less snow cover than other areas, and have food and water sources nearby. Deer wintering areas are not static, but tend to shift over time. Potential Deer Wintering Areas are depicted on Map 7. These are areas that need field verification.

### **INVASIVE/NON-NATIVE SPECIES**

Biodiversity is critical to healthy and vibrant ecosystems. When ecosystems are diverse, they are more resilient to threats of climate change, human impact, and pathogens. Maintaining this level of diversity is critical so that ecosystems can continue to produce ecological services that everyone within the town enjoys including clean water, clean air, forest productivity, and recreation.

It has become difficult to maintain this balance due to the movement of species around the world. Although some non-native species found in Jericho pose no threat, others may proliferate at an unsustainable rate and cause damage to the biodiversity of native species found within our ecosystems and therefore overall ecosystem function. It is critical to understand how invasive non-native species may be to determine if it is worth time and resources to fight against them.

For example, most types of apple trees found in Vermont are non-native. However, these trees pose no threat since they do not have the ability to outcompete native species currently found within our ecosystems. Some non-native species, such as Black Locust, establish themselves within Vermont's native ecosystems and find balance. They do not overwhelmingly outcompete native species but instead find their own niche within the ecosystems around Vermont. Non-native species that take on invasive roles, such as Norway Maple, Japanese Knotweed, Japanese Barberry, and Common Buckthorn, have the potential to outcompete native species and minimize ecosystem services. Of particular concern is "wild" parsnip (*Pastinaca sativa*) which is rapidly colonizing roadsides. The sap from wild parsnip causes dangerous burns when it gets on the skin, and the skin is subsequently exposed to sunlight. Therefore, it is imperative that our community manages these species so that they do not plague our native ecosystems and the numerous benefits they provide to our community.

Non-plant invasives also have the potential to have a transformative effect on our forests,

such as Asian longhorn beetle, emerald ash borer, and hemlock wooly adelgid.

The Town has the ability to combat invasives. It is impossible to remove every invasive plant, but being proactive in mapping, education, removal events, and partnering with organizations like the Nature Conservancy may prove effective. The [Wise on Weeds](#)<sup>23</sup> program through the Nature Conservancy is a great place to start for anyone wanting to help manage invasives.

## **CLIMATE AND CLIMATE CHANGE**

Climate change will impact the entire Northeast as temperatures increase and precipitation regimes shift to drier summers, stronger storm incidents, and milder winters with increased snow/rainfall. Forest communities are predicted to change with a significant loss of maple trees and other cold tolerant forest trees replaced by tree species that tolerate warmer climates. Eventually Vermont's future vegetation will probably look like the current forests of the mid-Atlantic states; climate models suggest this will be the case by the end of the 21<sup>st</sup> century.

The most noticeable changes are the incidents of extreme weather. Average rainfall is 39" in Jericho; numerous research studies predict this will increase, especially in winter where snow storm events will be heavier, but eventually becoming rain as temperatures warm. Severity of summer precipitation has been quite obvious. Since the last iteration of the Town Plan, Jericho has seen the occurrence of a 500 year event (Tropical Storm Irene) and several 100 year event storms that have resulted in flooding, blowdowns, and significant damage to infrastructure, especially roads, bridges and culverts, and buildings. The town should consider the numerous impacts of climate change and how it may be able adapt to these changing weather conditions.

Resiliency, the ability of natural systems to recover from climate change events, should be carefully considered and incorporated into town planning. New development in floodplains and river corridors should be avoided since structures in those areas are extremely vulnerable to damage. Protection of forests and restoration of wetlands and floodplains should be encouraged to control flooding and erosion. Healthy and functioning riparian habitats will help manage flood waters and conservation of upland and river corridor forests will maintain these riparian habitats. Controlling stormwater runoff must be encouraged, not only to prevent erosion from draining into streams and rivers, but also to avoid damage to transportation infrastructure.

Vermont's forests are currently buffers for climate change, sequestering carbon, and providing wood for alternative energy and heating. Changes in climate will cause a shift in forest species over time. Loss of boreal species such as red spruce and birch has already been documented. Of more immediate concern will be the invasion of forest pathogens.

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<sup>23</sup> <https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/invasive-plant-species-invasive-species-education-1/>

The loss of sustained cold temperatures in the winters allow for the movement and establishment of diseases and pests that destroy native species. We have observed the dramatic decline of the American elm due to Dutch Elm disease in the past, and we now see the decline of beech trees due to Beech Bark disease. While we may not be able to eradicate such pests, containment should be encouraged. Such practices as education about and identification of invasive pests such as the Emerald Ash Borer and Hemlock Woolly Adelgid and restriction of movement of firewood more than 4-5 miles in distance should be continued. Informing and educating the community is integral to minimizing the movement and potential impact of these pests.

## **AIR QUALITY**

In addition to many other valuable natural resources, we enjoy clean air in the state of Vermont. The United States Environmental Protection Agency promulgates the National Ambient Air Quality Standards (NAAQS) which establish criteria for the limits of acceptable levels of air pollutants with respect to human health, property and the environment. Areas with air quality that meet these standards are considered in “attainment”, while areas that do not are classified as “nonattainment”. The town of Jericho, as well as the entirety of the State of Vermont, is in an “attainment” area.

However, Vermont is located in the Ozone Transport Region, and as such must submit a State Implementation Plan (SIP) and meet additional requirements to reduce levels of ozone and ozone forming pollutants. Vermont’s SIP includes policies and activities such as pollutant monitoring and incentive programs to reduce sources of ozone, particulate matter, and other criteria pollutants. These activities and programs described in the SIP are being implemented to maintain Vermont’s attainment status for all federal criteria pollutant standards while also addressing regional ozone level exceedances in the other states in the Northeast.

Local sources of criteria pollutant emissions such as ozone and particulate matter come primarily from traffic, heating systems (wood combustion), and some agricultural practices. Currently, there are no significant issues or problems with emissions identified in the town. However, with the potential for future growth in the town the cumulative effect of these sources may have a greater impact on air quality in our area.

## **SCENIC RESOURCES**

Scenic Resources are and are part of the community's identity. They offer aesthetic pleasure to residents and visitors alike. Components of a view’s quality considered are the diversity or contrast among landscape elements, the kind and arrangement of man-made structures, and the distance of the view

In 1998 and 2003 the Town completed scenic surveys/assessments identifying roads such as VT Route 15, Lee River Road, Orr Road, Browns Trace, Fitzsimmonds Road, Handley Lane, Nashville Road and Old Pump Road as having scenic views. In 2009, as part of a joint project

with the Town of Essex and Smart Growth Vermont, Jericho undertook a comprehensive project, [Views to the Mountain: A Scenic Protection Manual](#)<sup>24</sup> to evaluate and photo document roads identified as having scenic resources in past studies. Several roads remain to be documented.

This evaluation noted two features, the traditional landscape pattern and ridgelines, which contribute to Jericho's scenic landscape. The traditional landscape pattern, which includes open fields or meadows contrasted by rolling forested hills and ridgelines, is a landscape pattern that is commonly identified as scenic. These landscapes define much of the character of Jericho. It should be noted that these landscapes are the result of more than two centuries of farming. If not kept open by productive use or regular maintenance, many of the scenic views and vistas visible from the town's roads would eventually be obscured as fields transitioned to forest.

Also noted by the study were prominent ridgeline and mountain features, including views to Mount Mansfield and Camels Hump. Given Jericho's position in the foothills of the Green Mountains, undeveloped hilltops are considered an essential part of the Town's rural character particularly when they are visible from the roads.

In addition to their scenic values, both of these features offer other natural resource values. For example, open fields provide habitat for several bird species. Many of the undeveloped ridgelines are parts of important core habitat, or provide important corridors for wildlife. These ridgelines often also contain head waters of local streams, seeps, and ground water recharge areas.

The scenic qualities of a forested ridgeline or hillside silhouetted against the sky can be compromised by poorly planned development, such as inappropriate building placement, site design, and excessive clearing. While some of the most visually and ecologically sensitive areas of town, the town's hillsides and ridgelines remain highly desired locations because of the views they offer. It is possible to locate development in these areas in a manner that preserves the scenic qualities of the landscape. Landowners wanting a more open view in a forest setting should limb trees and selectively cut branches to create view corridors rather than clear-cut a swath of trees.

## **CONSERVED LAND AND PUBLIC OPEN SPACE**

Jericho contains numerous publicly owned or conserved properties. These properties provide a variety of functions. The purpose of some conserved land is primarily to protect important natural features, while others provide the public with access to recreational land. In general, these functions are better served by large, interconnected blocks of open space, rather than dispersed or fragmented areas.

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<sup>24</sup> <https://jerichovt.org/town-documents>

Open Space may be owned by a variety of entities. In some cases, it may be owned outright by the Town or State Government. Jericho also contains several properties owned by non-profit organizations such as the [Jericho Underhill Land Trust](#)<sup>25</sup> (JULT) and [Winooski Valley Park District](#)<sup>26</sup>. Conserved land is sometimes under private ownership and subject to deed restrictions. In addition, open space can be preserved and incorporated into new developments through the use of Planned Unit Developments. In this case, open space may be owned by a homeowners association.

**Table 4.3 Public Open Space with Conservation Easement**

Name	Owner	Acreage
Old Mill Park	Winooski Valley Park District	11
Mills Riverside Park	Jericho Underhill Park District	206 in Jericho
Wolfrun Natural Area	Jericho Underhill Land Trust	187
Kikas Valley Farm	Jericho Underhill Land Trust	280
Lacy – Trail along Winooski River	Public Access Easement	20' wide strip

Source: Planning and Zoning Office

**Table 4.4 Public Open Space**

Name	Owner	Acreage
UVM Research Forest	University of Vermont	365
UVM Research Forest – Rogers Tract	University of Vermont	125
Mobbs Farm	Town of Jericho	278
Water District – VT Route 15	Town of Jericho	11
Water District – Packard Road	Town of Jericho	28
Jericho Center Green	Town of Jericho	3
Park Street Green	Town of Jericho	0.5
St. Dept of Fish and Wildlife (Nashville Rd)	Vermont Dept of Fish and Wildlife	41
Camp Swampy – Nashville Road	CESU School District	21

**Table 4.5 Private Land with Conservation Easement**

Name	Owner	Acreage
Prelco (Snipe Island Road)	Private Ownership with Conservation Easement	351
Simpson High Meadow (Bently Lane)	Private Ownership with Conservation Easement	201
Peet (Browns Trace)	Private Ownership with Conservation Easement	28
Larabee PUD (Barber Farm Road)	Private Ownership with Conservation Easement	30
Hallock/Pratt	Private Ownership with Conservation Easement	69.8
Sharpsteen	Private Ownership with Conservation Easement	70.45

Source: Planning and Zoning Office

<sup>25</sup> <https://www.jult.org/>

<sup>26</sup> <http://www.wvpd.org/>



**Table 4.5a Town Open Space Agreements\***

<b>Name</b>	<b>Owner</b>	<b>Acreage</b>
Xenophone Drive PUD	Homeowners Association	30
Valleys Edge PUD	Homeowners Association	16
Jericho East	Homeowners Association	24
Starbird Road	Homeowners Association	8
Old Farm PUD	Homeowners Association	22
Twin Meadow Lane PUD	Homeowners Association	18
Clover Lane PUD	Homeowners Association	9
Cedar Circle PUD	Homeowners Association	4.5
Elm Circle PUD	Homeowners Association	5.6
Gabaree Lane PUD	Homeowners Association	9
Kittell Subdivision	Homeowners Association	
Laisdell Hill Subdivision	Homeowners Association	29
Laisdell Pond Subdivision	Homeowners Association	22
Mansfield Drive PUD	Homeowners Association	20
Kettle Creek PUD	Homeowners Association	27
Sunset Ridge PUD	Homeowners Association	15.5
Rodgers Forest PUD	Homeowners Association	26
White Oak Drive PUD	Homeowners Association	54.5
Tetreault Subdivision	Homeowners Association	21.65
Atwood PUD	Homeowners Association	27.99

Source: Planning and Zoning Office

\*May not be public open space. Details vary by each Agreement.

## **GOALS, STRATEGIES, AND IMPLEMENTATION**

**Goal 4.1. Protect, preserve, and improve Jericho’s natural resources such as wildlife habitat, significant natural communities, wetlands and watercourses, groundwater, agricultural land, forest land, scenic roads and vistas, and open space.**

Strategy 4.1.1. Ensure protection of ground and surface water quality. Provision for effective off-site mitigation (for example, other permeable areas within the same watershed) may be considered, particularly in Village Centers.

Implementation 4.1.1.1. Monitor changes in state septic regulations and keep up-to-date on new technologies as they become available.

Implementation 4.1.1.2. Continue to enforce regulations that will prevent development (including but not limited to structures, filling, or substantial grading) within the 100 year floodplain and Fluvial Erosion Hazard Areas. Update these existing regulations based on best practices determined by local, state, and federal authorities.

Implementation 4.1.1.3. Monitor all of the fluvial erosion areas to see how best to accommodate fluvial equilibrium and natural erosion processes while minimizing undue damage to property.

Implementation 4.1.1.4. Plan culvert replacements for any undersized culverts in conjunction with roadway improvements.

Implementation 4.1.1.5. Review the Hazard Mitigation Plan on a regular basis and follow-up on action steps.

Implementation 4.1.1.6. Update existing regulations to ensure new infrastructure in proximity to waterways avoids encroachment on areas prone to flooding.

Implementation 4.1.1.7. Protect the groundwater recharge (Wellhead Protection Areas) areas for active public water supplies by limiting development in the immediate wellhead and providing appropriate standards and guidelines for development in the larger recharge area.

Implementation 4.1.1.8. Assess and map other major aquifers in Jericho and evaluate regulatory mechanisms for their protection.

Implementation 4.1.1.9. Maintain undeveloped, unmowed, naturally vegetated buffer zones along the boundaries and in the riparian zones of streams, wetlands, vernal pools and ponds to provide protection against flooding and erosion. Minimum buffer widths should be 50 feet for first and second order streams, and 100 feet for third order streams and greater. Monitor and enforce regulations that protect these buffer zones.

Implementation 4.1.1.10. Continue to require stormwater management and erosion control practices for developments that fall under the threshold for State stormwater permitting. Evaluate the effectiveness of the current local regulations.

Implementation 4.1.1.11. Consider revisions to the Zoning Regulations to require Low Impact Development and Green Stormwater Infrastructure for all developments.

Strategy 4.1.2. Protect, preserve, maintain, and enhance Primary Conservation Areas from development or alteration. These include rare natural communities, rare species, vernal pools and their primary life zones, river corridors and riparian areas, and wetlands and their 50' buffers.

Implementation 4.1.2.1. Monitor the effects of the NRO on development and land use applications and subsequent development, to gauge the effectiveness of the NRO, and to identify potential future regulatory improvements.

Implementation 4.1.2.2. Prioritize these areas for permanent conservation through acquisition or easements.

Implementation 4.1.2.3. Inform private landowners about these features on their lands and the importance of protecting them.

Strategy 4.1.3. Protect, preserve, maintain, and enhance Secondary Conservation Areas. These include the secondary life zone of vernal pools (100-500 feet away from pools), field-verified ledge, cliff, and talus habitat, field-verified hard mast stands, common but state-significant natural communities, and wildlife road crossings. In general, these places should be evaluated carefully when development is proposed within them for potential conflicts with the natural resource values and impacts may need to be mitigated.

Implementation 4.1.3.1. Monitor the effects of the NRO on development and land use applications and subsequent development, to gauge the effectiveness of the NRO, and to identify potential future regulatory improvements.

Implementation 4.1.3.2. Prioritize these areas for permanent conservation through acquisition or easements.

Implementation 4.1.3.3. Inform private landowners about these features on their lands and the importance of protecting them.

Strategy 4.1.4. Protect, preserve, and maintain Tertiary Conservation Areas (contiguous habitat units), as well as forest, open space, agricultural, and undeveloped lands

Implementation 4.1.4.1. Consider adoption of the Tertiary Conservation Areas map as well as recommendations from the Conservation Commission for new language, including the proposed Table of Uses. Also, consider amending the boundaries of the Rural/Agricultural Residential and Forestry Districts to better reflect the actual and potential uses in those areas.

Implementation 4.1.4.2. Develop specific regulations that prevent degradation of function of these areas.

Implementation 4.1.4.3. Cluster development away from unfragmented forest land and prime agricultural land, and to the extent possible, located predominantly in the village centers and the Commercial District.

Implementation 4.1.4.4. Prevent forest fragmentation and preserve wildlife corridors and large habitat blocks by writing regulations that will prevent development in these areas.

Implementation 4.1.4.5. Consider conducting an inventory of early successional and grassland habitats and hard mast stands.

Implementation 4.1.4.6. Consider having a naturalist review grassland habitat to determine wildlife potential.

Implementation 4.1.4.7. Consider having a naturalist field verify common but state significant natural communities.

Strategy 4.1.5. Ensure that practical constraints resulting from Jericho's topography are considered and detrimental impacts caused by development of unsuitable areas are avoided.

Implementation 4.1.5.1. Avoid development on land with extreme slopes of 25% or greater and minimize impacts from development on slopes between 8 and 24%.

Implementation 4.1.5.2. Review regulations requiring conditional use approval for development on slopes of 25% or greater, and consider if similar review should be required for slopes between 8 and 24%.

Implementation 4.1.5.3. Continue to enforce regulations regarding extraction of sand, gravel, topsoil, and ledges to prevent undue environmental harm and to maintain town character and avoid its defacement.

Implementation 4.1.5.4. Consider identifying areas where large-scale groundwater extraction should be avoided.

Strategy 4.1.6. Continue work to resist and contain invasive plants and animal pests.

Implementation 4.1.6.1. Survey for and document the presence and location of invasive species within the Town. Cooperate with Regional and State initiatives that conduct such work. Link with statewide citizen monitoring initiative to document and study invasives. Maintain an up-to-date map that records the presence, growth, and/or decline of invasives, realizing that such species often move around the landscape.

Implementation 4.1.6.2. Continue to provide education to residents, landowners and developers about the spread of invasives. Indicate restricted plants that may not be used in landscaping by state regulation. Provide information and links on the Town website. Conduct and publicize an invasive plant management/restoration project on town and/or JULT lands.

Implementation 4.1.6.3. Develop an "Early Detection/Rapid Response" protocol to limit and control small-scale outbreaks of invasives before they proliferate into larger, more difficult problems.

Implementation 4.1.6.4. Encourage landowners to identify and remove invasive plants. Encourage replanting with alternative plants, especially native species. Provide information on non-invasive plants.

Implementation 4.1.6.5. Continue to support and work with the Town road crew to adopt and implement best management practices to prevent the spread of invasives (e.g. cleaning equipment, changing mowing regimes, ensuring all fill that is moved in town is “weed-free”). The New Hampshire Department of Transportation’s 2008 publication “Best Management Practices for Invasive Plants” is one source for formulating these practices.

Implementation 4.1.6.6. Address invasive species and endorse the use of native species in development and management of Town-owned land.

Implementation 4.1.6.7. Address the possible spread of invasives by applicants that are seeking design approvals within the Town. Promote the use of native species in reseeded and landscaping on construction sites; at the very least make sure that the list of approved seeds and plants does not contain invasives.

Strategy 4.1.7. Maintain and enhance the rural character of Jericho and attractive landscape features such as scenic vistas, hillsides, and ridgelines and develop regulations to protect these features.

Implementation 4.1.7.1. Examine regulations that pertain to light pollution for applicability to the latest lighting technology. Ensure that outdoor lighting is designed in a manner that minimizes glare, sky glow, and adverse impacts on adjacent property owners.

Implementation 4.1.7.2. Review existing noise performance standards to determine if they meet the needs of the community and continue to consider adopting a noise ordinance or implementing other regulatory measures.

Implementation 4.1.7.3. Consider regulatory standards to protect ridgelines, such as the creation of a ridgeline protection overlay and/or ridgeline development standards.

Implementation 4.1.7.4. Consider regulatory standards to protect and preserve identified scenic resources, such as subdivision siting standards, density bonus provisions, screening standards, or access management policies.

Implementation 4.1.7.5. Adopt regulations that protect the scenic landscape along VT Route 15 in the Commercial District, as described in the 2019 Commercial District Master Plan.

Strategy 4.1.8. Preserve the high standard of air quality that now exists in Jericho.

Implementation 4.1.8.1. Monitor air quality reports.

Strategy 4.1.9. Consider the cumulative effect of multiple development actions in writing regulations; e. g., standards should require that there be no measurable impact to water quality and sensitive ecosystems.

**Goal 4.2. Update, augment, and regularly maintain existing information and studies on the Town's significant natural resources, and implement the recommendations of those studies.**

Strategy 4.2.1. Continue to update existing natural resources data using the best available and most reliable sources of data. Use this information as a resource for town planning and development review.

Implementation 4.2.1.1. Update, as more recent data becomes available, the Tiered Conservation Priorities Maps compiled in collaboration with the ECOS Science to Action Project to protect natural areas within the Town, including but not limited to unfragmented forest blocks, core habitat, wildlife corridors, black bear habitat, deer wintering areas and mast stands. Consider updates to the Natural Resource Overlay District where appropriate.

Implementation 4.2.1.2. Continue to develop and/or update a map of local wildlife sightings, crossing and corridors.

Implementation 4.2.1.3. Update information on Jericho's geological resources, particularly to identify significant features that are worthy of permanent protection.

Strategy 4.2.2. Update and implement an "Open Space Plan" with the help of the Jericho Conservation Commission, Jericho Underhill Land Trust, schools, Selectboard, affected landowners, and other interested groups and citizens.

Implementation 4.2.2.1. Target areas for protection and conservation using a scientific and objective ranking system, especially Primary and Secondary Conservation Areas as depicted on Map 9. Work with landowners to consider conservation status for areas that are significant and deserve protection.

Implementation 4.2.2.2. Review zoning regulations in light of the updated Open Space Plan.

**Goal 4.3. Engage townspeople, developers, and other organizations with an interest in protecting natural resources, and encourage the management of open lands for farming, forestry, recreation, and conservation.**

Strategy 4.3.1. Cooperate with local, regional, and state organizations.

Implementation 4.3.1.1. Encourage cooperation between the Jericho Conservation Commission, Mobbs Farm Committee, Jericho Underhill Land Trust, Vermont Land Trust, Chittenden County Regional Planning Commission, adjacent towns, and other organizations and committees as appropriate.

Implementation 4.3.1.2. Continue to add to Jericho's Open Space Fund. Funds will be used to maintain and improve existing open space and to purchase additional open space lands.

Implementation 4.3.1.3. Support local and regional initiatives, such as the Chittenden County Upland Project.

Strategy 4.3.2. Encourage the active use of options available in the Zoning Regulations, land trusts, and tax abatement programs such as Use Value Appraisal (Current Use).

Implementation 4.3.2.1. Study the Town's Tax Stabilization program which was discontinued. The program provided tax incentives to property owners who refrained from developing or subdividing parcels. Identify if the program should be reinstated, modified, or if an alternative program could be developed, to provide economic incentives to help protect Jericho's natural resources.

Strategy 4.3.3. Establish management plans for open space areas conserved through regulatory measures or acquisition to ensure that the natural resource values of the sites are retained.

Strategy 4.3.4. Provide educational opportunities for Jericho residents on natural features of the town, green infrastructure opportunities as well as environmental challenges, through lectures, field trips, and work days.

## **5. CULTURAL AND HISTORIC RESOURCES**

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Jericho has an abundance of historically significant buildings and features. These features help define Jericho's identity and provide an historical and aesthetic backdrop for the community. The Jericho Historical Society has developed a Multi-Volume "History of Jericho." The next volume of this series is under development and will include the years 1963 to 2013.

### **HISTORIC LANDSCAPE**

Through the 19th century, Jericho followed the typical pattern of many Vermont towns. The economy was based on logging, a profusion of mills on Browns River, and farms spread throughout the town. Three distinct village areas developed to serve the mills and the farms. Tree-lined roads linked the outlying areas to the villages. Later in the century, the railroad tied Jericho to Essex Junction and Cambridge and beyond, providing better access to markets for Jericho's products.

Jericho's three Village Centers - Jericho Center, Jericho Corners, and the Riverside area of Underhill Flats - have been the centers of commerce, culture, and community for the town. Each of these three locations is listed as an Historic District on the State Historical Register. Jericho Corners and Jericho Center are also listed on the National Register of Historic Places.

The majority of historic sites in Jericho are within the Historic Districts, but a number of individual historic buildings lie outside Historic District boundaries. Historic sites and Districts in Jericho that are on the State Historical Register are shown on Map 10.

These Historic Districts generally retain an architectural character that constitutes a valuable and unique part of Jericho's cultural heritage, which should be preserved. In addition to the buildings themselves, the character of the villages is defined by the relationships of the structures with one another, with the roads, with pedestrian access, and with open land.

Generally, large setbacks with parking in front of the buildings are not compatible with the historic pattern. Likewise, multi-story, mixed use structures are more appropriate than single-story buildings (particularly commercial structures) as most buildings in the villages are two or more stories high. New structures that are substantially larger than nearby buildings can be designed to be compatible with the historic village patterns by using architectural features to interrupt building bulk (i.e. appearing as a series of smaller structures, exhibiting a variety of roof forms, or featuring changes in the location and treatment of the horizontal plane of the walls, etc.).

In 2003, Jericho Corners became an official "Designated Village Center" through the Vermont Downtown Program, making it one of the first Designated Village Centers in Vermont. Since 2003, both Jericho Center and Riverside/Underhill Flats have also received Village Center Designation. Through this designation, building owners in the designated area may be eligible for certain tax credits to preserve and to make code and safety



improvements to historic buildings. In addition to these benefits to land owners, Village Center Designation has also improved Jericho's competitiveness when applying for a host of State and Federal grants. See the Transportation Chapter for a list of recent grants.

The historic and cultural value of significant buildings like meeting houses, mills, and mansions is readily apparent, but more modest structures also play an important role in defining the town's identity and heritage. Other perhaps less-recognized historic features such as barns, silos, stone walls, cellar holes, sugarhouses, etc. can be found outside of the villages throughout Jericho's rural areas. These features contribute to Jericho's rural landscape and offer a sharp contrast to the suburbanization in towns closer to Burlington.

As agriculture has changed over the years, many farm buildings have outlived their original purpose. Finding and allowing new uses for these historic structures can help maintain these components of the town's rural character and agricultural heritage.

The rural landscape itself – with its pattern of fields, meadows, woodlots, and forested uplands – is an historic and cultural resource that tells the story of the generations of farming families who shaped this landscape through their labor. As evidenced by nearby suburbanizing towns, this landscape is more at risk of being lost to poorly planned development than the town's major historic structures. 2019 Commercial District project public input showed a desire to protect Jericho's rural landscape, particularly along the VT Route 15 corridor.

## **HISTORIC STRUCTURES**

Power derived from the Browns River fueled much of Jericho's economy in the 19th century. The many mills built along the river's length helped shape Jericho as it is today. One of the mills, the Chittenden Mill (or Old Red Mill as it is more commonly known), has been restored through the efforts of the Jericho Historical Society. This mill building is now being used as an educational center, providing information about the history of the town and about Snowflake Bentley. The building also contains a public meeting room and a craft shop operated by the Historical Society. A new pedestrian bridge in front of the Old Red Mill on VT Route 15 was constructed in 2015 and will improve access to the Mill and to the view of the Mill, strategically perched above the powerful Browns River.

Many of Jericho's historic structures have found new life as public buildings and meeting areas. Jericho's Town Hall is located in a 19<sup>th</sup> century school house, which was renovated to modernize the interior of the building, while the historic exterior was maintained. Several historic buildings have been restored to host important community functions. Additionally, many Jericho residents have maintained or restored historic structures as homes and businesses. The Jericho Town Library, located in Jericho Center, is housed in the original Jericho Academy building, constructed in 1825. Another building, originally built as a Unitarian Universalist Meeting House and later used as the Jericho High School gym, is now owned and maintained by a citizen group as The Community Center in Jericho, and used for public and private events.

## **ARCHEOLOGICAL RESOURCES**

While archaeological resources are seldom identified until a site is planned for development, it is possible to predict where certain kinds of prehistoric Native American sites would be more likely found based on environmental characteristics. Results from archaeological investigations around Vermont in recent decades suggest that prehistoric sites are typically located within 300 to 500 feet of an existing or relict water source, on gently sloping land, or adequately drained soils with a southeast-south-southwest exposure. These lands provided essential resources that attracted human populations who then left behind archaeological remains of their activities at these locations.

Archaeological resources are not only pre-historic, but include the buried remnants from the historic era of the town's early settlement and development. Potential locations of historic archeological resources can be identified through documents such as deeds, directories, and maps. Federal laws protect many prehistoric Native American sites, while historic era sites are protected primarily through Act 250 review.

## **GOALS, STRATEGIES, AND IMPLEMENTATION**

### **Goal 5.1. Protect and preserve important historic, archeological, and architectural features of Jericho.**

Strategy 5.1.1. Encourage and promote the private and public preservation, rehabilitation, and enhancement of important historic structures and areas, sites, and archeological features, through a mix of regulatory programs and voluntary and non-regulatory programs.

Implementation 5.1.1.1. Allow the Adaptive Use regulations to include a wide range of eligible historic structures.

Implementation 5.1.1.2. Pursue historic preservation grants for publicly owned buildings. Publicize historic preservation grants and tax credits that are available for the preservation of private buildings.

Implementation 5.1.1.3 Provide technical assistance to property owners seeking grants and/or tax credits for historic preservation.

Implementation 5.1.1.4. Work with the Jericho Historical Society to increase awareness of existing historic preservation grants and to raise funds for matching such grants.

Implementation 5.1.1.5. Work with property owners and developers to encourage preservation or minimal disturbance of historic landscape features such as stonewalls and hedgerows.

Implementation 5.1.1.6. Encourage the development of an inventory of archeological features deemed worthy of preservation.

Implementation 5.1.1.7. Once archeological features are inventoried, modify Jericho's Land Use and Development Regulations as necessary to encourage, or at least promote, the preservation of archeological features.

Strategy 5.1.2. Conserve and enhance historic features and elements of Jericho's roadways.

Implementation 5.1.2.1. Coordinate with the CCRPC in planning road improvements that complement village and historic character.

Implementation 5.1.2.2. Work to maintain or develop a tree line along public roads. This may include replacement of trees removed or damaged through road maintenance and/or weather.

Implementation 5.1.2.3 As described in the 2019 Commercial District Master Plan, adopt Land Use Regulations for the Commercial District that limit new development along VT Route 15 and require new development to fit the rural character of Jericho, providing site planning and design standards that addresses the character of development.

**Goal 5.2. Strengthen and enhance the three historic Village Centers.**

Strategy 5.2.1. Ensure the economic viability of Jericho's three Village Centers.

Implementation 5.2.1.1. Encourage expanded mixed uses within Village Center areas.

Implementation 5.2.1.2. Require public uses such as schools, libraries, and town offices to be located in traditional village centers.

Implementation 5.2.1.3. Maintain Village Center Designation for each village center. Monitor and take advantage of public and private programs that could benefit Jericho's Village Centers.

Strategy 5.2.2. Develop a village scale streetscape which encompasses the historic character of each village center.

Implementation 5.2.2.1. Implement "pedestrian-friendly" design concepts for traffic calming.

Implementation 5.2.2.2. Allow on-street and shared parking, and embedded parking structures, to improve the appearance and accessibility of village businesses and public spaces.

Implementation 5.2.2.3. Require public facilities such as utility lines, guardrails, and streetlights to be compatible with village character. Pursue opportunities to bury existing above ground utilities.

## **6. ECONOMIC DEVELOPMENT**

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### **JERICO AND THE REGIONAL AND STATE ECONOMY**

Jericho's economic health is inextricably linked to that of the State and Region. Most of the region's major employers are located in the core of Chittenden County, with the outlying towns serving primarily as bedroom communities. Currently the majority of Jericho's residents work outside of Jericho, and most existing businesses in Jericho are small in comparison to the regional scale. Approximately 15% of Jericho residents work in Jericho, with the rest commuting primarily to the core Chittenden County Towns. Many of Jericho's local businesses are reliant on the economic health of the region's larger employers.

Jericho and other outlying towns of Chittenden Country, as well as portions of Franklin and Lamoille Counties, house much of the region's work force. The lack of affordable, work force housing has posed a challenge for some regional employers seeking to expand or locate in the greater Burlington area. Providing a diverse housing stock, as prescribed in the Housing Section of this Plan, will help to strengthen the Regional Economy.

Jericho is located on, or close to, two major regional transportation routes. VT Route 15 serves as one of the primary arteries connecting the Greater Burlington Area with rapidly growing communities located in Lamoille County. Jericho is also located in close proximity to VT Route 117, VT Route 2, and I 89, which connect the Greater Burlington Area to Washington County. The Burlington International Airport in South Burlington and Amtrak Station in Essex are located less than 20 minutes drive time from Jericho, and connect the Greater Burlington Area to national markets. This location not only enhances Jericho's attractiveness as a "bedroom community," but also creates opportunities for local businesses serving local residents and commuters.

Jericho's high quality K-12 Education system is also an attractive feature of the Jericho Community. In 2013, the National Association of Realtors estimates that 29% of home buying decisions are based upon the local school's reputation and that home buyers pay a higher premium in areas with high quality schools. The quality of a region's educational resources and the educational attainment of the workforce is also often an important factor companies consider in selecting locations for facilities. Furthermore, Mount Mansfield Union High School is a major local employer and draws students, staff, and faculty from neighboring towns into Jericho.

Jericho contains several publicly accessible open spaces, such as the Old Mill Park, Mills Riverside Park, and Mobbs Farm that are open to the general public, as well as an expanding network of trails. Jericho also offers striking views of Mount Mansfield that rival those found in prominent resort communities. These factors enhance the quality of life in Jericho and provide a solid foundation for future economic development.

Each of the three Village Centers remain hubs of culture, community, and commerce and offer economic opportunities for residents and local businesses.

## **VILLAGE CENTERS**

Jericho's three Village Centers have been hubs of economic activity throughout the Town's history. The villages may serve as incubators for new small businesses and former home businesses that require additional space. Larger businesses may also provide a solid "anchor" for economic activity in the Village Centers. Economic development of each Village Center will provide a local source of goods and services for Jericho's residents as well as increase employment opportunities within Town.

Jericho Corners and Riverside are strategically situated on VT Route 15 halfway between the Greater Burlington Area and several rapidly growing communities in Lamoille County. This location makes these Village Centers ideal for businesses that require high visibility and commuter traffic. Similarly, this location makes these Village Centers attractive locations for businesses located in the Greater Burlington Area seeking to open branch offices closer to the growing population base to the north.

While Jericho Center is not located on a state highway, its location may provide opportunities for recreational, natural resource based, and agricultural businesses. Jericho Center is easily accessible to Interstate 89, and is located in close proximity to Mobbs Farm and numerous local trails. As development in central Chittenden County is consuming former recreational land, some residents of these towns are seeking recreational opportunities in outlying towns, including Jericho. Existing and future businesses in Jericho Center may benefit from this trend.

Lack of parking can inhibit economic development in the Village Centers. By allowing flexible parking regulations, and encouraging offsite, shared, and on-street parking, new parking can be incorporated into the existing fabric of the Village Centers.

Each of the three Village Centers has received "Village Center Designation" from the State of Vermont. This designation provides tax credits for repairs and code improvements to historic, non-residential properties located within the Village Centers. Utilization of these tax credits could create an incentive for businesses to refurbish existing structures and locate in a Village Center rather than an outlying area. Further marketing of these incentives is needed to inform area residents and businesses of their availability.

## **COMMERCIAL DISTRICT**

The Commercial District could have a significant role in Jericho's future economic development. Its location, adjacent to the VT Route 15 corridor, makes it accessible to both commuters and residents. It is also located between two Village Centers (Riverside and Jericho Corners), and thus has the potential to augment services provided in those centers. The 2019 Commercial District Master Plan describes mixed-use development, and includes services, light industrial, small-scale retail, and residential, in alignment to Jericho's rural characteristics. For its development potential to be fully realized, infrastructure improvements are needed. Infill, redevelopment and new development could be served by

water from the Village Water District (Champlain Water district) via a line extension and utilize a shared onsite wastewater treatment system to accommodate a broader mix of uses including commercial and residential. New streets within the Commercial District should be created to increase development opportunities within the Commercial District and connected to North Main Street, as well as limit development on VT Route 15.

## BUSINESS ASSOCIATIONS

Several associations serve businesses in the Greater Burlington Area, including the Lake Champlain Regional Chamber of Commerce, the Greater Burlington Area Industrial Corporation and Vermont Businesses for Social Responsibility. There are also several smaller business associations, such as the Western Slopes of the Green Mountains Business Association, serving Jericho and other local communities.

## JERICO COMMUNITY DEVELOPMENT CORPORATION

In 2014 the Town formed the Jericho Community Development Corporation (the Corporation), a non-profit group that focuses on economic development within Town. The Corporation is organized to offer services and engage in other activities that promote and support community development within Jericho. The Corporation may apply for and administer grants on behalf of grant recipients and raise money for development within the Town.

## INFRASTRUCTURE

One potential barrier to local economic development in Jericho, particularly in Village Centers and the Commercial District, comes from infrastructure deficits. Lack of wastewater capacity can inhibit development of these areas. However, certain commercial uses, such as offices and retail stores, require significantly less wastewater capacity than residential uses, making commercial use of existing structures on small village lots a viable option for village redevelopment (see Table 6.1 below). Expanded, and especially shared, wastewater capacity would allow for increased development potential in each village center and the Commercial District.

**Table 6.1: Wastewater Capacity for Residential and Non-Residential Uses**

Business Type	Use equivalent 1-bedroom	Use equivalent 3-bedroom
Office	9 employees	28 employees
Day Care Facility (no meals)	2 care providers, 7 children	4 care providers, 24 children
Day Care Facility (1 meal)	1 care provider, 6 children	3 care providers, 18 children
Doctor's Office	2 staff, 7 patients	4 staff, 28 patients
Post Office	9 employees	28 employees
Retail store	9 employees	28 employees
Tavern or café	4 seats	12 seats

Jericho Corners and Riverside are currently served by public water, while Jericho Center and the Commercial District rely on -private wells. The limitations caused by lack of public water are explained further in the Utilities, Facilities, and Services Section of this Plan. Expansion of public water lines to these areas could facilitate infill development and allow for a more diverse range of businesses.

Many modern businesses rely on high speed internet access, telecommunications, and three phased power. Three phased power is currently available along the VT Route 15 and VT Route 117 corridors in Jericho. Three phased power also extends from VT Route 15 to approximately one mile down Browns Trace, along Raceway and North and South Main Streets, but is not available in Jericho Center. High-speed internet access and telecommunications are currently unreliable in some parts of Jericho. Expanding coverage, particularly around Village Centers and the Commercial District, should be an economic development priority for the town.

## **HOME BUSINESSES**

Numerous home based businesses, also known as “home occupations,” are located in Jericho, including small catering companies, home offices, vehicle repair shops, and a newly formed independent microchip design firm. In addition to providing local employment, home businesses also provide a cost effective way to start a new business. In general, a home business is defined as a business operating out of an existing home which is operated by the resident of the home, and employs up to three outside workers.

If successful, a business may outgrow the definition of a “home business” and need to expand at a different location. Ideally, these businesses would find a suitable location within Jericho to expand. Jericho’s Village Centers and Commercial District can serve as prime locations for growing home businesses to relocate and expand within the Town.

## **LOCAL SERVICES**

Projections of Jericho’s growing population base, coupled with the growing population of nearby communities, is increasing the demand for local goods and services, such as medical offices, grocery and household goods, pharmaceutical products, home, garden and hardware supplies, restaurants and caterers, professional services, and similar businesses. Jericho’s Village Centers and Commercial District provide ideal, central locations for these businesses. Locally based businesses can provide Jericho residents and residents of nearby communities an alternative to the regional chains located in the more urban communities in the region, as well as create opportunities for local employment and grow the Town’s revenue base.

## **AGRICULTURE AND LOCAL FOOD BASED BUSINESSES**

Jericho’s rural areas contain a vibrant working landscape. While the number and amount of land dedicated to traditional dairy farming has decreased over the last half century, new

agricultural operations focused on specialized and high value products have taken root. There are numerous local enterprises, including traditional dairy farms, vegetable growers, beef farms, maple sugar producers, nurseries, bee keepers, and Christmas tree farms located in Jericho. The increased market demand in Jericho and surrounding communities has created new opportunities for direct marketing of agricultural products to consumers through farm stands, farmers markets, and CSAs. Agricultural land in rural areas will be best preserved by encouraging new development into Jericho's three Village Centers and by clustering development within the Commercial District. As with any sector of the economy, a predictable and efficient permitting process can help to foster growth of agriculture and food based businesses. Current Land Use and Development Regulations allow the roadside sale of agricultural products as an accessory use and farmers markets as a permitted use in all zoning districts.

One potential barrier to further utilization of local foods is the lack of facilities to prepare and package larger quantities for distribution. This can sometimes be inhibited by local land use regulations. For example, farmers producing milk or cheese onsite are not considered "agriculturally exempt" from local zoning if they receive more than 50% of their raw product from off-site. Some facilities may be considered commercial or industrial and not be permitted in rural areas.

The capital cost of some processing equipment can also be prohibitive for many start-up ventures. Development of incubator facilities, such as the Vermont Food Venture Center in Hardwick, can help to nurture the growth of local food and agriculture-based enterprises. Village Centers, the Commercial District or adaptive use of historic agricultural structures may be appropriate locations for incubator space.

## **INSTITUTIONAL PROPERTIES**

Jericho contains two large institutional properties – the UVM Research Forest and Ethan Allen Firing Range. The Ethan Allen Firing Range has evolved into an important mountain warfare training facility as well as an equipment testing facility for General Dynamics. The US Military is in the process of expanding barrack capacity at the Range, which will further increase the number of service members on site. The Range provides some employment for local residents. Further, many service members training on the site frequent local businesses, particularly those in close proximity to the Range.

While the UVM Research Forest currently has limited facilities, it serves as an important laboratory for natural resource based education and research. As interest in this subject increases, it is likely that more activity will occur at the Research Forest. Eventually, the University may seek to develop more modern classroom and laboratory facilities at the Research Forest. Increased use of the Research Forest may provide an opportunity for Jericho businesses to provide goods and services to students, staff, and faculty. In addition to this immediate benefit, the Research Forest could serve as a local anchor for private firms engaged in natural resource conservation and research.



## **ART BASED BUSINESSES**

Numerous small galleries and studios are located in Jericho. Not only do these establishments help define Jericho's character, they also provide local employment and bring visitors to Town who may frequent other local businesses. For example, the Jericho Center Green is decorated in anticipation of the annual Open Studio Weekend. This event draws Jericho residents as well as visitors to local galleries and studios. As the number of studios and galleries grow, so will the demand for local sources of supplies. Again, this creates an opportunity for other local businesses. Jericho's Land Use Regulations allow small galleries to be located in all districts except the Forestry and Open Space Districts, and larger galleries in the Commercial and Village Center Districts.

## **WILDLIFE AND NATURAL RESOURCE BASED RECREATION**

As noted in the Natural Resources Section, Jericho contains several large blocks of unfragmented forestland which provide critical habitat for a diverse range of wildlife. According to a recent federal survey, wildlife based recreation, including activities such as wildlife observation, bird watching, fishing, and hunting, adds approximately \$400 million annually to the Vermont economy. Given the impact of these activities on the Vermont economy, conservation and protection of important wildlife habitat should be considered an economic development strategy as well as a natural resource conservation strategy.

## **TRAVEL, TOURSIM, AND HOSPITALITY**

Jericho's strategic location between the Burlington area and Mount Mansfield places it on the direct route of many tourists traveling from the airport or interstate to Mount Mansfield and related attractions such as Smugglers Notch and the Underhill State Park.

Jericho's three Village Centers each contain well preserved historic structures and features, as well as local businesses selling services and "Vermont" products. Recent investment in pedestrian infrastructure has made it possible for tourists to leave their cars and enjoy the Villages safely on foot. In order to encourage this activity, marketing materials describing self-guided "walking tours" of each Village could be developed in collaboration with local businesses, the Historical Society, and economic development interests.

The Village Centers could also become an alternative for visitors seeking accommodations close to the attractions near Mount Mansfield. Several hospitality based businesses are currently located in the Village Centers. Growth of support businesses such as restaurants and small retail stores, as well as streetscape improvements and upgrades to pedestrian infrastructure, could enhance the attractiveness of Jericho for additional hospitality based businesses.

In rural areas, the traditional landscape pattern of open fields surrounded by wooded hedgerows with a backdrop of wooded hillsides has the potential to attract visitors to Jericho. The numerous parks and trails located in Jericho are particularly attractive to stay-

cationers. Maps similar to the “Village Center Walking Tours” which identify parks and trails and roadways with particularly attractive scenic roadscapes, as well as nearby businesses, could be developed and distributed to market these features.

For Jericho to capitalize on its historic Village Centers and scenic rural landscapes as a tourism resource, their unique character and identity must be respected and taken into account as new development occurs. Poorly located and designed development that detracts from Jericho’s scenic and historic resources could limit the Town’s ability to attract visitors and expand its tourism sector.

While tourism is often measured by the immediate impact of income for local businesses, it is worth noting that the executives of several employers in Chittenden County, notably IBM and Husky Injection Molding, were first introduced to the area while vacationing in Vermont. Many high-tech firms place a premium on quality of life when considering new locations. The same attributes that attract tourists may also serve as low cost marketing to potential employers. This is especially important, given that Jericho, and Vermont as a whole, lacks the resources to compete with larger, more populous areas in traditional economic development marketing. Marketing materials about incentives how to do business in Jericho, such as the Village Center tax credits, should be provided at Town Hall as well as areas likely to draw large numbers of visitors.

## **GOALS, STRATEGIES, AND IMPLEMENTATION**

### **Goal 6.1. Foster economic development in Jericho’s Village Centers and Commercial District.**

Strategy 6.1.1. Provide an efficient and predictable permitting process for development within the Village Centers and Commercial District.

Implementation 6.1.1.1. Foster mixed uses within Village Centers and Commercial District.

Implementation 6.1.1.2. Evaluate regulations for ambiguous standards or unclear requirements and make appropriate amendments.

Implementation 6.1.1.3. Evaluate the success of the 2009 Land Use and Development Regulations in fostering appropriate development within the Village Centers.

Strategy 6.1.2. Facilitate the development of infrastructure necessary to support economic development in each Village Center and Commercial District, including but not limited to water and wastewater, telecommunications, three phased power, and other forms of energy, including renewables, as appropriate.

Implementation 6.1.2.1. Determine and recommend infrastructure improvements needed to foster economic development in each village center, as prescribed in the Utilities, Facilities, and Services Section of this Plan.

Implementation 6.1.2.2. Evaluate current telecommunications and high-speed internet service within each Village Center and the Commercial District.

Implementation 6.1.2.3. Work with service providers to achieve 100% telecommunication and high-speed internet access within each village center and the Commercial District.

Implementation 6.1.2.4. Work with utility companies to increase the availability of three phased power and other forms of energy, including renewables, as appropriate. Priority should be first given to the village centers and secondarily to the Commercial District.

Implementation 6.1.2.5. Participate in Public Service Board proceedings related to utility expansions and extensions within Jericho. Request that the Public Service Board require extension of utilities to unserved areas of the Village Centers and the Commercial District when reviewing applications for extensions elsewhere within Jericho or neighboring communities.

Strategy 6.1.3. Design parking in keeping with the pedestrian character of the Village Centers and of the Commercial District as envisioned in the 2019 Commercial District Master Plan.

Implementation 6.1.3.1. Continue to allow and encourage flexible alternative parking arrangements, such as shared, off site, and on street parking.

Implementation 6.1.3.2. Evaluate village streets for public, on street parking, and implement in suitable locations.

Implementation 6.1.3.3. Encourage mixed use development that reduces overall parking demands.

Strategy 6.1.4. Use public resources to foster economic development in the Village Centers.

Implementation 6.1.4.1. Upgrade pedestrian infrastructure and make streetscape improvements to each village center.

Implementation 6.1.4.2. Locate public and quasi-public facilities, such as schools, post offices, public offices, libraries, and other community facilities in Village Centers to provide a stable anchor for village businesses

Implementation 6.1.4.3. Interview existing Village Center businesses regarding new amenities that would improve the business climate and attract additional customers and businesses.

Strategy 6.1.5. Develop a diverse housing stock to provide workforce housing for local and regional businesses.

Implementation 6.1.5.1. Implement the tasks prescribed in the Housing Section of this Plan to foster the development of a broad range of housing options in Jericho's Village Centers and the Commercial District.

Strategy 6.1.6. Leverage existing and new incentives for businesses to locate in the Village Centers and the Commercial District.

Implementation 6.1.6.1. Promote greater utilization of Village Center Tax Credits by existing and potential village businesses.

Implementation 6.1.6.2. Investigate the applicability of other incentive programs offered by the State of Vermont, such as the Growth Center and Vermont Neighborhoods programs.

Implementation 6.1.6.3. Research market potential for new businesses to locate in the Village Centers and the Commercial District.

Implementation 6.1.6.4. Investigate programs and incentives to promote economic development offered by similarly sized communities in Vermont and other parts of the country.

**Goal 6.2. Promote growth and development of a diverse local economic base.**

Strategy 6.2.1. Encourage growth of home businesses in Jericho.

Implementation 6.2.1.1. Continue to allow home occupation businesses as a permitted use in all single family dwellings.

Implementation 6.2.1.2. Periodically evaluate the existing home occupation provisions.

Strategy 6.2.2. Identify the needs and challenges faced by existing Jericho businesses.

Implementation 6.2.2.1. Evaluate the interest of local businesses in the formation of a local business association. Provide assistance in the initial organization of such an association if desired.

Implementation 6.2.2.2. Catalog and survey current businesses to identify the attributes they find most and least attractive about doing business in Jericho.

Implementation 6.2.2.3. Consider revisiting the boundaries of the Commercial District, as described in the 2019 Commercial District Master Plan.

Implementation 6.2.2.4. Consider whether additional provisions for commercial uses utilizing heavy equipment are needed elsewhere in town.

Strategy 6.2.3. Encourage the development of agriculture and local food based commercial enterprises.

Implementation 6.2.3.1. Promote the protection of important agricultural and forestry land through use of Planned Unit Development provisions and voluntary land conservation

Implementation 6.2.3.2. Continue to allow roadside sale of agricultural products and farmers markets in all zoning districts.

Implementation 6.2.3.3. Review current regulations to determine their impact on farm based-value added endeavors. Consider revising regulations to allow for on-farm processing that may not fall under the State definition of “agriculture.”

Implementation 6.2.3.4. Develop standards to reduce conflicts between existing and future agricultural operations and new residential development, such as requiring new developments in rural areas to include “right-to-farm” language in deeds, use of vegetative buffers, or other similar measures.

Implementation 6.2.3.5. Evaluate the need and feasibility of incubator space for agriculture and local food based businesses. Identify potential sites for such a facility, that could also take advantage of prime agricultural soils, in locations such as the Commercial District.

Implementation 6.2.3.6. Provide Jericho residents with information on responsible methods of local food production, including guidance on mitigating impacts to neighboring properties.

Strategy 6.2.4. Encourage the development of art based businesses.

Implementation 6.2.4.1. Continue to allow galleries, studios, and museums in a broad range of zoning districts.

Implementation 6.2.4.2. Foster further development of the arts and cultural community through development of festivals, gathering spaces, galleries, and/or artists' cooperatives.

Implementation 6.2.4.3. Encourage new creative economy industries and support industries and suppliers, such as retailers and professional offices, to locate in the Village Centers and the Commercial District.

Strategy 6.2.5. Encourage the development of wildlife and natural resource based recreation and industries.

Implementation 6.2.5.1. Maintain important wildlife habitat as prescribed in the Natural Resources Section of this Plan

Implementation 6.2.5.2. Take advantage of the numerous public lands located in Jericho, and the scenic resources provided by Mount Mansfield, the Browns River, and Jericho's rural landscape.

Implementation 6.2.5.3. Open a dialogue with the University of Vermont regarding its long term plans for the UVM Research Forest and opportunities that growth of this facility may provide for Jericho businesses.

Strategy 6.2.6. Encourage the development of travel, tourism, and hospitality based businesses.

Implementation 6.2.6.1. Continue to allow commercial lodging of various sizes in a broad range of zoning districts.

Implementation 6.2.6.2. Encourage new hospitality based businesses and support businesses such as restaurants and specialty retail stores to locate in the Village Centers.

Implementation 6.2.6.3. Ensure access to Jericho's public and quasi-publicly owned open lands for residents and visitors. Develop a network of trails, including on road bike and pedestrian facilities, connecting these amenities.

Implementation 6.2.6.4. Market Jericho's amenities to local residents and residents of neighboring communities.

Implementation 6.2.6.5. Develop promotional materials marketing Jericho businesses, Village Centers, and rural areas, such as "Village Walking Tours," trail maps, and other similar materials.

Strategy 6.2.7. Cooperate with Regional and State partners that promote economic development.

Implementation 6.2.7.1. Train local officials about various economic development resources available through programs such as the Vermont Small Business Administration Community Business Connections.

Implementation 6.2.7.2. Provide regional and state agencies and organizations with marketing materials which clearly describe Jericho's assets, sites, amenities, and long-term vision.

Implementation 6.2.7.3. Work with regional marketing entities, such as the Greater Burlington Industrial Corporation (GBIC) and the Lake Champlain Regional Chamber of Commerce to promote and market Jericho properties, particularly those located in the Village Centers and the Commercial District, to firms making regional inquiries.

Implementation 6.2.7.4. Develop partnerships with tourism industry representatives to market Jericho as a good place to visit and do business.

Implementation 6.2.7.5. Develop promotional materials for tourist and business development touting the scenic, historic, and rural characteristics of the Town, and other attributes that make Jericho a desirable location.

## 7. HOUSING

### JERICO'S EXISTING HOUSING STOCK

Census data suggests that nearly nine out of ten homes in Jericho are single-family structures, and that this proportion remained essentially unchanged since 1970. The 2015 Grand List (Table 7.1) indicates that in 2015 single-family homes made up 93% of the dwelling units in town, or approximately the same percent as in the 2000 Grand List, suggesting that the ratio of single to multiple family dwelling units has remained unchanged.

**Table 7.1 Number and Type of Dwelling Units: 2015**

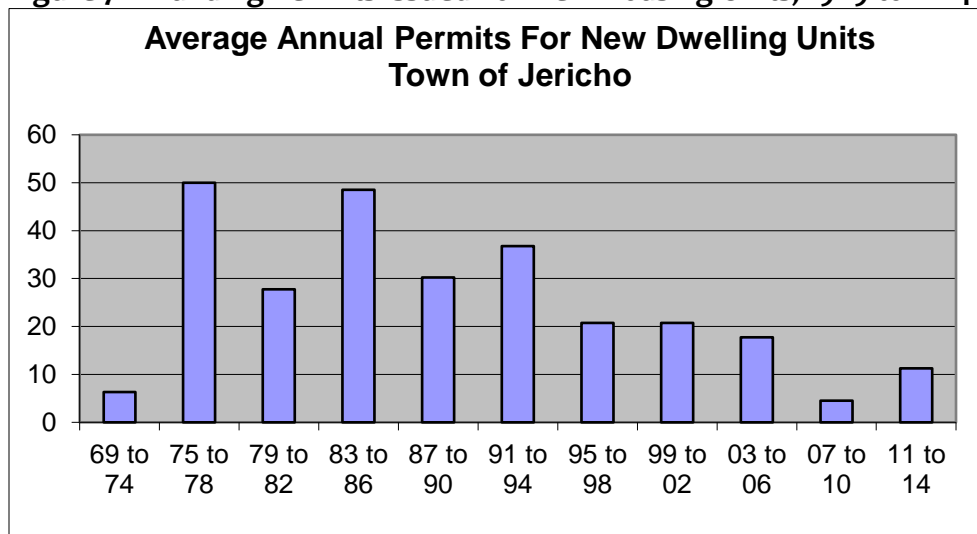
Type	Number	Percent
Single Family	1,693	93.1%
Multi-family	82	6.1%
Mobile Homes	11	.7%
Vacation Homes	2	.1%
Totals	1,788	

Source: Jericho 2015 Grand List.

Figure 7.1 shows a general trend toward a decline in the number of new residential units permitted, since the peak of an average of 50 permits per year in 1975-1978. The number of single-family homes permitted fell to fewer than four per year from 2007-2010, which is probably a reflection of 2008-2009 economic challenges. As general economic trends improved, the average number of all units has increased slightly in 2011-2014 to an average of 11 units per year.

Typically, a small number of Jericho's total residential permits are for new multi-family dwellings. 2004 had the year with the most permits multi – family unit permits, with 9 multi – family units permitted. An average of less than one multi-family unit was issued per year for the period 1990-2014.

**Figure 7.1 Building Permits Issued For New Housing Units, 1969 to 2014**



Source: Jericho Planning and Zoning. Includes single-family and multi-family permits.



Housing in Jericho is primarily owner-occupied. Renter occupied housing has accounted for about 10% of the total housing stock, since 1990. While the total number of renter occupied units grew modestly from 1990 to 2000, the number actually declined between 2000 and 2013. This number could be due to the estimates used in the 2013 data source, the American Community Survey. These figures are based on 5-year estimates and not full Census data available for 1990 and 2000.

Table 7.2 shows the distribution of residential property values, based on the 2015 Grand List. 73% of single family homes are valued between \$200,000 and \$400,000. 17% of single family homes are valued less than \$200,000, and approximately 10% are valued more than \$400,000. 82% of condominiums and 91% of mobile homes are valued at less than \$200,000.

Jericho's 2016 Grand List will be adjusted according to the most recent re-assessments conducted in 2015-2016.

**Table 7.2 Housing Occupancy**

Occupancy	1990		2000		2013'	
Owner-occupied	1,244	83.5%	1,551	86.9%	1,656	86.7%
Renter-occupied	192	12.9%	200	11.2%	194	10.2%
Vacant	53	3.6%	23	1.3%	59	3.1%
Total Units	1,489	100%	1,774	100.0%	1,909	100%
Units w/o complete plumbing	7	1.1%	9	0.5%	0	0%

Source: U.S. Census

'2013 figures based on the American Community Survey 5-Year Estimates, with a margin of error of +/- 54 - 65

**Table 7.3 Assessments Of Residential Property - 2015 Grand List**

Range	Single Family		Multi-Family	
	#	%	#	%
Under \$100,000	11	0.6%	0	0%
\$100,000 - \$199,999	337	19.9%	15	18.3%
\$200,000 - \$299,999	762	45.0%	43	52.4%
\$300,000 - \$399,999	421	24.9%	15	18.4%
\$400,000 - \$499,999	127	7.5%	7	8.5%
\$500,000 - \$599,999	25	1.5%	1	1.2%
\$600,000 - \$699,999	7	0.4%	1	1.2%
\$700,000 - \$799,999	2	0.1%	0	0%
\$800,000 - \$899,999	0	0	0	0%
\$900,000 - \$999,999	1	0.05%	0	0%
\$1,000,000+	1	0.05%	0	0%
<b>TOTAL</b>	<b>1,694</b>	<b>100.0%</b>	<b>82</b>	<b>100%</b>

Source: 2015 Jericho Grand List

Assessments are based on housesite value including 2 acres of land with buildings. The value of any area of land above 2 acres is not included in the assessments.

## HOUSING AFFORDABILITY

Housing affordability is determined by the cost of purchasing or renting a home, and the personal income available to acquire it. Housing is considered affordable when monthly housing costs do not exceed 30% of a person's income. For homeowners this includes mortgage, property tax, and property insurance payments; for renters it includes rent and

utilities. An income of 81%-95% of the area median is considered to be moderate and a family's income that doesn't exceed 80% is low.

Jericho's Land Use and Development Regulations define "affordable housing" as housing owned or rented by inhabitants whose gross income does not exceed 100% of area median income, as defined by the United States Department of Housing and Urban Development, where the total annual cost of housing, including principal interest, property taxes, insurance, and fees is not more than 30% of the household's gross annual income. Ample housing stock that is affordable is vital for the long-term health of the Town.

Jericho will best achieve the goal of a diverse socio-economic population when housing is comprised of various types and prices, to meet the needs of household with a wide range of income levels. Table 7.4 details affordable home value for different income levels.

**Table 7.4 Income Level and Housing Affordability**

	2X Median Income		Median Income		80% of Median		50% of Median	
	Family	Indiv	Family	Indiv	Family	Indiv	Family	Indiv
<b>Income</b>	\$147,600	\$103,400	\$73,800	\$51,700	\$56,400	\$39,500	\$36,900	\$25,850
<b>Affordable Home Value</b>	\$493,000	\$345,500	\$246,500	\$163,500	\$188,000	\$131,500	\$122,000	\$84,500

Source: [www.housingdata.org](http://www.housingdata.org) Home Mortgage Calculator; US Department of Housing and Urban Development FY2010 Income Limits Summary

## Homeownership

In 2014, the median sale price for a single family home in Jericho was \$262,750 compared to \$192,450 for a condominium. Note that these figures are slightly lower than the median sale prices for Chittenden County, which were \$285,000 for a single family home and \$195,000 for a condominium. Based on this information, a household would need an income of \$77,126 to afford a median priced single family home, or \$56,644 to afford a median priced condo. (Source: VT Dept. of Taxes, from [the VT Housing Data web site](http://theVT.HousingData.web.site)<sup>27</sup>).

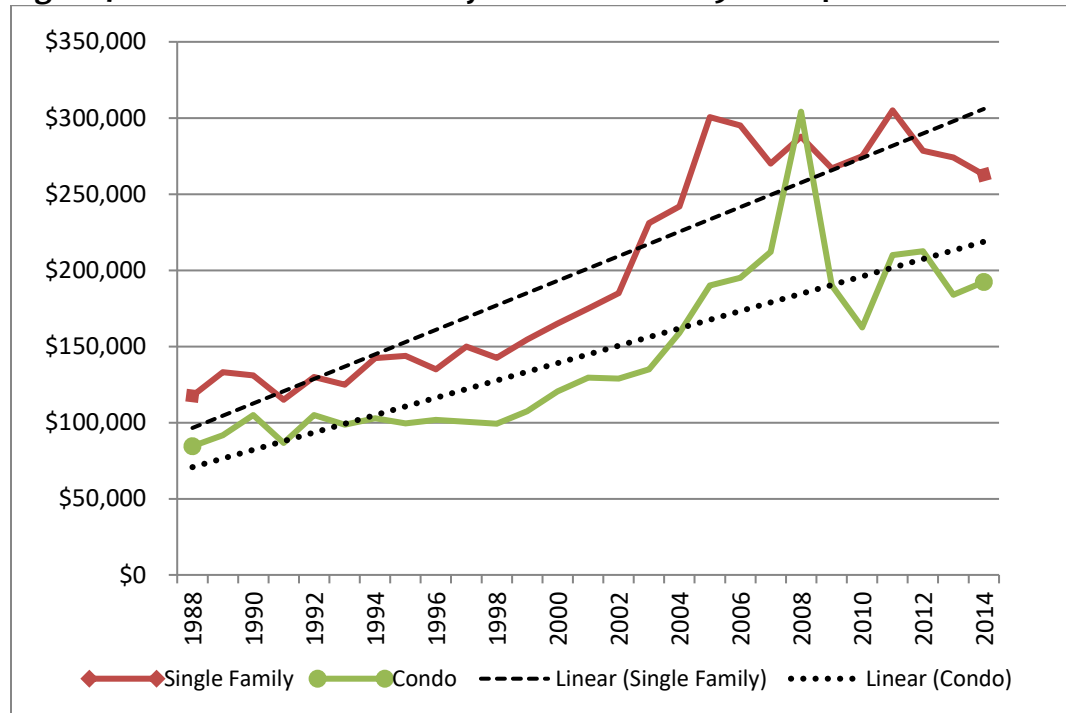
A median priced single family home and condo sold in Jericho would be considered "affordable" for a family of four earning the county median income. Neither a median priced single family home nor condominium could be considered affordable for an individual earning the county median income.

Figure 7.2 below compares median sales prices for condominiums and single family homes over the last two decades as reported by the Vermont Department of Taxation. This chart shows an overall trend of increased housing prices over time, with a sharp increase in housing prices starting in the late 1990's and early 2000's. There has been a slight decline in the median price for both single family homes and condominiums since their peak in the mid 2000's. However, housing prices show an overall increase over time. Note that the sharp peak in the median condominium price in 2008 is the result of the sale of several new, high-

<sup>27</sup> [www.housingdata.org](http://www.housingdata.org)

end retirement condominiums. To date, the Town has not seen further development of this type and price.

**Figure 7.2 Median Price of Primary Residence Sold 1988-2014**



Source: Vermont Department of Taxes

Much work has been done to encourage affordable housing; however, housing costs continue to be an issue. The Town should consider additional ways to encourage development of affordable housing.

### Rental Housing

The affordability of rental properties is often measured based on Fair Market Rent, or the dollar amount below which 40 percent of the standard-quality rental housing units are rented (including rent plus the cost of all utilities, except telephones).

Table 7.5 below shows fair market and median rents for various sized apartments and the income needed to afford these rents. Note that these figures are for the entire Burlington/South Burlington MSA, as Jericho Specific Data is not available.

**Table 7.5 Rental Housing Costs, 2015**

Unit Type	Fair Market Rent (FMR)	Median Rent	Income Needed to Afford FMR	Affordability					
				Individual			Family of 4		
				AMI	80% AMI	50% AMI	AMI	80% AMI	50% AMI
Efficiency	\$936	\$832	\$37,440	Yes	Yes	No	Yes	Yes	Yes
1-Bedroom	\$1,017	\$904	\$40,680	Yes	Yes	No	Yes	Yes	Yes
2-Bedroom	\$1,328	\$1,180	\$53,120	Yes	No	No	Yes	Yes	No
3-Bedroom	\$1,663	\$1,478	\$66,520	No	No	No	Yes	No	No
4-Bedroom	\$1,953	\$1,735	\$78,120	No	No	No	Yes	No	No

Source: housingdata.org , Home mortgage Calculator, 2015.

Based on Table 7.5 above, an efficiency apartment could be considered affordable for an individual earning median income or 80% of median income. A four bedroom apartment would be considered affordable for a household earning median income, but not for a household earning 80% or less of median income.

## REGIONAL HOUSING NEEDS

In the [2018 ECOS Regional Plan](#)<sup>28</sup>, the Chittenden County Regional Planning Commission (CCRPC) developed strategies and action steps for new housing development. The desire is to see 80% of new development take place in the areas planned for growth and to provide increased opportunities for quality, affordable and fair housing for all types of households.

As described throughout this Town Plan, Jericho desires to see new development occur within the three Village Centers, which CCRPC has defined as the “Village Planning Area,” one of their areas planned for growth. With development focused in the Village Centers the rural character will be preserved in the remainder of the Town. To encourage additional housing, the Town’s zoning also supports pedestrian scale development, with small lot sizes, within the Village Centers. As described in this chapter, the Town has made efforts and will continue to strive for additional opportunities to expand options for affordable and elderly housing in the Town. To implement the strategies identified in the ECOS Plan, the Town will continue to partner with the CCRPC to identify local housing opportunities and needs.

## STRATEGIES TO ENCOURAGE HOUSING OPTIONS

The availability of affordable and reasonably priced housing is a problem not confined to Jericho; all communities in Chittenden County face this issue. As discussed in Chapter 2 of this Plan, the [Town of Jericho Build Out and Common Impacts Analysis](#)<sup>29</sup>, provides the Town with a tool to understand how development under existing and alternative land uses with increased density could have on the community. This information will be helpful for future land use discussions related to addressing future housing needs.

One of the most direct ways Jericho can influence housing is through its Land Use and

<sup>28</sup> <http://www.ecosproject.com/>

<sup>29</sup> <https://jerichovt.org/town-documents>

Development Regulations, which encourage housing diversity in several ways.

- The regulations allow increased residential density in the Village Center District.
- Within the Village Center District, affordable and elderly housing is governed by lot coverage rather than minimum lot size. This will allow more, small units to be located within a single structure or series of structures than would be allowed based on a traditional unit-to-lot-size basis. Jericho has also received Village Center designation from the state for its three centers, Jericho Center, Riverside and Jericho Corners. As a benefit of the program, the town and certain developments are eligible for funding benefits and tax credits which could be used to encourage affordable and elderly housing.
- Density bonuses are offered for the development of affordable and elderly housing in all districts.
- Multifamily housing is allowed as a permitted or conditional use in all but the Forestry and Open Space Districts, and is regulated at a rate of 2 units per minimum lot size. Again, this encourages the creation of a more diverse housing stock.
- In an effort to encourage accessory apartments, the Land Use and Development Regulations contain significantly relaxed regulations regarding accessory apartments.
- The 2019 Commercial District project recommended zoning changes that will promote greater density and smaller lot sizes for mixed use development in the Commercial District. This would allow for more development options within the District.

## **GOALS, STRATEGIES, AND IMPLEMENTATION**

### **Goal 7.1. Housing will be available and accessible for a socio-economically diverse population**

Strategy 7.1.1. Encourage affordable housing and elderly (senior) housing through municipal regulations and ordinances.

Implementation 7.1.1.1. Encourage adoption of a fee structure that reduces or waives application and impact fees for affordable and senior housing. Consider reducing fees for all units within a development that contains a certain percentage of affordable units.

Implementation 7.1.1.2. Continue to provide for variable lot sizes within Planned Unit Developments (PUDs), with a density bonus for affordable/ elderly housing.

Strategy 7.1.2. Cooperate with affordable housing non-profits and other affordable housing developers.

Implementation 7.1.2.1. Encourage developers to take advantage of the incentives now in place.

Implementation 7.1.2.2. Support applications, such as Community Development Block Grants, for funding of affordable housing.

Implementation 7.1.2.3. Facilitate partnerships between interested land owners and local affordable housing providers such as Green Mountain Habitat for Humanity and the Champlain Housing Trust, to name a few.

Implementation 7.1.2.4. Inventory publicly owned properties to determine if any would be appropriate locations for affordable housing. Identify and contact landowners whose property may support elderly or affordable housing, particularly in the Village Center District.

Strategy 7.1.3. Consider an expansion of higher density zoning to allow for more affordable and senior housing.

Implementation 7.1.3.1. Review the Zoning Map and look for locations where higher residential density zoning would encourage socio-economic diversity.

Strategy 7.1.4. Think about increasing density bonuses for affordable and/or senior housing.

Implementation 7.1.4.1. Review the effect of density bonuses on the creation of affordable and/or senior housing.

**Goal 7.2. Encourage a mix of housing types located in mixed use Village Centers and the Commercial District.**

Strategy 7.2.1. Evaluate needs and develop plans to create infrastructure necessary to support increased housing density in the Village Center Districts and the Commercial District.

Implementation 7.2.1.1. Inventory and evaluate infrastructure needs in each Village Center.

Implementation 7.2.1.2. Include necessary infrastructure upgrades in the Capital Plan and Budget.

Implementation 7.2.1.3. Pursue innovative methods of improving infrastructure in the Village Centers, such as Special Assessment Districts, Public-Private Partnerships, etc.

Implementation 7.2.1.4. Implement the zoning changes recommended by the 2019 Commercial District Master Plan to increase mixed use development in the Commercial District.

## 8. EDUCATION AND CHILD CARE

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### EDUCATION

There are four schools operating in Jericho. The Jericho Elementary School (JES) serves most Jericho children, kindergarten through grade four. The Underhill Incorporated District ("the Underhill I.D.") serves Jericho children, kindergarten through grade four, who live in the northeast part of Jericho, as well as children in the same grades living in the Underhill Flats area of Underhill. Browns River Middle School (BRMS), also located in Riverside/Underhill Flats serves grades five through eight, and Mount Mansfield Union High School (MMU) serves all children in grades nine through twelve from the towns of Jericho, Underhill, Richmond, Bolton, and Huntington. Public schools located in Jericho are depicted on Map 12.

Jericho is a member of the Chittenden East Supervisory Union (CESU), along with the towns of Bolton, Richmond and Underhill. In 2011 voters in the CESU went to the polls to determine if they wanted to consolidate resources by merging their eight school boards into one. Voters in four districts liked the idea but those in Huntington and Richmond did not. In 2014, Bolton, Jericho, Richmond and both Underhill districts decided to create the new [Mt. Mansfield Modified Union School District](#)<sup>30</sup> (MMMUSD) but voters from Huntington opted not to join the group.

Technical opportunities are available for Jericho high school juniors and seniors through the Center for Technology at Essex or the Burlington Technology Center. Some adult technology programs also are available at those locations.

Education is one of the most important community services provided by the Town when viewed in terms of social impact and is the most significant in terms of cost. The schools function as a social focal point for the community, deeply involving most students and their families and significantly affecting all students for the rest of their lives. The schools are among the largest employers in Jericho. Data on educational indicators for Jericho is available from [the Vermont Agency of Education](#).<sup>31</sup>

### EDUCATION-RELATED TRANSPORTATION

MMMUSD owns and operates a fleet of school buses, which transports the children of Jericho to their schools.

Through the nationwide [Safe Routes to School \(SR2S\) program](#)<sup>32</sup>, students, particularly at Jericho Elementary School, Browns River Middle School and Underhill I.D., are encouraged to walk or bike to school. SR2S includes two key areas– programmatic activities and infrastructure improvements. An example of a programmatic activity includes the JES,

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<sup>30</sup> <https://www.mmuusd.org/>

<sup>31</sup> <https://education.vermont.gov>

<sup>32</sup> <https://saferoutes.vermont.gov/>

BRMS and UID “walking school bus” program through nearby neighborhoods. BRMS and UID have also successfully used is the “First Friday” program, where students and their families are encouraged to walk to school on the first Friday of every month. During the 2015 school year, on First Friday, a sheriff has assisted crossing of VT Route 15 from Raceway over to the GMT bus stop. The Town of Jericho is largely responsible for planning SR2S infrastructure improvements designed to encourage children and families walking and biking to school. With the help of the BRMS, UID, and JES SR2S committees, Jericho is investing in streetscapes and sidewalk infrastructure intended to promote walking and biking that will likely be used by students and their families to get to school. The Town received a grant in 2015 to install a pedestrian crossing signal across VT Route 15 to River Street and a striped pedestrian crossing at Dickinson Street. Constriction of these crossing is proposed for 2016.

## **EARLY EDUCATION**

During the 2014 Legislative Session, legislators passed the Universal Preschool law (Act 166), which provides universal publicly funded prekindergarten education of a minimum of ten hours for 35 weeks annually for all 3, 4, and 5 year-old children who are not enrolled in kindergarten. This law gave districts the option to start providing a \$3,000 voucher for each eligible child to attend 10 hours per week in a pre-qualified preschool. Although this law is not mandatory until the 2016-2017 school year, the MMMUSD decided to offer vouchers during the 2015-2016 school year because it will greatly benefit children.

Parents of preschoolers can use this voucher to have their child attend any qualified preschool, whether the school is housed in one of the Town’s school buildings or not. The elementary schools in the district surveyed preschool families and asked what preschool options they were considering for their children. The survey found that many people wanted a program that was housed in an elementary school. Jericho Elementary, Underhill ID and Underhill Central schools all had space available to house a preschool. The schools opted to not create their own preschool programs. Instead, Underhill ID has rented space to Saxon Hill School and Jericho Elementary along with Underhill Central have both rented space to the Greater Burlington YMCA to run a qualified preschool in their buildings. In this way, the district will have increased preschool opportunities for families.

## **AFTER SCHOOL AND SUMMER PROGRAMS**

Jericho Elementary School and the Underhill ID School have after school programs managed by the YMCA. The former has 50 slots and the latter has 35 slots. The total number of slots is unchanged since 2005 and according to school officials, there is no need for expansion at this time.

The Jericho Recreation Program operates a 6-week full-day summer program for children ages 5 to 14. Younger children attend camp at Jericho Elementary School. Older children attend camp at Browns River Middle School. Saxon Hill School operates several part-week



camp sessions, some for children up to age 9, during the summer months.

## **CHILD CARE**

In Jericho 74.8% of children under six have all their parents in the workforce. For comparison, the County average is 71.67%, Bolton the county low with 36.5% and Westford has the highest of 91.9%. Additionally, Jericho has 328 children under the age of 6. (Source: US Census Bureau, American Community Survey, 2013 population estimates).

As of May 2015, three licensed family based infant and toddler child care providers were operating in Jericho. There are no center – based, full – day, full – year child care programs in Jericho. The family based providers have a total of 18 slots, with 3 current vacancies, for a vacancy rate of 16%. This is divided into 6 infant slots, 6 toddler spots and 6 preschool slots. This represents an overall decrease in availability from 2010, when there were 3 family based providers with available 24 slots and a vacancy rate of 25%. As shown by the numbers above, there has been a decrease in the total number of family – based child care slots over the last five years with a slight decrease in the vacancy rates. The existing childcare programs in Jericho have little capacity available, especially when compared to with the number of families seeking childcare. Although the need may be met as many families may seek childcare outside of Jericho.

Jericho’s Land Use and Development Regulations, family based daycares are permitted in all districts, and center – based child care and preschools are permitted in the Village Center District and conditional in the Agricultural, Rural Residential, Commercial, and Village Districts.

## **GOALS, STRATEGIES, AND IMPLEMENTATION**

### **Goal 8.1. Provide high quality education opportunities for Jericho residents.**

Strategy 8.1.1. Ensure that school district facilities are adequately planned to absorb the impacts of new development.

Implementation 8.1.1.1. Require that approval of future development be based on the demonstrated ability of the affected school district to provide the necessary services.

Strategy 8.1.2. Provide and maintain for recreation facilities that serve the needs of the school district and the general community.

Implementation 8.1.2.1. Coordinate construction, maintenance, and use of school recreational facilities and town recreational facilities.

Implementation 8.1.2.2. Improve communications regarding usage of school recreational facilities by the general public.

**Goal 8.2. Provide safe and accessible transportation for high quality education opportunities in Jericho.**

Strategy 8.2.1. Encourage access to the school facilities by pedestrians and cyclists.

Implementation 8.2.1.1. Continue to support programmatic activities by schools such as “the walking school bus” and other Safe Routes to School activities.

Implementation 8.2.1.2. Interconnect the schools with other important town facilities through the creation of alternate transportation paths.

Implementation 8.2.1.3. Construct and upgrade sidewalks and bicycle facilities serving Jericho schools.

Strategy 8.2.2. Encourage students not within walking or cycling distance of the schools to use school buses.

Implementation 8.2.2.1. Encourage the installation and use of seatbelts on school buses. Encourage school bus routes which result in reasonable ride times for children.

**Goal 8.3. Increase high quality childcare opportunities in Jericho.**

Strategy 8.3.1. Investigate the barriers or challenges to owning/operating high quality daycare in Jericho.

Implementation 8.3.1.1. Conduct a formal study or obtain information about Jericho childcare needs and barriers/challenges to owning or operating high quality daycare in Jericho.

## 9. TRANSPORTATION

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In 2015, the Town completed [the Jericho Transportation Study](#)<sup>33</sup>. This plan investigates and assesses the existing transportation system, estimates and evaluates future conditions and lists recommendations for future improvements. At the same time, the Town also completed [the Jericho Bicycle and Pedestrian Facility Master Plan](#)<sup>34</sup> which addresses the existing bicycle and pedestrian transportation system, evaluates future conditions, and presents a list of recommendations for future improvements. This chapter is based on these plans.

### TRAVEL CHARACTERISTICS

The residents of Jericho work in a number of towns mostly within Chittenden County, with the majority working in Burlington and Essex. The third largest destination of employment is the Town of Jericho itself. Improvements to the bicycle and pedestrian network will allow more Jericho residents to have an alternative to driving a vehicle to/from their workplace. The percentage of people commuting to work outside of Chittenden County has increased from 2000 to 2010 by 2.6 percent or from 215 in 2000 to 261 of all work commuters in 2010.

Apart from work trips, school and recreation trips also account for a significant number of trips made in and around Jericho. Any improvements to the pedestrian and bicycle network will improve accessibility to these sites, which in turn may result in less congestion on local roadway, less demand on limited parking facilities, and better overall community health.

VT Routes 15 and 117 provide the most direct route for through traffic in Jericho for passenger cars as well as truck traffic. Truck traffic can negatively impact traffic operations for other vehicles and alternative modes of travel, such as bicyclists and pedestrians. Additionally, the 2015 survey conducted by Planning Commission shows that a majority of respondents desire improved bicycle and pedestrian conditions throughout town. The survey also showed that providing for transportation services for seniors should be a priority consideration.

### CHARACTERISTICS OF ROADWAYS

State owned Vermont Routes 15 and 117 carry substantial volumes of through traffic as well as providing access to a major portion of Jericho. Class 2 Town Highways also serve as primary traffic corridors in Jericho. Class 3 roads are maintained by the Town and primarily serve residential areas in Town. The Town has approximately 20.5 miles of Class 2 roads and 41.5 miles of Class 3 roads. Jericho has a total of 30 miles of paved roads and 34 miles of gravel roads. Jericho's *Public Work Standards* include road design standards and the Selectboard recently adopted the VTrans road and bridge standards, both of which provide

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<sup>33</sup> <https://jerichovt.org/town-documents>

<sup>34</sup> <https://jerichovt.org/town-documents>

the design standard for all Town roads.

The 2015 *Transportation Study* addressed roadway maintenance. Pavement, including gravel and paved roads, was indexed from “good” to “failed” condition as well as the change in condition from 2011 to 2014. Foothills Drive and Governor Peck Road (from Browns Trace to Forestry Road) have experienced a “severe” rate of deterioration and several other roadways have a “high” rate of deterioration, with most roads experiencing small to medium levels of pavement deterioration. The 2015 *Transportation Study* provided the Town with a recommended five-year paving plan based on the most cost effective way to maintain roads. The Study and paving plan note that it is far less expensive to maintain a good road in good condition over time than it is to repair a poor road once it has begun to fail. The Town began working with the CCRPC to incorporate the paving plan into the Capital Improvement Plan, which will officially lay out a proposed schedule for future maintenance and improvements.

The Vermont Local Roads Program suggests that a threshold of 500 Annual Average Daily Trips (AADT) be used to determine when a roadway should be considered for paving, but also mentions that roadway with much higher AADT can work well as non-paved gravel facilities.

Skunk Hollow Road was paved in 2014, after years of debate and based on increased traffic volume. Under existing conditions, Nashville Road exceeds the 500 AADT threshold for gravel roads. Other local roads, including Raceway Road, Packard Road, Orr Road and Plains Road all have volumes approaching or marginally exceeding the 500 AADT threshold set by the Vermont Local Roads Program. Many residents prefer gravel roads remain unpaved.

In 2015 the state created a new municipal highway permit designed to regulate stormwater runoff from municipal roads. The permit will be issued by the end of 2017 and Jericho will be subject to the permit sometime between 2018 and 2021. The Town will need to begin planning and incorporating the required stormwater improvements into the capital budgeting process.

## **TRAFFIC VOLUMES**

Intersection control throughout Jericho currently relies solely on stop and yield signs, although in Fiscal year 2016, VTrans is planning to install a traffic signal at the intersection of VT Route 15 and Browns Trace. The 2015 *Transportation Study* measured Annual Average Daily Traffic (AADT) volumes for existing conditions. The highest AADT in Jericho occurs on VT Route 15, where traffic ranges from approximately 7,050 vehicles per day near the Underhill town line to nearly 12,000 vehicles per day near the Essex town line. The Study also measured out 20 years to 2035. These numbers consider annual growth in housing and modest commercial growth. The number of vehicles per day on VT Route 15 is predicted to increase by 27% near the Essex and Underhill town lines and by 33% between Lee River Road to Browns Trace by 2035.

## Congestion Concerns

The 2015 Jericho Transportation Study also analyzed the major intersections for their Level of Service (LOS), the standard measure used to qualify the operational performance of intersections

**Table 9.1 Unsignalized Intersection Level of Delay**

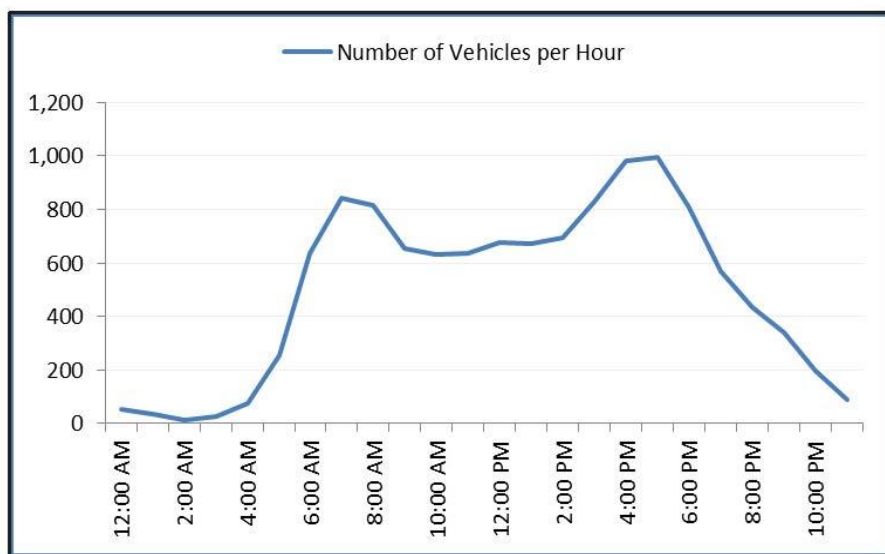
LOS	Characteristics	Seconds of Delay
A	Little or No Delay	<10
B	Short Delays	>10 and <20
C	Average Delays	>20 and <35
D	Long Delays	>35 and <55
E	Very Long Delays	>55 and <80
F	Extreme Delays	>80

Source: Highway Capacity Manual

and road segments. LOS is measured in terms of average delay per vehicle, as listed below in Table 9.1. The VTrans policy on level of services is that LOC C or higher is desirable for rural facilities, which would apply to all Jericho intersections. Building to LOS A or B service tends to necessitate the widening of roads to accommodate peak hour traffic, resulting in roads that are overbuilt for traffic for the majority of the time. Additionally, overbuilt roadways encourage motorists to drive at higher speeds making roads difficult to cross and unpleasant to walk or bike along.

The existing (2015) LOS measured for all the studied intersections is C or better in the morning and afternoon peak hours except for VT Route 15/River Road where the AM and PM Peak is LOS F for left turns from River Road onto westbound VT Route 15.

**Figure 9.1 Vehicles per hour Along VT Route 15**



Source: 2015 Jericho Transportation Study. Volumes recorded in 2011.

Existing travel patterns found throughout the Town of Jericho demonstrate that a significant number of vehicles pass through Jericho to other communities within Chittenden County from northern Vermont counties. This flow of commuter traffic along with Jericho commuter traffic creates significant peaking of traffic during the AM and PM peak hours.

Figure 9.1 illustrates the traffic during the AM and PM peak hours. These hourly volumes were recorded on VT Route 15 north of Lee River Road in 2010.

In an effort to reduce commuter traffic and congestion along VT Route 15 in and around the Commercial District, future additional streets should be considered. For example, it might be possible to develop a new street that connects Raceway Rd. with the north side of the Commercial District (over Brown's River). This could provide an alternative access to the Commercial District that might help reduce congestion on VT Route 15 to some extent. Additionally, reconfiguring the way Orr Road meets Brown's Trace might help reduce potential vehicle conflicts (by increasing distance from the intersection with VT Route 15) and allow for additional mixed use properties to be developed.

New streets connecting to streets outside of the Commercial District other than VT Route 15 will help reduce traffic and improve circulation. New development should be served by new or existing internal streets that comply with Complete Streets design, rather than allowing new development to individually access VT Route 15. The 2019 Commercial District Project found that there is a preference for limiting access off VT Route 15, particularly as it relates to allowing new development to access VT Route 15 and utilizing existing or future internal streets as their primary access points. This will limit new curb cuts on VT Route 15 and will limit turning conflicts in the midst of a high traffic high speed state highway.

The study identified connectivity as a key function of the Commercial District and recommended any new streets comply with Complete Streets design, to provide and enhance multi-modal transportation options. The study also suggested the Commercial District could be a preferred site for transit facilities such as a bus stop and a park and ride, to help address traffic and congestion.

## **Safety Concerns**

The 2015 Transportation Study analyzed five years of crash data for Jericho. For the 2008-2012 period, there were a total of 128 reported crashes involving 65 injuries and one fatality, with 60% either single vehicle or rear end crashes. There are no high crash locations (HCLs), which are defined as a road segment or intersections where the number of crashes are greater than 5 per year that exceed the critical ratio/rate, however, the following high-crash road segments have been identified:

- VT 117 near Skunk Hollow Road
- VT117 near Barber Farm Road

An additional intersection has been identified for improvement, the Browns Trace/Lee River Road intersection. The operation of this intersection is unusual, stopping the higher volume roadway (southbound Browns Trace).

## RECOMENDED INTERSECTON IMPROVEMENTS

The 2015 Transportation Study made several recommendations for improvements to several intersections based on existing (2015) and future (2035) congestion and safety concerns at a number of intersections. The specific design improvements have not been determined, but potential intersection improvements are shown in Table 9.2 below.

**Table 9.2 Suggested Future Intersection Congestion and Safety Improvements**

Intersection	Deficiency	Suggested Improvement	Properties Impacted
VT 15/River Road	Existing LOS F	Traffic Signal	TBD (Slight)
VT 15/Packard Road	Future LOS E	Second Lane	1
VT 15/Lee River Road	Future LOS F	Traffic Signal	TBD (2-3)
		Left Turn Lane	TBD (3-5)
Skunk Hollow/VT 117	Existing Safety (HCL)	Realignment	1
		Left Turn Lane	TBD (0-2)
Barber Farm /VT 117	Existing Safety (HCL)	Realignment	1
		Left Turn Lane	TBD (0-2)
Browns Trace/Lee River Road	Existing Safety	Realignment	0
		Roundabout	1

Source: 2015 Transportation Study

## PARK AND RIDE/BUS SERVICE

The nearest formal Park-and-Ride sites are located to the west in Essex near the intersection of VT Route 15 and VT Route 128 and to the south in Richmond at Exit 11 (I-89). Several potential sites were evaluated in the *Jericho Park-and-Ride Feasibility Study and Alternatives Evaluation* (2012) and the development of a site in Jericho is a top CCRPC scoping priority. The 2019 Commercial District project identified the Commercial District as a potential location for a park and ride and bus stop that could feature pedestrian and bicycle linkages and would capture Underhill, Jericho, and Lamoille County travelers.

[Green Mountain Transit](http://ridegmt.com/)<sup>35</sup> (GMT) began operating bus service in the Town of Jericho on October 14, 2013. The Jeffersonville Commuter bus travels between Jeffersonville and Burlington along VT Route 15 with stops in Riverside (at Dickinson Street) and in Jericho Corners (at the post office). Service consists of two weekday trips corresponding with the morning and afternoon commute peaks. Ridership has been increasing over the nearly two years of service. Parking is available at the Riverside stop location where a temporary Park and Ride has been established by agreement between GMT and the property owner. Both locations are connected to sidewalks for pedestrian access; bicyclists must use on-road, shared facilities.

## BICYCLE AND PEDESTRIAN MOBILITY

The 2015 Jericho Bicycle and Pedestrian Master Plan, which assessed the existing bicycle and pedestrian transportation systems, evaluated future conditions and presented a list of

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<sup>35</sup> <http://ridegmt.com/>

recommendations. There are currently 2.3 miles of sidewalks in “good condition” and the beginnings of a path network. The sidewalks are concentrated in Jericho’s three village centers. Additionally, an informal network of paths connects Jericho Elementary School and surrounding neighborhoods. There are also recreational trail networks concentrated at Mobbs Farm and Mills Park. There are no existing paved multi-use off road facilities located within the Town. State Highways VT Route 15 and VT Route 117 and all Class 2 Town highways have been identified in CCRPC’s Regional/Pedestrian/Bicycle Plan as recommended on-road bicycle routes. None of these roadways currently meet the design criteria established for on-road bicycle use.

The Town is committed to providing continued support for alternative transportation modes of travel. The 2015 survey conducted by the Planning Commission for this Town Plan found that residents highly value additional and improved bicycle and pedestrian modes. *The 2015 Bicycle and Pedestrian Plan* also takes note of several key areas for growth in the pedestrian and bicycle infrastructure:

- The overall sidewalk system has improved significantly in the last decade, with key connections established in Jericho Corners, Jericho Center and Riverside, including a crossing with a flashing beacon across VT Route 15 at the Jericho Elementary School. However, sidewalks still only cover limited stretches and do not interconnect for regional access or internal connections in the Town.
- There are critical gaps for bicycle travel along the existing road network in Jericho where the shoulder widths do not meet the VTrans guidelines for shared bicycle use.
- A comprehensive pedestrian bicycle network, with connections to regional routes, can help to promote Jericho as a travel destination. The network could tie together several important sites within the Town.
- Many important destinations in Jericho (cultural, scenic, civil, schools, etc.) cannot currently be reached safely by bicycle or walking. By providing alternate connections (i.e., sidewalks or bike lanes), residents and visitors will not be as reliant on automobiles for all trips.
- A more fully integrated pedestrian and bicycle system will encourage Jericho residents to bicycle and walk to destinations, thus encouraging a healthier lifestyle, as well as relieve congestion and reduce safety concerns.

There are several pedestrian and bicycle enhancement projects that are currently either under construction or planned for the near future:

- Browns Trace Bicycle/Pedestrian Path and Sidewalk Extension – This project will construct a bicycle/pedestrian path along Browns Trace, beginning at Pratt Road and extending to Plains Road. It will also construct sidewalk/shoulders from Plains Road to the existing sidewalk in Jericho Center. This project is funded by a 2010 Transportation Enhancement grant and 2014 Transportation Alternatives grant, both from VTrans. The goal is to eventually connect Jericho Corners to MMU High School. Construction began on this project in 2015.



- Riverside VT Route 15 Pedestrian Crossing – This project was under design in 2015 for a pedestrian crossing signal across VT Route 15 to River Street and a striped pedestrian crossing at Dickinson Street. Construction is proposed for 2016.
- Jericho Corners Connection Project – This scoping study, funded by a 2014 VTrans Bicycle/Pedestrian grant award, began in the spring of 2015 and will evaluate bicycle/pedestrian facilities in Jericho Corners Village Center and the residential neighborhoods along Lee River Road. The Town received additional grant funding in 2015 for implementation of the chosen alternative in 2016.
- Riverside Sidewalks – Conceptual plans have been developed for sidewalks on the north and south sides of VT Route 15 from Palmer Lane in Riverside to the Underhill town line. Construction of the west side sidewalk from River Road to the Underhill town line was completed in summer 2013, while construction of the sidewalk on the east side of VT Route 15 has been deferred for a future project.
- Jericho Boardwalk – This proposed pedestrian boardwalk (bicyclists must dismount and walk) would be six-feet wide and would include two or more 12-foot wide observation decks, and would be constructed completely within the public right-of-way between Wilder Road and Varney Road in Jericho Center. The boardwalk would extend the full length of the wetland, and would include several measures to minimize potential impacts on wildlife. The results of the study were submitted to the Selectboard in December 2010 for their review/action.
- Jericho Center Pedestrian Crossing – This proposed crossing would be on Browns Trace in front of the Town Green and the Jericho Center Country Store. It will likely include a flashing beacon and striping on the road. Additional improvements like a pedestrian island might also be included. The Town received a grant in 2015 for construction for this project in 2016.
- Bike and Pedestrian Facility on VT Route 15 – The Town received a 2016 grant for a scoping study along VT Route 15 to assess options for bike and pedestrian facilities in the stretch between the Jericho Corners and Riverside. The preferred alternative chosen is a multi-use path along the south side of VT Route 15.

## **Proposed Bicycle Facilities**

The 2015 Bicycle and Pedestrian Master Plan recommends several additional specific improvements for on-road bicycle accommodations. On road bicycle accommodations are intended to provide bicyclists with adequate shoulder width on existing roads to travel more safely with vehicles. Table 9.3 shows the highest priority on-road bicycle accommodations; these would allow bicycles to safely travel between the three village centers and to serve the greatest density of residences and businesses as well as the lower priority bicycle improvements that will enable safe bicycle travel to areas outside of Jericho. As noted above, the Town should pursue widening where needed as road improvement projects are initiated.

Proposed Town on-road accommodations are envisioned as three-to-four-foot striped shoulders. In the absence of funds necessary for shoulder widening, short-term

incremental improvements can significantly improve bicycle safety by reallocating existing pavement width to provide as little as two feet of shoulder width to cyclists and pedestrians.

**Table 9.3 Priority and Desirable Bicycle Connections**

<b>Priority Roadway Segments</b>
Jericho Corners to Jericho Center via Lee River Road
Jericho Center to Riverside via Browns Trace
Riverside to Jericho Corners via VT 15
<b>Desirable Roadway Segments</b>
Jericho Corners to Essex via VT 15
Jericho Corners to VT 117 via Skunk Hollow Road
Jericho Center to VT 117 via Barber Farm Road
Access to the Richmond Park and Ride via VT 117 and Governor Peck Road
Jericho Center to Richmond via Browns Trace
Williston to Essex via VT 117

Source: 2015 Bicycle and Pedestrian Plan

## Proposed Pedestrian Facilities

While sidewalks and multi-use paths are found in many locations, additional pedestrian facilities should be considered to connect neighborhoods and fill in gaps in the existing sidewalk network. The 2015 Bicycle and Pedestrian Plan recommended that the Town install sidewalks or paths in each area when there are roadway or other improvements in the same area or when safety demands dictate it, such as if schoolchildren are present, if unsafe conditions currently exist, or to fill in gaps between existing sidewalks. Additionally, the 2015 Planning Commission survey showed residents are very supportive of improved pedestrian and bicycle connections. The 2019 Commercial District project identified a desire to utilize the railroad bed and the banks of the Browns River for a multi-use path that could ultimately connect Jericho Corners to Riverside along this route. The project also identified a priority for a multi-use path along VT Route 15 in the Commercial District. Additionally, taking a “complete streets” approach in the Commercial District, utilizing internal street designs that meet Town Road and Bridge Standards, and should provide adequate area for bicycling and walking. Table 9.4 below shows the town wide list of priority and desirable connections. Within each category there is no set order of priority.

Numerous subdivisions have been built in Jericho over the last several decades, but little work has been done to ensure connection between these neighborhoods. The Town should pursue connections where landowners are amenable or when the Town will have particular influence over a tract of land, for example when a subdivision is proposed. Additionally, the Town should pursue connections more aggressively to address safety concerns.

**Table 9.4 Priority and Desirable Pedestrian Sidewalk/Path Connections**

<b>Priority Projects</b>	
<b>Roadway Segment</b>	<b>Mode of Connection</b>
VT 15, south side, connecting Griswold Street to Raceway Road	Multiuse Path
Packard Road, connecting Starbird Road to VT 15	Sidewalk or path
Plains Road, connecting the Tillotson Drive to the new sidewalk on Browns Trace and Jericho Center	Sidewalk
Alpine Drive, connecting to Raceway Road and VT 15	Sidewalk
VT 15, southeast side, adjacent to the Riverside development.	Sidewalk
<b>Desirable Projects</b>	
<b>Roadway Segment</b>	<b>Mode of Connection</b>
Griswold St. to Twin Meadow Ln/Lafayette Dr.	Sidewalk
Snowflake Dr. to VT 15	Sidewalk or Path
Varney Rd to Jericho Center	Sidewalk or Path
Kettle Creek to Mobbs Farm	Multiuse Path
MMMU to VT 15	Sidewalk or Path
Orr Rd. to Lee River Road	Sidewalk
Skunk Hollow Rd to Saxon Hill (in Essex)	Multiuse Path
UVM/Mobbs Farm to Barber Farm	Multiuse Path
Snipe Island Rd. to Wolf Run	Multiuse Path
UVM Forest to Governor Peck Rd	Multiuse Path
River Rd. to Mills Riverside Park	Sidewalk or Path
Utilize the former Central Vermont Railway railroad bed, connecting Jericho Corners with Riverside	Multiuse Path

Source: 2015 Bicycle and Pedestrian Plan

## Other Considerations

Concerns have been expressed about the safety of bicyclists and pedestrians due to speeding traffic along many paved and gravel Town roads. Additional concerns have been raised about the safety of horse on Town roads. Some consideration for traffic calming may be appropriate, particularly where vehicle speeds have been noted as a concern. Measures that may be employed include:

1. Strategic/occasional use of radar speed trailers. Speed trailers, particularly when they are new, have been shown to have an effect on vehicle speeds. Having a Town-owned trailer that can be moved around would be a cost-effective way to addressing speeding concerns.
2. “Share the road” and bicycle warning signs can raise the awareness of drivers that other users might be present.
3. “Watch for pedestrians & cyclists” signs can be used at sight distance-constrained locations.



## GOALS, STRATEGIES, AND IMPLEMENTATION

### **Goal 9.1. Jericho's transportation network will be appropriately maintained, managed, and upgraded to accommodate new growth.**

Strategy 9.1.1: Plan for adequate use, upgrades, construction and routine maintenance of existing roadways and stormwater infrastructure.

Implementation 9.1.1.1. Maintain and update a schedule for capital expenditures related to the maintenance and upgrading of the roads and stormwater management infrastructure, based on the 2015 Transportation Study and in order to comply with the new state stormwater permit requirements, effective in 2018.

Implementation 9.1.1.2. Maintain and update a schedule of impact fees to mitigate the effect of new development on the cost of improving affected roads.

Strategy 9.1.2. Provide viable, safe, and pedestrian friendly intersections.

Implementation 9.1.2.1. Upgrade the VT Route 15/River Road intersection or redirect traffic as recommended in the 2015 Transportation Study.

Implementation 9.1.2.2. Evaluate different design alternatives to address projected poor LOS at the VT Route 15/Browns Trace and VT Route 15/Packard Road Intersections.

Implementation 9.1.2.3. Consider safety improvements to the Skunk Hollow/VT Route 117, Barber Farm/VT Route 117, and Browns Trace/Lee River Road intersections.

Implementation 9.1.2.4. Periodically evaluate LOS and safety at major intersections. Prioritize improvements based on safety rather than Level of Services. Service Levels lower than C can be acceptable in Village Centers when the delay provides for traffic calming and/or improves pedestrian safety or where upgrades would negatively impact the surrounding built or natural environment.

Implementation 9.1.2.5. Formulate an Official Map identifying right-of-way needs for future intersection improvements.

Strategy 9.1.3. Promote a network of interconnected roads and streets.

Implementation 9.1.3.1. Formulate an Official Map for a street and multi-modal network within and connecting the Village Center, Commercial and Village Districts.

Implementation 9.1.3.2. When feasible, require continuation of roads in new developments and subdivisions. Rights-of-way in new developments should be reserved for future extension/connection of dead-end roads. Dead-end

turn-arounds should be designed to allow for continuation of the road in future phases of development or when adjacent properties are developed.

Implementation 9.1.3.3. In general, the Town of Jericho should not accept additional dead-end roads as public roads. Only roads which contribute to a network of interconnected roads and streets should be accepted as public roads.

Implementation 9.1.3.4. Consider adding new streets, that comply with complete streets design, in the Commercial District to reduce congestion on VT Route 15, increase connectivity to Riverside Village Center, and increase development opportunities in the district.

Implementation 9.1.3.5. Consider reconfiguring the way Orr Road meets Brown's Trace to help reduce potential vehicle conflicts.

Implementation 9.2.3.6. Access management should be implemented for the Commercial District where new development will utilize existing streets or new internal streets within the District and limit curb cuts on VT Route 15.

Strategy 9.1.4. Maintain up-to-date data on Jericho's Transportation network.

Implementation 9.1.4.1. Every ten years, conduct traffic projections using similar methodology to the 2015 Transportation Study. Compare these projections against actual traffic counts.

**Goal 9.2. Provide facilities for alternative modes of transportation such as bicycling, walking, and car-pooling.**

Strategy 9.2.1. Develop a system of pedestrian and bike paths connecting key points throughout Jericho, such as the Village Centers and Schools.

Implementation 9.2.1.1. Include funds in the Capital Plan for shoulder widening on roadways proposed for on-road bicycle facilities in the 2015 Transportation Study. Priority will be given to roadways which connect Village Centers such as Lee River Road and Browns Trace. Shoulder widening should occur in conjunction with other planned roadway improvements.

Implementation 9.2.1.2. Work with VTrans to ensure that upgrades to VT Route 15 and VT Route 117 include creation of shoulder widths sufficient to accommodate a paved shoulder bicycle facility meeting the requirements of the Vermont Pedestrian and Bicycle Facility Planning and Design Manual.

Implementation 9.2.1.3. Whenever median lines are repainted, ensure that the fog lines receive similar treatment. Fog lines should be located to provide sufficient shoulder widths for bicycles and to encourage motor vehicle travel at safe speeds. Consider methods for keeping shoulders clear for cyclists such as a road sweeper.

Implementation 9.2.1.4. Identify and fill any gaps within the pedestrian infrastructure in each Village Center. In general, sidewalks should be

available on both sides of the main road through each Village Center (VT Route 15/Browns Trace) and on at least one side of other streets.

Implementation 9.2.1.5. Provide greenways, pedestrian/bike paths, or sidewalks when constructing new roads or when performing major upgrades such as paving or road realignment. These alternative transportation paths may be placed at a different location than the primary construction.

Implementation 9.2.1.6. Consider developing a shared use path that connects Riverside and Jericho Corners through the Commercial District along the Brown's River and the old railroad bed.

Strategy 9.2.2. Consider pedestrian and bicycle safety and access when reviewing new developments.

Implementation 9.2.2.1. Secure easements and rights-of-way for new pedestrian and bicycle facilities through the development review process, especially along roads in the Village Centers or proposed for on-road bicycle facilities, or where existing trails connecting important facilities or neighborhoods are present.

Implementation 9.2.2.2. Consider the implementation of impact fees for the development of pedestrian and bicycle facilities.

Implementation 9.2.2.3. Require that common land in subdivisions, public land, and open space be arranged to enhance interconnections and require public rights-of-way where appropriate.

Implementation 9.2.2.4. Develop and enforce standards that ensure that the layout of new developments is conducive to pedestrian access.

Implementation 9.2.2.5. Require the construction of sidewalks in new subdivisions and developments.

Implementation 9.2.2.6. New development, particularly in the Commercial District should take a complete streets approach, utilizing street designs that provide adequate area for bicycling and walking.

Strategy 9.2.3. Support alternatives to the single occupancy vehicle.

Implementation 9.2.3.1. Identify locations, including areas within the Commercial District, that could be utilized as a local park-and-ride, including existing establishments with excess overflow parking during weekdays that may serve as a leased local park-and-ride. Continue to work with the CCRPC to identify funding sources and mechanisms to support a local park-and-ride.

Implementation 9.2.3.2. Identify and work to eliminate barriers to the formation of informal park-and-ride arrangements between private parties, including but not limited to liability and maintenance/safety concerns.

Implementation 9.2.3.3. Continue to work with the GMT with the Jeffersonville Commuter bus and to enhance additional transit opportunities.

Implementation 9.2.3.4. Provide Jericho residents with information on existing state programs that support and facilitate carpooling.

Implementation 9.2.3.5. Encourage municipal and school employees to seek alternative means to commute to work, such as walking/bicycling, carpooling, or ridesharing.

Implementation 9.2.3.6. Work with major local and regional employers and businesses to facilitate carpooling, ridesharing, and or transit use among their employees and/or customers.

Implementation 9.2.3.7. Encourage school children to travel to school by use of the buses or walking/cycling. Educate parents as to the benefits and availability of these options.

**Goal 9.3. Design Jericho's roads to be sensitive to their natural and historical context and to promote the safety and livability of surrounding neighborhoods.**

Strategy 9.3.1. Standards for new roads will take into account aesthetic and economic values as well as the present and/or anticipated level of service.

Implementation 9.3.1.1. Amend the Public Works Specifications to encourage road designs that reflect the location, use, and context of the site. Include special standards for village streets and low volume rural roads. New roads shall comply with the standards for the appropriate designation.

Implementation 9.3.1.2. Narrow, whenever possible, the travel lanes of paved roadways in developed areas, providing larger shoulders for bicyclists or curbs and/or a green strip between roads and sidewalks.

Strategy 9.3.2. Ensure that upgrades to existing roads are compatible with the surrounding neighborhood and context of the road.

Implementation 9.3.2.1. Solicit public input including warned public hearings prior to undertaking significant road alterations.

Implementation 9.3.2.2. When reviewing possible road upgrades, including paving, the Selectboard shall consider impacts on (a) the safety of alternative transportation, including pedestrian and bicycle traffic, (b) the average speed of traffic, (c) the volume of through traffic (d) stormwater management, and (e) the aesthetics of the area.

Implementation 9.3.2.3. In general, upgrades to gravel roads shall consist of improvements to the road base rather than paving.

Implementation 9.3.2.4. Give due consideration to the impacts on and opinions of property owners, residents, and tenants on a road prior to undertaking major upgrades.

Implementation 9.3.2.5. Work with VTrans to mitigate impacts of increased commuter traffic on VT Route 15, and to implement measures to reduce residual vehicle noise, control vehicle speed, and improve safety for pedestrians and residents. Ensure that upgrades to VT Route 15 consider pedestrian safety and circulation, the mixed use character of the Jericho Corners and Riverside Village Centers, and the safety of residents living on the corridor.

Implementation 9.3.2.6. Investigate the benefits and costs of methods to increase local authority over management and upgrades to VT Route 15, such as assuming management of VT Route 15 as a Class I town Highway.

Strategy 9.3.3. Consider the environmental impacts of roadway construction and maintenance.

Implementation 9.3.3.1. Continue to work with organizations to reduce erosion and runoff from Jericho's roadways and to replace undersized bridges and culverts.

Implementation 9.3.3.2. Implement Low Impact and Green Site design development standards for erosion and stormwater control for use in road maintenance and construction.

Implementation 9.3.3.3. Investigate potential road salt alternatives. Consider safety and cost when evaluating potential alternatives.

Strategy 9.3.4. Use roadway design to encourage travel at safe speeds.

Implementation 9.3.4.1. Examine and implement strategies for road layout and design, roadside landscaping, and other traffic calming measures such as signage that encourage travel at safe speeds.

Implementation 9.3.4.2. Design and construct "village gateways" to calm traffic entering each Village Center.

Implementation 9.3.4.3. Consider implementing traffic calming measures such as radar speed feedback signs, "slow down" and "caution: pedestrian" signs, to help keep vehicle speeds down.

Strategy 9.3.5. Maintain and enhance the rural character of Jericho's roadways.

Implementation 9.3.5.1. Formulate a plan for the planting of trees in or along all rights-of-way both public and private. Establish a policy for the replacement of trees removed from the right-of-way through road maintenance. Do not remove trees within the right-of-way without contacting the Town Tree Warden and holding public meeting as required by law.

Implementation 9.3.5.2. Consider a scenic overlay along the VT Route 15 corridor to preserve the view of Mt. Mansfield and enhance the rural character of the area.



Implementation 9.3.5.3. Research, develop, and encourage alternate designs for bridges based on scale of use and aesthetics.

## **10. UTILITIES, FACILITIES AND SERVICES**

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### **WATER SUPPLY**

Jericho Corners and Riverside are both served by public water supplies. Riverside is served by the Jericho-Underhill Water District, which also provides water in Underhill. Jericho Corners is served by the Jericho Village Water District, which obtains water from the [Champlain Water District](#)<sup>36</sup> (CWD). The Jericho Village Water District waterlines extend down Packard Road to Mount Mansfield Union High School and then to the Ethan Allen Firing Range. Boundaries of these two public water service areas are shown on Map 12.

The availability of public water greatly enhances development opportunities in these two Village Centers. For one, public water alleviates the need for each property to provide its own water supply. In areas with public water, more area can be devoted to structures, septic fields, parking, and other infrastructure due to the lack of conflicting setbacks from private wells. This enables greater development densities and a more diverse range of uses. The availability of public water also greatly enhances fire protection.

The remainder of Jericho is served by either private or community wells. Unlike the other two Village Centers, Jericho Center is not served by a public water system. This reduces the potential for new, village scale development in this area. The close proximity of many existing structures in Jericho Center coupled with the lack of public water also raises concerns regarding fire protection. As noted above, the Champlain Valley Water District water lines extend to Mount Mansfield Union High School, which is located approximately one mile north of Jericho Center. These lines could be expanded to Jericho Center in the future. As an alternative, some properties could be connected to a community system serving this area.

The 2019 Commercial District study discussed the benefits of extending water infrastructure within the Commercial District, recognizing its value to future businesses as well as for fire safety purposes. Based on analysis in that study, the most viable solution is to extend water service to the Commercial District by connecting to the Jericho Village Water District's system.

### **WASTEWATER/SEWAGE DISPOSAL**

No central wastewater disposal system is available to Jericho residents. Private systems, including both community systems serving major subdivisions and individual dwelling systems, process all of the sewage in Jericho. Soil Septic Suitability is depicted on Map 13. Soils in Jericho Corners, Riverside and the Commercial District are generally favorable for onsite sewage disposal. These favorable soils, coupled with new technologies, increased allowed density in the Jericho Land Use and Development Regulations, and regulatory

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<sup>36</sup> <https://www.champlainwater.org/>

changes discussed below will allow more dense development to occur in these areas.

While some soils favorable to onsite sewage disposal exist in Jericho Center, the presence of neighboring wells greatly reduces their availability for this function. It is likely that some type of community solution will be necessary for the densities and uses envisioned for the other Village Centers to occur in Jericho Center on a village wide scale.

The development of community wastewater systems could also serve to allow more dense development in the Commercial District and Jericho Center.

Wastewater regulations and new wastewater treatment technology may allow additional development in some areas. “Pretreatment technologies” can be used on poor soils and in areas with high groundwater tables that are otherwise undevelopable. Even in areas with soils well suited for onsite wastewater treatment, pretreatment can be used to increase wastewater flows or reduce the size of the wastewater disposal field. In a similar vein, the new state wastewater regulations eliminated the requirement for a replacement area for mound systems and, in some cases reduced the size of the replacement area required for conventional systems. Together, these changes will likely contribute to increased development density, particularly in Jericho’s Village Centers and the Commercial District. These changes may also have the effect of allowing development in rural areas that were previously thought undevelopable.

## **GAS, ELECTRICITY, CABLE TV, AND TELECOMMUNICATION SERVICES**

Electric power to Jericho is provided by the Green Mountain Power Corporation and the Vermont Electric Cooperative. Three phased power is currently available within Jericho Corners and Riverside, but not available in Jericho Center or in some parts of the Commercial District. Extension of three phased power to Jericho Center and throughout the Commercial District would increase these areas’ ability to support mixed use development. Both cable and wireless TV services are offered by private companies, one of which maintains facilities on the town land at Mobbs Farm.

While high-speed internet connection is currently available in parts of Jericho, other parts of town have unreliable or inadequate high-speed internet.

Although utilities are buried in new developments, there are still many lines along Jericho’s roads and a number of major transmission lines running through the woods and fields. Although provision for these facilities is vital for a safe and productive society, the poles, wires, and the destruction of roadside vegetation are among the most unfortunate impacts to the landscape. Over time, existing lines should be buried and new lines shall be placed underground unless there are clear environmental constraints to doing so.

In 2007, Vermont Gas began expanding service into Jericho. These gas lines primarily serve VT Route 15, the Village Centers of Jericho Corners and Riverside and surrounding residential neighborhoods. This added piece of infrastructure enhances the viability of these Village

Centers. Natural gas is not currently available in Jericho Center and portions of the Commercial District. While the 2019 Commercial District study identified that some residents believed that extending the natural gas line between the Browns River and Brown's Trace and into the Commercial District would support economic development, it is important to consider how other forms of energy, including renewables, can support this goal.

The Town adopted Telecommunication Regulations in 2003 to regulate Telecommunication facilities, but local control is limited by federal and state law (30 V.S.A. §248). Additionally, renewable energy projects that are tied to the electric grid will be regulated under the net metering provisions of the Vermont Public Service Board. Given that towers by necessity often must be placed on undeveloped ridgelines, the siting of new towers and associated facilities must take into account factors such as visual impacts, wildlife habitat, erosion, and potential impacts on headwaters. Collocation of new antennae on existing towers shall be preferred over the construction of new towers whenever feasible.

## **FIRE PROTECTION**

Fire protection is provided by the Underhill-Jericho Fire Department, Inc. (UJFD), a combination fire department that is primarily comprised of volunteers. The Department serves Jericho and Underhill and is staffed by two full-time firefighters/EMT's (40 hours per week) and approximately 40 volunteers, serving as firefighters, fire police, dispatcher, auxiliary and specialists, all of whom live in the service area. The UJFD operates two stations with the headquarters located at 420 Vermont VT Route 15 in Underhill Flats. The Underhill station houses one engine, one engine/tanker, one heavy rescue, one water supply pumper, one utility/brush truck with gator, and a first response/command vehicle. The Jericho substation is located at 288 Browns Trace and houses one engine and one tanker. The Department has mutual aid agreements with surrounding communities to provide additional and specialized equipment when needed.

Emergency 911 calls are answered by the Vermont State Police in Williston. Each department member carries a radio and is alerted to emergency calls dispatched by the Vermont State Police. Any members who are available respond to the alarm.

The department is financed by a contract with the two towns, with Jericho currently assuming 60% of the total annual budget. An annual budget is prepared by the department and reviewed by the both Selectboards. The budget includes a capital plan for the regular replacement of equipment. Fire department members are paid an hourly stipend for emergency calls and weekly training.

The fire department faces a number of challenges in providing adequate service to a growing and changing community. Three primary considerations are the availability of firefighters, availability of water, and access to the structure or area. At one time most members worked in the service area, but now all but a few members work outside, making it difficult for the department to respond to alarms occurring on weekdays, hence the need for the two full time positions. The Fire Department faces a growing challenge of finding

qualified people who are willing to make the commitment of time necessary to maintain a volunteer fire department and of retaining them in membership beyond the first few years. The number of alarms has increased to more than 370 emergency calls annually.

In areas served by public water, water supply for fire protection is provided through pressurized hydrants. In areas not served by public water (which is the majority of the service area), the UJFD relies on a “tanker shuttle” or “large diameter hose lay” to provide water for fire suppression. These techniques remove firefighters from the fire ground, requiring more manpower to control fires. Alternative water sources such as cisterns or ponds connected to a dry hydrant can alleviate some of these pressures and increase the likelihood of successfully extinguishing a fire in a timely manner.

The Insurance Services Office (ISO) rates communities based on their ability to suppress fire through the Public Protection Classification program (PPC). Communities are rated on a scale of 1 to 10, with 1 representing superior fire protection and 10 essentially meaning an area has no fire protection. This rating is based on equipment and personnel (50%), water supply (40%), and alarm response rate (10%). Jericho is rated Class 4 in areas served by public water and Class 6 in all other areas. The PPC provides an objective, countrywide standard that helps in planning and budgeting for facilities, equipment, and training. The PPC is also used by insurance companies to set fire insurance premiums, with lower ratings generally translating into lower premiums.

## **POLICE**

Jericho currently contracts with the State and the Chittenden County Sheriff for local law enforcement services, including speed control. While the Town supports the continuation of this arrangement, a study commissioned by the Vermont State Legislature recently recommended that the State Police cease contracting with Towns for Law enforcement. Other options would include a new local or regional police force.

## **HEALTH, RESCUE, AND SOCIAL SERVICES**

Jericho’s location on VT Route 15 has made it an attractive location for health care practitioners looking to expand beyond the immediate Burlington area. Healthcare practitioners in town include a dentist office, two chiropractors, and physical therapist.

The greater Burlington area offers a full array of practitioners representing virtually all specialties, so that Jericho residents have ready access to health care. University of Vermont Medical Center facilities in Burlington and Colchester offer inpatient, emergency room, and immediate care services.

The Visiting Nurse Association, Inc. provides home care, hospice, maternal and child health, and homemaker services to Jericho residents in their homes. Reimbursement for these services by health insurance payments and patient fees is supplemented by an annual appropriation of town funds.

Social service, counseling, transportation and mental health services are available to Jericho residents through a wide variety of public, voluntary, and proprietary organizations and services located throughout Chittenden County but concentrated in Burlington. Some of these receive an annual appropriation of town funds. A full list is available in the Annual Report.

Ambulance service for most of Jericho is provided by Essex Rescue, Richmond Rescue, and St Michael's Rescue. These organizations are primarily staffed by volunteers, some of whom live in Jericho. Most members are qualified Emergency Medical Technicians and all receive ongoing training through area hospitals and the state Emergency Medical Services. The Underhill Jericho Fire Department also provides first response services for accidents and situation in Jericho.

Several local organizations are offering charitable services. These include the Jericho-Underhill Ecumenical Ministry, a cooperative ministry of local churches that sponsors a local food shelf, and Meals on Wheels, which provides meals to persons who are house-bound or invalid.

## **HAZARD MITIGATION PLAN**

As noted in Chapter 4, Natural Resources, the Town participates in the National Flood Insurance Program, has an established Local Hazard Mitigation Plan (approved by FEMA 8/8/11 valid for 5 years), and has a [Town Emergency Operations Plan](#)<sup>37</sup> that provides a directive for emergency preparedness and response planning. However, due to development predating the regulations there are approximately 16 residences and 2 commercial/industrial structures located within the 100-year floodplain, according to an analysis performed for the [2011 Town of Jericho All-Hazards Mitigation Plan](#)<sup>38</sup>, thereby making local emergency preparedness all the more important.

## **SOLID AND HAZARDOUS WASTE DISPOSAL**

The Jericho town landfill has been closed since the early 1990's. The Town is a member of the Chittenden County Solid Waste District which operates a landfill and recycling center in Williston. It also operates several drop-off sites for waste and recyclables, including sites in Essex and Richmond. The Waste District also operates a mobile unit for the drop-off of certain hazardous waste materials. Many town residents, though, employ private haulers to pick up their trash and recyclables. A number of private haulers provide this service. There have been discussions about having the Town contract with haulers to reduce wear and tear on town roads.

The Vermont Legislature unanimously passed the Universal Recycling (UR) law in 2012, which bans disposal of recyclables (metal, glass, plastics #1 & #2, and paper/cardboard) by

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<sup>37</sup> <https://jerichovt.org/town-documents>

<sup>38</sup> <https://jerichovt.org/town-documents>

July 1, 2015; leaf and yard debris and clean wood by July 1, 2016; and food scraps by July 1, 2020. It also requires solid waste haulers and facilities to collect these same materials.

## **LIBRARIES**

Jericho is served by two libraries. The Deborah Rawson Memorial Library is located in Riverside and funded by both Jericho and Underhill. The Jericho Town Library is located on the Jericho Center Green. At the time of the writing of the plan, the Town Library was developing a plan for a much needed expansion and renovation, to keep it as a viable community gather place with up to date amenities, while at the same time preserving its historic features.

The Deborah Rawson Memorial Library is operated under the Jericho-Underhill Library District by a Trustee Board comprised of residents of both towns. Each library offers a wide ranging collection, special programs on a variety of topics for all ages, computers for patrons' use, and outreach programs for community needs. Both libraries are located within Jericho's Village Centers.

The locations of both libraries are depicted on Map 12

## **RECREATION AND OPEN SPACE**

Recreation and open space land, which is sometimes referred to as "Green Infrastructure," is an important component of a community.

Each of Jericho's three Village Centers is served by a system of green infrastructure. Jericho Center Common is the focal point of Jericho Center. Many of the community institutions in Jericho Center are located around the Common. The Common consists of grassy area interspersed with shade trees, picnic tables, and benches and serves as a community gathering spot. An informal network of trails also connects many properties in Jericho Center.

In Jericho Corners, the Winooski Valley Park District owns 12 acres of land behind the Old Mill. This land, known as **Old Mill Park**, provides access to the Browns River for fishing and swimming, picnic areas and a network of nature and hiking trails. The former Water District lands in Jericho Corners are also sometimes used for recreation, though their uses are not clearly defined and could be expanded. An informal network of footpaths connects many neighborhoods within Jericho Corners. Many mountain bike trails are scattered throughout Jericho.

Riverside contains the 200 + acre **Mills Riverside Park** managed by the Jericho Underhill Park District. The Park includes a pavilion, playing fields, hiking trails, open areas, the banks of the Browns River, a sledding hill as well as forested hillside. During the summer months, Mills Riverside Park also hosts the Jericho Farmers Market and a concert series. The Jericho/Underhill Common located on Park Street provides a small green focal point for a

busy intersection in this village.

**Mobbs Farm**, a 278 acre Town owned property located on Browns Trace, is a significant piece of green infrastructure located close to Jericho Center but outside the Village Centers boundary. The Mobbs Farm Committee maintains the property according to the Town's adopted Management Plan

**Kikas Valley Farm** is 280 acres of working farmland and forest which the Jericho Underhill Land Trust acquired in 2005. The land includes trails for walking and cross-country skiing, as well as a portion of the Vermont Association of Snow Travelers (VAST) trails.

**Barber Farm** is a 158-acre parcel which was conserved by the Vermont Land Trust. The majority of the land is being farmed but there is a public access through a short trail, which connects the Kikas Valley Farm to the Barber Farm. This trail potentially could be extended with the consent of another landowner to reach Barber Farm Road.

**Wolfrun Natural Area includes 189 acres in Jericho acquired by the** Jericho Underhill Land Trust in 2003. The land is home to black bear, moose, bobcat, and many other wildlife species and includes some walking trails. In 2009, the land trust acquired an additional 123 acre parcel called the Gateway (located in the town of Bolton) which provides better access to Wolfrun.

A private landowner has given the Town an easement on land along the Winooski River with the goal of creating a public trail. The Jericho Trails Committee is helping make this a reality.

The **UVM Jericho Research Forest** is open to public use for hiking, horseback riding, cross-country skiing, and approved research and educational activities. All-terrain vehicles and mountain bikes are not allowed, but snowmobiles are permitted. VAST maintains an extensive set of snowmobile trails. There are also two stream accesses, the State Fish and Wildlife access to Mill Brook on Nashville Road and the canoe launch on VT Route 117 near Skunk Hollow Road, which is located on private property but made available for public use. Open space lands associated with residential subdivisions are also scattered throughout Jericho. However, these areas tend to primarily serve the residents of the subdivision and are not generally open to the wider public.

Numerous community recreational activities include aerobics lessons, Jericho Youth League baseball and softball, gymnastics programs, several ski programs for children and adults, soccer, the Jericho Recreation summer program for children K-8, swimming lessons, tennis lessons, track and field training, volleyball leagues, girl and boy scouts, 4-H clubs, art classes, karate and tae-kwon-do classes, yoga, story hours and book discussion groups. The Community Center in Jericho, located in Jericho Center, is also available to all members of the community for a wide variety of activities.

The five school facilities in the town all offer basic services to the community, including parking areas, playing fields, a gymnasium and auditorium, and kitchen/cafeteria facilities. In



addition, Mount Mansfield Union High School offers cross-country running trails, a circuit training course, and a river access. Major upgrades to the Mount Mansfield Union athletic fields were recently completed.

The Town currently employs a part-time summer recreation coordinator to run the summer recreation program. The Selectboard formed a Recreation Committee in 2015 to better coordinate recreational needs and opportunities in the Town. The Town will undertake a Recreation Needs Assessment in 2015-2016 to better assess the recreational opportunities and needs in the Town.

Public parks in Jericho are depicted on Map 12.

## **CEMETERIES**

Jericho has three historic cemeteries which it maintains, Castle, Lowrey, and the Jericho Center Cemetery. The Jericho Cemetery Commission was organized by the Selectboard in 2014 with the responsibility for the care and maintenance of the Town Cemeteries.

The **Castle Cemetery** is located next to the Good Shepherd Lutheran Church on VT Route 15, and contains the grave sites of Dezier (Hawley) Castle whose death was the first in Jericho (1786), David Castle, Jericho's first selectman (in 1776) and his wife Phebe Sanford, and several members of the Brown family, Jericho's first settlers. Many of the grave markings in the Castle Cemetery are in need of repair and/or restoration.

The **Lowery Cemetery**, located on Raceway Road, was given by the Lowery family in 1801. Together with Castle and Brown families, the Lowerys were among Jericho's earliest settlers.

The **Jericho Center Cemetery** is partly owned by the Town and partly privately owned. This cemetery contains the final resting place of Wilson "Snowflake" Bentley.

While Jericho Center Cemetery recently expanded to include an adjoining three acres, there is limited cemetery space in Jericho. As the Town's population ages there may be an increased need for this resource. In some areas, this may be an appropriate use of PUD Open Space that does not have high natural resource or recreation value, provided appropriate agreements can be reached by the applicant/homeowners association and the Selectboard.

A private Cemetery, the Pleasant View Cemetery, located in Jericho Corners, is operated by the Jericho Cemetery Association; in it are buried members of many families prominent in Jericho's past, among them Day, Galusha, Howe, Whitcomb, Williams and Wilbur.

Cemeteries in Jericho are depicted on Map 12.

## TOWN GOVERNMENT

Town political and governmental functions are carried out by a team of elected and appointed Jericho residents supported by a paid staff.

### Elected

The three elected members of the **Selectboard** are responsible for overall town operations. They are elected at Town meeting for three year terms. In 2014 a ballot item failed to increase the membership from three to five members.

The **Town Clerk** provides many services such as the issuance of Dog Licenses, Marriage Licenses, filing Vital Records including Birth, Death, and Marriage Certificates, recording real estate transactions, processing Motor Vehicle renewals, preserving all documents for the Town, and providing Notary Public services. This position is an elected position serving a 1 year term.

### Appointed

The **Planning Commission** is a 7-member board primarily responsible for updating the Town Plan every 5 years and updating and revising the Land Use and Development Regulations. These positions are appointed by the Selectboard to 3-year terms.

The **Development Review Board** is a 5-member board with 3 additional alternate positions. It is primarily responsible for reviewing development proposals, which include conditional uses, site plans, subdivisions, appeals and variances. These positions are appointed by the Selectboard to 3-year terms.

The **Conservation Commission** is a 9-member board, under the direction of the Selectboard. They are available for conducting studies, applying for grants, and providing input for the various Boards in regards to the natural resources within Jericho. These positions are appointed by the Selectboard to 3-year terms.

The **Trails Committee** is a 7-member board that was established as an advisory committee to help maintain existing non-motorized public trails and pathways and to educate the public on their use, as well as to identify and assist in creating new public trails and pathways. Members are appointed by the Selectboard for 3-year terms.

The **Energy Task Force** is a 9 member board formed by the Selectboard to help promote energy awareness and efficiency in Jericho. Key areas of focus are energy efficiency, transportation, food production and renewable energy.

The **Mobbs Farm Committee** is tasked to manage and oversee maintenance of the Town's 278-acre Mobbs property in Jericho. The Committee interfaces with the public and the Jericho Selectboard on all management activities.

The 3-member **Jericho Cemetery Commission** was formed by the Selectboard in 2014 with the responsibility of caring for and maintaining the Town cemeteries.

The 7-9 member **Recreation Commission** was formed by the Selectboard in August 2015 with the purpose of coordinating the recreational opportunities in town.

The **Animal Control Officer** is the contact for all issues related to domestic/wild animals. This position will assist with lost/found animals, unlicensed dogs, some wild animal concerns and animals-at-large.

**Town Health Officer** is appointed by the Selectboard and is responsible for all public health issues in town including enforcing the rental housing code and any animal bites.

The **Tree Warden** provides assistance to the Selectboard in determining the health of trees and identifying potentially hazardous trees within the public right-of-way.

The **Fire Warden** is appointed by the state, with the approval of the Selectboard, to have jurisdiction over wildland fire suppression and activities in town. In Jericho, the Fire Warden has given designation to the Jericho Underhill Fire Department to engage in fire suppression.

Several arcane appointed positions include the **Fence Viewers, Weigher of Coal and Inspector of Lumber and Shingles**. These positions are largely ceremonial in nature and are a memorial of Jericho's past.

## **Hired**

The **Town Administrator** appointed by the Selectboard is responsible for the day-to-day general administration issues, not covered by one of the other departments. This position currently has a full-time administrative assistant.

The **Planning and Zoning Office** provides support to the Planning Commission and Development Review Board. Duties include preparation of Town Plans and Land Use Regulations; oversight of planning studies; review of subdivision, conditional use, site plan and other development applications; and issuance of building permits and certificates of occupancy. Currently the office is staffed by a full time **Town Planner** and part time **Zoning Administrator**.

The **Listers Office** provides and manages property assessment information. Annual inspections are conducted on properties where improvements have been made, and any town wide reappraisals are managed out of this office. Most questions regarding the value of one's property can be answered here. The three lister positions are appointed by the Selectboard for a 3-year term. The **Assessor** position is a contract position approved by the Selectboard.

A part-time **Assistant Town Clerk** assists the elected Town Clerk. A part-time **Financial Coordinator** is responsible for the daily management of our accounts payable and payroll issues.

The **Treasurer** maintains oversight of all accounts and investments. The Treasurer also collects tax payments two times a year and deals with resulting delinquent tax matters.

The **Summer Recreation Director** is responsible for overall administration and management of the 6-week children's program and is supported by two seasonal Assistant Directors and a number of counselors. Outside of the actual program dates, the Summer Recreation Director has limited office hours.

Most Town government activity takes place at the Jericho Town Hall, a former schoolhouse on VT Route 15 in Jericho Corners, originally erected in 1893. The Town Hall includes offices for the Town Clerk, Treasurer, Listers, Town Planner, Zoning Administrator and storage for maps and records. It provides space for meetings of Town officers and boards. In 2008, the Town completed a major renovation of the Town Hall, which completely reconstructed the interior of the building and resulted in all three levels of the building being available for public use.

## **GOALS, STRATEGIES AND IMPLEMENTATION**

**Goal 10.1. Jericho will maintain a high quality level of services and facilities and provide for new or expanded public facilities and services that support the goals of this Plan, such as compact, mixed use development in the Village Centers and secondarily in the Commercial District.**

Strategy 10.1.1. Ensure that new users and new development contribute their proportion of the costs for infrastructure improvement and maintenance.

Implementation 10.1.1.1. Maintain and update a schedule for capital expenditures related to the maintenance and upgrading of the services described within this section of the Plan.

Implementation 10.1.1.2. Maintain and update a schedule of impact fees to mitigate the effect of new development on the cost of improving affected utilities, facilities, and services.

Strategy 10.1.2. Provide for an adequate and safe supply of water for present and future Jericho residents and ensure the adequate and safe disposal of wastewater.

Implementation 10.1.2.1. Encourage appropriate mixed use development within areas currently served by public water.

- Implementation 10.1.2.2. Evaluate expansion opportunities for Champlain Water District, particularly to include Jericho Center and the Commercial District. Investigate potential costs and funding options for that expansion.
- Implementation 10.1.2.3. Investigate methods for the protection of the potability and availability of water for private wells, such as the development of a Water Resources Plan as described in the Natural Resources Section of this Plan.
- Implementation 10.1.2.4. Keep current on emerging technologies for sewage disposal and their impact on the goals of this Plan.
- Implementation 10.1.2.5. Investigate the feasibility of a community wastewater system serving Jericho Center and the Commercial District. Investigate potential costs and potential funding options for that expansion.
- Strategy 10.1.3. Provide for adequate power and communications services while maintaining the attractiveness of roadsides, hilltops and the landscape generally.
- Implementation 10.1.3.1. Identify areas which would be adversely affected by the location of telecommunications towers.
- Implementation 10.1.3.2. Require that all new and relocated utilities be located underground and pursue opportunities to bury existing above ground utilities.
- Implementation 10.1.3.3. Develop a plan to progressively reduce the number of overhead power and communications lines with a goal of complete elimination.
- Strategy 10.1.4. Provide Jericho residents with adequate fire protection, police, and emergency medical services.
- Implementation 10.1.4.1. Review and consider the Fire Department's assessment of its ability to provide adequate protection in the approval of future developments.
- Implementation 10.1.4.2. Continue Fire Department review of site plans for access and provide recommendations during the review of all proposals for new development.
- Implementation 10.1.4.3. Evaluate the adequacy of the Public Works Specifications for driveways to new home sites against the Fire Department's recommendations for access.

Implementation 10.1.4.4. Identify areas which lack adequate water supply for fire protection and develop plans to improve the water supply in rural areas. Require new developments to provide facilities such as fire ponds, cisterns and/or hydrants in accordance with this Plan.

Implementation 10.1.4.5. Include standards for dry hydrants, fire ponds and cisterns in the Public Works Standards.

Implementation 10.1.4.6. Work to improve the Town's ISO PPC rating in areas not served by public water through improved emergency response planning, equipment and water supply upgrades and better training/documentation.

Implementation 10.1.4.7. Maintain or improve the Town's current arrangement with the State Police and County Sheriff and consider alternatives to the state police, such as a local or regional police force.

Implementation 10.1.4.8. Provide informational resources to Jericho residents interested in forming Neighborhood Watches.

Implementation 10.1.4.9. Review and strengthen arrangements with area rescue squads.

Strategy 10.1.5. Provide environmentally and economically sound systems for managing the disposal of solid and hazardous waste. Reduce the volume of material entering the waste stream.

Implementation 10.1.5.1. Maintain membership in the Chittenden Solid Waste District.

Implementation 10.1.5.2. Consider development of a town-wide contract for trash/recycling pick up.

Implementation 10.1.5.3. Retain regulations for the management and disposal of hazardous waste materials.

Implementation 10.1.5.4. Support waste reduction and recycling efforts and provide residents with educational materials on waste reduction methods and resources.

Implementation 10.1.5.5. Promote the use of drop off centers and encourage all town residents to recycle materials as specified by the solid waste district.

Implementation 10.1.5.6. Implement recycling, composting, and other solid waste reducing measures in all municipal and school buildings.

- Implementation 10.1.5.7. Consider the implementation of a municipally operated curbside composting service and offering other composting services.
- Implementation 10.1.5.8. Purchase high post-consumer recycled content and non-bleached brands.
- Implementation 10.1.5.9. Encourage composting by individual households, condo associations, neighborhoods and businesses.
- Implementation 10.1.5.10. Encourage research into communal wastewater systems in the village centers.
- Strategy 10.1.6. Provide for adequate “Green Infrastructure” such as open space, trails, recreational facilities and park land.
  - Implementation 10.1.6.1. Investigate ways to encourage public use and available activities in existing parks such as Mills Riverside Park, Old Mill Park, Mobbs Farm and Kikas Valley Farm.
  - Implementation 10.1.6.2. Evaluate potential recreational uses for the Village Water District parcels located in Jericho Corners.
  - Implementation 10.1.6.3. Use town resources and development incentives to obtain easements and/or parcels contiguous to existing open spaces and/or greenways to connect natural areas and to protect outstanding water features. Develop walking/hiking trails and bike paths through these connected open spaces.
  - Implementation 10.1.6.4. Evaluate the immediate and future need for community and neighborhood parks. Investigate opportunities for creating new parks of various size and type throughout the town.
  - Implementation 10.1.6.5. Work with other community groups to implement the Open Space Plan, to increase the number of places and facilities available in town for recreational use and open space.
  - Implementation 10.1.6.6. Formulate an Official Map identifying potential locations for new parks, trails, and other recreation facilities.
- Strategy 10.1.7. Maintain and improve important community buildings located within Jericho.
  - Implementation 10.1.7.1. Establish a plan for capital expenditures to improve the maintenance and use of space in municipal buildings such as the Jericho Town Hall, Town Library and Highway Garage.

Implementation 10.1.7.2. Locate future public and community buildings within the Village Centers to enhance and stimulate the activities occurring there.

Strategy 10.1.8. Provide for adequate cemetery facilities in Jericho.

Implementation 10.1.8.1. Town administrative staff and funds will be made available to provide mapping, planning, historical research support and land space design for future growth.

Implementation 10.1.8.2. Maintain the grounds and fencing of all public cemeteries in Jericho.

Implementation 10.1.8.3. Restore and repair grave markings in the Castle Cemetery.

**Goal 10.2. Governmental functions are open and easily accessible to Jericho Residents.**

Strategy 10.2.1. Foster the informed participation of Town residents through additional methods of communication.

Implementation 10.2.1.1. Utilize online methods of communication such as email lists, Front Porch Forum, Two Towns Online and the Municipal Website to inform residents of official meetings and events.

Implementation 10.2.1.2. Investigate the creation of a Town Newsletter or blog.

Implementation 10.2.1.3. Have Town staff contribute to the Mountain Gazette.

Implementation 10.2.1.4. Work with Mount Mansfield Cable Television for taping of Town meetings.

Strategy 10.2.2. Seek creative means of increased participation in Town Government.

Implementation 10.2.2.1. Provide opportunities for citizens to directly participate in the organization and implementation of the special projects noted in this Plan.

Implementation 10.2.2.2. Enlist the aid of volunteer, civic and youth organizations, such as the Lions Club, 4-H, and the Girl Scouts and Boy Scouts in implementing the special projects noted in this Plan.

Strategy 10.2.3. Increase coordination and cooperation among the various groups and organizations serving Jericho residents.

Implementation 10.2.3.1. Conduct periodic joint meetings of various Town boards and committees.



## 11. ENERGY

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In an effort to become more sustainable and resilient in response to a changing global climate, The State of Vermont has adopted a [Comprehensive Energy Plan](#)<sup>39</sup> (CEP) that sets ambitious statewide energy goals:

- To reduce total energy consumption per capita by 15% by 2025 and by more than 33% by 2050;
- To obtain 25% of remaining energy needs across all sectors (transportation, heating, electricity) from renewable sources by 2025, 40% by 2035, and 90% by 2050;
- To weatherize 25% of homes by 2020
- To reduce greenhouse gases by 50% from 1990 levels by 2028 and 75% by 2050

The Town of Jericho has identified goals and strategies to contribute to these State's goals. Jericho's Enhanced Energy Plan describes its existing energy infrastructure, identifies specific targets for total energy use reduction and renewable energy generation, articulates strategies for meeting these targets, and maps the most suitable areas for renewable energy generation. This plan is in alignment with the Chittenden Regional Planning Commission ECOS plan (2018) and uses data from the Long-range Energy Alternative Planning (LEAP) analysis completed by the Vermont Energy Investment Corporation.

This plan addresses strategies for energy management across all end uses in Vermont, including residential uses (28% of all energy used), commercial (19%), industrial (14%) and transportation (39%) (US Energy Information Administration State Profile, 2016). To meet the state's goals, energy use in all of these sectors must be transformed. A swift adoption of renewable technologies and increased electric efficiency will be necessary. The strategies described in this plan will lead the town towards these goals.

### CURRENT ENERGY UTILITY INFRASTRUCTURE

#### Electricity Distribution and Transmission

Two electric utilities provide grid service to Jericho consumers:

- Green Mountain Power (GMP) serves approximately 1500 customers in a wide strip north and south of VT Route 15, as well as most of the southwest corner of the town. GMP took over the territory parallel to VT Route 15 when it acquired Central Vermont Public Service.
- Vermont Electric Cooperative (VEC) serves approximately 570 customers in the southeast corner of Jericho, including much of Jericho Center, as well as the far northern and western edges of the town.

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<sup>39</sup> [https://publicservice.vermont.gov/publications-resources/publications/energy\\_plan](https://publicservice.vermont.gov/publications-resources/publications/energy_plan)

Map 12 in the appendix shows the GMP and VEC service areas.

Jericho's electric utility service territories grew organically from Vermont Electric Cooperative's original mandate as part of the Rural Electrification Act (around 1938) to provide electric service to unserved areas of the state. The Public Service Board (now the Public Utilities Commission) later formalized boundaries to reduce redundant utility infrastructure. Owing to this rather unusual history, utility service territories seldom follow neat geographic or political boundaries. In a few locations in Jericho, both utility companies provide service on the same road. It can be confusing and aggravating for customers of one utility who have lost power to see that neighbors served by the other utility still have it.

GMP's distribution system originates from a substation on Route 15 near the Jericho/Underhill border, served by a sub-transmission line from Fairfax. A three-phase distribution line runs west along Route 15 to the Essex town line, terminating at a Champlain Water District pumping station on the Essex side. Three-phase service also extends south along Browns Trace to a metering point about midway between Route 15 and Packard Road. All other GMP service in Jericho is single-phase, mostly branching off the 3-phase line. Service in the far southern portions of Jericho is fed from lines along Route 117 between Richmond and Williston. See the map of GMP and VEC's Jericho distribution facilities on Map 17 in Appendix A.

The three-phase distribution line along VT Route 15 interrupts the scenic view of Mount Mansfield, a view that helps make Jericho an attractive place to live. Relocating the line underground would restore the uninterrupted view of the mountain, reduce the hazard posed by utility poles too close to the highway, improve electrical reliability and provide a right-of-way for a sidewalk from Underhill Flats to Jericho Corners.

Vermont Electric Cooperative provides three-phase service from a metering point on Browns Trace southward to Mt Mansfield Union High School and the Army National Guard at Ethan Allen Road. Single phases branch out from this line south along Browns Trace and west along Lee River and Packard Roads. VEC's single-phase service in the northern (Cilley Hill) and western (Skunk Hollow) portions of Jericho originates from a subtransmission line between Essex and Westford.

VEC's pole lines are generally constructed to follow the shortest straight-line route. The lines are often in the woods where damage is likely and access is difficult. In contrast, GMP's lines mostly follow public roads. The difference in construction practices results in a significant difference in reliability as illustrated by actual outage data provided by both utilities, as shown in Table 11.1.

**Table 11.1 Utility Outage Data**

	VEC			GMP		
Year	cstmrs	total outage hours	avg outage hours	cstmrs	total outage hours	avg outage hours
2010	554	37648	67.96	1692	41	0.02
2011	560	9623.7	17.19	1691	106.4	0.06
2012	570	8436.5	14.80	1677	105	0.06
2013	571	17693.2	30.99	1667	363.3	0.22

Source: VEC and GMP

These statistics suggest that any consumer within VEC’s Jericho service territory should consider installing a backup generator or a battery system. In-home battery storage systems can be leased from Green Mountain Power, but there is currently a waiting list for the program and purchasing the systems can be prohibitively expensive. This may change over time, making technology more accessible. VEC doesn’t currently offer a battery storage system to offer VEC rate payers at the time of writing of this plan.

## Electricity Generation

Private solar (photovoltaic or PV) collectors and solar hot water heaters are becoming popular in Jericho and Vermont as a whole. According to the State Department of Public Service and the Vermont Community Energy Dashboard, 264 solar arrays have been permitted in Jericho as of May 2019, as shown in Table 11.2. As of this writing, the Town of Jericho is pursuing a 1.6 MW solar array on the former landfill at Mobbs Farm.

**Table 11.2 Existing Renewable Electricity Generation in Jericho**

	Sites	Power (MW)	Energy (MWh)
Solar	264	2.8	3,434
Wind	0	0	0
Hydroelectric	0	0	0
Other	0	0	0
Total	264	2.8	3,434

Source: Community Energy Dashboard, May 2019

Innovative financing plans offered by several companies have reduced the upfront cost of solar PV and water heating systems. Favorable power purchase terms offered by local utilities (so-called “net metering” arrangements) have made these investments attractive over the long term. As a result, individual PV systems have been installed at many locations in Jericho. Browns River Middle School now uses solar PV lighting in its parking lot. At least three community solar arrays with a combined capacity of 665 kW have been installed, benefitting many households.

## Natural Gas

Since 2008, Vermont Gas Systems has provided natural gas service along VT Route 15 and adjoining roads, from the Essex Town Line to Underhill.

According to data provided by Vermont Gas Systems, they currently serve more than 700 customers in Jericho, as shown in Figure 1. While electric utilities have a regulatory obligation to serve all consumers within their designated service territory, Vermont Gas is obliged to prove the economic feasibility of any proposed new construction. Generally, this restriction limits gas service to highly developed areas or locations with an “anchor load” such as a large industrial or institutional facility. Natural barriers such as river crossings or rock formations can make it economically impractical to serve all potential customers within the approved “footprint.” For Jericho, natural gas service will probably not expand beyond the vicinity of VT Route 15.

Natural gas infrastructure in Jericho could be positive for economic development and for lowering home heating costs, but its energy impacts are more complicated. Greenhouse gas emissions from natural gas use are lower than fuel oil, making it a possible bridge fuel from fuel oil to renewable technologies. However, once they have invested in installing natural gas infrastructure, building owners may be unlikely to switch heating sources again. In the future, this infrastructure may be utilized for renewable natural gas (biomethane), a nascent technology whose availability may increase over the life of this plan. Going forward, the town’s energy committee should focus efforts on promoting the benefits of switching from fuel oil to renewable energy sources for heating, rather than to natural gas. Vermont will not be able to reach its goal of switching to 90% renewable thermal energy by 2050 without changes in state policy regarding the permitting of additional fossil fuel infrastructure.

## ANALYSIS AND TARGETS

Current inventories of energy sources and projections of future energy use are found below. Future energy use targets come from the Long-range Energy Alternatives Planning (LEAP) analysis for Chittenden County, completed by the Vermont Energy Investment Corporation (VEIC). LEAP shows the most likely path for Jericho to meet the State’s energy goals, based on current technology. For detailed information on LEAP, see the [2018 Chittenden County ECOS Plan – Supplement 6<sup>40</sup>](#).

### Thermal Energy

Table 11.3 and Figure 1 below show available data on current home heating fuel by source. To meet Jericho’s energy goals, most thermal energy use must come from renewable sources in the future. Most heating in Jericho uses fossil fuels, although it is difficult to estimate exactly how many residents are using fossil fuels to heat their homes. Fossil fuel-based energy use is costly from an economic and environmental perspective. Additionally, some

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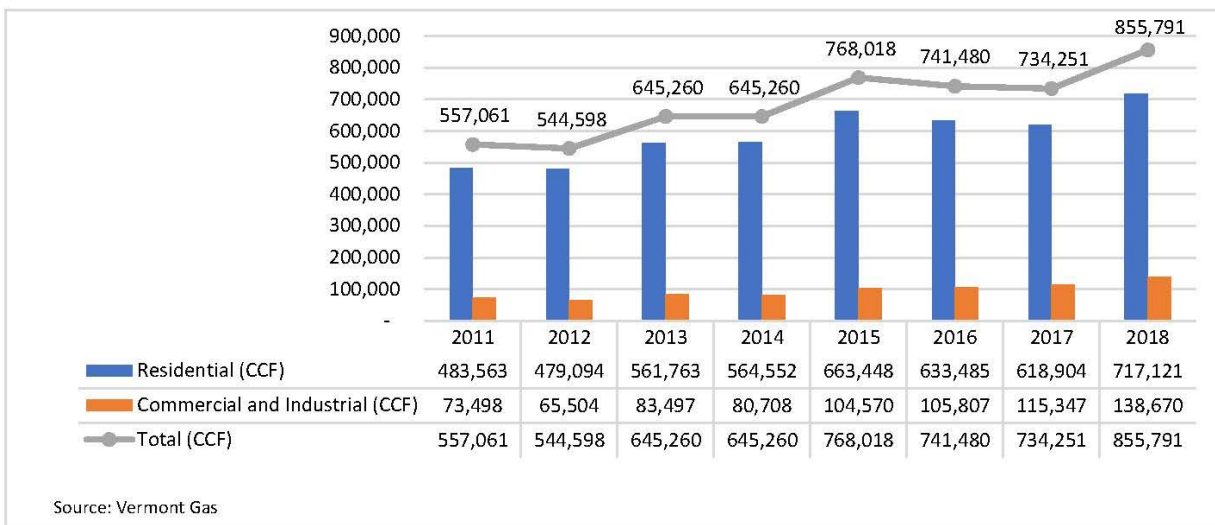
<sup>40</sup> <http://www.ecosproject.com/2018-ecos-plan>

residents use wood to meet supplemental heating needs. Use of fuel oil/kerosene, propane and wood must be estimated through the American Community Survey. Vermont Gas makes data available regarding the use of natural gas.

<b>Table 11.3 Number of Homes Heating with Delivered Fuels</b>	2011	2016
Number of homes heating with Fuel oil, Kerosene	719 homes (39%)	588 homes (30%)
Number of homes heating with Propane	470 homes (25%)	342 homes (18%)
Number of homes heating with Wood	252 homes (14%)	336 homes (17%)

*Sources: American Community Survey 2007-2011 and 2012-2016 5-Year Estimates, this data is associated with a margin of error*

**Figure 1. Natural Gas Usage in Jericho, 2011-2018**



Between now and 2050, the LEAP model projects major changes in thermal energy use for residential, municipal and commercial buildings. The LEAP model assumes that total thermal energy use will decrease due to (1) increased building weatherization, (2) advances in energy efficient technology, and (3) increased use of heat pumps and wood heat across building types. The tables below show the LEAP model results for commercial and residential thermal energy use between 2015 and 2050.

**Table 11.4 LEAP Model Estimates of Future Commercial Thermal Energy Use, 2015-2050**

	<b>2015</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Total Commercial Thermal Energy Use (MMBtu)	63,018	61,673	58,743	51,959
Percent of Commercial Establishments Weatherized by Target Year	14%	25%	27%	48%
Energy Saved by Weatherization by Target Year (MMBtu)	1,514	3,315	4,597	11,078
Commercial Establishments Using Heat Pumps (%)	1%	27%	44%	50%
Commercial Thermal Energy Use by Heat Pumps (MMBtu)	116	5,001	9,886	14,771
Commercial Establishments Using Wood Heating (%)	9%	12%	13%	14%
Commercial Thermal Energy Use Attributable to Wood Heating (MMBtu)	4,682	7,462	10,278	15,048

*\*Please note that 2015 data is modeled and therefore there may be a difference between data reported in 2015 and the 2015 data point from the LEAP Model*

*Sources: LEAP Model, Department of Public Service, Department of Labor*

Jericho and surrounding areas have an abundant wood supply. While much of the new growth has little value for timber production, it is still valuable for energy. As noted above, many residents use cordwood as a supplemental heat source. Mount Mansfield Union High School and Browns River Middle School currently use woodchip burners to generate heat. Each winter, the high school burns approximately 600 green tons of wood, and the middle school burns approximately 300 green tons of wood. However, these systems are both

**Table 11.5 LEAP Model Estimates of Future Residential Thermal Energy Use, 2015-2050**

	<b>2015</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Total Residential Thermal Energy Use (MMBtu)	190,860	171,104	145,076	100,445
Percent of Residences Weatherized by Target Year	1%	14%	36%	100%
Energy Saved by Weatherization by Target Year (MMBtu)	679	7,987	21,816	68,284
Percent of Residences Using Heat Pumps	3%	18%	37%	60%
Residential Thermal Energy Use from Heat Pumps (MMBtu)	1,909	11,090	22,816	33,451
Residences Using Wood Heating (%)	14%	14%	14%	14%
Residential Thermal Energy Use from Wood Heating (MMBtu)	29,876	31,421	31,451	27,634

*\*Please note that 2015 data is modeled and therefore there may be a difference between data reported in 2015 and the 2015 data point from the LEAP Model*

*Sources: LEAP Model, Department of Public Service*

about 25 years old, and may need replacing during the life of this plan. Any replacement systems should also be wood or another renewable fuel.

Replacement of old furnaces and wood stoves with new, cleaner burning pellet-burning furnaces should be considered to protect air quality. Pelletized wood and grass and “waste-to-fuel” methane digestion can be used to generate heat or electricity.

While not energy generation in the traditional sense, passive solar, or the direct use of sunlight for heat and light, can reduce energy use and costs. Passive solar design is discussed at greater length in “Land Use Planning and Site Design” below.

## Electricity

Residential uses are responsible for most of Jericho’s current electricity consumption. While the LEAP model projects a reduction in total energy use (electric, thermal and transportation use) by 2050, electricity use is projected to increase. This is due to the projected electrification of the light duty transportation fleet and the increased use of heat pumps, especially for residential heating.

**Table 11.6 Electrical Energy Use, 2015**

Residential Electric Energy Use (MWh)	15,021
Commercial and Industrial Electric Energy Use (MWh)	5,804
Total Electric Energy Use (MWh)	20,824

*Sources: Efficiency Vermont, October 2017*

**Table 11.7 LEAP Model Estimates of Future Electrical Energy Use, 2025-2050**

	2015	2025	2035	2050
Total Electricity Use (MWh)*	12,982	15,641	19,935	25,835
Total Electric Energy Saved (MWh)	272,700	3,242,100	6,544,800	12,241,200
Residences that have increased their Electric Efficiency	3%	30%	58%	98%
Commercial Establishments that have Increased Their Electric Efficiency	3%	30%	58%	98%

*Source: LEAP Model*

*\*Please note that 2015 data is modeled and therefore there may be a difference between data reported in 2015 and the 2015 data point from the LEAP Model*

*\*Please note that because of the difficulty of projecting industrial electricity use and the small amount of industrial activity in Jericho, projected industrial electricity use is not included in these data.*

## Transportation

Transportation accounts for approximately one-third of all energy use in the United States and probably more in Jericho, due to Jericho’s rural character. It represents a major use of

fossil fuel and the single biggest source (approximately 44%) of greenhouse gas emissions in Vermont. To meet the state's goals of 90% renewable energy by 2050, major changes will be needed in the transportation sector. Measures that reduce the use of the single-occupancy motor vehicle include planning for compact, mixed-use development in village centers, pedestrian and bicycle friendly roadways, local park-and-ride facilities, carpooling, and public transit. Jericho has worked closely with Green Mountain Transit to bring regular bus service to two of Jericho's Village Centers. The town has installed new sidewalks in Jericho Center and elsewhere to provide for safer bicycle and pedestrian traffic and encourage more non-driving travel. These measures are discussed at greater length in the Transportation Chapter of this Plan.

The tables below show the light duty vehicles that are currently registered to addresses in Jericho.

**Table 11.8 Current Municipal Transportation Energy Use**

Fossil Fuel Burning Light Duty Vehicles, 2015	3,945
Electric Light Duty Vehicles (including plug in hybrids), July 2017	28

*Sources: DMV, Drive Electric Vermont*

The LEAP model projects that 89% of light duty vehicles will be electric cars and 96% of energy used by heavy-duty vehicles will come from biodiesel rather than fossil fuels. The Town of Jericho can encourage this fuel shift by providing charging spaces in public parking areas and working with partners to educate residents on vehicle benefits.

In addition to reducing single occupancy vehicle use, vehicles must shift away from fossil fuels to meet Jericho's energy goals. While many forms of non-fossil fuel cars may be available in the future, current technology suggests that electric vehicles are the most likely to replace gas-burning light duty vehicles, and biodiesel-capable engines are the most likely to replace heavy-duty vehicles. Widespread adoption of non-fossil fuel vehicles will depend on cost competitiveness, reliability and other factors that play into individual and business choices. This is especially true with regards to the Town of Jericho's vehicle fleet, which consists of medium and heavy-duty trucks for road work and plowing. The Town evaluates fuel efficiency when replacing vehicles, but technology and cost competitiveness must advance significantly before the Town will consider alternative fuels for its road maintenance vehicles.



**Table 11.9 LEAP Model Estimates of Future Transportation Energy Use, 2025-2050**

	2015	2025	2035	2050
Total Light Duty Transportation Energy Use (MMBtu)	279,001	232,433	147,231	64,169
Electricity Used for Light Duty Transportation (MMBtu)	221	3,100	21,365	45,092
Light Duty Electric Vehicles (% of Vehicle Fleet)	1%	6%	41%	89%
Biofuel Blended* Energy Used for Light Duty Transportation (MMBtu)	278,780	229,334	125,866	19,077
Biofuel Blend*Light Duty Vehicles (% of Vehicle Fleet)	99%	94%	59%	11%
Heavy-Duty Transportation Energy Use from Biodiesel (Percent of Total)	4%	33%	58%	96%
Heavy-Duty Transportation Energy Use from Fossil Fuels (Percent of Total)	96%	67%	42%	4%

*\*Please note that 2015 data is modeled and therefore there may be a difference between data reported in 2015 and the 2015 data point from the LEAP Model*

*\*This measures biofuels blended with fossil fuels. A common example is gasoline with ethanol mixed in.*

*Sources: VTrans, LEAP Model*

## **ENERGY EFFICIENCY AND CONSERVATION**

The least expensive energy is the energy we don't use. Simple actions such as replacing inefficient lighting and appliances can save energy and money. Other more complex improvements such as increased building insulation and air sealing can save even more. Energy audits are essential in determining which insulation and air-sealing improvements should be made, as well as the effectiveness of the measures undertaken. Jericho should promote energy audits which often reveal low-cost improvements residents can make themselves.

Municipalities and schools can be models for energy conservation and efficiency. The Jericho Elementary and Underhill I.D. schools have installed more efficient outdoor lighting. The 2008 renovation of the Jericho Town Hall included installation of modern windows, improved insulation, energy efficient lighting, and HVAC systems. Energy efficiency retrofits were completed at the Jericho Community Center, Jericho Highway Garage, and Mount Mansfield Union High School, but more work is needed. Jericho should lead by example and continue to make energy efficient retrofits to other municipal buildings, such as the Town Library. Any work performed needs to be completed so as to not disturb the historic character of a building.

**Table 11.10 Recent Residential Energy Efficiency Projects**

	2014	2015	2016	2017	2018
Home Performance with ENERGY STAR® Leads	30	30	17	9	4
Home Performance with ENERGY STAR® Projects	13	16	7	9	3
Total Residential Projects (includes Home Performance with ENERGY STAR® projects)	51	103	99	93	171

Source: Efficiency Vermont, October 2017

**Table 11.11 LEAP Model Estimates of Future Total Energy Use Per Capita (Excluding Industrial Electricity Use) 2015-2050**

	2015	2025	2035	2050
Total Energy Use (MMBtu)	577,173	518,577	419,070	304,723
Population	5,082	5,202	5,279	5,511
Total Energy Use Per Capita (MMBtu)	114	100	79	55
Reduction in Total Energy Use Per Capita since 2015	--	-12%	-30%	-51%

Source: LEAP Model

*\*Please note that 2015 data is modeled and therefore there may be a difference between data reported in 2015 and the 2015 data point from the LEAP Model*

*\*Please note that industrial electricity use is recognized as the most difficult element to project in the LEAP model, because of regional discrepancies in data from the commercial and industrial sector. Therefore, projected electricity use and total energy use are reported two ways: with industrial electricity use included and excluded.*

Efficiency upgrades completed as a result of a comprehensive energy audit qualify for incentives from Efficiency Vermont (EVT), Vermont's energy efficiency utility. EVT offers rebates and incentives for homeowners' purchase and installation of energy efficient products and works with commercial and non-residential property owners to plan and implement energy conservation strategies. Energy efficiency services are also available from Vermont Gas Systems and from Champlain Valley Weatherization Services for qualified households. Projects undertaken with Efficiency Vermont during 2014 – 2018 are shown above. These efforts will help the Town meet its goals of decreasing per capita total energy use by 2050, as shown in Table 11.12.

### **Land Use Planning and Site Design**

Land use planning can significantly reduce energy consumption. Directing development toward Jericho's three Village Centers and the Commercial District can reduce Jericho's energy consumption. It works in several ways:

- Concentrating residential development and infrastructure close to local services reduces the need to commute by automobile. Transit service is more viable when populations are concentrated rather than spread out over wide distances.
- Natural gas lines are more often found in areas with higher population density. Existing natural gas infrastructure may provide opportunities for conversion to renewable natural gas in the future. Additionally, dense areas may be candidates for future combined heat and power systems. However, as discussed in the Current Energy Utility Infrastructure section of this plan, Vermont will not be able to reach its goal of switching to 90% renewable thermal energy by 2050 without changes in state policy regarding the permitting of additional fossil fuel infrastructure.

Multi-family dwellings and mixed-use structures are usually more efficient than single family dwellings due to decreased exposure from common walls. Even for single family residential development, the small lot sizes allowed in the Village Centers will probably result in smaller dwellings, which require less energy for heating, air conditioning, and lighting than large ones. Site design can also reduce energy use and costs:

- Southern exposure for building sites provides immediate energy savings as well as potential future benefits.
- Large window areas on the southern side of a building allow passive solar heating in the winter months.
- South facing roof areas favor solar panels.
- Clearing areas with solar access in mind facilitates future use of the sun.
- Shelterbelts north of a building can buffer against cold winter wind and on the south side of a building can provide cooling shade in the summer.

## **Local Food Production**

As noted elsewhere, more food is being grown in Jericho. Local food includes production on small farms, farm stands, CSAs, community and neighborhood gardens, and family gardens. Selling and growing local food reduces the energy needed for transportation and storage. Growing local food may also use energy-saving techniques. Jericho's current Land Use and Development Regulations allow the roadside sale of agricultural products as an Accessory Use and farmers' markets as a Permitted Use in all zoning districts. Additionally, Vermont's Act 143, passed in 2018, limits municipal regulation of "accessory on-farm businesses." This provides additional clarity to agricultural operations seeking to expand their businesses. More information on Jericho's farming operations, including tax abatement programs and economic development strategies, can be found in Chapter 6 of this plan.

## **GENERATION**

Meeting the goal of 90% renewable energy by 2050 will require a significant increase in electricity generation throughout Vermont. As part of Chittenden County's regional energy plan, the 2018 *ECOS Regional Plan*, the Chittenden County Regional Planning Commission set a high and low range generation goal for each of the County's municipalities. Jericho's range is annual generation of 14,523 to 25,201 MWh, in addition to the 1,347 MWh already being

generated in the municipality as of 2017.<sup>41</sup>

The Town of Jericho is open to considering all forms of renewable energy generation, including solar, wind and hydroelectric. Wind energy has been controversial in other locations due to concerns about aesthetics, noise, and wildlife mortality. With appropriate constraints, including limiting the amount of land that would need to be cleared, small-scale wind energy production (as a general rule, one or two turbines with a hub height of no more than 50 meters) could contribute to Jericho's renewable energy generation goals. While Jericho historically once used local hydrological sources for much of its energy needs, it currently does not use any energy derived from hydro-electric generation. The redevelopment of hydro-electric is impeded by high capital costs and state and federal regulations conceived for larger facilities.

**Table 11.12 New Renewable Electricity Generation Targets**

	2025		2035		2050	
	Low	High	Low	High	Low	High
Generation Targets – Any Technology (MWh)	4,149	7,200	8,299	14,401	14,523	25,201

*Sources: LEAP Model and CCRPC Modeling*

*These targets are in addition to the 1,347 MWh already being generated in Jericho as of 2017.*

These goals are technology neutral, but estimating generation potential in Jericho for various technologies helps contextualize the goals. As shown in Tables 11.13 and 11.14 and Figures 2 and 3, Jericho has a large amount of renewable energy potential, but only a small part of it would need to be developed to meet the generation goals. Environmental and regulatory constraints are also accounted for in the analysis of wind and solar potential to identify prime and base areas. Prime areas are locations with high energy potential that are free from state/local known constraints. Base areas are locations with high energy potential and with a presence of state/local possible constraints.

**Table 11.13 Land Available for Wind and Solar Generation**

	Prime Area Potential	Base Area Potential
Solar	575 acres (3% of town)	3,855 acres (17% of town)
Wind	447 acres (2% of town)	4,889 acres (22% of town)

*Source: CCRPC and the Department of Public Service, Vermont Center for Geographic Information*

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<sup>41</sup> Chittenden County Regional Planning Commission has set high and low generation targets for the county and each municipality (see [Supplement 6 of the 2018 ECOS Plan for the methodology](#)). Any amount of generation within this range means that the town is producing its share of renewable energy generation for the county.

**Table 11.14 Estimates of Future Renewable Electricity Generation Potential**

	Power (MW)	Energy (MWh)
Rooftop Solar*	4	4,712
Ground-Mounted Solar* – Prime	72	88,219
Ground-Mounted Solar* – Base	64	78,791
Wind – Prime	18	54,815
Wind – Base	196	599,538
Hydro	See Map 17 for Potential Sites	
Biomass	See Map 7 for Forested Areas	
Methane	Unknown	Unknown
Other	Unknown	Unknown

Source: CCRPC and the Department of Public Service

*\*Rooftop solar potential is calculated by assuming that a certain percentage of rooftops can hold solar systems. Ground-mounted solar potential reports how much land could be developed with solar based on its aspect and elevation, and does not remove space taken up by impervious surfaces like roofs. Therefore, rooftop solar potential cannot be added to ground-mounted solar potential, as this would lead to some generation potential being double counted.*

With 0.7% of its total acres developed with solar or 0.9% of its total acres developed with wind, Jericho could reach its high generation target (see Figures 2 and 3 below).

**Figure 2 - Land Area Needed to Meet Jericho's High Target with 100% Wind**



**Figure 3 - Land Area Needed to Meet Jericho's High Target with 100% Solar**



## Energy Generation Siting

In order to reach the renewable electricity generation targets, Jericho will need to identify the most suitable areas to site these facilities. As articulated in the Town Plan, Jericho values its natural resources, its rural character, and its scenic view sheds, listing their protection and preservation as its first two goals. While it is important for Jericho to move towards secure and affordable energy sources, they must also have minimal environmental impact. Not all areas are suitable for renewable energy development.

The State of Vermont and the Town of Jericho have defined certain resources as known and possible constraints. Known constraints are areas in which development, including renewable energy generation, is not appropriate. Possible constraints are areas in which the effects of development, including renewable energy generation, may need to be mitigated. State-defined constraints are protected by the ECOS Regional Plan and state agency review during the Public Utility Commission review process. These constraints ensure that energy generation in Jericho is subject to the same standards as other kinds of development.

<b>State-Defined Known Constraints*</b>	<b>State-Defined Possible Constraints*</b>
<ul style="list-style-type: none"> <li>• FEMA Floodways</li> <li>• DEC River Corridors</li> <li>• State-significant Natural Communities</li> <li>• Rare, Threatened, and Endangered Species</li> <li>• Vernal Pools</li> <li>• Class 1 and 2 wetlands (VSWI and advisory layers)</li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural Soils and Hydric Soils</li> <li>• Act 250 Agricultural Soil Mitigation Areas</li> <li>• FEMA Special Flood Hazard Areas</li> <li>• Vermont Conservation Design Highest Priority Forest Blocks (Forest Blocks – Connectivity, Forest Blocks – Interior, Forest Blocks - Physical Land Division)</li> <li>• Highest Priority Wildlife Crossings</li> <li>• Protected Lands (State fee lands and private conservation lands)</li> <li>• Deer Wintering Areas</li> </ul>
<b>*Also Shown on Map 18</b>	<b>*Also shown on Map 19</b>

The Town of Jericho has added additional constraints based on local policy. These resources are discussed in detail in the Natural Resources chapter of this plan (Chapter 4). Additionally, implementation tasks 11.2.1.9 and 11.2.1.10 should be applied to renewable energy development applications.

<b>Locally Defined Known Constraints</b>	<b>Locally Defined Possible Constraints</b>
<ul style="list-style-type: none"> <li>• Groundwater Supply Source Protection Areas (Shown on Map 6)</li> <li>• Primary Conservation Areas as protected in the Natural Resources Overlay (Shown on Map 22)</li> </ul>	<ul style="list-style-type: none"> <li>• Secondary Conservation Areas as protected in the Natural Resources Overlay (Shown on Map 22)</li> <li>• Village Centers (shown on Map 2)<sup>42</sup></li> </ul>

<sup>42</sup> Unlike the other constraints in this plan, development is encouraged in the Village Center areas. However, using the limited land area planned for growth for land intensive energy generation and transmission facilities is counter to this plan's broader goals of compact, energy efficient development. Energy generation is appropriate in the Village Centers if it is incorporated into a preferred site, such as a parking lot or the roof of a building.

While it is important to identify constraints to renewable energy generation, it is also important to identify preferred sites.

Articulating preferred sites for renewable energy generation is important because of the growth of net metering (the process by which homeowners or businesses feed electricity they generate directly into the grid and are paid the retail rate or higher for that electricity). Vermont's Net Metering Rules (Rule 5.100, effective 7/1/2017) define preferred sites for net-metered renewable energy generation (any renewable technology besides hydroelectric). Net metering on preferred sites can be larger (up to 500 kW instead of 150 kW) and receive better net metering rates. (See the latest *Vermont Public Utility Commission Rule Pertaining to Construction and Operation of Net-Metering Systems*). Though they receive benefits, preferred sites are still subject to review by the Public Utilities Commission. Preferred sites as of 2019 are:

#### ACT 174 AND SUBSTANTIAL DEFERENCE

In 2016, Act 174 established a process for "enhanced energy planning," which encourages municipalities to write plans that are "energy compliant." This plan meets the standards for energy planning established by Act 174 and outlined in 24 V.S.A. §4352. Therefore, the policies of this plan will receive substantial deference in §248 proceedings. The Public Utility Commission shall apply the land conservation measures or specific policies in accordance with their terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure or policy. This is a higher standard of review than "due consideration," which the municipal plan's policies would otherwise receive.

- On a pre-existing structure
- Parking lot canopies over permitted paved areas
- Previously developed land
- Brownfields
- Landfills
- Gravel pits
- Superfund sites
- On the same parcel as a customer taking 50% or more of the output
- Town-designated sites (Town-designated preferred sites can be identified in a duly adopted municipal plan or through a joint letter of support by the town planning commission, town legislative body and regional planning commission)



### A NOTE ON SECENIC VIEWS

Scenic views are important to the Town of Jericho, and this plan includes many implementation items calling for new incentives or regulations to preserve the town's scenic beauty (Including implementation items 3.1.4.4, 3.2.1.2, 4.1.7.4, 4.1.7.5, and 5.1.2.3). Though more specific local policies are still in development, Section 248 still requires energy generation facilities not to have an undue adverse effect on the scenic or natural beauty of an area. The Town encourages applicants to work with neighbors and the planning commission to use strategies from the Views to the Mountain Manual to mitigate any that are projects proposed in the viewsheds identified as "most scenic" in that report.

## PATHWAYS: GOALS, STRATEGIES, AND IMPLEMENTATION

### Actions Taken

In 2009, the Jericho Energy Task Force (JETF) was formed to tackle energy-related projects within the Jericho community, including energy efficiency, transportation, food production, and renewable energy. JETF's projects have included:

- Street lighting efficiency improvements - In 2011 the task force took advantage of incentives offered by EVT to upgrade Jericho's streetlights for increased efficiency. The upgrade project, completed at no cost to Town taxpayers, removed about 10 unnecessary fixtures and converted the 70 remaining fixtures to light-emitting diode (LED) technology. Because of the lower lease rate on the LED fixtures, the Town is saving several thousand dollars annually on lighting costs while enjoying uniform lighting. Jericho was one of the first towns in Chittenden County to have all LED street lighting.
- Home Energy Challenge - In 2013 the task force won \$10,000 from Efficiency Vermont for encouraging community members to weatherize their homes via the Home Energy Challenge. The money helped make the Jericho Community Center more energy efficient.
- Northeast Solar Energy Association Home Energy Tour - for three years, the JETF hosted tours of local energy efficiency projects.
- Button Up Workshops - four workshops were held at the Deborah Rawson Memorial Library and more are planned.
- Winter Movie Series - for seven years we have sponsored energy-related movies, presentations and lectures at the Deborah Rawson Memorial Library and Jericho Community Center.
- Home energy visits were completed by volunteers and further visits are being planned with professional assistance.
- Energy efficiency presentations and informational displays at local functions such as Town Meeting and Green Up Day.

- Home Energy Makeover Trailer at Harvest Market.
- Two years of electric vehicle displays and education took place at Harvest Market.
- An eco-driving workshop was held.
- Button Up Day - Energy efficiency information in cooperation with Jeri-Hill Hardware.
- Bicycle Commuting and Hands on Bicycle Repair workshops.
- Advised the Select Board and Planning Commission on energy-related matters
- Assisted with the establishment and continuation of a GMT bus line.
- Collaborate with other town energy committees to share information and advocate long-term policy changes.

**Goal 11.1. Promote energy conservation through municipal example and encourage public and private entities to take appropriate actions to decrease energy consumption.**

Strategy 11.1.1. Encourage the reduction of energy use and costs in municipal and school facilities.

Implementation 11.1.1.1. Identify cost effective improvements to reduce energy consumption and cost at public and quasi-publicly owned buildings, such as the community center, through professional energy audits.

Implementation 11.1.1.2. Include low cost energy efficiency retrofits as part of the annual building maintenance budget.

Implementation 11.1.1.3. Include high cost energy efficiency retrofits in the Capital Budget. Pursue resources such as grants, bonds, and low interest loans to fund such retrofits.

Strategy 11.1.2. Encourage residents and businesses to decrease energy consumption through conservation measures.

Implementation 11.1.2.1. Regularly update the town's sources and uses of energy (energy use profile).

Implementation 11.1.2.2. Continue to provide Jericho residents and businesses with informational materials and presentations regarding energy audits, weatherization, energy efficiency options, and current financial incentive programs.

Implementation 11.1.2.3. Investigate opportunities to collaborate with neighboring towns and work with organizations, such as Efficiency Vermont and the Champlain Valley Office of Economic Opportunity, to encourage energy efficiency and reduce energy consumption.

Implementation 11.1.2.4. Encourage weatherization by educating residents on the fact that weatherization efforts do not increase the assessed taxable value of a property.

Implementation 11.1.2.5. Develop methods to accurately track residential weatherization projects.

Implementation 11.1.2.6: Decrease the rate of conversion to natural gas by promoting the benefits of switching from fuel oil or kerosene to renewable systems like advanced wood heat or heat pumps.

Strategy 11.1.3. Improve the fuel efficiency of Town vehicle fleet to reduce costs and conserve energy.

Implementation 11.1.3.1. Adopt fuel efficiency standards as an important consideration in the acquisition and/or lease of new vehicles.

Implementation 11.1.3.2. Consider the cost-effectiveness and viability of diverse fuel-types, such as biodiesel, natural gas, and electric, when purchasing and/or leasing new vehicles.

Implementation 11.1.3.3. Maintain a regular schedule of vehicle maintenance to ensure efficient operation and minimum emissions.

Implementation 11.1.3.4. Evaluate the feasibility of hybrid/biofuel and electric vehicles in any RFP or purchase consideration for the road crew to eliminate idling for power-to-auxiliary systems.

Implementation 11.1.3.5. Evaluate the feasibility of hybrid/biofuel and electric vehicles in any RFP or purchase consideration for any municipal light duty vehicles.

Strategy 11.1.4. Encourage Jericho residents to conserve fuel and use renewable fuels.

Implementation 11.1.4.1. Develop and implement a comprehensive education program that includes educational materials/web resources and workshops about “eco-driving techniques,” fuel efficiency, and EV, biodiesel, current incentive programs, and collaborate with Drive Electric Vermont to host electric vehicle demonstrations.

Implementation 11.1.4.2. Work with the Mount Mansfield Union High School to incorporate energy efficient driving techniques into the drivers’ education curriculum.

Implementation 11.1.4.3. Find ways to reduce idling through education and enforcement of 23 V.S.A. §1110 which puts limits on idling.

Implementation 11.1.4.4. Consider adopting the Vermont Energy Stretch Code to require EV charging stations for new commercial development in the Village Center and Commercial Districts.

Implementation 11.1.4.5. Identify locations for electric vehicle charging stations in each of the Village Centers, such as the Jericho Market, and the Commercial District.

Implementation 11.1.4.6. Work with GMP, VEC, and grant programs to identify funding sources for electric vehicle charging infrastructure.

Implementation 11.1.4.7. Update zoning regulations to include language to clarify permitting requirements for new electric vehicle charging installations and support the ongoing development of this infrastructure.

#### **Goal 11.2. Promote the Development of Renewable Energy.**

Strategy 11.2.1. Increase the town's capacity to generate between 14,523 and 25,201 MWh of additional renewable energy by 2050.

Implementation 11.2.1.1. Appoint a town staff person to document on a regular basis the amount of renewable energy generated in Jericho. Track progress towards meeting goals stated in 11.2.1.

Implementation 11.2.1.2. Maintain the current height exemption for small renewable energy generation facilities found in the Land Use and Development Regulations. Evaluate this exemption against advances in renewable energy technology and amend as necessary.

Implementation 11.2.1.3. Designate appropriate sites throughout Jericho as "preferred sites" for renewable energy generation, including possibilities such as impervious surfaces near schools. Net metering systems on preferred sites can be larger and receive better net metering rates.

Implementation 11.2.1.4. Inventory public and quasi-publicly owned lands, buildings, and properties and evaluate their potential for renewable energy, including but not limited to solar, wood/biomass, and carbon sequestration.

Implementation 11.2.1.5. Identify potential sites for community solar systems, with assistance from the Energy Task Force and other partners.

Implementation 11.2.1.6. Consider revising existing zoning regulations to require solar-ready roofs for all new commercial construction.

Implementation 11.2.1.7. Conduct a cost-benefit analysis for purchasing renewable energy, such as Green Mountain Power’s “Cow Power” for electricity at public buildings.

Implementation 11.2.1.8. Work with the Mount Mansfield Unified Union School District to encourage any future heating systems at Jericho Elementary School and Browns River Middle School remain wood systems or other renewables.

Implementation 11.2.1.9. Work with developers, including those developing energy facilities, to avoid adverse impacts to the known constraints mapped and defined in this plan.

Implementation 11.2.1.10. Work with developers, including those developing energy facilities, to minimize and mitigate impacts to the possible constraints mapped and defined in this plan.

Implementation 11.2.1.11. Develop a solar screening bylaw to be implemented when ground mounted solar arrays are proposed.

Strategy 11.2.2. Encourage residents to increase their use of solar, wind, hydro, wood, biomass, and other renewable energy sources to meet the town’s goal stated in Strategy 11.2.1.

Implementation 11.2.2.1. Create and publicize a list of renewable energy developers operating in Jericho to educate residents who are thinking of installing solar panels or other renewable systems.

Implementation 11.2.2.2. Educate residents about opportunities to purchase or lease in-home battery storage systems, especially combined with net metering projects, to reduce the need for generators during power outages.

Implementation 11.2.2.3. Request that homeowners’ associations do not impede the town’s energy strategy by having covenants which include, among other options, minimum house sizes, restrictions on output of solar panels, or requirements that homes face in a direction which does not provide for passive solar heating.

Strategy 11.2.3 Review zoning regulations and incentives and evaluate how they move Jericho towards meeting the energy goals.

Implementation 11.2.3.1. Continue to offer density bonuses for developments that follow the Vermont Stretch Energy Codes.

Implementation 11.2.3.2. Consider offering density bonuses and other local incentives for new residential and commercial development, especially in

the Commercial District, for implementing passive solar siting and installing renewable energy systems. Density bonuses could be scaled proportionately to the amount of energy generated by the system.

Implementation 11.2.3.2. Identify state and local incentives for solar-ready roofs on new residential and commercial buildings.

**Goal 11.3. Establish land use patterns and building practices that will result in the conservation of energy.**

Strategy 11.3.1. Establish and maintain land use patterns and implement bylaws that will encourage energy efficient building and neighborhood design that reduces dependence on the automobile.

Implementation 11.3.1.1. Maintain the existing zoning bylaws that encourage the concentration of residential and mixed-use development in the Village Centers and the Commercial District.

Implementation 11.3.1.2. Work with utility companies to plan for the efficient location of infrastructure necessary to support denser, mixed use land use patterns and expansion of fiber optics that facilitate telecommuting.

Implementation 11.3.1.3. Facilitate communications improvements such as phone and high-speed Internet service that support home businesses and reduce commuting.

Implementation 11.3.1.4. Identify opportunities to bury overhead power lines. For example, work with power companies and VTrans to bury power lines and cables when roads are improved or constructed and recommend to the Selectboard to consider burying lines when constructing sidewalks and laying fiber optic lines.

Strategy 11.3.2. Offer incentives for and provide education about building design that maximize solar exposure, and energy conservation.

Implementation 11.3.2.1. Consider adopting the Vermont Stretch Energy Codes for all new residential and commercial development.

Implementation 11.3.2.2. Consider adopting subdivision and site plan standards that promote solar gain and utilization of other renewable energy resources, moving Jericho toward a [Passive House](https://www.phius.org/phius-certification-for-buildings-products/project-certification/overview)<sup>43</sup> goal for standards.

Implementation 11.3.2.3. Encourage landscape designs that promote the efficient use of energy.

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<sup>43</sup> <https://www.phius.org/phius-certification-for-buildings-products/project-certification/overview>

Implementation 11.3.2.4. Offer incentives for new residential and commercial buildings that result in NetZero buildings (buildings where the total amount of energy used on an annual basis is roughly equal to the amount of renewable energy supplied to the building.)

**Goal 11.4: Reduce transportation energy demand and single-occupancy vehicle use and encourage renewable energy sources for transportation.**

Strategy 11. 4.1. Include energy efficiency and conservation in all future transportation planning. Encourage ridesharing, public transportation, intersection design, and road design that is inclusive for pedestrians and cyclists.

Implementation 11.4.1.1. Improve infrastructure for bicycles and pedestrians by regularly painting fog lines and ensuring they are wide enough for use by cyclists, as well as sweeping road shoulders in the spring. See Goal 9.2 in the Transportation section for more details.

Implementation 11.4.1.2. Work to site and construct a small commuter parking lot in coordination with the CCRPC and GMT.

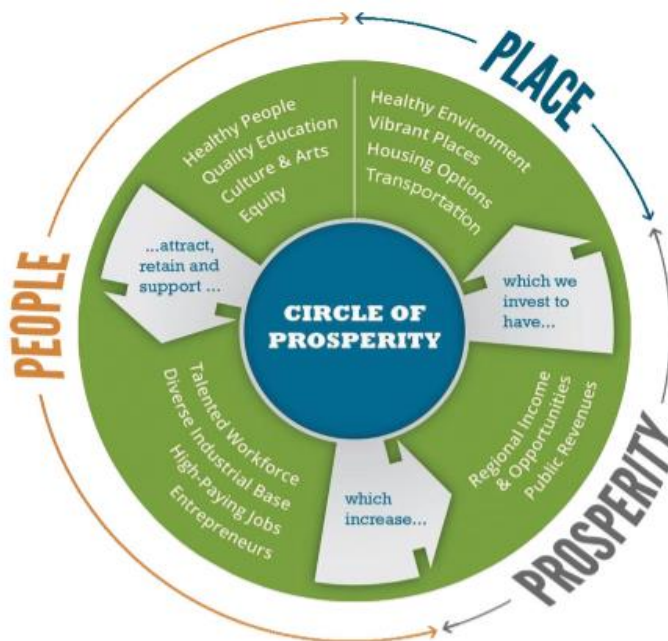
Implementation 11.4.1.3. Consider building roundabouts at intersections of town roads, such as Brown's Trace and Lee River Road, where they can increase safety and improve traffic flow.

Implementation 11.4.1.4. Support the planning efforts of the Tri-Town Alternative Transportation Committee regarding public transportation for Jericho, Underhill and Cambridge.

**For other energy-related transportation strategies, including the promotion of multimodal transportation systems, see Chapter 9 of the Jericho Town Plan.**

## 12. HEALTHY COMMUNITY

Jericho has a vision to support active living, healthy eating, and increased access to local foods within the town. People have a better opportunity to stay healthy when they live in communities that encourage biking and walking, conserve natural places, ensure access to healthy foods, and provide safe, affordable housing. Jericho recognizes the role of community planning to improve the health of residents where they live, work, learn, worship, and play. <sup>i</sup>



Three behaviors raise our risk for four diseases which cause the deaths of over half of Vermonters. Jericho can help reduce disease rates by using healthy community design principles that help people get physical activity, cut or quit tobacco use, and eat a healthier diet.



Vermont Department of Health

## STRATEGIES TO SUPPORT A HEALTHY COMMUNITY

### Enhance Concentrated Mixed-Use Development and Smart Growth

Keeping businesses in the village centers and compacted within the commercial district helps improve access, encourages walking and biking, and supports economic growth. Design elements should include pedestrian-scale buildings and street networks, better street lighting, safer street crossings, protected bicycle lanes, speed humps and street landscaping. These characteristics for promoting physical activity support the town's



priorities for new development.

### **Create a Bicycle and Pedestrian Friendly Community**

People are more likely to walk or bike when communities have plenty of sidewalks and bike lanes. Improving transportation between the village centers, the commercial district, and the surrounding areas is part of our vision for Jericho. Better connections can promote stronger businesses and make physical activity safer.

### **Improve Access to Parks, Recreation, and Open Spaces**

Jericho is home to Mills Riverside Park, Mobbs Farm, Winooski Valley Park District, and Land Trust natural areas. Making it safe and easy to visit parks, sport fields, and natural areas helps people to be more active. Recreation areas and open space make people feel happier and more like they're part of the community. A lack of open space in towns can lead to less depression and worrying.<sup>ii</sup> Visiting ponds, lakes, and streams helps people feel better.<sup>iii</sup> The town recently updated the Natural Resources Overlay as a zoning tool to help protect specific natural resources while allowing "compatible" development.

In Vermont, adults living in large rural towns and cities are more likely to feel that their community is not safe for walking compared with adults living in urban towns and cities.

Vermont adults living with disabilities were more than three times as likely to feel that their community was unsafe for walking compared to those without a disability.

*Source: Vermont, Behavior Risk Factor Surveillance System, 2017*

### **Increase Access to Fresh and Healthy Food**

A good way to make healthy food available is to support farmer's markets, community gardens, and grocery stores. Jericho is home to many small farms, a full-service grocery store, and a large farmer's market. Having healthy food choices available during town events supports good health. Policies that support local agriculture are good for the town's economy and good for the people of Jericho.

77% of adults in Chittenden County do not eat the recommended 5+ servings of fruit and vegetables daily.

*Source: Vermont Behavior Risk Factor Surveillance System, 2015/17*

### **Decrease Use of Tobacco, Alcohol, and Drugs**

People who are more active are less likely to use tobacco, drugs, or alcohol. Keeping youth away from these products stops unhealthy habits before they can start.

Tobacco use is the leading cause of early death in the United States and in Vermont. Jericho can support residents in choosing not to use tobacco through establishing tobacco free public spaces, such as public parks and town property. Outdoor community and public events such as farmer's markets, fairs and festivals can set a good example for youth by choosing to be tobacco, electronic vapor product, and alcohol-free. The town may consider limits to the advertising and sale of these products to prevent substance use among young people, and



support community members in recovery from substance use disorder. Research also shows that e-cigarette advertising uses many of the same themes that have led to cigarette smoking among young people.<sup>iv</sup>

Early and frequent use of marijuana can have negative impacts on the developing brain which can lead to problems with academic success and mental health.<sup>v</sup>  
<sup>vi</sup>Jericho can support and protect youth by increasing community understanding of the health risks related to youth marijuana use.

### **Improve Mental Health**

There are many ways to design a community that support the mental health of all residents.

The way a town is laid out can contribute to people's feeling of belonging inside the community. One way to increase personal connections is through better planning of roads and sidewalks. A major cause of stress can be long distances travelled to work and back.<sup>vii</sup> This happens when businesses are built far from houses and schools. Mixed use development, where businesses are built close to homes, churches, and schools can make people feel less stressed out and happier. Good road and sidewalk connections can be made between where people live and town centers. This makes it easier for people to use sports areas, buy healthier food, and use town services that improve their health and happiness.<sup>viii</sup>

A quarter (25%) of Chittenden East High Schoolers report using marijuana in the past 30 days.

Almost half (48%) of 8th graders in Chittenden East Supervisory Union think alcohol would be sort of or very easy to get.

Almost half (46%) of Chittenden East High Schoolers report most of the time or always seeing ads for cigarettes or other tobacco products.

Significantly more LGBT students and students from Racial/Ethnic minorities at Mount Mansfield High School students reported currently using electronic vapor products than their peers.

Source: Vermont Youth Risk Behavior Survey, 2017

## **GOALS, STRATEGIES AND IMPLEMENTATION**

### **Goal 12.1 Enhance concentrated mixed-use development and smart growth.**

Strategy 12.1.1. Keep businesses in the village centers and compacted within the commercial district.

Implementation 12.1.1.1. Continue to encourage new development to occur in the three village centers and the commercial district and discourage sprawling disconnected development in outlying areas. Focus on encouraging a mix of compatible uses.

Implementation 12.1.1.2. Consider requiring Universal Access Design (UAD) for certain buildings and/or as one of the incentive options for PUD density bonuses. UAD helps make buildings/spaces that can be accessed and by all people regardless of their age, size, ability or disability.

Implementation 12.1.1.3. Limit private dedicated parking lots, implement shared parking, reduce or eliminate parking minimums, to create “park once” conditions in the villages and commercial district.

**Goal 12.2. Create a bicycle and pedestrian friendly community.**

Strategy 12.2.1. Improve transportation between the village centers, the commercial district, and the surrounding areas.

Implementation 12.2.1.1. Continue to enhance walkability in the three village centers and pursue pedestrian facilities within and connecting to the commercial district.

Implementation 12.2.1.2. Support public transit, ride share, bike share, park and ride, and similar measures to reduce residents’ dependence on cars for daily routines.

Implementation 12.2.1.3. Update zoning to help implement the 2015 Bike/Ped Master Plan.

**Goal 12.3. Improve access to parks, recreation, and open spaces.**

Strategy 12.3.1. Make it safe and easy to visit parks, sport fields, and natural areas to help people to be more active, make people feel happier and to feel more like they’re part of the community.

Implementation 12.3.1.1. Reinstate annual funding for the Open Space Fund.

Implementation 12.3.1.2. Continue to investigate the feasibility of acquiring the “Rivers property” from Underhill-Jericho Fire District for community use and public recreation.

Implementation 12.3.1.3. Fill the recently funded year-round Recreation Director position.

Implementation 12.3.1.4. Evaluate the 2019 Trails Committee survey for ways to improve access to and increase use of trails and natural areas.

**Goal 12.4. Increase opportunities for access to fresh and healthy food.**

Strategy 12.4.1. Support farmer’s markets, community gardens, and grocery stores.

Implementation 12.4.1.1. Consider zoning changes to remove barriers and create pathways for small local producers to access land, particularly in small and/or shared lots, and to sell their products.

Implementation 12.4.1.2. Consider criteria that should potentially constrain conversions of prime agricultural soil, existing farms, and former farmland to other uses such as new neighborhoods or businesses.

**Goal 12.5. Decrease use of tobacco, alcohol, and drugs**

Strategy 12.5.1. Support residents in choosing not to use tobacco through establishing tobacco free public spaces, such as public parks and town property.

Implementation 12.5.1.1. Raise awareness of the nature and seriousness of substance misuse with the help of community organizations.

Implementation 12.5.1.2. Designate town hall campus and town parks tobacco-free.

Implementation 12.5.1.3. Ensure any regulations of tobacco use include e-cigarettes and vaping.

Implementation 12.5.1.4. Consider connecting with a community coalition in a neighboring community or establishing a similar coalition in Jericho.

Implementation 12.5.1.5. Promote substance-free community events.

Implementation 12.5.1.6. Consider adopting policies to prohibit tobacco and alcohol advertisements on exterior windows, doors, or walls, and requiring interior advertisements and displays to target only adult customers.

Implementation 12.5.1.7. Ensure any regulations of tobacco use include e-cigarettes and vaping.

**Goal 12.6. Jericho's public policies should be designed to improve mental health.**

Strategy 12.6.1. Encourage mixed use development, where businesses are built close to homes, churches, and schools with good road and sidewalk connections made between where people live and town centers.

Implementation 12.6.1.1. Continue commitment to enhancing walkability in the three village centers.

Implementation 12.6.1.2. Continue to value and prioritize protection and use of Jericho's numerous recreational/natural spaces including Mills Riverside Park, Mobbs Farm, Winooski Valley Park District, and Land Trust natural areas.

Implementation 12.6.1.3. Concentrate new development in the three village

centers and the commercial district.

Implementation 12.6.1.4. Consider requiring Universal Access Design (UAD) for certain buildings and/or as one of the incentive options for PUD density bonuses. UAD helps make buildings/spaces that can be accessed and by all people regardless of their age, size, ability or disability.

Implementation 12.6.1.5. Continue to support community events that foster residents' relationships such as parades, outdoor concerts, library activities, workshops, celebrations, art shows, etc.

Implementation 12.6.1.6. Ensure that the planning process includes broad community input, with emphasis on older adults, families living in poverty and racial and ethnic minorities.

Implementation 12.6.1.7. Consider using AARP Livable Communities resource to help ensure elderly residents of Jericho can age in place.

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<sup>i</sup> Healthy Community Design

<https://www.apha.org/topics-and-issues/environmental-health/healthy-community-design>

<sup>ii</sup> Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin Kirsten M. M. Beyer ,\*, Andrea Kaltenbach , Aniko Szabo , Sandra Bogar , F. Javier Nieto and Kristen M. Malecki Int. J. Environ. Res. Public Health 2014, 11, 34533472; doi:10.3390/ijerph110303453)

<sup>iii</sup> Smedley, Tim, What impact do seas, lakes and rivers have on people's health? The Guardian March 2013

<http://www.theguardian.com/sustainable-business/impact-sea-lakes-riverspeoples-health>.

<sup>iv</sup> Centers for Disease Control and Prevention, E-cigarettes and Youth,

<https://www.cdc.gov/vitalsigns/ecigarette-ads/index.html>, accessed 09/05/19

<sup>v</sup> U.S. Surgeon General's Advisory: Marijuana and the Developing Brain (2019). Retrieved from:

<https://www.hhs.gov/surgeongeneral/reports-and-publications/addiction-and-substance-misuse/advisory-on-marijuana-use-and-developing-brain/index.html>

<sup>vi</sup> <sup>2</sup>Vermont Department of Health (2019). Marijuana Use in Vermont. Retrieved from: <https://www.healthvermont.gov/alcohol-drug-abuse/alcohol-drugs/marijuana>

<sup>vii</sup> Centers for Disease Control and Prevention, Healthy Places, Mental Health

<http://www.cdc.gov/healthypaces/healthtopics/mental.htm>. December 2012.

<sup>viii</sup> Neighborhood Development the Connects Community Resources to Transit, Centers for Disease Control and Prevention Health Equity Guide, <http://www.cdc.gov/nccdphp/dch/pdfs/healthequity-guide/health-equity-guide-sect-4-5.pdf>.

### 13. IMPLEMENTATION

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The purpose of this Section is to provide an organized framework for undertaking the numerous implementation tasks listed in prior sections of this Plan. The spreadsheet below organizes individual tasks by timeline, responsible party, and type of project. Use of this Section over the next five year planning cycle will help to ensure that the tasks listed in the Plan are considered when various segments of Town Government undertake their regular duties.

#### **TIMELINE**

Each task is listed as On-going, Short Term, or Long Term. **On-going** tasks are those that relate to on-going tasks of various boards, and do not have a clear completion date. **Short Term** tasks are those that can reasonably be expected to be completed in the next five year planning cycle. **Long Term** tasks are those tasks which will likely require more than five years to fully implement. However, groundwork and background research on many of these tasks should occur within the next five year planning cycle.

#### **RESPONSIBLE PARTIES**

This field lists the various Town boards that will be responsible for implementing the various tasks. Town boards are encouraged to consult the spreadsheet when developing their work plans.

Note that some tasks are classified under “Other.” These include tasks that may be beyond the purview of existing Town boards. Implementation of these tasks may require creation of special, ad-hoc committees, or may by nature require action or collaboration with groups unaffiliated with Town government.

#### **TYPE**

Each task has been categorized by type or types of projects. In some cases, different phases of the same task may fall under different types of projects. This field should be consulted when various projects are undertaken. For example, when the Selectboard considers updates to the Capital Budget/Plan, it should sort the spreadsheet by “Capital Budget/Plan” to identify this Plan’s recommendations for the Capital Budget.

#### **Project Types include:**

**Land Use and Development Regulations** –The Land Use and Development Regulations govern all development within Jericho. The Planning Commission envisions annual housekeeping updates to the Land Use and Development Regulations as well as periodic amendments based on larger tasks. Some tasks listed under this project type relate to amendments to the regulations, while others relate to the implementation and interpretation of existing regulations.

**Capital Budget/Plan** – The Capital Budget and Plan provides long term allocation of funds for major infrastructure investments and improvements, and is also used to set impact fees due from new developments. The 2010 Town Plan includes specific recommendations for the Capital Budget and Impact Fee Ordinance.

**Public Works Specifications** -- The Public Works Specifications set standards for new infrastructure construction within Jericho.

**Policy/Ordinance** –Some tasks call for or will require new or modified town policies and/or ordinances

**Official Map** – Under Chapter CH117 (Section 4421) Towns are given the authority to adopt an “Official Map” which identifies future utility and facility improvements, such as road and recreational path rights-of-way, parkland, utility rights-of-way, and other public improvements, and allows the Town to purchase the area if development is proposed on the parcel. Jericho does not currently have an adopted Official Map; though it is envisioned as a step to implement the goals and strategies of this plan.

**Annual Budget** – Refers to tasks that specifically require funding from the Town’s annual budget.

**Special Projects and Studies** – Several tasks call for special projects or studies that do not fall under other project types.

**Town Government** –Tasks which would be implemented primarily through the operation of Town government.

Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
03.1.1.1	Consider infrastructure investments and/or zoning incentives/revisions that will increase the likelihood that development will occur in these districts.	short term	x	x					x			x	x					x	
03.1.2.1	Determine appropriate balance for investing in transportation and other infrastructure improvements. Priority areas are in the Village Centers and secondarily in the Commercial District.	on-going		x					x				x				x	x	
03.1.3.1	Identify areas that are adjacent to the Village Centers, Commercial District or Village Districts that may be appropriate for inclusion in these areas. Areas to be considered shall have pedestrian access to one of the Village Centers and be served by appropriate infrastructure, or areas where appropriate capital planning could provide necessary infrastructure in the near future.	short term	x									x							
03.1.3.2	Consider the impacts of the I-89 Interstate exit on development patterns along the Route 117 corridor and the surrounding road network and evaluate zoning revisions and other planning techniques appropriate for this area.	short term	x									x							
03.1.3.3	Identify development opportunities in the area for commercial and light industrial development near the Interstate exit along VT Route 117.	short term	x	x					x			x			x			x	



Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
03.1.4.1	Promote the use of Planned Unit Developments as a tool to cluster residential development and maintain critical natural resources and open space.	on-going	x		x							x							
03.1.4.2	Work with local and regional conservation organizations such as the Vermont Land Trust and Jericho Underhill Land Trust to afford landowners the opportunity to conserve their property.	on-going									x							x	
03.1.4.3	Continue funding the Open Space Fund for conservation opportunities.	on-going		x													x		
03.1.4.4	Consider adopting incentives and programs to promote the protection of scenic areas.	short term	x									x							
03.2.1.1	Insure that natural resources, based on the most current Town natural resources inventory, are taken into consideration when development occurs.	on-going			x	x			x						x				
03.2.1.2	Continue to require setbacks of 50 feet from VT Route 15 in the Commercial District, for the purpose of protecting the aesthetics of the corridor and maintain consistency with existing development. For development within the Commercial District that does not directly access VT Route 15, setbacks should be reduced to allow for a more village-style feel as described in the 2019 Commercial District Master Plan.	short term	x	x					x			x						x	

Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
03.2.1.3	Update the documentation of agricultural soils in order to have the most accurate information to protect agricultural lands.	short term	x	x		x						x						x	
03.2.1.4	Consider amendments to the Land Use and Development Regulations to protect wildlife corridors, such as the creation of a wildlife corridor overlay, “maximum setback” in certain areas, or other regulatory standards.	short term	x	x		x			x			x							
03.2.2.1	Consider zoning district description that includes “character of the neighborhood/district” definitions and criteria.	short term	x	x					x			x						x	
03.2.2.2	As described in the 2019 Commercial District Master Plan, adopt Land Use Regulations for the Commercial District that limit new development along VT Route 15 and require new development to fit the rural character of Jericho, providing site planning and design standards that addresses the character of development.	short term	x	x					x			x						x	
03.2.2.3	Consider developing performance standards for the Commercial District to ensure that uses within the District are aligned with the character with the immediate and surrounding areas, as described in the 2019 Commercial District Master Plan	on-going			x				x			x							x
3.2.2.4	Consider reducing the minimum lot size for the Commercial District in the Land Use Regulations as described in the	short term	x						x			x							

			Responsible Parties									Type								
Task #	Task	Timetable	Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government	
	2019 Commercial District Master Plan.																			
03.3.1.1	In keeping with the Regional Land Use Plan and ACT 200 goals, work closely with the Regional Planning Commission and State agencies to preserve Jericho's natural, historic, and recreational resources, provide continued opportunities for agriculture and forestry, and provide for residential and mixed uses in Jericho’s Village Centers.	on-going		x					x										x	
03.3.1.2	Communicate with adjacent towns through participation in regional meetings.	on-going		x					x										x	
03.3.1.3	Provide responsible input to Jericho’s representatives on regional planning groups, particularly the Chittenden County Regional Planning Commission (CCRPC).	on-going	x	x					x										x	
03.3.2.1	Continue joint planning efforts with the Town of Underhill related to the Riverside/Underhill Flats Village Center.	on going	x	x					x		x							x		
03.3.2.2	Monitor development along the I-89 exit in Richmond, and coordinate transportation and facilities upgrades necessitated by such development with the Town of Richmond. Work with developers in this area to ensure that adequate protection for residential properties is provided when commercial or industrial development occurs across the town line.	on-going	x	x					x									x		

			Responsible Parties									Type								
Task #	Task	Timetable	Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government	
03.3.3.1	The Selectboard and Planning Commission should seek to meet annually in public session with Range and University officials.	on-going	x	x							x								x	
03.3.3.2	Consider revisions to the Land Use and Development Regulations to allow educational and research facilities within the Open Space District, subject to appropriate standard	short term	x									x								
04.1.1.1	Monitor changes in state septic regulations and keep up-to-date on new technologies as they become available.	on-going							x									x		
04.1.1.2	Continue to enforce regulations that will prevent development (including but not limited to structures, filling, or substantial grading) within the 100 year floodplain and Fluvial Erosion Hazard Areas. Update these existing regulations based on best practices determined by local, state, and federal authorities.	on-going	x		x							x								
04.1.1.3	Monitor all of the fluvial erosion areas to see how best to accommodate fluvial equilibrium and natural erosion processes while minimizing undue damage to property	long term	x			x			x						x			x		
04.1.1.4	Plan culvert replacements for any undersized culverts in conjunction with roadway improvements.	on-going		x					x				x	x	x					
04.1.1.5	Review the Hazard Mitigation Plan on a regular basis and follow-up on action steps.	on-going		x		x												x	x	

Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
04.1.1.6	Update existing regulations to ensure new infrastructure in proximity to waterways avoids encroachment on areas prone to flooding.	short term	x	x					x			x			x				
04.1.1.7	Protect the groundwater recharge (Wellhead Protection Areas) areas for active public water supplies by limiting development in the immediate wellhead and providing appropriate standards and guidelines for development in the larger recharge area.	on-going	x		x							x							
04.1.1.8	Assess and map other major aquifers in Jericho and evaluate regulatory mechanisms for their protection.	long term	x			x					x	x						x	
04.1.1.9	Maintain undeveloped, unmowed, naturally vegetated buffer zones along the boundaries and in the riparian zones of streams, wetlands, vernal pools and ponds to provide protection against flooding and erosion. Minimum buffer widths should be 50 feet for first and second order streams, and 100 feet for third order streams and greater. Monitor and enforce regulations that protect these buffer zones.	on-going	x		x	x					x	x						x	
04.1.1.10	Continue to require stormwater management and erosion control practices for developments that fall under the threshold for State stormwater permitting. Evaluate the effectiveness of the current local regulations.	on-going	x		x							x							

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04.1.1.1 1	Consider revisions to the Zoning Regulations to require Low Impact Development and stormwater Infrastructure for all developments.	short term	x	x		x			x			x								
04.1.2.1	Monitor the effects of the NRO on development and land use applications and subsequent development, to gauge the effectiveness of the NRO, and to identify potential future regulatory improvements.	on going	x			x			x			x								
04.1.2.2	Prioritize these areas for permanent conservation through acquisition or easements.	long term				x												x		
04.1.2.3	Inform private landowners about these features on their lands and the importance of protecting them.	on-going				x									x			x		
04.1.3.1	Monitor the effects of the NRO on development and land use applications and subsequent development, to gauge the effectiveness of the NRO, and to identify potential future regulatory improvements.	on going	x			x			x			x								
04.1.3.2	Prioritize these areas for permanent conservation through acquisition or easements.	short term		x		x							x					x		
04.1.3.3	Inform private landowners about these features on their lands and the importance of protecting them.	on-going				x			x									x		
04.1.4.1	Consider adoption of the Tertiary Conservation Areas map as well as recommendations from the Conservation Commission for new language, including the proposed Table	short term	x	x		x			x			x								

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	of Uses. Also, consider amending the boundaries of the Rural/Agricultural Residential and Forestry Districts to better reflect the actual and potential uses in those areas.																		
04.1.4.2	Develop specific regulations that prevent degradation of function of these areas.	short term	x			x			x			x							
04.1.4.3	Cluster development away from unfragmented forest land and prime agricultural land, and to the extent possible, located predominantly in the village centers and the Commercial district.	on-going	x		x							x							
04.1.4.4	Prevent forest fragmentation and preserve wildlife corridors and large habitat blocks by writing regulations that will prevent development in these areas.	short term	x			x						x							
04.1.4.5	Consider conducting an inventory of early successional and grassland habitats and hard mast stands.	short term		x		x							x					x	
04.1.4.6	Consider having a naturalist review grassland habitat to determine wildlife potential.	short term		x		x							x					x	
04.1.4.7	Consider having a naturalist field verify common but state significant natural communities.	short term		x		x							x					x	
04.1.5.1	Avoid development on land with extreme slopes of 25% or greater and minimize impacts from development on slopes between 8 and 24%.	on-going	x		x							x							

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04.1.5.2	Review regulations requiring conditional use approval for development on slopes of 25% or greater, and consider if similar review should be required for slopes between 8 and 24%.	short term	x									x							
04.1.5.3	Continue to enforce regulations regarding extraction of sand, gravel, topsoil, and ledges to prevent undue environmental harm and to maintain town character and avoid its defacement.	on-going	x		x							x							
04.1.5.4	Consider identifying areas where large-scale groundwater extraction should be avoided.	short term		x		x			x						x			x	
04.1.6.1	Survey for and document the presence and location of invasive species within the Town. Cooperate with Regional and State initiatives that conduct such work. Link with statewide citizen monitoring initiative to document and study invasives. Maintain an up-to-date map that records the presence, growth, and/or decline of invasives, realizing that such species often move around the landscape.	long term		x		x												x	
04.1.6.2	Continue to provide education to residents, landowners and developers about the spread of invasives. Indicate restricted plants that may not be used in landscaping by state regulation. Provide information and links on the Town website. Conduct and publicize an invasive plant	on-going		x		x			x									x	



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	management/restoration project on town and/or JULT lands.																			
04.1.6.3	Develop an “Early Detection/Rapid Response” protocol to limit and control small-scale outbreaks of invasives before they proliferate into larger, more difficult problems.	short term				x			x				x					x		
04.1.6.4	Encourage landowners to identify and remove invasive plants. Encourage replanting with alternative plants, especially native species. Provide information on non-invasive plants.	long term		x		x			x									x		
04.1.6.5	Continue to support and work with the Town road crew to adopt and implement best management practices to prevent the spread of invasives (e.g. cleaning equipment, changing mowing regimes, ensuring all fill that is moved in town is “weed-free”). The New Hampshire Department of Transportation’s 2008 publication “Best Management Practices for Invasive Plants” is one source for formulating these practices.	on-going		x		x			x					x	x					
04.1.6.6	Address invasive species and endorse the use of native species in development and management of Town-owned land.	on-going		x		x			x					x	x			x		
04.1.6.7	Address the possible spread of invasives by applicants that are seeking design approvals within the Town. Promote the use of native species in reseeding and landscaping on construction sites; at the	on-going	x	x		x			x									x		

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	very least make sure that the list of approved seeds and plants does not contain invasives.																		
04.1.7.1	Examine regulations that pertain to light pollution for applicability to the latest lighting technology. Ensure that outdoor lighting is designed in a manner that minimizes glare, sky glow, and adverse impacts on adjacent property owners.	long term	x	x								x		x	x				
04.1.7.2	Review existing noise performance standards to determine if they meet the needs of the community and consider adopting a noise ordinance or implementing other regulatory measures.	long term	x	x								x			x				
04.1.7.3	Consider regulatory standards to protect ridgelines, such as the creation of a ridgeline protection overlay and/or ridgeline development standards.	short term	x									x							
04.1.7.4	Consider regulatory standards to protect and preserve identified scenic resources, such as subdivision siting standards, density bonus provisions, screening standards, or access management policies.	short term	x									x							
04.1.7.5	Adopt regulations that protect the scenic landscape along VT Route 15 in the Commercial District, as described in the 2019 Commercial District Master Plan.	short term	x							x		x							
04.1.8.1	Monitor air quality reports.	short term									x							x	

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04.2.1.1	Update, as more recent data becomes available, the Tiered Conservation Priorities Maps compiled in collaboration with the ECOS Science to Action Project to protect natural areas within the Town, including but not limited to unfragmented forest blocks, core habitat, wildlife corridors, deer wintering areas, black bear habitat and mast stands. Consider updates to the Natural Resource Overlay District where appropriate.	on going	x			x						x	x					x		
04.2.1.2	Continue to develop and/or update a map of local wildlife sightings, crossing and corridors.	on-going				x							x					x		
04.2.1.3	Update information on Jericho’s geological resources, particularly to identify significant features that are worthy of permanent protection.	short term				x							x					x		
04.2.2.1	Target areas for protection and conservation using a scientific and objective ranking system, especially Primary and Secondary Conservation Areas as depicted on Map 9. Work with landowners to consider conservation status for areas that are significant and deserve protection.	on-going		x		x			x						x			x		
04.2.2.2	Review zoning regulations in light of the updated Open Space Plan.	short term	x			x			x			x						x		
04.3.1.1	Encourage cooperation between the Jericho Conservation Commission, Mobbs Farm Committee, Jericho Underhill Land Trust, Vermont Land	on-going				x					x								x	

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	Trust, Chittenden County Regional Planning Commission, adjacent towns, and other organizations and committees as appropriate.																		
04.3.1.2	Continue to add to Jericho's Open Space Fund. Funds will be used to maintain and improve existing open space and to purchase additional open space lands.	on-going		x									x		x				
04.3.1.3	Support local and regional initiatives, such as the Chittenden County Upland Project.	on-going		x		x												x	
4.3.2.1	Study the Town's Tax Stabilization program which was discontinued. The program provided tax incentives to property owners who refrained from developing or subdividing parcels. Identify if the program should be reinstated, modified, or if an alternative program could be developed, to provide economic incentives to help protect Jericho's natural resources.	short term	x	x		x									x			x	
05.1.1.1	Allow the Adaptive Use regulations to include a wide range of eligible historic structures.	on-going	x									x							
05.1.1.2	Pursue historic preservation grants for publicly owned buildings. Publicize historic preservation grants and tax credits that are available for the preservation of private buildings.	on-going							x										x
05.1.1.3	Provide technical assistance to property owners seeking grants and/or tax credits for historic preservation.	on-going							x										x
05.1.1.4	Work with the Jericho Historical Society	on-							x										x

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	to increase awareness of existing historic preservation grants and to raise funds for matching such grants.	going																		
05.1.1.5	Work with property owners and developers to encourage preservation or minimal disturbance of historic landscape features such as stonewalls and hedgerows	long term	x								x	x						x		
05.1.1.6	Encourage the development of an inventory of archeological features deemed worthy of preservation.	short term									x		x					x		
05.1.1.7	Once archeological features are inventoried, modify Jericho’s Land Use and Development Regulations as necessary to encourage, or at least promote, the preservation of archeological features.	long term	x								x	x								
05.1.2.1	Coordinate with the CCRPC in planning road improvements that complement village and historic character.	on-going		x									x	x						
05.1.2.2	Work to maintain or develop a tree line along public roads. This may include replacement of trees removed or damaged through road maintenance and/or weather.	short term		x	x															
05.1.2.3	As described in the 2019 Commercial District Master Plan, adopt Land Use Regulations for the Commercial District that limit new development along VT Route 15 and require new development to fit the rural character of Jericho, providing site planning and design standards that addresses the character	short term	x	x					x			x								

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	of development.																		
05.2.1.1	Encourage expanded mixed uses within Village Center areas	on-going	x									x							
05.2.1.2	Require public uses such as schools, libraries, and town offices to be located in traditional village centers	on-going	x	x								x	x		x				
05.2.1.3	Maintain Village Center Designation for each village center. Monitor and take advantage of public and private programs that could benefit Jericho's Village Centers.	on going		x					x									x	
05.2.2.1	Implement “pedestrian-friendly” design concepts for traffic calming.	long term	x	x	x							x	x	x					
05.2.2.2	Allow on-street and shared parking and embedded parking structures to improve the appearance and accessibility of village businesses and public spaces.	on-going	x	x								x		x	x				
05.2.2.3	Require public facilities such as utility lines, guardrails, and streetlights to be compatible with village character. Pursue opportunities to bury existing above ground utilities.	long term		x								x		x					
06.1.1.1	Foster mixed uses within Village Centers and the Commercial District.	on-going	x		x							x							
06.1.1.2	Evaluate regulations for ambiguous standards or unclear requirements and make appropriate amendments.	on-going	x		x							x							
06.1.1.3	Evaluate the success of the 2009 Land Use and Development Regulations in fostering appropriate development within the Village Centers	short term	x									x						x	

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06.1.2.1	Determine and recommend infrastructure improvements needed to foster economic development in each Village Center, as prescribed in the Utilities, Facilities, and Services Section of this Plan.	long term		x							x		x					x		
06.1.2.2	Evaluate current telecommunications and high-speed internet service within each village center and the Commercial District.	short term		x							x							x		
06.1.2.3	Work with service providers to achieve 100% telecommunication and high-speed internet access within each village center and the Commercial District.	long term		x							x							x		
06.1.2.4	Work with utility companies to increase the availability of three phased power and other forms of energy, including renewables, as appropriate. Priority should first be given to the village centers and secondarily to the Commercial District.	long term		x														x		
06.1.2.5	Participate in Public Service Board proceedings related to utility expansions and extensions within Jericho. Request that the Public Service Board require extension of utilities to unserved areas of the Village Centers and the Commercial District when reviewing applications for extensions elsewhere within Jericho or neighboring communities	long term	x	x														x		

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06.1.3.1	Continue to allow and encourage flexible alternative parking arrangements, such as shared, off site, and on street parking.	on-going	x		x							x							
06.1.3.2	Evaluate village streets for public, on street parking, and implement in suitable locations.	long term		x					x				x	x	x			x	
06.1.3.3	Encourage mixed use development that reduces overall parking demands.	on-going	x		x							x							
06.1.4.1	Upgrade pedestrian infrastructure and make streetscape improvements to each village center.	long term		x									x				x		
06.1.4.2	Locate public and quasi-public facilities, such as schools, post offices, public offices, libraries, and other community facilities in Village Centers to provide a stable anchor for village businesses.	long term		x	x						x	x	x		x				
06.1.4.3	Interview existing Village Center businesses regarding new amenities that would improve the business climate and attract additional customers and businesses.	short term							x		x							x	
06.1.5.1	Implement the tasks prescribed in the Housing Section of this Plan to foster the development of a broad range of housing options in Jericho's Village Centers and the Commercial District.	long term	x																
06.1.6.1	Promote greater utilization of Village Center Tax Credits by existing and potential village businesses.	short term							x		x							x	x
06.1.6.2	Investigate the applicability of other incentive programs offered by the State	short term	x	x					x									x	



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	of Vermont, such as the Growth Center and Vermont Neighborhoods programs.																			
06.1.6.3	Research market potential for new businesses to locate in the Village Centers and the Commercial District.	short term		x					x		x							x		
06.1.6.4	Investigate programs and incentives to promote economic development offered by similarly sized communities in Vermont and other parts of the country.	short term		x					x		x							x		
06.2.1.1	Continue to allow home occupation businesses as a permitted use in all single family dwellings.	on-going	x		x							x								
06.2.1.2	Periodically evaluate existing home occupation provisions.	on-going	x		x							x								
06.2.2.1	Evaluate the interest of local businesses in the formation of a local business association. Provide assistance in the initial organization of such an association if desired.	short term		x					x									x		
06.2.2.2	Catalog and survey current businesses to identify the attributes they find most and least attractive about doing business in Jericho.	short term							x		x							x		
06.2.2.3	Consider revisiting the boundaries of the Commercial District, as described in the 2019 Commercial District Master Plan.	short term	x									x								
06.2.2.4	Consider whether additional provisions for commercial uses utilizing heavy equipment are needed elsewhere in town.	long term	x									x								

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06.2.3.1	Promote the protection of important agricultural and forestry land through use of Planned Unit Development provisions and voluntary land conservation.	on-going	x		x	x	x				x	x						x		
06.2.3.2	Continue to allow roadside sale of agricultural products and farmers markets in all zoning districts.	on-going	x		x							x								
06.2.3.3	Review current regulations to determine their impact on farm based-value added endeavors. Consider revising regulations to allow for on-farm processing that may not fall under the State definition of “agriculture.”	short term	x									x								
06.2.3.4	Develop standards to reduce conflicts between existing and future agricultural operations and new residential development, such as requiring new developments in rural areas to include “right-to-farm” language in deeds, use of vegetative buffers, or other similar measures.	short term	x									x								
06.2.3.5	Evaluate the need and feasibility of incubator space for agriculture and local food based businesses. Identify potential sites for such a facility, that could also take advantage of prime agricultural soils, in locations such as the Commercial District.	long term							x		x							x		
06.2.3.6	Provide Jericho residents with information on responsible methods of local food production, including guidance on mitigating impacts to	short term				x	x											x		

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	neighboring properties.																		
06.2.4.1	Continue to allow galleries, studios, and museums in a broad range of zoning districts.	on-going	x		x							x							
06.2.4.2	Foster further development of the arts and cultural community through development of festivals, gathering spaces, galleries, and/or artists' cooperatives.	on-going									x	x						x	
06.2.4.3	Encourage new creative economy industries and support industries and suppliers, such as retailers and professional offices, to locate in the Village Centers and the Commercial District.	on-going	x		x						x	x						x	
06.2.5.1	Maintain important wildlife habitat as prescribed in the Natural Resources Section of this Plan.	long term			x	x						x			x				
06.2.5.2	Take advantage of the numerous public lands located in Jericho, and the scenic resources provided by Mount Mansfield, the Browns River, and Jericho's rural landscape.	on-going		x		x					x							x	x
06.2.5.3	Open a dialogue with the University of Vermont regarding its long term plans for the UVM Research Forest and opportunities that growth of this facility may provide for Jericho businesses.	short term		x					x			x						x	
06.2.6.1	Continue to allow commercial lodging of various sizes in a broad range of zoning districts.	on-going	x		x							x							

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06.2.6.2	Encourage new hospitality based businesses and support businesses such as restaurants and specialty retail stores to locate in the Village Centers.	on-going	x		x						x	x						x	
06.2.6.3	Ensure access to Jericho's public and quasi-publicly owned open lands for residents and visitors. Develop a network of trails, including on road bike and pedestrian facilities, connecting these amenities.	on-going		x	x				x		x		x	x	x			x	x
06.2.6.4	Market Jericho's amenities to local residents and residents of neighboring communities.	short term									x							x	
06.2.6.5	Develop promotional materials marketing Jericho businesses, Village Centers, and rural areas, such as "Village Walking Tours," trail maps, and other similar materials.	short term		x					x		x							x	
06.2.7.1	Train local officials about various economic development resources available through programs such as the Vermont Small Business Administration Community Business Connections.	short term		x					x										x
06.2.7.2	Provide regional and state agencies and organizations with marketing materials which clearly describe Jericho's assets, sites, amenities, and long-term vision.	short term							x		x							x	x
06.2.7.3	Work with regional marketing entities, such as the Greater Burlington Industrial Corporation (GBIC) and the Lake Champlain Regional Chamber of Commerce to promote and market Jericho properties, particularly those	on-going									x							x	

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	located in the Village Centers and the Commercial District, to firms making regional inquiries.																			
06.2.7.4	Develop partnerships with tourism industry representatives to market Jericho as a good place to visit and do business.	short term		x					x		x							x	x	
06.2.7.5	Develop promotional materials for tourist and business development touting the scenic, historic, and rural characteristics of the Town, and other attributes that make Jericho a desirable location.	long term									x							x		
07.1.1.1	Encourage adoption of a fee structure that reduces or waives application and impact fees for affordable and senior housing. Consider reducing fees for all units within a development that contains a certain percentage of affordable units.	short term	x	x									x				x			
07.1.1.2	Continue to provide for variable lot sizes within Planned Unit Developments (PUDs), with a density bonus for affordable/ elderly housing.	on-going	x		x							x								
07.1.2.1	Encourage developers to take advantage of the incentives now in place.	on-going			x				x		x	x								
07.1.2.2	Support applications, such as Community Development Block Grants, for funding of affordable housing.	short term		x					x								x		x	
07.1.2.3	Facilitate partnerships between interested land owners and local affordable housing providers such as	on-going							x		x							x	x	

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	Green Mountain Habitat for Humanity and the Champlain Housing Trust to name a few.																		
07.1.2.4	Inventory publicly owned properties to determine if any would be appropriate locations for affordable housing. Identify and contact landowners whose property may support elderly or affordable housing, particularly in the Village Center District.	short term							x		x							x	
07.1.3.1	Review the Zoning Map and look for locations where higher residential density zoning would encourage socio-economic diversity.	short term	x	x					x			x							
07.1.4.1	Review the effect of density bonuses on the creation of affordable and/or senior housing.	short term	x	x					x			x							
07.2.1.1	Inventory and evaluate infrastructure needs in each Village Center.	short term		x					x									x	
07.2.1.2	Include necessary infrastructure upgrades in the Capital Plan and Budget.	long term		x									x						
07.2.1.3	Pursue innovative methods of improving infrastructure in the Village Centers, such as Special Assessment Districts, Public-Private Partnerships, etc.	long term		x					x		x		x				x	x	
07.2.1.4	Implement the zoning changes recommended by the 2019 Commercial District Master Plan to increase mixed use development in the Commercial District.	short term	x	x								x							

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08.1.1.1	Require that approval of future development be based on the demonstrated ability of the affected school district to provide the necessary services.	on going			x							x							x
08.1.2.1	Coordinate construction, maintenance, and use of school recreational facilities and town recreational facilities.	on-going		x						x			x				x		
08.1.2.2	Improve communications regarding usage of school recreational facilities by the general public.	on-going		x					x	x									x
08.2.1.1	Continue to support programmatic activities by schools such as “the walking school bus” and other Safe Routes to School activities.	on-going								x									x
08.2.1.2	Interconnect the schools with other important town facilities through the creation of alternate transportation paths.	long term		x	x					x		x	x						
08.2.1.3	Construct and upgrade sidewalks and bicycle facilities serving Jericho schools.	long term		x									x						
08.2.2.1	Encourage the installation and use of seatbelts on school buses. Encourage school bus routes which result in reasonable ride times for children.	long term								x			x						x
08.3.1.1	Conduct a formal study or obtain information about Jericho childcare needs and barriers/challenges to owning or operating high quality daycare in Jericho.	short term		x							x							x	
09.1.1.1	Maintain and update a schedule for capital expenditures related to the maintenance and upgrading of the	on-going		x									x						

			Responsible Parties									Type								
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	roads and stormwater management infrastructure, based on the 2015 Transportation Study and in order to comply with the new state stormwater permit requirements, effective in 2018.																			
09.1.1.2	Maintain and update a schedule of impact fees to mitigate the effect of new development on the cost of improving affected roads.	on-going		x									x							
09.1.2.1	Upgrade the VT Route 15/River Road intersection or redirect traffic as recommended in the 2015 Transportation Study.	short term		x							x		x					x		
09.1.2.2	Evaluate different design alternatives to address projected poor LOS at the VT Route 15/Browns Trace and VT Route 15/Packard Road Intersections.	long term		x							x		x					x		
09.1.2.3	Consider safety improvements to the Skunk Hollow/VT Route 117, Barber Farm/VT Route 117, and Browns Trace/Lee River Road intersections.	short term		x					x			x						x	x	
09.1.2.4	Periodically evaluate LOS and safety at major intersections. Prioritize improvements based on safety rather than Level of Services. Service Levels lower than C can be acceptable in Village Centers when the delay provides for traffic calming and/or improves pedestrian safety, or where upgrades would negatively impact the surrounding built or natural environment.	on-going		x					x				x					x	x	



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09.1.2.5	Formulate an Official Map identifying right-of-way needs for future intersection improvements.	short term	x													x			
09.1.3.1	Formulate an Official Map for a street and multi-modal network within and connecting the Village Center, Commercial and Village Districts.	short term	x													x			
09.1.3.2	When feasible, require continuation of roads in new developments and subdivisions. Rights-of-way in new developments should be reserved for future extension/connection of dead-end roads. Dead-end turn-arounds should be designed to allow for continuation of the road in future phases of development or when adjacent properties are developed.	on-going			x									x	x				
9.1.3.4	Consider adding new streets, that comply with complete streets design, in the Commercial District to reduce congestion on VT Route 15, increase connectivity to Riverside Village Center, and increase development opportunities in the district.	on going	x											x		x			
9.1.3.5	Consider reconfiguring the way Orr Road meets Brown's Trace to help reduce potential vehicle conflicts.	short term		x														x	
9.1.3.6	Access management should be implemented for the Commercial District where new development will utilize existing streets or new internal streets within the District and limit curb cuts on VT Route 15.	Short term	x	x								x		x	x				

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09.1.3.3	In general, the Town of Jericho should not accept additional dead-end roads as public roads. Only roads which contribute to a network of interconnected roads and streets should be accepted as public roads.	on-going		x										x	x				
09.1.4.1	Every ten years, conduct traffic projections using similar methodology to the 2015 Transportation Study. Compare these projections against actual traffic counts.	long term							x									x	
09.2.1.1	Include funds in the Capital Plan for shoulder widening on roadways proposed for on-road bicycle facilities in the 2015 Transportation Study. Priority will be given to roadways which connect Village Centers such as Lee River Road and Browns Trace. Shoulder widening should occur in conjunction with other planned roadway improvements.	short term		x									x						
09.2.1.2	Work with VTTrans to ensure that upgrades to VT Route 15 and VT Route 117 include creation of shoulder widths sufficient to accommodate a paved shoulder bicycle facility meeting the requirements of the Vermont Pedestrian and Bicycle Facility Planning and Design Manual.	long term		x					x				x					x	x
09.2.1.3	Whenever median lines are repainted, ensure that the fog lines receive similar treatment. Fog lines should be located to provide sufficient shoulder widths for bicycles and to encourage motor vehicle	on going		x					x				x					x	x

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	travel at safe speeds. Consider methods for keeping shoulders clear for cyclists such as a road sweeper.																		
09.2.1.4	Identify and fill any gaps within the pedestrian infrastructure in each Village Center. In general, sidewalks should be available on both sides of the main road through each Village Center (VT Route 15/Browns Trace) and on at least one side of other streets.	long term		x	x							x	x						
09.2.1.5	Provide greenways, pedestrian/bike paths, or sidewalks when constructing new roads or when performing major upgrades such as paving or road realignment. These alternative transportation paths may be placed at a different location than the primary construction.	long term		x	x								x	x					
09.2.1.6	Consider developing a shared use path that connects Riverside and Jericho Corners through the Commercial District along the Brown's River and the old railroad bed.	short term		x					x		x					x		x	
09.2.2.1	Secure easements and rights-of-way for new pedestrian and bicycle facilities through the development review process, especially along three-rod roads in the Village Centers or proposed for on-road bicycle facilities, or where existing trails connecting important facilities or neighborhoods are present.	on-going	x		x							x			x	x			
09.2.2.2	Consider the implementation of impact fees for the development of pedestrian	short term		x					x					x	x				x

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	and bicycle facilities.																		
09.2.2.3	Require that common land in subdivisions, public land, and open space be arranged to enhance interconnections and require public rights-of-way where appropriate.	on-going	x		x							x				x			
09.2.2.4	Develop and enforce standards that ensure that the layout of new developments is conducive to pedestrian access.	short term	x		x							x							
09.2.2.5	Require the construction of sidewalks in new subdivisions and developments.	on-going	x	x	x							x	x	x					
09.2.2.6	New development, particularly in the Commercial District should take a complete streets approach, utilizing street designs that provide adequate area for bicycling and walking.	on going	x		x							x		x					
09.2.3.1	Identify locations, including areas within the Commercial District, that could be utilized as a local park-and-ride, including existing establishments with excess overflow parking during weekdays that may serve as a leased local park-and-ride. Continue to work with the CCRPC to identify funding sources and mechanisms to support a local park-and-ride.	short term		x			x		x				x				x	x	
09.2.3.2	Identify and work to eliminate barriers to the formation of informal park-and-ride arrangements between private parties, including but not limited to liability and maintenance/safety	short term		x			x		x									x	

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	concerns.																			
09.2.3.3	Continue to work with the GMT with the Jeffersonville Commuter bus and to enhance additional transit opportunities.	long term		x			x		x				x					x		
09.2.3.4	Provide Jericho residents with information on existing state programs that support and facilitate carpooling.	short term					x		x									x		
09.2.3.5	Encourage municipal and school employees to seek alternative means to commute to work, such as walking/bicycling, carpooling, or ridesharing.	short term		x			x		x	x									x	
09.2.3.6	Work with major local and regional employers and businesses to facilitate carpooling, ridesharing, and or transit use among their employees and/or customers.	on-going					x				x							x		
09.2.3.7	Encourage school children to travel to school by use of the buses or walking/cycling. Educate parents as to the benefits and availability of these options.	on-going					x			x								x	x	
09.3.1.1	Amend the Public Works Specifications to encourage road designs that reflect the location, use, and context of the site. Include special standards for village streets and low volume rural roads. New roads shall comply with the standards for the appropriate designation.	short term		x										x						

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09.3.1.2	Narrow, whenever possible, the travel lanes of paved roadways in developed areas, providing larger shoulders for bicyclists or curbs and/or a green strip between roads and sidewalks.	on-going		x	x							x	x	x						
09.3.2.1	Solicit public input including warned public hearings prior to undertaking significant road alterations.	on-going		x					x				x				x		x	
09.3.2.2	When reviewing possible road upgrades, including paving, the Selectboard shall consider impacts on (a) the safety of alternative transportation, including pedestrian and bicycle traffic, (b) the average speed of traffic, (c) the volume of through traffic (d) stormwater management, and (e) the aesthetics of the area.	on-going		x					x				x				x		x	
09.3.2.3	In general, upgrades to gravel roads shall consist of improvements to the road base rather than paving.	on-going		x					x				x		x		x			
09.3.2.4	Give due consideration to the impacts on and opinions of property owners, residents, and tenants on a road prior to undertaking major upgrades.	on-going		x					x				x				x		x	
09.3.2.5	Work with VTrans to mitigate impacts of increased commuter traffic on VT Route 15, and to implement measures to reduce residual vehicle noise, control vehicle speed, and improve safety for pedestrians and residents. Ensure that upgrades to VT Route 15 consider pedestrian safety and circulation, the mixed use character of the Jericho	on-going		x					x				x	x	x			x		

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	Corners and Riverside Village Centers, and the safety of residents living on the corridor.																		
09.3.2.6	Investigate the benefits and costs of methods to increase local authority over management and upgrades to VT Route 15, such as assuming management of VT Route 15 as a Class I town Highway.	long term		x					x								x	x	
09.3.3.1	Continue to work with organizations to reduce erosion and runoff from Jericho’s roadways and to replace undersized bridges and culverts.	on-going		x					x				x				x		
09.3.3.2	Implement low impact and green site design development standards for erosion and stormwater control for use in road maintenance and construction.	short term	x						x			x		x			x		x
09.3.3.3	Investigate potential road salt alternatives. Consider safety and cost when evaluating potential alternatives.	short term		x		x	x		x								x		x
09.3.4.1	Examine and implement strategies for road layout and design, roadside landscaping, and other traffic calming measures such as signage that encourage travel at safe speeds.	long term		x									x	x			x		
09.3.4.2	Design and construct “village gateways” to calm traffic entering each Village Center.	short term		x					x		x		x				x		
09.3.4.3	Consider implementing traffic calming measures such as radar speed feedback signs, “slow down” and “caution: pedestrian” signs, to help keep vehicle speeds down.	on going		x									x	x			x		

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09.3.5.1	Formulate a plan for the planting of trees in or along all rights-of-way both public and private. Establish a policy for the replacement of trees removed from the right-of-way through road maintenance. Do not remove trees within the right-of-way without contacting the Town Tree Warden and holding public meeting as required by law.	short term		x					x								x	x	x
09.3.5.2	Consider a scenic overlay along the VT Route 15 corridor to preserve the view of Mt. Mansfield and enhance the rural character of the area.	short term	x						x			x	x				x	x	x
09.3.5.3	Research, develop, and encourage alternate designs for bridges based on scale of use and aesthetics.	long term		x					x				x					x	
10.1.1.1	Maintain and update a schedule for capital expenditures related to the maintenance and upgrading of the services described within this section of the Plan.	on-going		x									x						
10.1.1.2	Maintain and update a schedule of impact fees to mitigate the effect of new development on the cost of improving affected utilities, facilities, and services.	on-going		x									x						
10.1.2.1	Encourage appropriate mixed use development within areas currently served by public water.	on-going	x		x							x	x						
10.1.2.2	Evaluate expansion opportunities for Champlain Water District, particularly to include Jericho Center and the	short term		x							x							x	



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	Commercial District. Investigate potential costs and funding options for that expansion.																		
10.1.2.3	Investigate methods for the protection of the potability and availability of water for private wells, such as the development of a Water Resources Plan as described in the Natural Resources Section of this Plan.	short term	x			x					x	x						x	
10.1.2.4	Keep current on emerging technologies for sewage disposal and their impact on the goals of this Plan.	on-going							x										x
10.1.2.5	Investigate the feasibility of a community wastewater system serving Jericho Center and the Commercial District. Investigate potential costs and potential funding options for that expansion.	short term		x					x		x							x	
10.1.3.1	Identify areas which would be adversely affected by the location of telecommunication towers.	on-going		x	x	x						x							
10.1.3.2	Require that all new and relocated utilities be located underground and pursue opportunities to bury existing above ground utilities.	on-going	x		x							x							
10.1.3.3	Develop a plan to progressively reduce the number of overhead power and communications lines with a goal of complete elimination.	long term		x									x		x			x	
10.1.4.1	Review and consider the Fire Department's assessment of its ability to provide adequate protection in the approval of future developments.	on-going	x		x				x			x							

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10.1.4.2	Continue Fire Department review of site plans for access and provide recommendations during the review of all proposals for new development.	on-going			x						x	x							
10.1.4.3	Evaluate the adequacy of the Public Works Specifications for driveways to new home sites against the Fire Department's recommendations for access.	short term		x					x		x			x					
10.1.4.4	Identify areas which lack adequate water supply for fire protection and develop plans to improve the water supply in rural areas. Require new developments to provide facilities such as fire ponds, cisterns and/or hydrants in accordance with this Plan.	long term	x	x	x						x	x	x				x	x	
10.1.4.5	Include standards for dry hydrants, fire ponds, and cisterns in the Public Works Standards.	short term	x	x							x			x					
10.1.4.6	Work to improve the Town's ISO PPC rating in areas not served by public water through improved emergency response planning, equipment and water supply upgrades, and better training/documentation.	long term									x							x	x
10.1.4.7	Maintain or improve the Town's current arrangement with the State Police and County Sheriff and consider alternatives to the state police, such as a local or regional police force.	on-going		x					x										x
10.1.4.8	Provide informational resources to Jericho residents interested in forming Neighborhood Watches.	short term							x		x							x	x

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10.1.4.9	Review and strengthen arrangements with area rescue squads.	on-going		x					x		x							x	x	
10.1.5.1	Maintain membership in the Chittenden Solid Waste District.	on-going		x					x										x	
10.1.5.2	Consider development of a town-wide contract for trash/recycling pick up.	long term		x					x								x	x	x	
10.1.5.3	Retain regulations for the management and disposal of hazardous waste materials.	on-going		x											x				x	
10.1.5.4	Support waste reduction and recycling efforts and provide residents with educational materials on waste reduction methods and resources.	on-going				x	x											x		
10.1.5.5	Promote the use of drop off centers and encourage all town residents to recycle materials as specified by the solid waste district.	on-going				x	x											x		
10.1.5.6	Implement recycling, composting, and other solid waste reducing measures in all municipal and school buildings.	short term		x		x	x		x	x							x			
10.1.5.7	Purchase high post-consumer recycled content and non-bleached paper brands.	short term				x	x		x								x		x	
10.1.5.8	Encourage composting by individual households, condo associations, neighborhoods, and businesses.	on-going				x	x											x		
10.1.5.9	Encourage research into communal wastewater systems in the village centers.	short term		x	x				x						x			x		
10.1.6.1	Investigate ways to encourage public use and available activities in existing parks such as Mills Riverside Park, Old	on-going		x				x	x		x									

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	Mill Park, Mobbs Farm and Kikas Valley Farm.																			
10.1.6.2	Evaluate potential recreational uses for the Village Water District parcels located in Jericho Corners.	long term		x		x		x	x		x							x		
10.1.6.3	Use town resources and development incentives to obtain parcels contiguous to existing open spaces and/or greenways to connect natural areas and to protect outstanding water features. Develop walking/hiking trails and bike paths through these connected open spaces.	short-term	x	x	x			x				x	x				x			
10.1.6.4	Evaluate the immediate and future need for community and neighborhood parks. Investigate opportunities for creating new parks of various size and type throughout the town.	long term	x	x				x										x		
10.1.6.5	Work with other community groups to implement the Open Space Plan, to increase the number of places and facilities available in town for recreational use and open space.	long term		x		x		x			x							x		
10.1.6.6	Formulate an Official Map identifying potential locations for new parks, trails, and other recreation facilities.	long term	x					x								x				
10.1.7.1	Establish a plan for capital expenditures to improve the maintenance and use of space in municipal buildings such as the Jericho Town Hall, Town Library, and Highway Garage.	short term	x	x									x							
10.1.7.2	Locate future public and community buildings within the Village Centers to	on-going	x	x	x							x	x		x				x	

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	enhance and stimulate the activities occurring there.																			
10.1.8.1	Town administrative staff and funds will be made available to provide mapping, planning, historical research support, and land space design for future growth.	on-gong							x								x		x	
10.1.8.2	Maintain the grounds and fencing of all public cemeteries in Jericho.	on-going		x					x		x						x			
10.1.8.3	Restore and repair grave markings in the Castle Cemetery.	long term		x							x						x	x		
10.2.1.1	Utilize online methods of communication such as email lists, Front Porch Forum, Two Towns Online, and the Municipal Website to inform residents of official meetings and events.	on-going							x										x	
10.2.1.2	Investigate the creation of a Town Newsletter or blog.	short term		x					x									x	x	
10.2.1.3	Have Town staff contribute to the Mountain Gazette.	short term		x					x									x	x	
10.2.1.4	Work with Mount Mansfield Cable Television for taping of Town meetings.	on-going	x	x	x	x	x		x						x				x	
10.2.2.1	Provide opportunities for citizens to directly participate in the organization and implementation of the special projects noted in this Plan	on-going		x					x		x							x	x	
10.2.2.2	Enlist the aid of volunteer, civic and youth organizations, such as the Lions Club, 4-H, and the Girl Scouts and Boy Scouts in implementing the special projects noted in this Plan.	on-going		x					x		x							x	x	

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10.2.3.1	Conduct periodic joint meetings of various Town boards and committees.	on-going	x	x	x	x	x		x	x	x								x
11.1.1.2	Identify cost effective improvements to reduce energy consumption and cost at public and quasi-publicly owned buildings, such as the community center through professional energy audits.	short term		x			x			x	x							x	x
11.1.1.3	Include low cost energy efficiency retrofits as part of the annual building maintenance budget.	short term		x						x							x		
11.1.1.4	Include higher cost energy efficiency retrofits in the Capital Budget. Pursue resources such as grants, bonds, and low interest loans to fund such retrofits.	long term		x						x	x		x						
11.1.2.1	Regularly update the town's sources and uses of energy (energy use profile).	on-going		x			x		x				x		x		x	x	
11.1.2.2	Continue to provide Jericho residents and businesses with informational materials and presentations, regarding energy audits, weatherization, energy efficiency options, and current financial incentive programs.	on-going					x		x									x	x
11.1.2.3	Investigate opportunities to collaborate with neighboring towns and work with organizations, such as Efficiency Vermont and the Champlain Valley Office of Economic Opportunity, to encourage energy efficiency and reduce energy consumption.	on-going					x											x	
11.1.2.4	Encourage weatherization by educating residents on the fact that weatherization efforts do not increase the assessed taxable value of a	long term		x			x		x									x	

			Responsible Parties									Type								
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	property. Evaluate Jericho’s potential participation in the Property-Assessed Clean Energy (PACE) program and/or the establishment of a Clean Energy Assessment Districts (CEAD).																			
11.1.2.5	Develop methods to accurately track residential weatherization projects.	short term					x											x		
11.1.2.6	Decrease the rate of conversion to natural gas by promoting the benefits of switching from fuel oil or kerosene to renewable systems like advanced wood heat or heat pumps.	long term					x				x							x		
11.1.3.1	Adopt fuel efficiency standards as an important consideration in the acquisition and/or lease of new vehicles.	short term					x			x			x		x		x			
11.1.3.2	Consider the cost-effectiveness and viability of diverse fuel-types, such as biodiesel and natural gas, when purchasing and/or leasing new vehicles.	short term		x			x			x			x				x			
11.1.3.3	Maintain a regular schedule of vehicle maintenance to ensure efficient operation and minimum emissions.	on-going							x								x		x	
11.1.3.4	Evaluate the feasibility of hybrid/biofuel and electric vehicles in any RFP or purchase consideration for the road crew to eliminate idling for power-to-auxiliary systems.	short term					x		x									x		
11.1.3.5	Evaluate the feasibility of hybrid/biofuel and electric vehicles in any RFP or purchase consideration for any municipal light duty vehicles .	short term		x					x						x			x		

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11.1.4.1	Develop and implement a comprehensive education program that includes educational materials/web resources and workshops about “eco-driving techniques,” fuel efficiency, biodiesel, current incentive programs, and collaborate with Drive Electric Vermont to host electric vehicle demonstrations.	on-going					x											x	
11.1.4.2	Work with the Mount Mansfield Union High School to incorporate energy efficient driving techniques into the drivers’ education curriculum.	short term					x			x								x	
11.1.4.3	Find ways to reduce idling through education and enforcement of 23 V.S.A. §1110 which puts limits on idling.	short term		x			x		x	x									x
11.1.4.4	Consider adopting the Vermont Energy Stretch Code to require EV charging station for new commercial development in the Village Center and Commercial Districts.	short term	x	x			x		x			x							
11.1.4.5	Identify locations for electric vehicle charging stations in each of the Village Centers, such as the Jericho Market, and the Commercial District.	on going					x		x									x	
11.1.4.6	Work with GMP, VEC, and grant programs to identify funding sources for electric vehicle charging infrastructure.	on going					x		x									x	
11.1.4.7	Update zoning regulations to include language to clarify permitting requirements for new electric vehicle charging installations and support the ongoing development of this	short term	x				x		x			x							



Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
	infrastructure.																		
11.2.1.1	Appoint a town staff person to document on a regular basis the amount of renewable energy generated in Jericho. Track progress towards meeting goals stated in 11.2.1.	on going		x			x		x		x							xx	
11.2.1.2	Maintain the current height exemption for small renewable energy generation facilities found in the Land Use and Development Regulations. Evaluate this exemption against advances in renewable energy technology and amend as necessary.	on-going	x		x							x							
11.2.1.3	Designate appropriate sites throughout Jericho as “preferred sites” for renewable energy generation, including possibilities such as impervious surfaces near schools. Net metering systems on preferred sites can be larger and receive better net metering rates.	on going	x		x							x							
11.2.1.4	Inventory public and quasi-publicly owned lands, buildings, and properties and evaluate their potential for renewable energy, including but not limited to solar, wood/biomass, and carbon sequestration.	short term	x				x					x						x	
11.2.1.5	Identify potential sites for community solar systems, with assistance from the Energy Task Force and other partners.	short term		x			x		x				x					x	
11.2.1.6	Consider revising existing zoning regulations to require solar-ready roofs for all new commercial construction.	short term	x				x		x			x							

Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
11.2.1.7	Conduct a cost-benefit analysis for purchasing renewable energy, such as Green Mountain Power's "Cow Power," for electricity at public buildings.	short term		x			x				x	x					x	x	
11.2.1.8	Work with the Mount Mansfield Unified Union School District to encourage any future heating systems at Jericho Elementary School and Browns River Middle School remain wood systems or other renewables.	on going		x			x			x								x	
11.2.1.9	Work with developers, including those developing energy facilities, to avoid adverse impacts to the known constraints mapped and defined in this plan.	on going					x			x					x			x	
11.2.1.10	Work with developers, including those who develop energy facilities, to minimize and mitigate impacts to the possible constraints mapped and defined in this plan	on going					x		x						x			x	
11.2.1.11	Develop a solar screening bylaw to be implemented when ground mounted solar arrays are proposed.	short term	x				x					x							
11.2.2.1	Create and publicize a list of renewable energy developers operating in Jericho to educate residents who are thinking of installing solar panels or other renewable systems.	on going					x				x							x	
11.2.2.2	Educate residents about opportunities to purchase or lease in-home battery storage systems, especially combined with net metering projects, to reduce the need for generators during power	on going					x		x									x	

			Responsible Parties									Type								
Task #	Task	Timetable	Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government	
	outages.																			
11.2.2.3	Request that homeowners’ associations do not impede the town’s energy strategy by having covenants which include, among other options, minimum house sizes, restrictions on output of solar panels, or requirements that homes face in a direction which does not provide for passive solar heating.	short term			x		x					x						x		
11.3.1.1	Maintain the existing zoning bylaws that encourage the concentration of residential and mixed use development in the Village Centers and the Commercial District.	on-going	x		x							x								
11.3.1.2	Work with utility companies to plan for the efficient location of infrastructure necessary to support denser, mixed use land use patterns and expansion of fiber optics that facilitate telecommuting.	short term	x	x							x		x					x	x	
11.3.1.3	Facilitate the provision of communications improvements such as phone and high-speed Internet service which support home businesses, and reduce commuting.	on-going		x			x		x									x	x	
11.3.1.4	Identify opportunities to bury overhead power lines. For example, work with power companies and VTrans to bury power lines and cables when roads are improved or constructed and recommend to the Selectboard to consider burying lines when constructing sidewalks and laying fiber	short term		x			x		x				x					x	x	

Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
	optic lines.																		
11.3.2.1	Consider adopting the Vermont Stretch Energy Codes for all new residential and commercial development.	short term					x		x									x	
11.3.2.2	Consider adopting subdivision and site plan standards that promote solar gain and utilization of other renewable energy resources, moving Jericho toward a Passive House goal for standards.	short term	x									x							
11.3.2.3	Encourage landscape designs that promote the efficient use of energy.	on-going	x									x							
11.3.2.4	Offer incentives for new residential and commercial buildings that result in NetZero buildings.	on going	x						x			x							
11.4.1.1	Improve infrastructure for bicycles and pedestrians by regularly painting fog lines and ensuring they are wide enough for use by cyclists, as well as sweeping road shoulders in the spring. See Goal 9.2 in the Transportation section for more details.	long term	x	x									x						
11.4.1.2	Work to site and construct a small commuter parking lot in coordination with the CCRPC and GMT.	long term	x	x		x	x				x		x					x	

Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
11.4.1.3	Consider building roundabouts at intersections of town roads, such as Brown's Trace and Lee River Road, where they can increase safety, improve traffic flow.	short term		x					x									x	x
11.4.1.4	Support the planning efforts of the Tri-Town Alternative Transportation Committee regarding public transportation for Jericho, Underhill and Cambridge.	on going			x											x	x		
12.1.1.1	Continue to encourage new development to occur in the three village centers and the Commercial District and discourage sprawling disconnected development in outlying areas. Focus on encouraging a mix of compatible uses.	on going	x	x								x						x	
12.1.1.2	Consider requiring Universal Access Design (UAD) for certain buildings and/or as one of the incentive options for PUD density bonuses. UAD helps make buildings/spaces that can be accessed and by all people regardless of their age, size, ability or disability.	short term	x						x			x							
12.1.1.3	Limit private dedicated parking lots, implement shared parking, reduce or eliminate parking minimums, to create "park once" conditions in the villages and commercial district.	short term	x						x			x							
12.2.1.1	Continue to enhance walkability in the three village centers and pursue pedestrian facilities within and connecting to the commercial district.	on going	x	x					x			x	x	x			x	x	

Task #	Task	Timetable	Responsible Parties									Type							
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12.2.1.2	Support public transit, ride share, bike share, park and ride, and similar measures to reduce residents' dependence on cars for daily routines.	on going	x	x					x			x	x					x	
12.2.1.3	Update zoning to help implement the 2015 Bike/Ped Master Plan.	short term	x						x			x							
12.3.1.1	Reinstate annual funding for the Open Space Fund.	short term		x		x			x								x		
12.3.1.2	Continue to investigate the feasibility of acquiring the "Rivers property" from Underhill-Jericho Fire District for community use and public recreation.	long term		x		x			x		x	x						x	
12.3.1.3	Fill the recently funded year-round Recreation Director position.	short term		x					x										x
12.3.1.4	Evaluate the 2019 Trails Committee survey for ways to improve access to and increase use of trails and natural areas.	on going	x	x					x		x							x	
12.4.1.1	Consider zoning changes to remove barriers and create pathways for small local producers to access land, particularly in small and/or shared lots, and to sell their products.	short term	x						x			x							
12.4.1.2	Consider criteria that should potentially constrain conversions of prime agricultural soil, existing farms, and former farmland to other uses such as new neighborhoods or businesses.	short term	x			x			x			x							
12.5.1.1	Raise awareness of the nature and seriousness of substance misuse with the help of community organizations.	on going	]	x						x	x								x
12.5.1.2	Designate town hall campus and town parks tobacco- free.	short term		x					x						x				

Task #	Task	Timetable	Responsible Parties									Type							
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12.5.1.3	Ensure any regulations of tobacco use include e-cigarettes and vaping.	on going		x						x	x				x				
12.5.1.4	Consider connecting with a community coalition in a neighboring community or establishing a similar coalition in Jericho.	on going		x							x				x			x	
12.5.1.5	Promote substance-free community events.	on going		x					x	x	x		x						
12.5.1.6	Consider adopting polices to prohibit tobacco and alcohol advertisements on exterior windows, doors, or walls, and requiring interior advertisements and displays to target only adult customers.	short term	x						x			x							
12.5.1.7	Ensure any regulations of tobacco use include e-cigarettes and vaping.	on going		x											x				
12.6.1.1	Continue commitment to enhancing walkability in the three village centers.	on going																	
12.6.1.2	Continue to value and prioritize protection and use of Jericho's numerous recreational/natural spaces including Mills Riverside Park, Mobbs Farm, Winooski Valley Park District, and Land Trust natural areas.	on going																	
12.6.1.3	Concentrate new development in the three village centers and the commercial district.	on going	x	x								x			x				
12.6.1.4	Consider requiring Universal Access Design (UAD) for certain buildings and/or as one of the incentive options for PUD density bonuses. UAD helps make buildings/spaces that can be accessed and by all people regardless of their age, size, ability or disability.	short term	x	x								x							

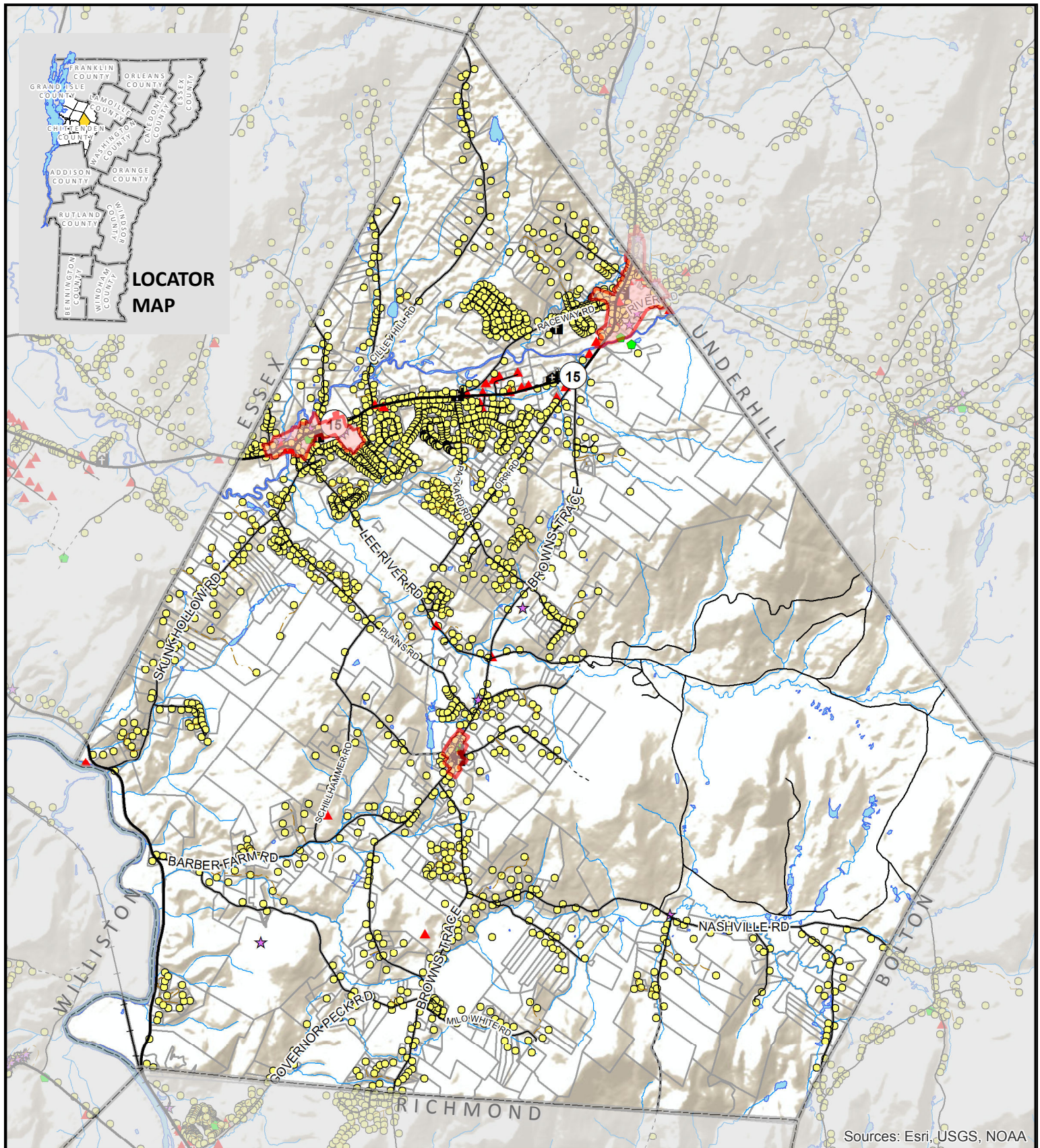
Task #	Task	Timetable	Responsible Parties									Type							
			Planning Commission	Selectboard	DRB	Conservation Commission	Energy Task Force	Recreation Committee	Town Staff	School District	Other	Land Use & Dev. Regulations	Capital Budget/Plan	Public Works Specs	Policy/Ordinance	Official Map	Annual Budget	Special Project	Town Government
12.6.1.5	Continue to support community events that foster residents' relationships such as parades, outdoor concerts, library activities, workshops, celebrations, art shows, etc.	on going		x				x	x					x				x	
12.6.1.6	Ensure that the planning process includes broad community input, with emphasis on older adults, families living in poverty and racial and ethnic minorities.	on going	x	x					x			x	x						
12.6.1.7	Consider using AARP Livable Communities resource to help ensure elderly residents of Jericho can age in place.	short term	x	x								x							



## Appendix A: Maps

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MAP 1	..... Existing Land Use
MAP 2	..... Future Land Use
MAP 3	..... Agriculture
MAP 4	..... Topography
MAP 5	..... Water Resources
MAP 6	..... Ground Water Protection Areas
MAP 7	..... Habitat & Natural Areas
MAP 8	..... Upland Natural Communities
MAP 9	..... Natural Resources Overlay
MAP 10	..... Historic Sites & Districts
MAP 11	..... Transportation
MAP 12	..... Facilities & Utilities
MAP 13	..... Soil Suitability for On-Site Septic
MAP 14	..... Riverside – Designated Village Center Boundary
MAP 15	..... Jericho Center – Designated Village Center Boundary
Map 16	..... Jericho Corners – Designated Village Center Boundary
Map 17	..... Energy Generation: Preferred Sites & Existing Renewable Generation
Map 18	..... Energy Generation: State Known Constraints
Map 19	..... Energy Generation: State Possible Constraints
Map 20	..... Energy Resources Areas: Potential Wind
Map 21	..... Energy Resource Areas: Potential Solar
Map 22	..... Tiered Conservation Priorities



Sources: Esri, USGS, NOAA

Source:  
Land Use - e911 data, July 2015; Topography - developed from 2013 DEM  
by CCRPC; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline -  
e911 roads, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008  
(VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane  
Coordinate System, NAD 1983.

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#### Legend

- ▲ Commercial
- ★ House of Worship
- ★ Government/Education
- Residential
- ◆ Public Gathering/Recreation Site
- Designated Village Center
- Tax Parcel Boundary

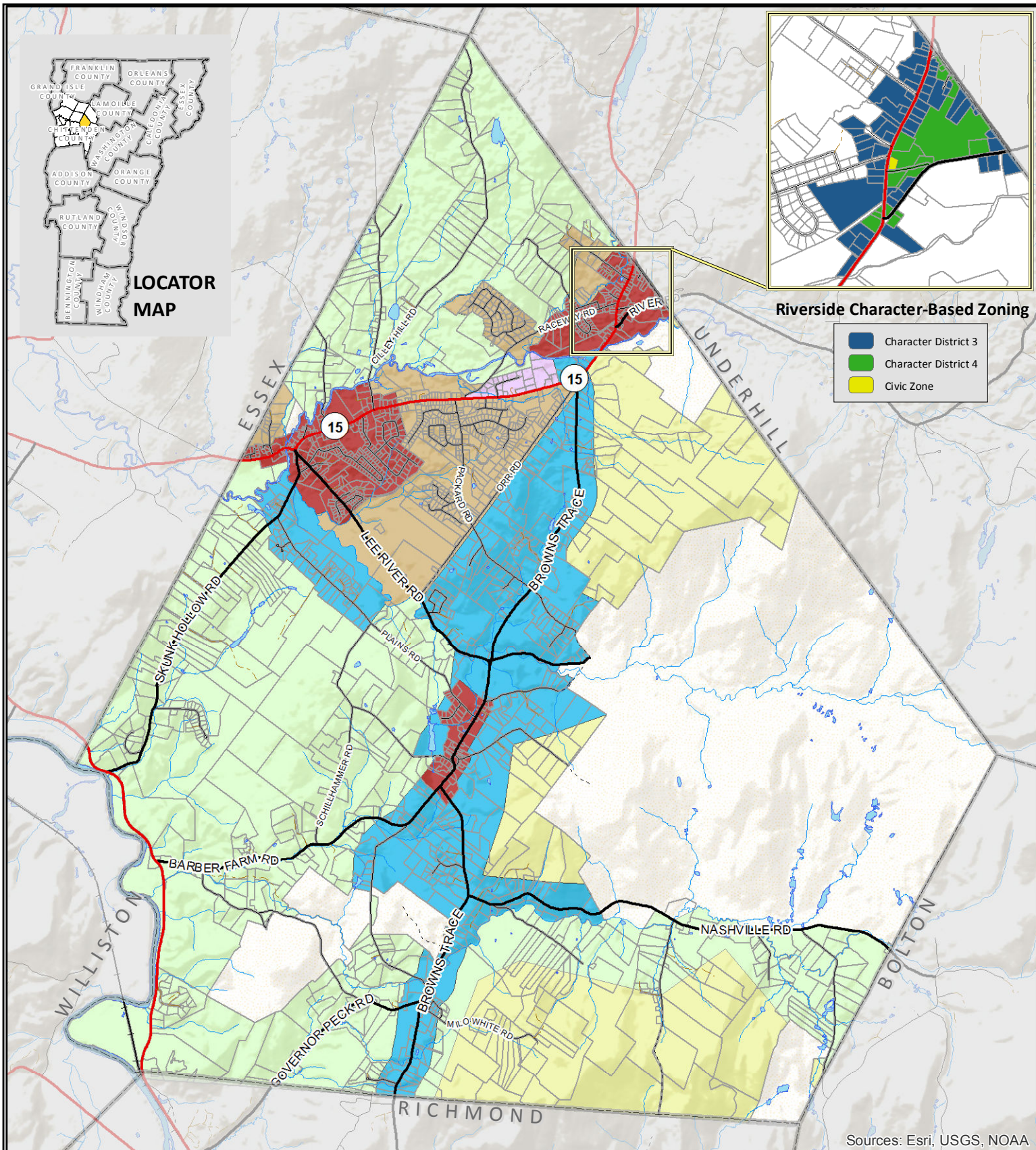
- Road Centerline
- US/State Highway
- Town Highway Class 2 or 3
- Town Highway Class 4
- Private/Unknown
- + Railroad



## Map 1: Existing Land Use Jericho, Vermont 2016 Comprehensive Plan

1:63,360  
0 1 2 Miles  
1 in = 1 mile





Source:  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.  
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#### Zoning District

- AGR = Agriculture (10 acre)
- COM = Commercial (1 acre)
- FOR = Forestry (10 acre)
- OS = Open Space (10 acre)
- RR = Rural Residential (3 acre)
- VCTR = Village Center (1/4 acre)
- VIL = Village (1 acre)
- 2015 Tax Parcel Boundary

1:63,360

1 in = 1 miles

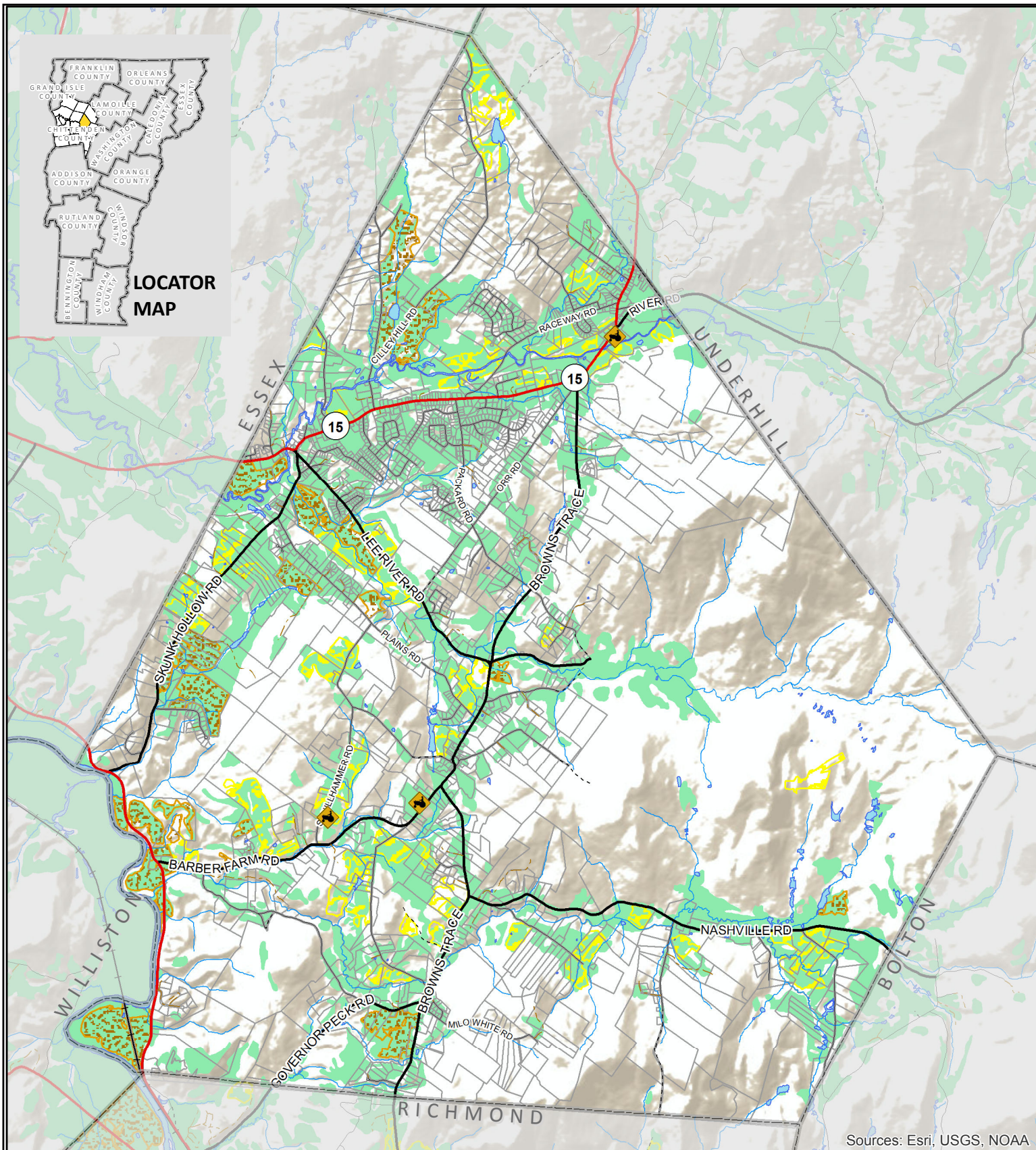
0 1 2 Miles



## Map 2: Future Land Use Jericho, Vermont

**2016 Comprehensive Plan**






Sources: Esri, USGS, NOAA

Source:  
Land Cover - National Land Cover Dataset; Soils - NRCS; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

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 Farm Market

#### Land Cover

 Open- Grassland

 Cultivated/Crop

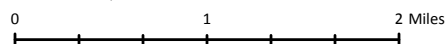
 Prime Agricultural Soil

 2015 Tax Parcel Boundary



1:63,360

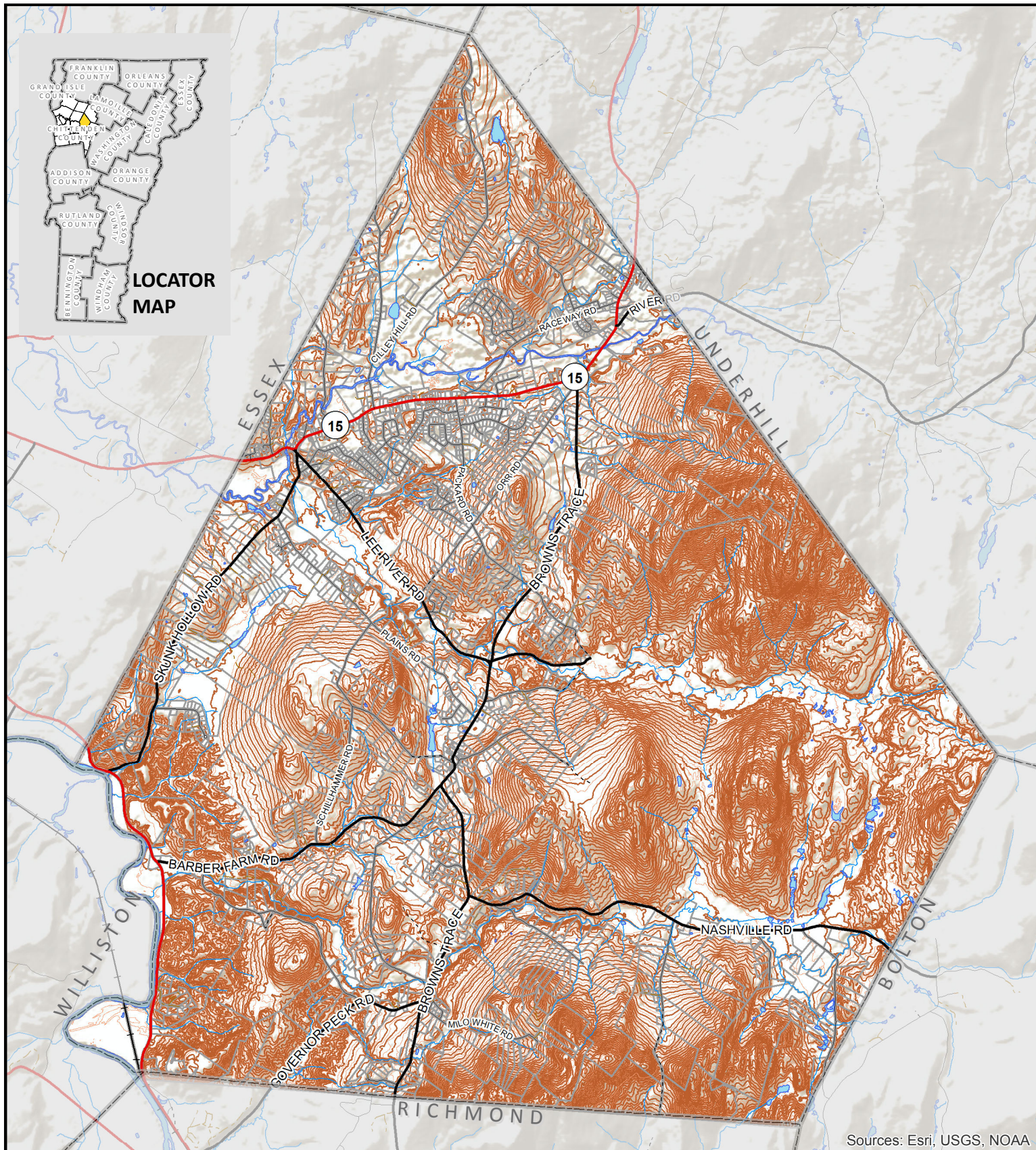
1 in = 1 miles



## Map 3: Agriculture Jericho, Vermont

**2016 Comprehensive Plan**





Sources: Esri, USGS, NOAA

Source:  
Topography - developed from 2013 DEM by CCRPC; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - e911 roads, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.  
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#### Legend

##### Topography - 10 Foot Interval

- Contour Line, Major
- Contour Line, Intermediate
- Stream Centerline
- Water Body
- Tax Parcel Boundary

##### Road Centerline

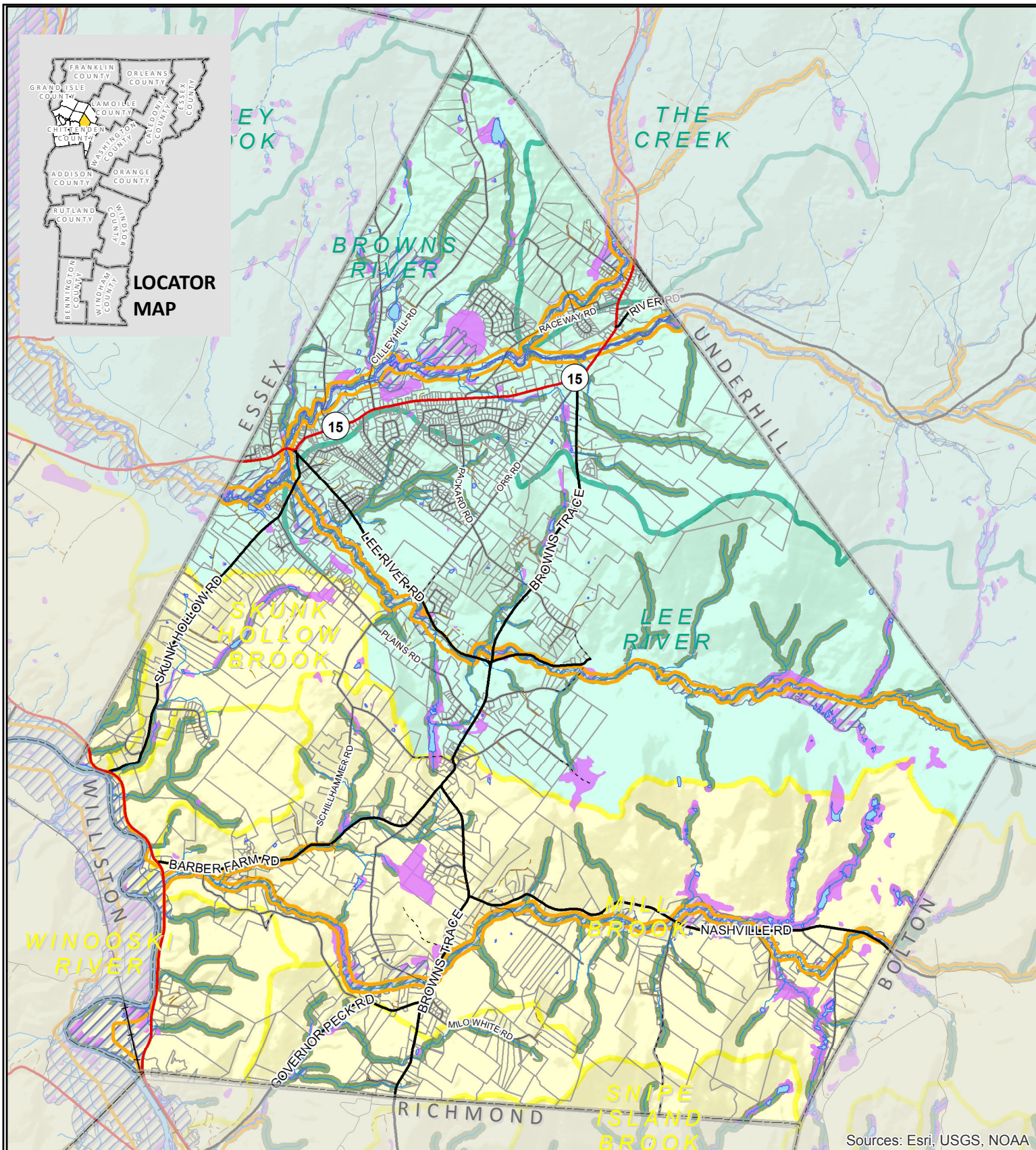
- US/State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private/Unknown
- Railroad



## Map 4: Topography Jericho, Vermont 2016 Comprehensive Plan

1:63,360 1 in = 1 mile  
0 1 2 Miles





Source:  
Floodplain - FEMA DFIRM, 2011; Wetlands - VT Sign. Wetlands, 2009; Tax  
Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July  
2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane  
Coordinate System, NAD 1983.  
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information or engineering studies.

- Stream Centerline
- Water Body
- ANR River Corridor - Jan. 2, 2015\*
- FEMA - Special Flood Hazard Area
- Class II Wetland
- Riparian Area
- Lamoille Basin
- Winooski Basin

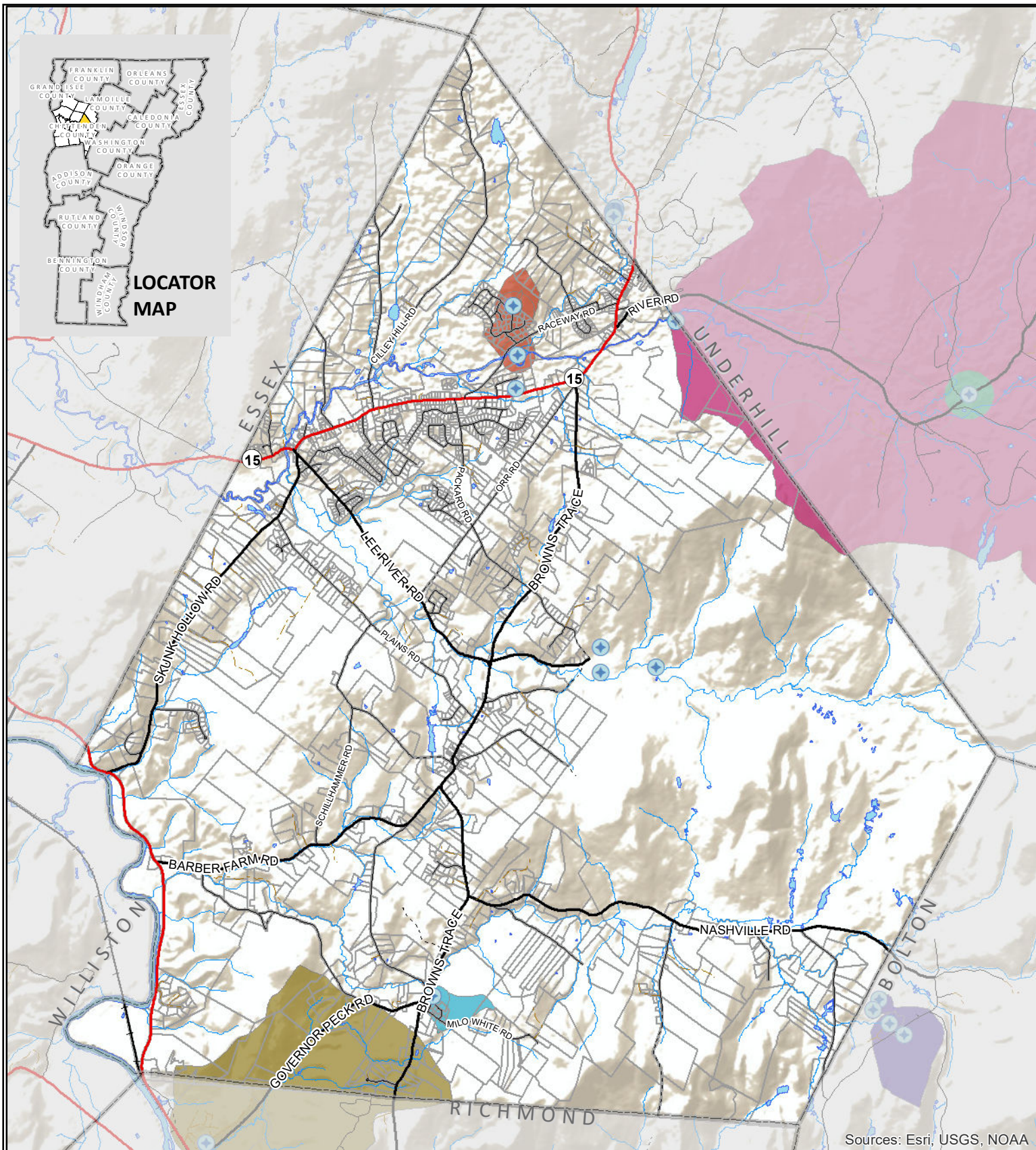


0 1:63,360 1 1 in = 1 mile 2 Mile

## Map 5: Surface Water Resources & Protection Areas Jericho, Vermont 2016 Comprehensive Plan

\*ANR River Corridor should be viewed via FloodReady Website -  
[http://floodready.vermont.gov/assessment/vt\\_floodready\\_atlas](http://floodready.vermont.gov/assessment/vt_floodready_atlas)





Source: Floodplain - FEMA DFIRM, 2011; Wetlands - VT Sign. Wetlands, 2009; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI) Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

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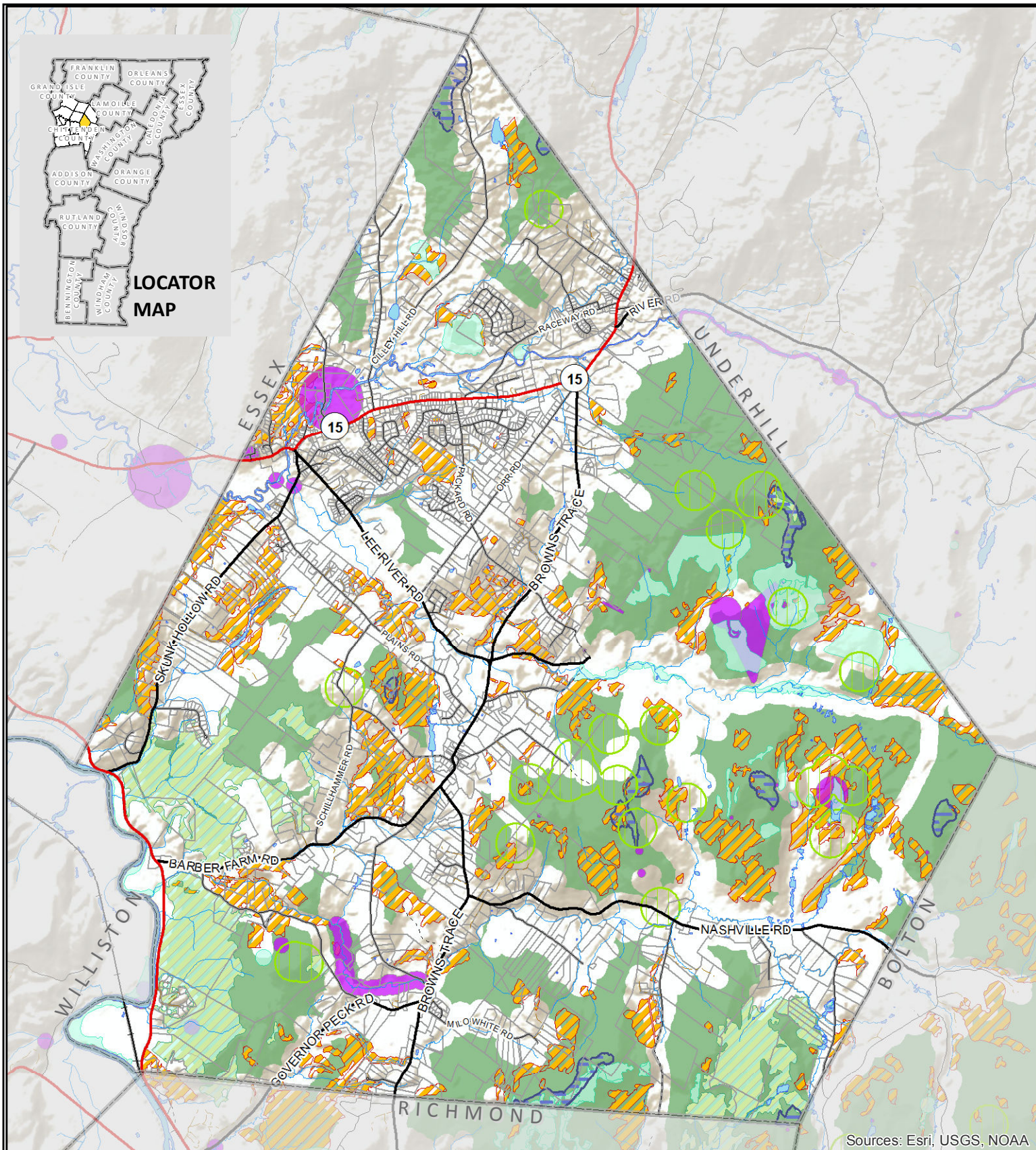
- Water Supply Source Protection Area - Groundwater**
- Public Well
  - Jericho Fire District
  - Jericho Heights Water

- Jericho-Underhill
- Country Club Condo
- Riverview Commons (Richmond)
- Underhill Central



**Map 6:**  
**Ground Water**  
**Protection Areas**  
**Jericho, Vermont**  
**2016 Comprehensive Plan**





Source:  
Habitat Data - Science to Action & ANR; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.  
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- Vernal Pool Life Zone
- Rare, Threatened, and Endangered Species & Significant Communities
- Uncommon Species and Other Features
- ▨ Deer Wintering Area
- ▨ Scenic
- Core Forest Area

- Stream Centerline
- Road Centerline**
- US/State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private/Unknown
- Tax Parcel Boundary



## Map 7: Habitat & Natural Areas Jericho, Vermont 2016 Comprehensive Plan

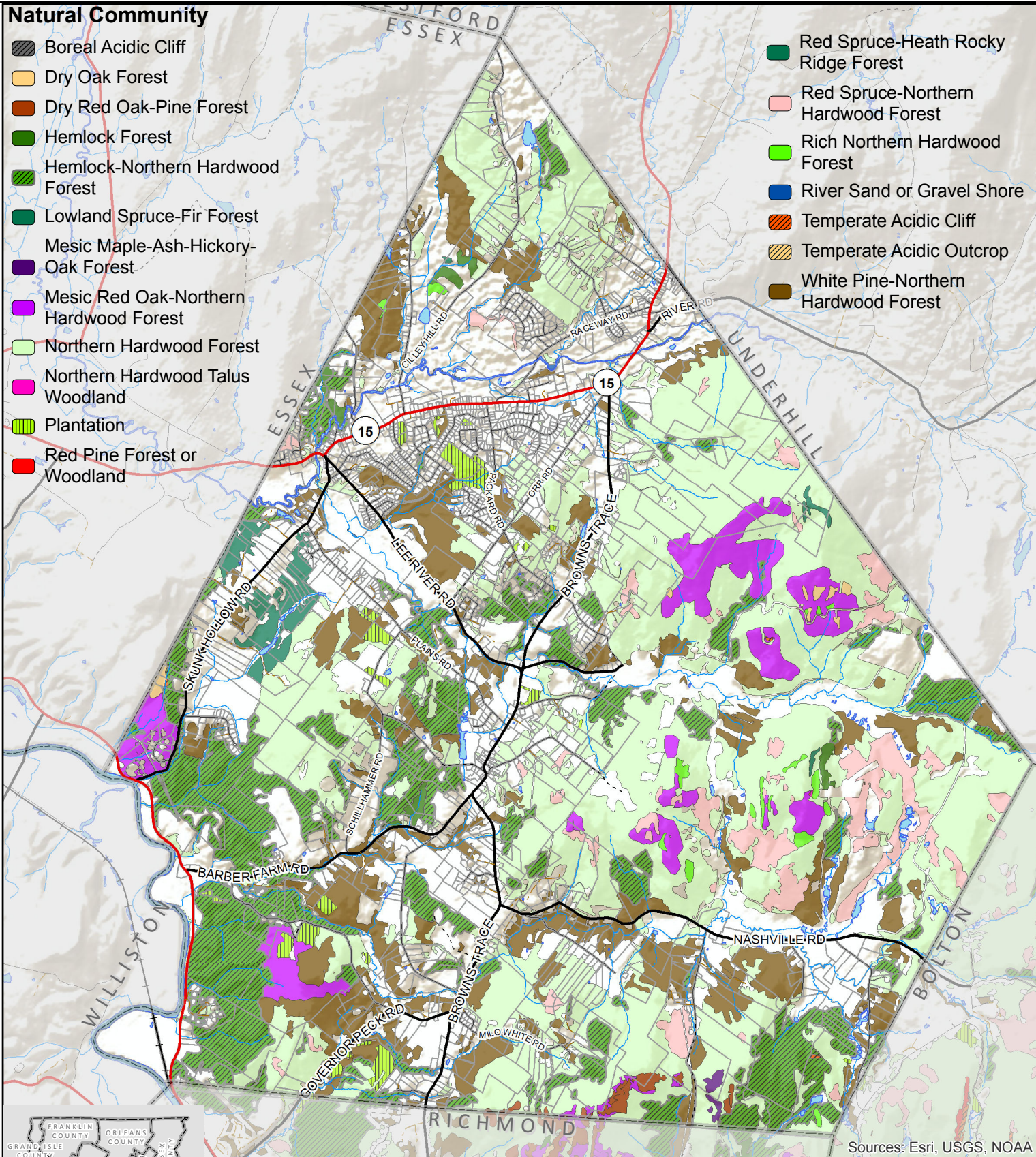
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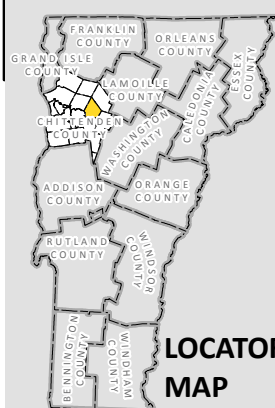
# Natural Community

- Boreal Acidic Cliff
- Dry Oak Forest
- Dry Red Oak-Pine Forest
- Hemlock Forest
- Hemlock-Northern Hardwood Forest
- Lowland Spruce-Fir Forest
- Mesic Maple-Ash-Hickory-Oak Forest
- Mesic Red Oak-Northern Hardwood Forest
- Northern Hardwood Forest
- Northern Hardwood Talus Woodland
- Plantation
- Red Pine Forest or Woodland

- Red Spruce-Heath Rocky Ridge Forest
- Red Spruce-Northern Hardwood Forest
- Rich Northern Hardwood Forest
- River Sand or Gravel Shore
- Temperate Acidic Cliff
- Temperate Acidic Outcrop
- White Pine-Northern Hardwood Forest



Sources: Esri, USGS, NOAA



**LOCATOR  
MAP**

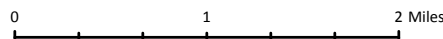
Source:  
Upland Natural Communities - Science To Action, Arrowwood Environmental - 2012; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

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1:63,360

1 in = 1 miles



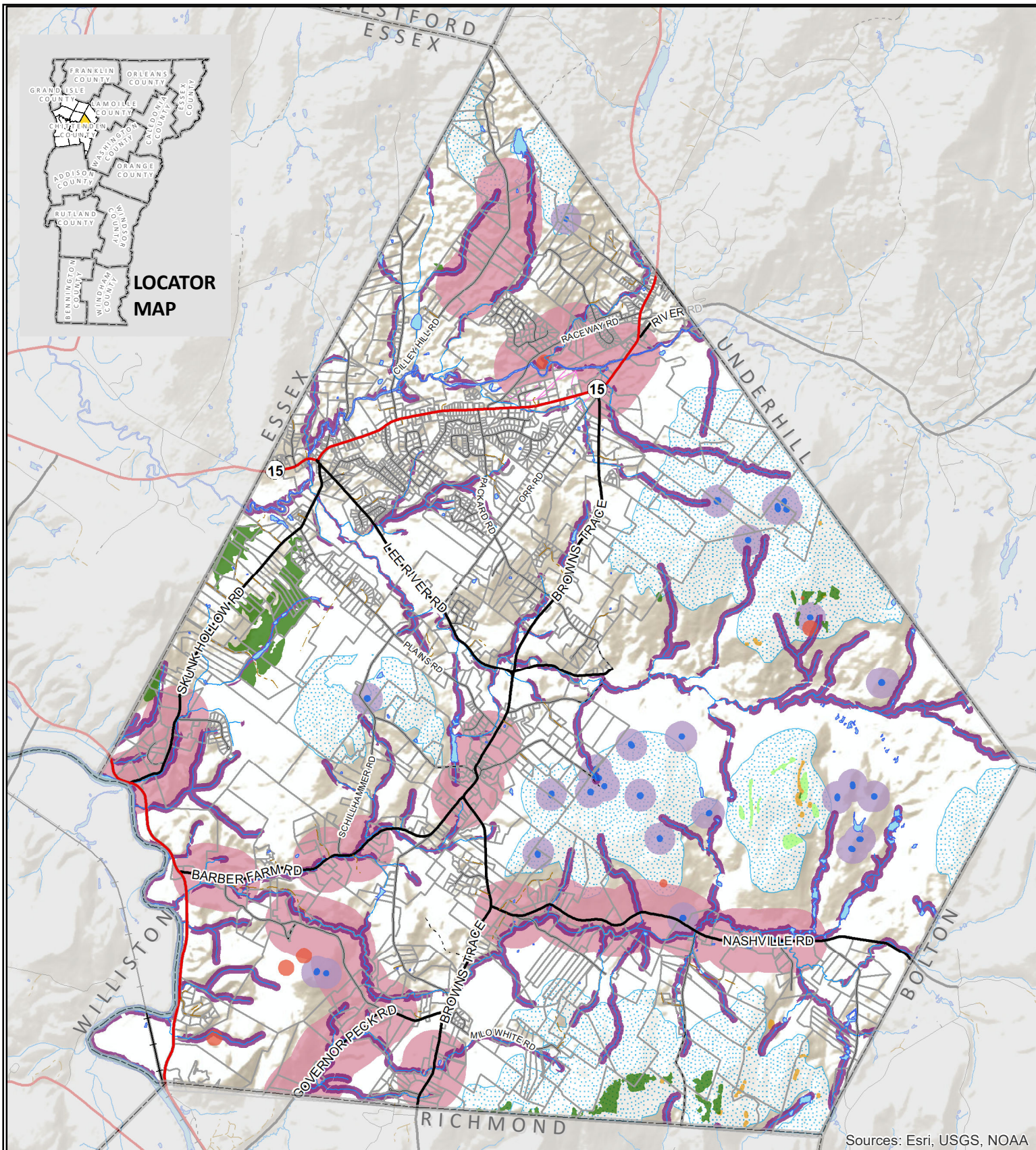
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11/18/2015

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**Map 8:  
Upland Natural  
Communities  
Jericho, Vermont  
2016 Comprehensive Plan**





Natural Resource Overlay, Defined by Fish and Wildlife, Town of Jericho;  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTTrans, July  
2015; Railroad - VTTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane  
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Commission is not responsible for these. Questions of on-the-ground  
location can be resolved by site inspections and/or surveys by registered  
surveyor. This map is not sufficient for delineation of features on-the-  
ground. This map identifies the presence of features, and may indicate  
relationships between features, but is not a replacement for surveyed  
information or engineering studies.

### Primary Conservation Area

- Rare, Threatened & Endangered Species
- Vernal Pools with 100 ft Life Zone
- Forested Riparian Areas
- Upland Natural Communities

### Exempt from the Natural Resources Overlay

- Commercial District Wildlife Road Crossings

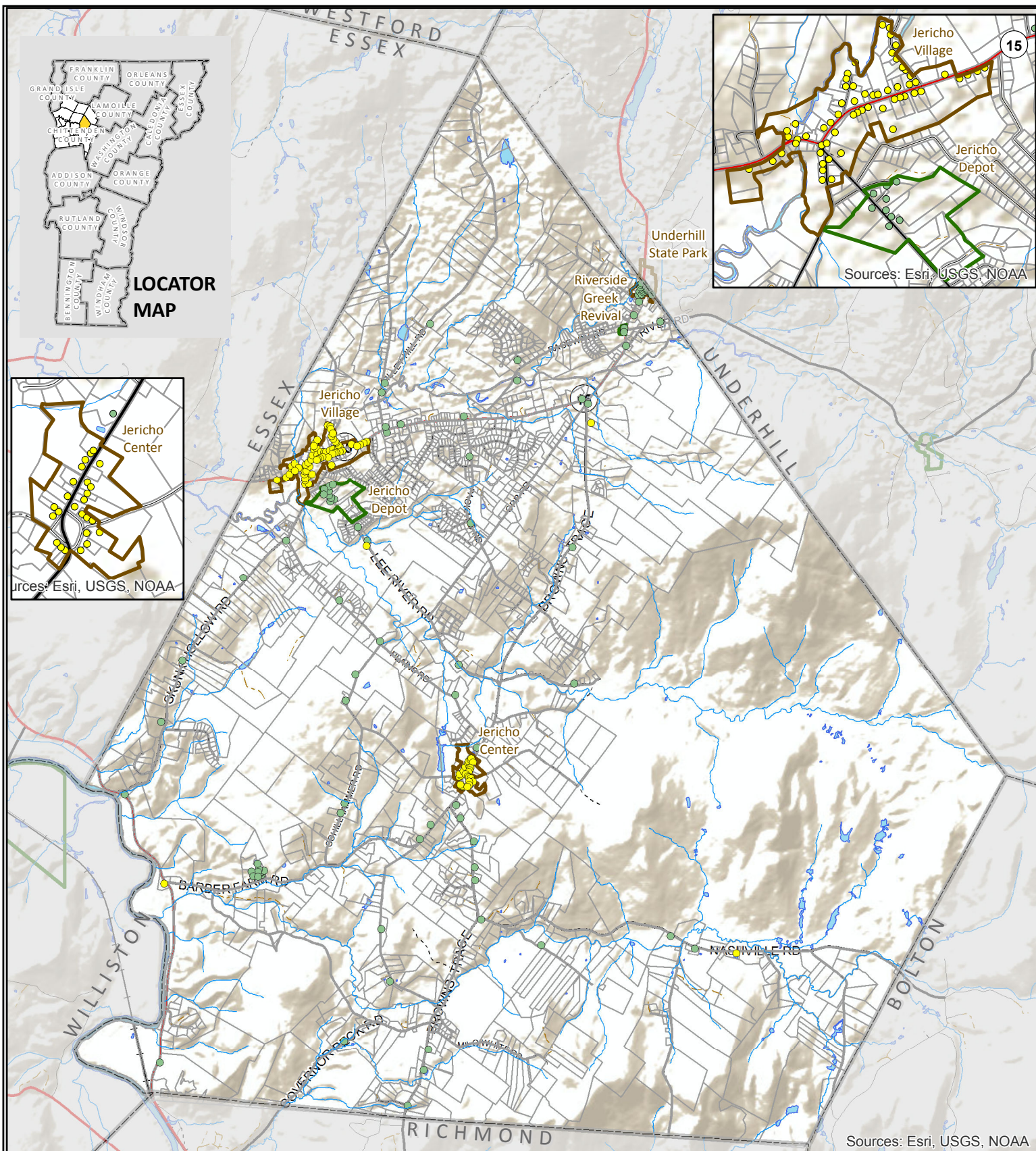
### Secondary Conservation Area

- Vernal Pools with 600 ft Migration Zone
- Ledge, Cliff, & Talus Habitats
- Upland Natural Communities
- Wildlife Road Crossings
- High Elevation Forest Blocks

## Map 9: Natural Resources Overlay Jericho, Vermont

2016 Comprehensive Plan





Source:  
Habitat Data - Science to Action & ANR; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.  
Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

- National Historic Site
- State Historic Site
- National Historic District
- State Historic District
- ~ Stream Centerline
- Water Body
- Road Centerline
- US/State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private/Unknown
- Tax Parcel Boundary

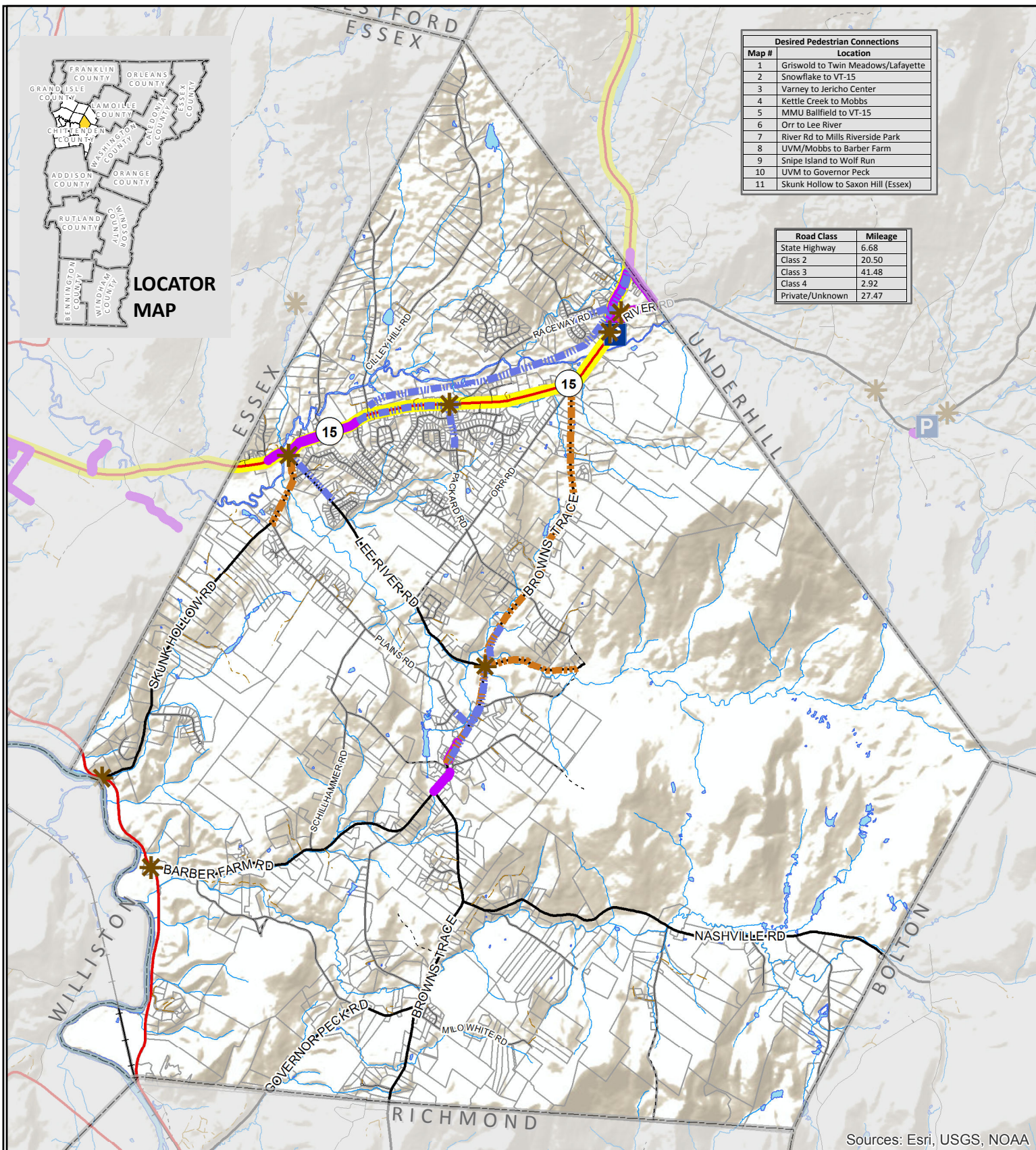


1:63,360

0 1 2 Miles  
1 in = 1 miles

**Map 10:**  
**Historic Sites**  
**& Districts**  
**Jericho, Vermont**  
**2016 Comprehensive Plan**





Desired Pedestrian Connections	
Map #	Location
1	Griswold to Twin Meadows/Lafayette
2	Snowflake to VT-15
3	Varney to Jericho Center
4	Kettle Creek to Mobbs
5	MMU Ballfield to VT-15
6	Orr to Lee River
7	River Rd to Mills Riverside Park
8	UVM/Mobbs to Barber Farm
9	Snipe Island to Wolf Run
10	UVM to Governor Peck
11	Skunk Hollow to Saxon Hill (Essex)

Road Class	Mileage
State Highway	6.68
Class 2	20.50
Class 3	41.48
Class 4	2.92
Private/Unknown	27.47

Source:  
Habitat Data - Science to Action & ANR; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

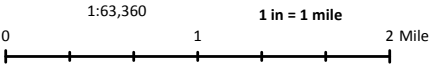
Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

- Existing Park & Ride
- Existing Sidewalk
- Existing Shared Use Path
- Bus Route
- Existing Trail

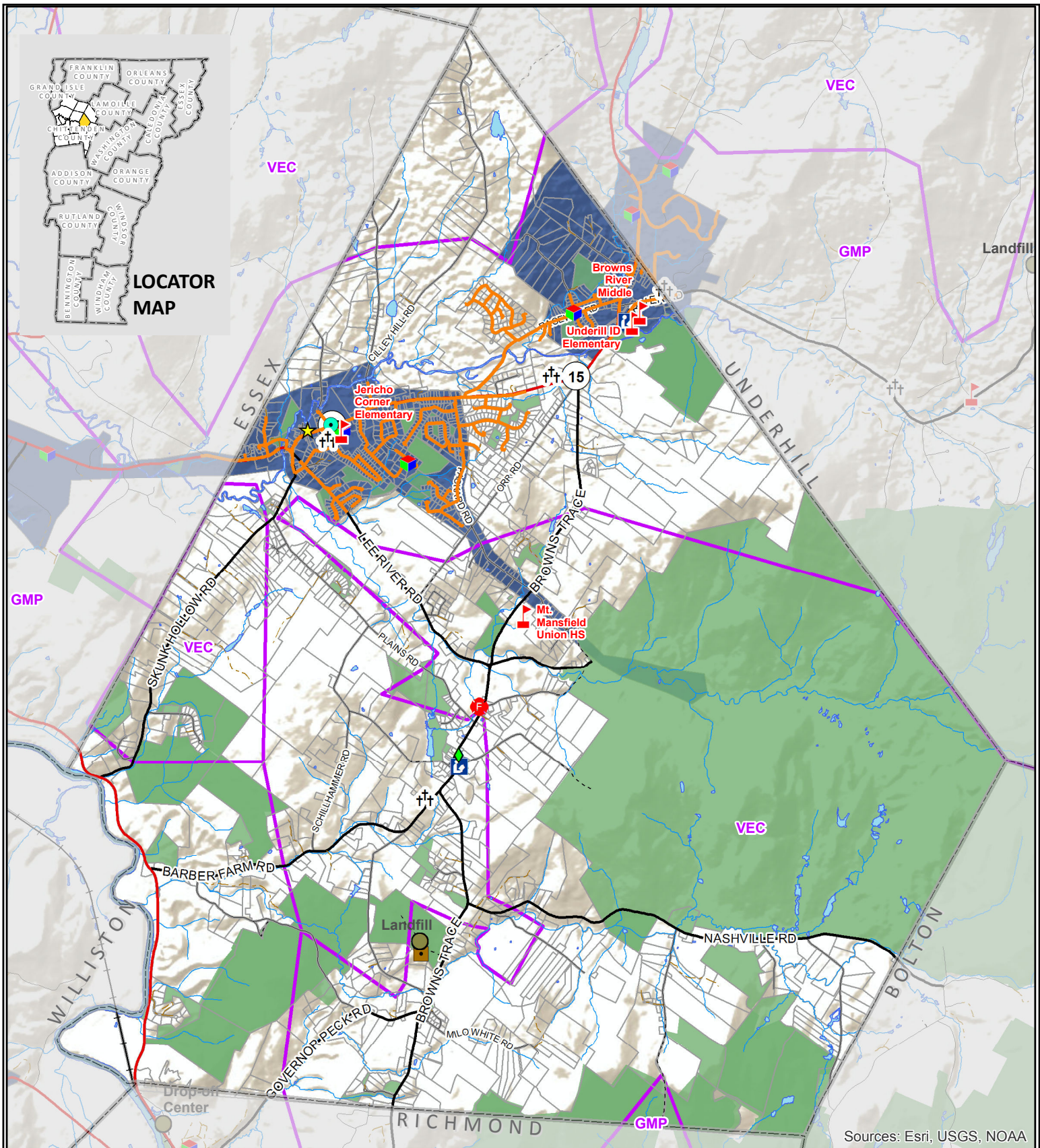
- Road Centerline**
- State Highway
- Class 2
- Class 3
- Class 4
- Private/Unknown

- Recommended Transportation Improvement**
- Intersection
- Bike/Pedestrian
- Roadway
- Desired Connections
- Proposed Trail

**Map 11:**  
**Transportation**  
**Jericho, Vermont**  
**2016 Comprehensive Plan**







Source:  
Habitat Data - Science to Action & ANR; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

Disclaimer:  
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- ★ Town Hall
- Town Garage
- 🚒 Jericho-Underhill Fire Department
- 📖 Library
- 📮 Post Office
- 🏠 Community Center
- 🏫 School

- ⛪ Cemetery
- 🧸 Childcare (non school age)
- ♻️ Solid Waste Facility
- 🔥 Natural Gas Line
- 🔌 Electric Utility Service Area
- 💧 Water Service Area
- 🌿 Open Space/Conserved Land



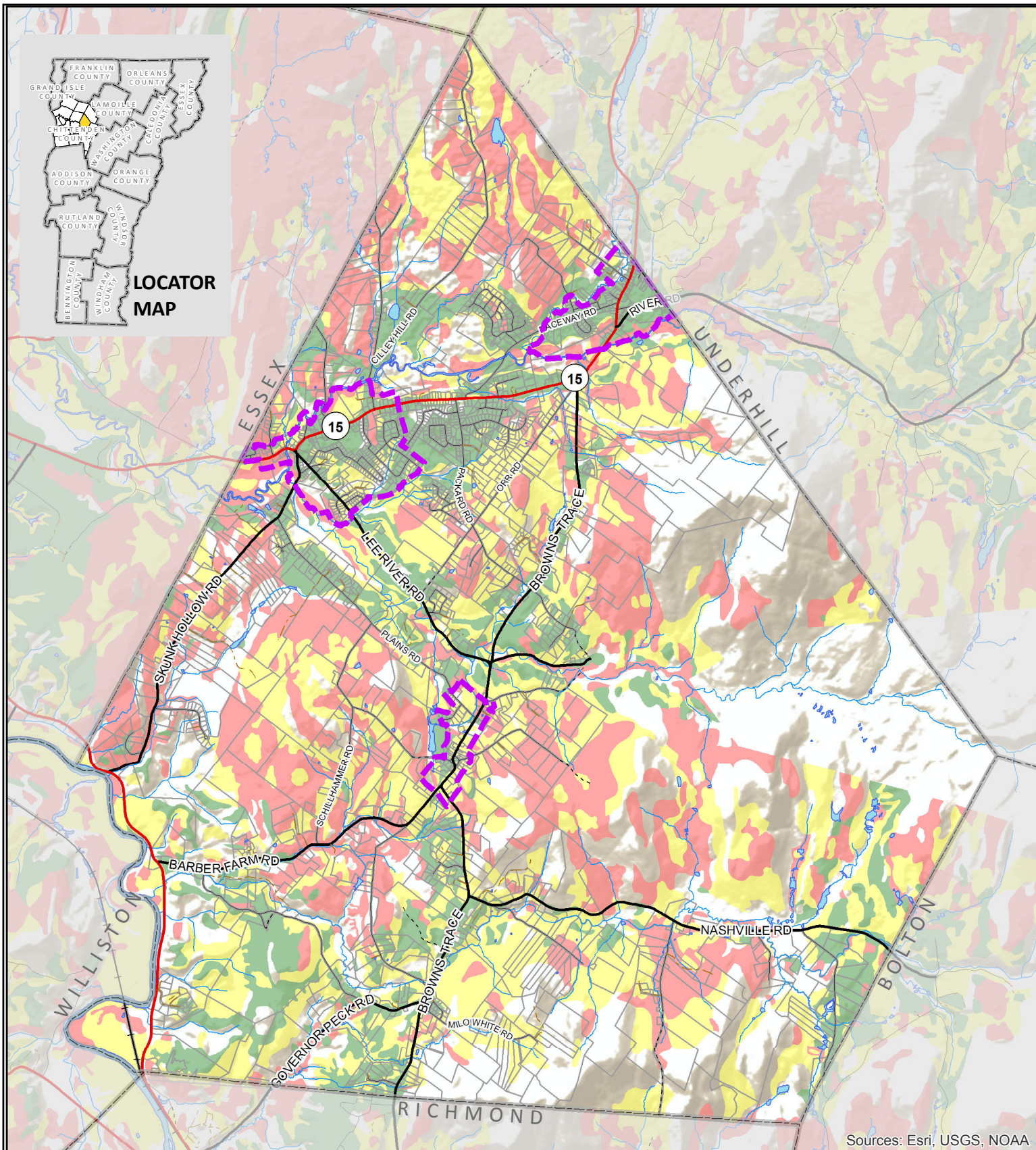
1:62,015

0 1 2 Miles

## Map 12: Facilities & Utilities

**Jericho, Vermont**  
**2016 Comprehensive Plan**

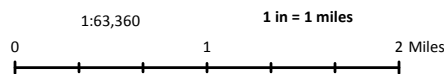




Source:  
Topography - developed from 2013 DEM by CCRPC; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

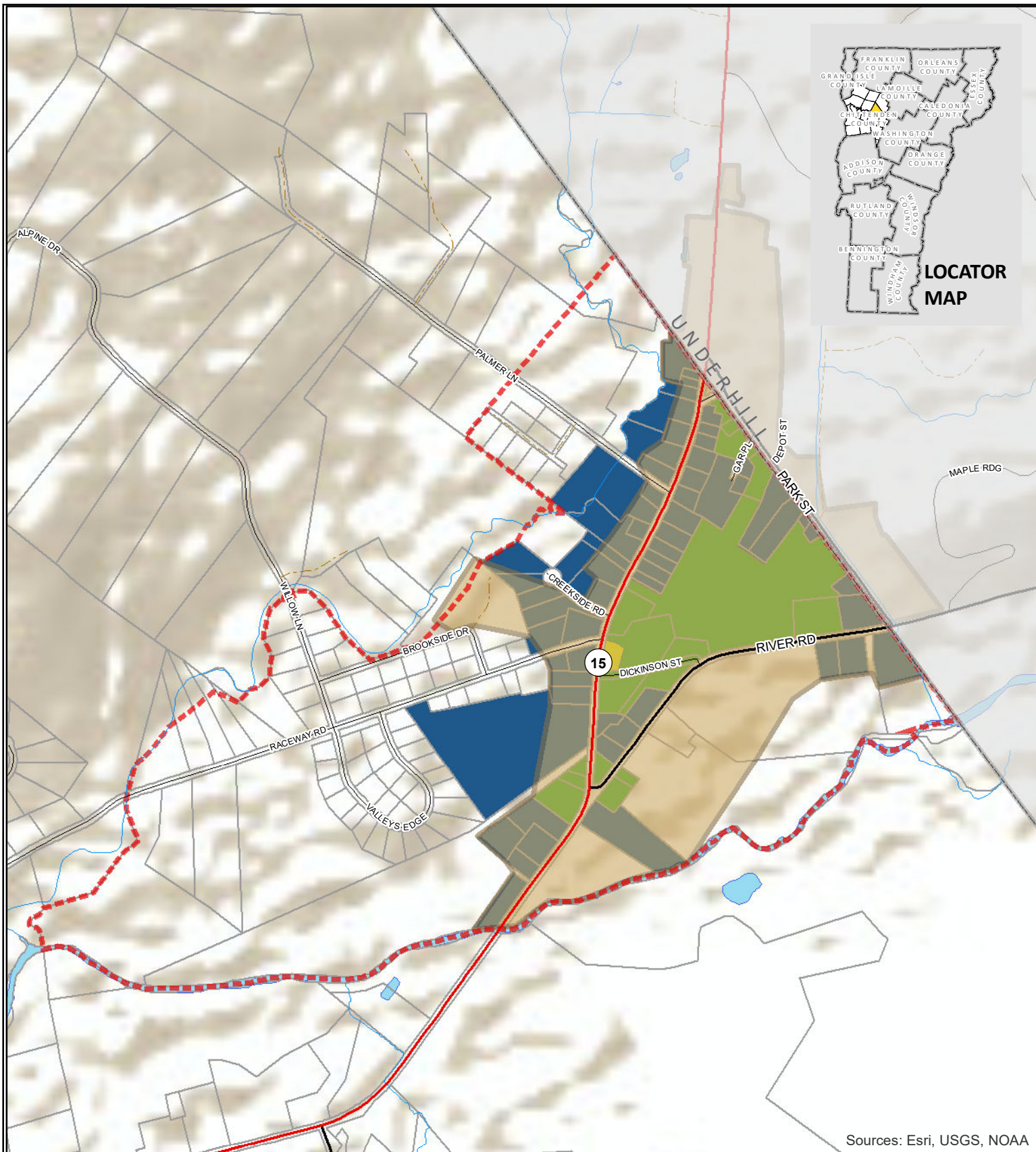
Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

- Village Center District
- Onsite Sewage Disposal Ratings**
- Of Vermont Soils**
- Well Suited
- Moderately Suited
- Marginally Suited
- Not Suited or Not Rated
- 2015 Tax Parcel Boundary



**Map 13:**  
**Soil Suitability for**  
**On-Site Septic**  
**Jericho, Vermont**  
**2016 Comprehensive Plan**





Sources: Esri, USGS, NOAA

Source:  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

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- Riverside Designated
- Village Center Zoning
- Riverside Character-Based**
- Character District
- Character District
- Civic
- 2015 Tax Parcel



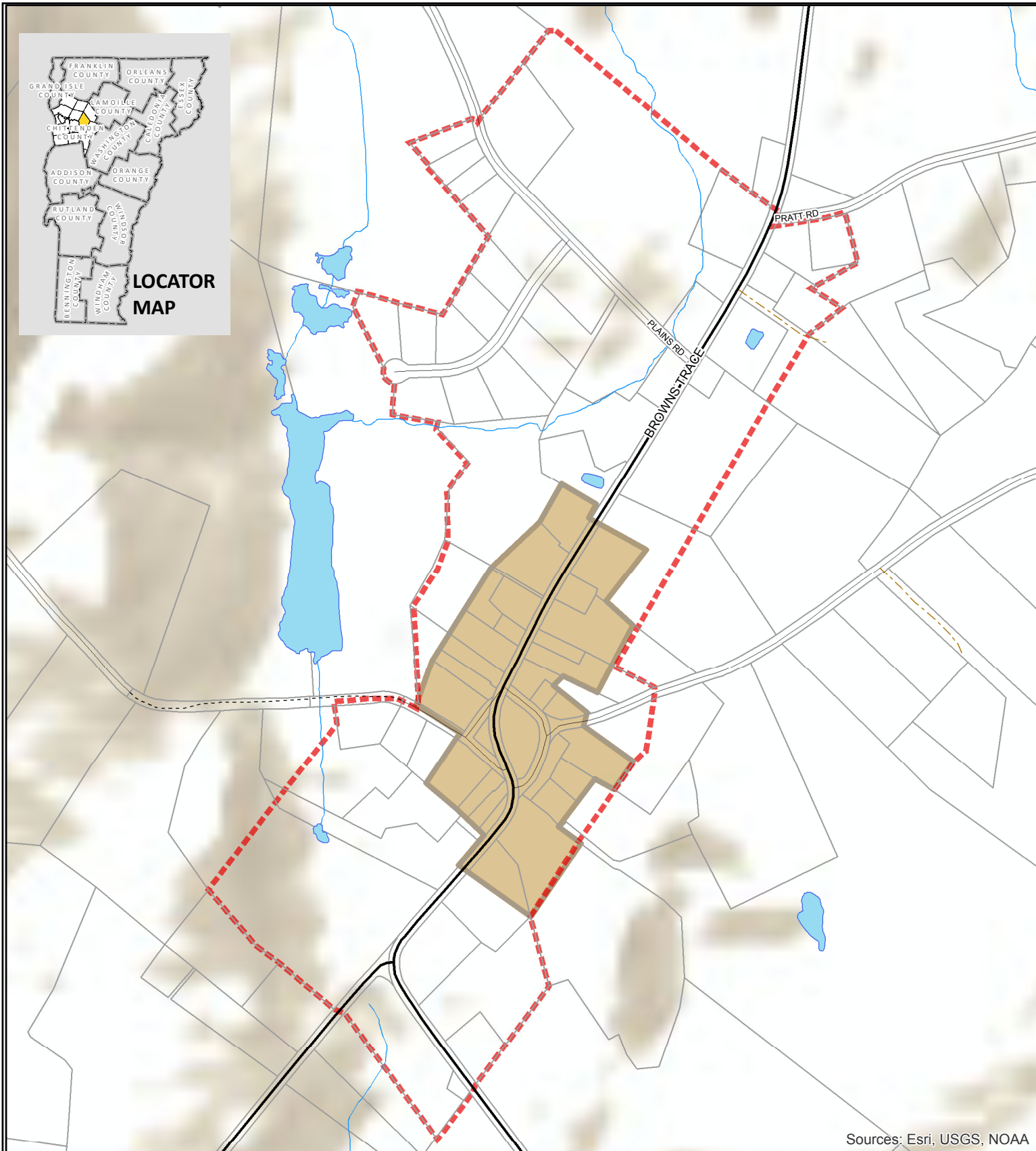
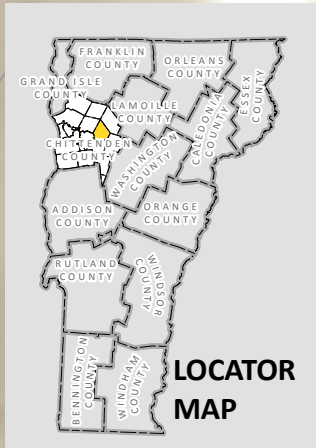
1:10,000

1 in = 833 feet

0 0.25 0.5 Mile

## Map 14: Riverside Village Jericho, Vermont

**2016 Comprehensive Plan**



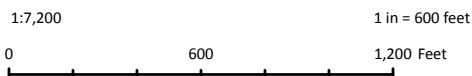
Sources: Esri, USGS, NOAA

Source:  
 Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
 Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

Disclaimer:  
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### Legend

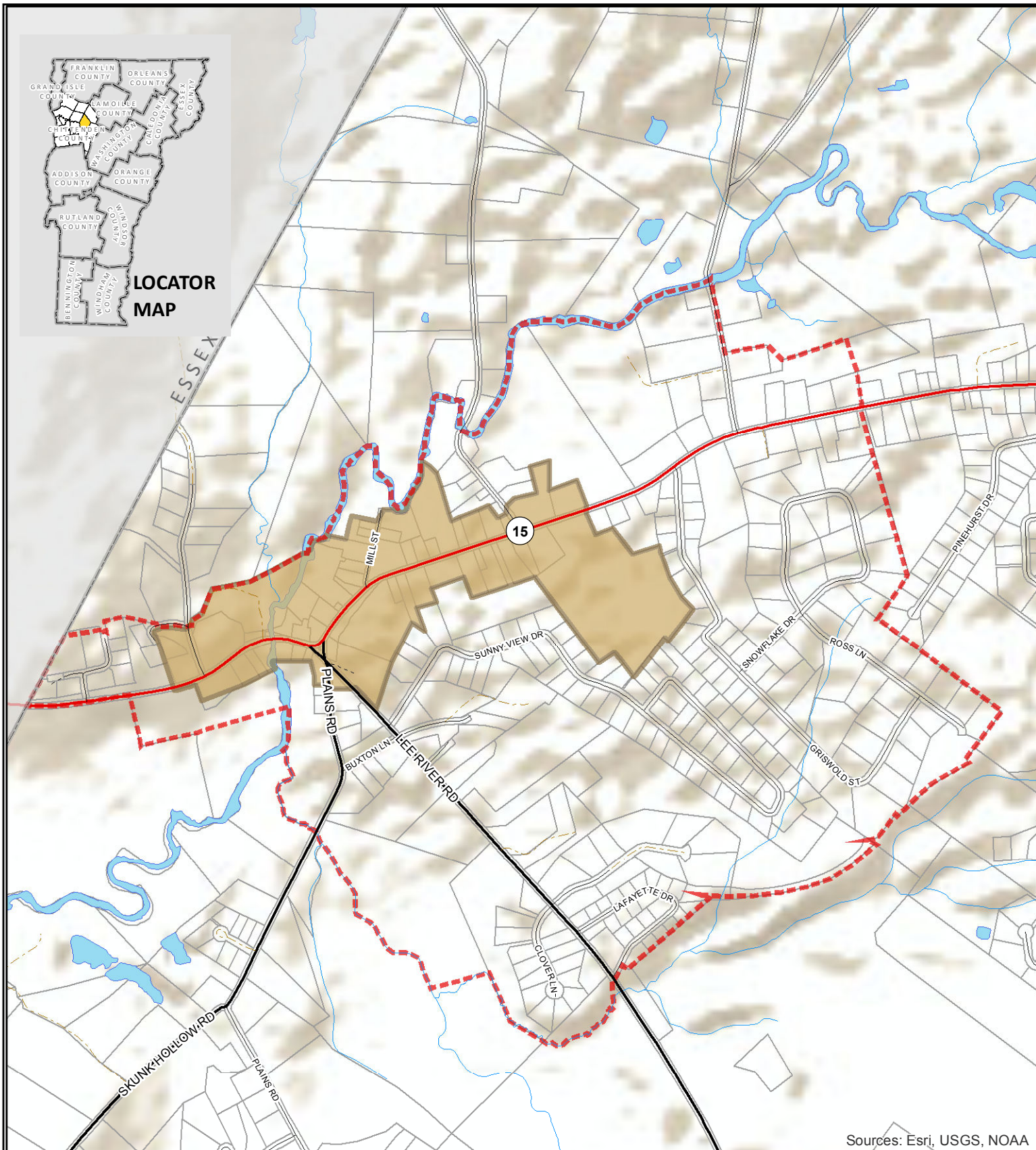
- Jericho Center Designated Village
- Village Center Zoning District
- 2015 Tax Parcel Boundary



## Map 15: Jericho Center Village Jericho, Vermont

**2016 Comprehensive Plan**








Sources: Esri, USGS, NOAA

Source:  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

Disclaimer:  
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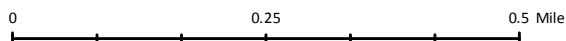
#### Legend

-  Jericho Corners Designated Village
-  Village Center Zoning District
-  2015 Tax Parcel Boundary



1:12,000

1 in = 1,000 feet

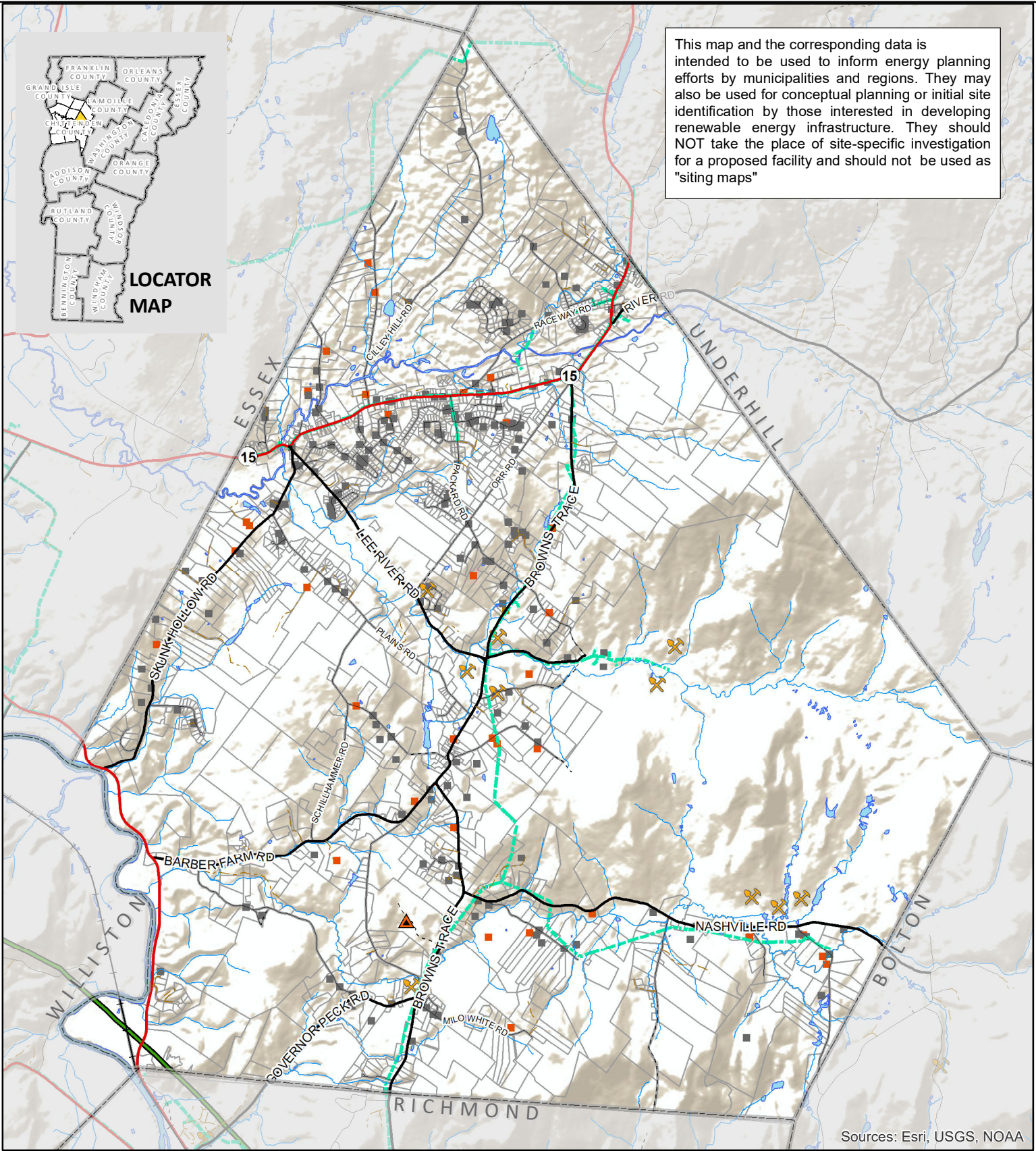


## Map 16: Jericho Corners Village Jericho, Vermont

**2016 Comprehensive Plan**



This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. They may also be used for conceptual planning or initial site identification by those interested in developing renewable energy infrastructure. They should NOT take the place of site-specific investigation for a proposed facility and should not be used as "siting maps"



Sources: Esri, USGS, NOAA

Source:  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI); Existing Renewable-EAN, 2018  
Map created by M. Needle using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.  
Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

Legend

- 2015 Tax Parcel Boundary
- Transmission Lines
- 3 Phase Power Lines
- Preferred Sites for Solar Net-Metering\*
- Closed Landfill
- Sand or Gravel Pit

- Existing Renewable Generation Sites
- Wood Chip Heat
- Ground-Mounted Solar
- Roof-Mounted Solar

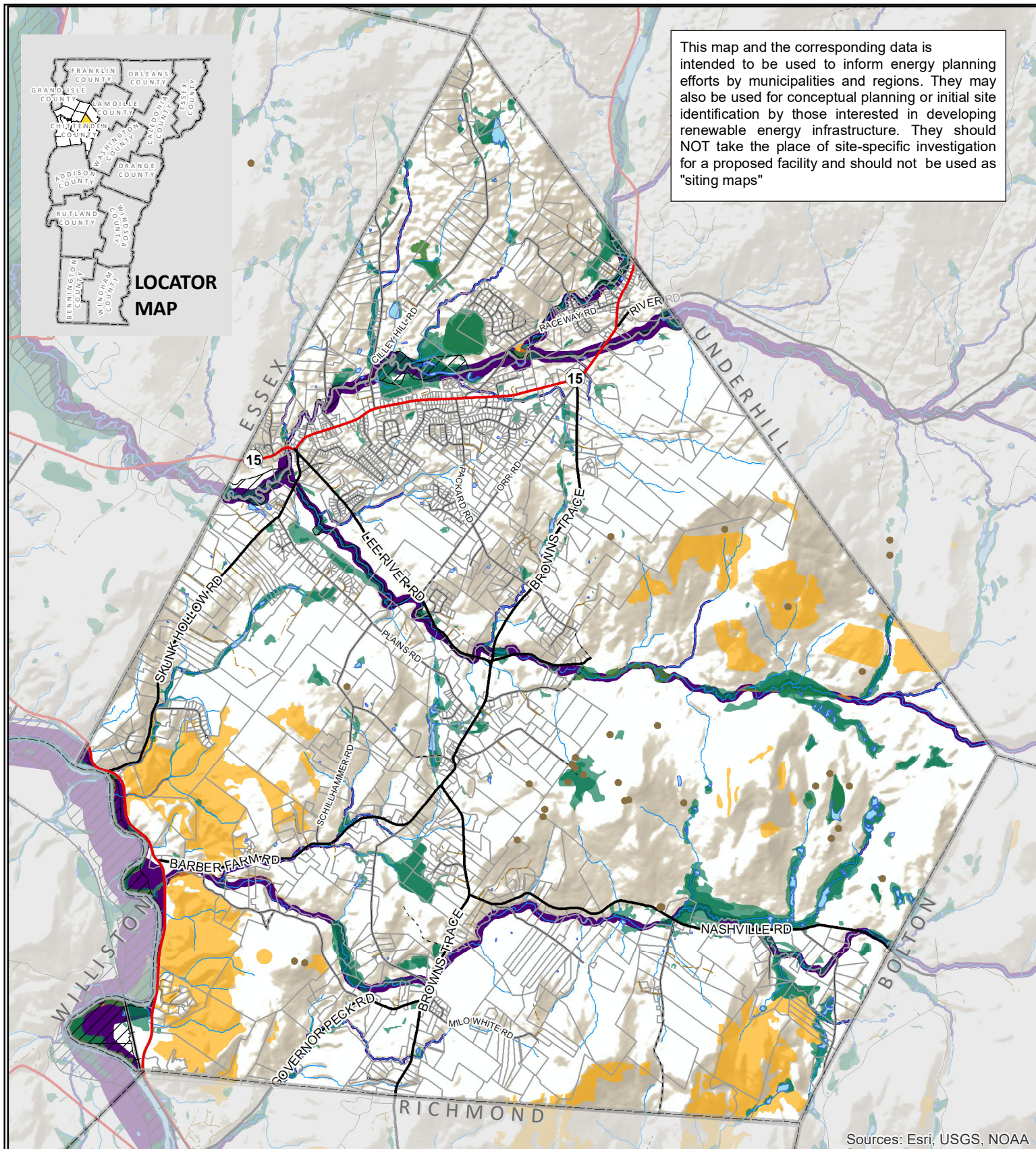


1:63,360 1 in = 1 miles  
0 1 2 Miles

\*See the Plan text for additional types of designated preferred sites for solar net-metering.

# Map 17: Preferred Sites & Existing Renewable Energy Generation Jericho, Vermont 2016 Comprehensive Plan





Source:  
 Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTtrans, July 2015; Railroad - VTtrans, 2003; Surface Water - VHD, 2008 (VCGI); Draft River Corridor-2019, ANR; Wetlands-VSW/Advisory Layer-ANR  
 Map created by M. Needle using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

Disclaimer:  
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- Legend**
- Vernal Pools (Confirmed & Unconfirmed)
  - ▤ FEMA Floodway
  - Class 2 Wetlands
  - State-significant Natural Communities & RTE Species
  - Vermont Department of Environmental Conservation River Corridor
  - 2015 Tax Parcel Boundary



1:63,360    1 in = 1 miles

0    1    2 Miles

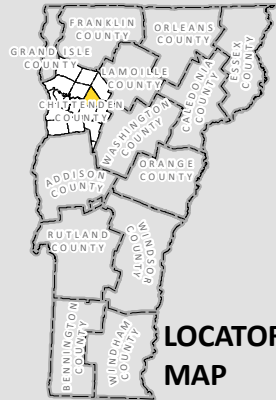
\*See the Plan text for specific policies applicable to the features on this map.

## Map 18: State Known Constraints Energy Generation Jericho, Vermont

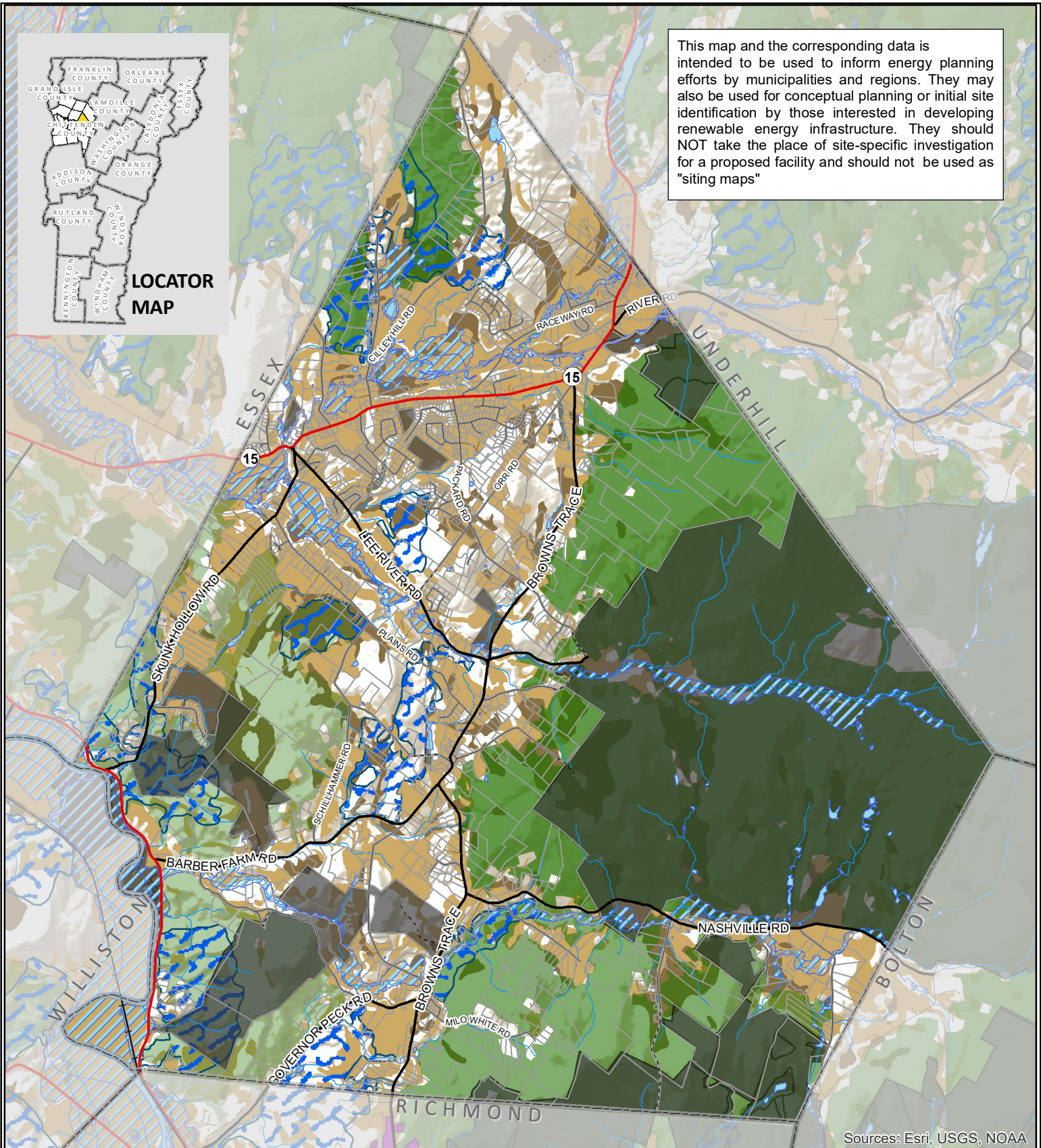
**2016 Comprehensive Plan**



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LOCATOR MAP



Sources: Esri, USGS, NOAA

Source:  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI); Draft River Corridor-2019, ANR; Wetlands-VSW/Advisory Layer-ANR  
Map created by M. Needle using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

#### Legend

- FEMA Special Flood Hazard Areas
- Deer Wintering Areas
- VT Conservation Design Highest Priority Forest Blocks
- Protected Land
- ACT 250 Ag Mitigation Parcel
- Agricultural Soils
- Hydric Soils
- 2015 Tax Parcel Boundary



1:63,360 1 in = 1 miles

0 1 2 Miles

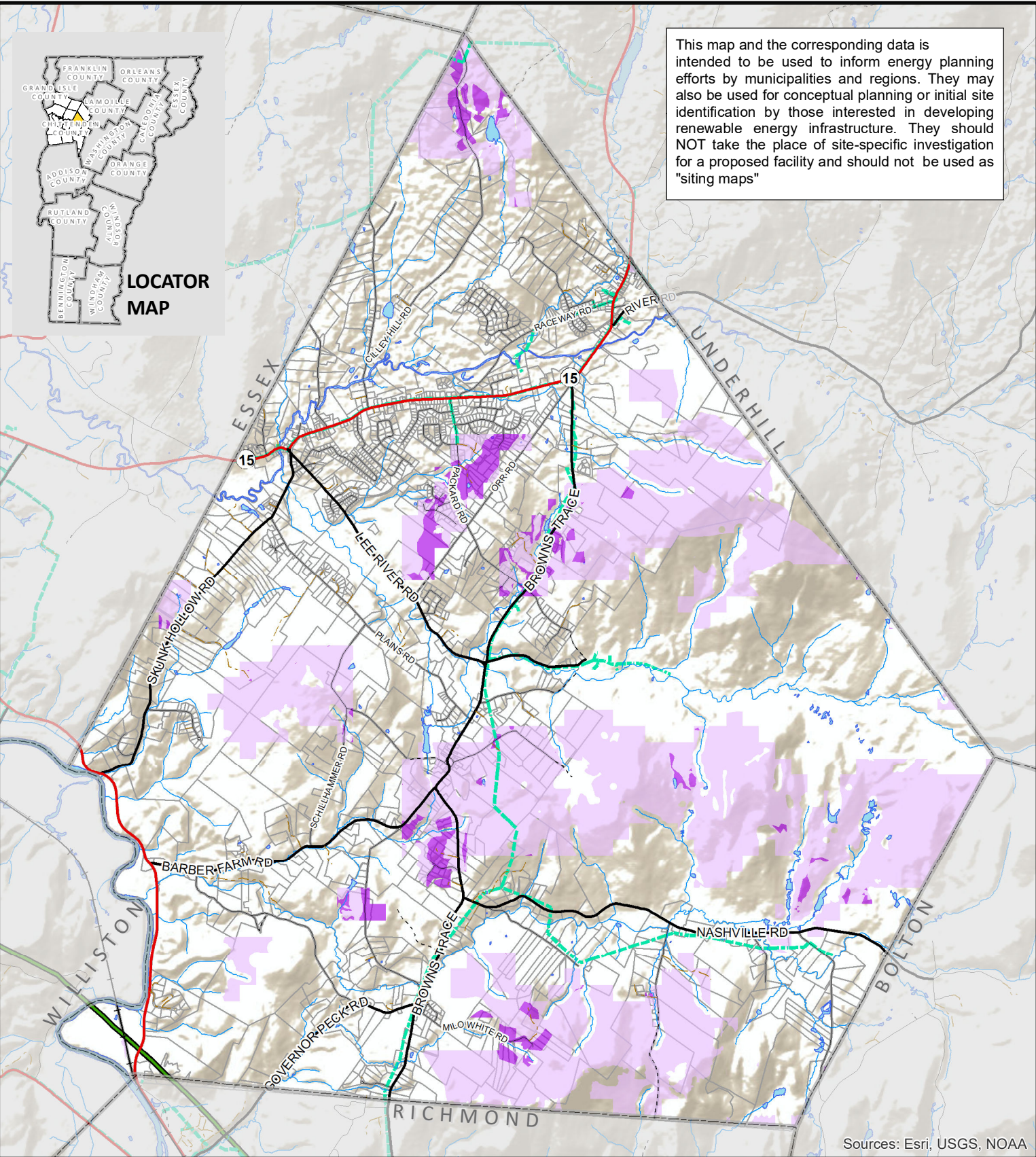
\*See the Plan text for specific policies applicable to the features on this map.

## Map 19: State Possible Constraints Energy Generation Jericho, Vermont

2016 Comprehensive Plan



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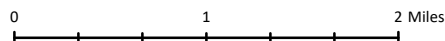
Sources: Esri, USGS, NOAA

Source:  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI); Wind Potential-CCRPC, VCGI 2019  
Map created by M. Needle using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.  
Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

#### Legend

- Prime Wind: Areas with high wind potential and no state/local known +possible constraints
- Base Wind: Areas with high wind potential and a presence of state/local possible constraints
- 3 Phase Power Lines
- Transmission Lines
- 2015 Tax Parcel Boundary

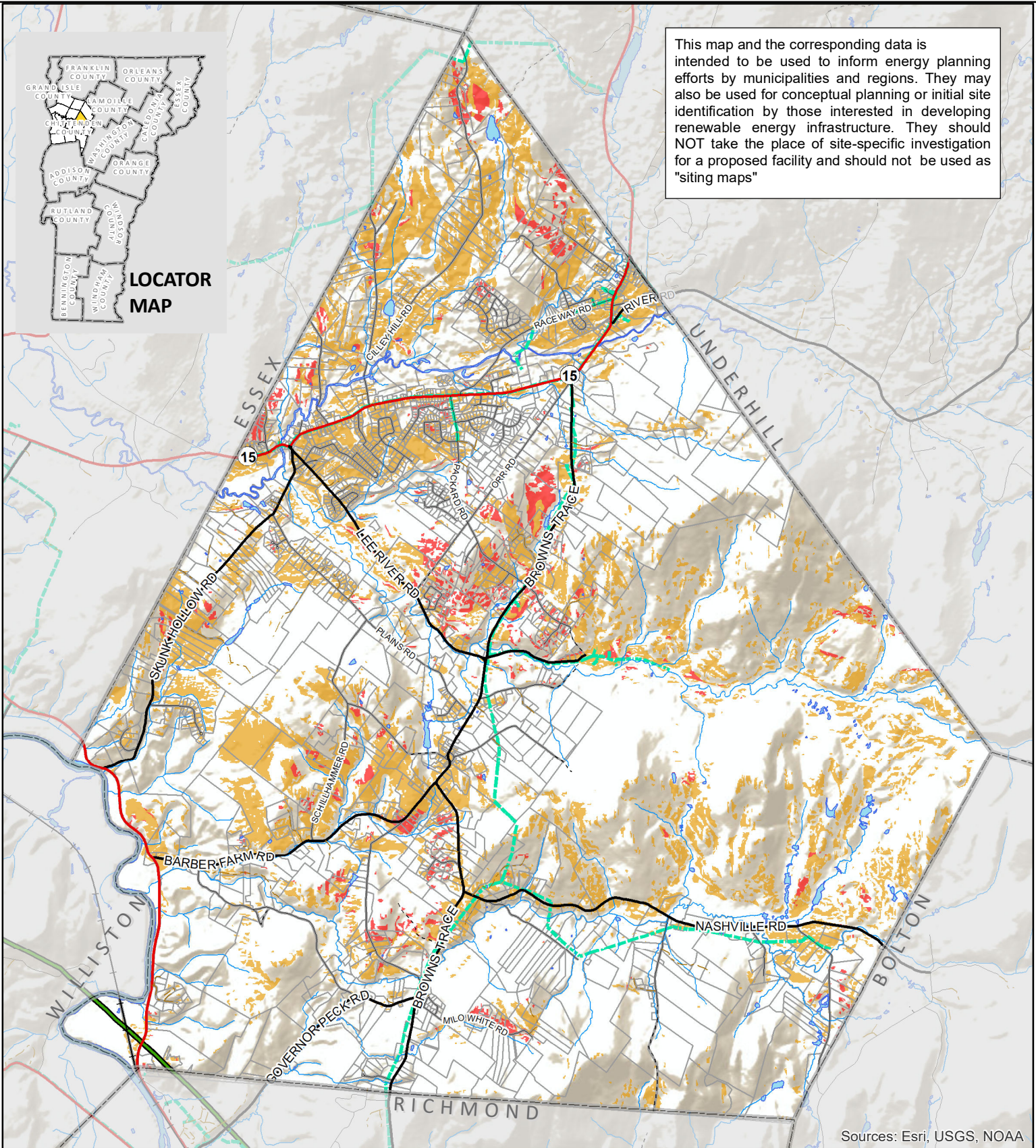
1:63,360 1 in = 1 miles



## Map 20: Potential Wind Energy Resource Areas Jericho, Vermont 2016 Comprehensive Plan



This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. They may also be used for conceptual planning or initial site identification by those interested in developing renewable energy infrastructure. They should NOT take the place of site-specific investigation for a proposed facility and should not be used as "siting maps"



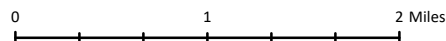
Sources: Esri, USGS, NOAA

Source:  
Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI); Solar Potential-CCRPC, VCGI 2019  
Map created by M. Needle using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.  
Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

#### Legend

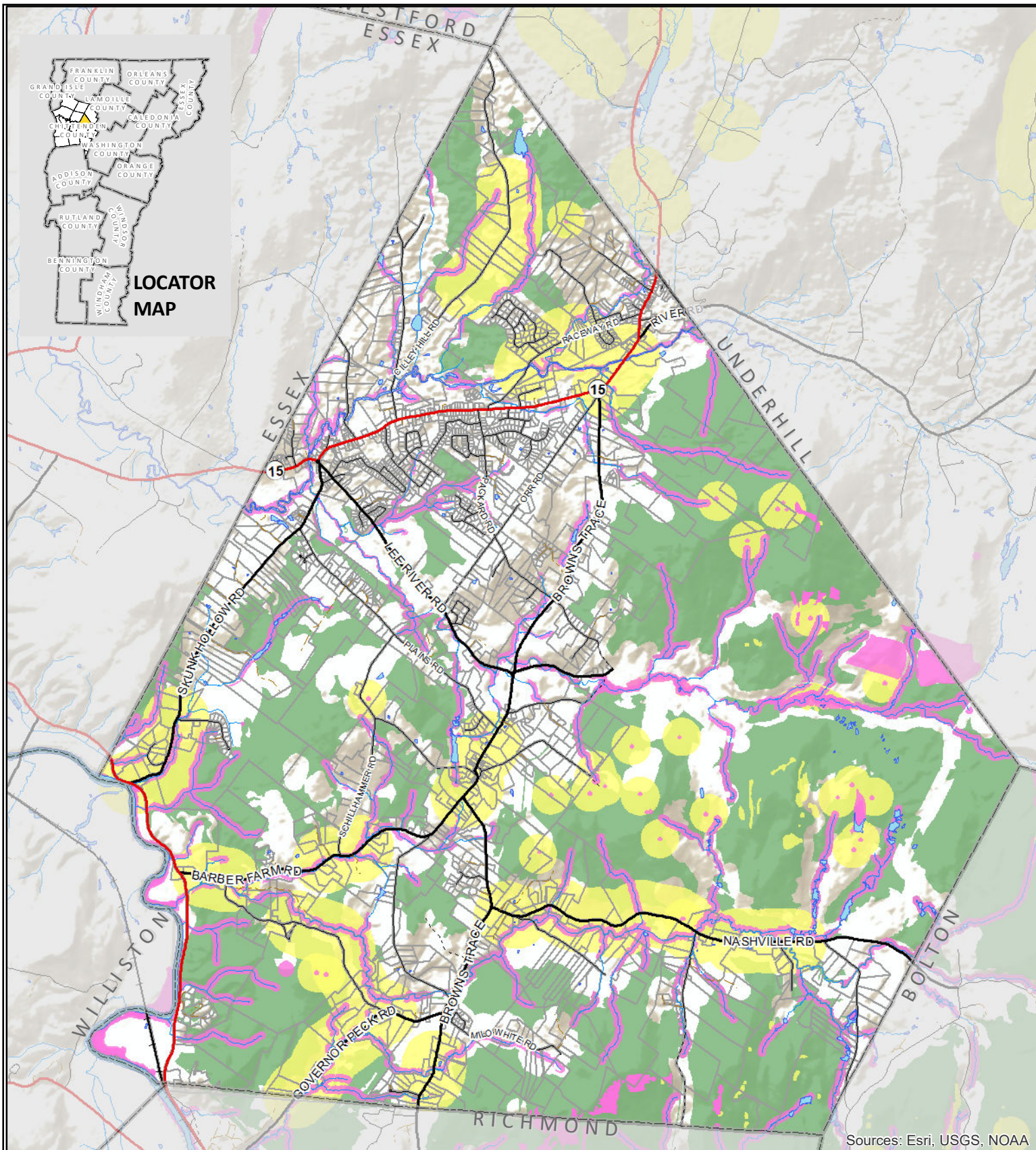
- 3 Phase Power Lines
- Transmission Lines
- Prime Solar: Areas with high solar potential and no state/local known & possible constraints
- Base Solar: Areas with high solar potential and a presence of state/local possible constraints
- 2015 Tax Parcel Boundary

1:63,360 1 in = 1 miles



## Map 21: Potential Solar Energy Resource Areas Jericho, Vermont 2016 Comprehensive Plan





Sources: Esri, USGS, NOAA

Source:  
Tiered Priorities defined by Jericho Conservation Commission; Tax Parcel Boundary - GrassRootsGIS, 2015; Road Centerline - VTrans, July 2015; Railroad - VTrans, 2003; Surface Water - VHD, 2008 (VCGI)  
Map created by P. Brangan using ArcGIS. All data is in State Plane Coordinate System, NAD 1983.

Disclaimer:  
The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

### Primary Conservation Areas

Forested Riparian Habitat; S1, S2, S3 Wetland Natural Community + 50' Buffer; Rare, Threatened, Endangered Species; S1, S2, S3 Upland Natural Community; & Vernal Pools + 100' Buffer

### Secondary Conservation Areas

Wildlife Road Crossing; Ledge, Cliff, Talus + 100' Buffer; Vernal Pool + 600' Buffer; S4, S3 Wetland Natural Communities + 50' Buffer; S4, S5 Upland Natural Communities; & Ledge, Cliff, Talus + 100' Buffer

### Tertiary Conservation Areas

Contiguous Habitat Units



1:63,360

1 in = 1 mile

0 1 2 Miles

## Map 22: Tiered Conservation Priorities Jericho, Vermont

2016 Comprehensive Plan



## Appendix B: Natural Resources of Jericho: Inventories & Reports 1996-2013.

---

### Listed in Chronological Order

***Summary: The Town of Jericho has had the opportunity to gather high-quality information on its natural resources in a systematic manner over the last several years. Data from all the reports described below are incorporated into the draft Chapter 4 of the town plan, as well as the accompanying maps.***

**Town of Jericho, Vermont: Plans for Open Space, Scenic Roads, and Water Resources. February, 2003. Prepared by the Open Space Committee and submitted to the Selectboard, Planning Commission, and Conservation Commission.**

Description: Discusses the benefits of Open Space and methods to encourage its retention in the Town – vistas, ridgetops, natural areas, wildlife habitat, recreation, and forested lands. Identifies some 50 high priority areas within Town based on a list of criteria. Recommends Scenic Road and Scenic Segments for designation as “Scenic Roads” or “Vermont Byways” based on a 1989 assessment by Town residents. Makes numerous recommendations to protect riparian areas in stream and river corridors, to manage wastewater and stormwater runoff, to increase buffer zones for wetlands, and to identify and inventory vernal pools. This report was never adopted by the Town.

Source: Available from the Town Clerk at the Town Offices.

**Significant Natural Communities and Natural Community Systems of Jericho, Vermont. 2008. Prepared by Jesse Mohr, Native Geographic LLC, Pike, NH 03780.**

Description: Inventory of significant natural communities and natural community systems (recurring across the landscape and linked by a common ecological process) in the Town of Jericho. Contains introductory information, evaluation, and mapping of identified communities. A town-wide perspective of the occurrence of the communities is included as well as specific location data that may be sensitive.

Source: Available from the Jericho Conservation Commission

**Enduring Features of Jericho, Vermont: An Analysis for Conservation, Restoration, and Climate Change Adaptation Planning. 2008. Prepared by Jesse Mohr, Native Geographic LLC, Pike, NH 03780.**

Description: Assessment of Jericho’s physical landscape and diversity, the various combinations of bedrock, surficial geology, aspect, topographic position and elevation, to guide conservation of the range of systems within the Town. Preparing for climate change and selecting restoration targets are also highlighted.

Source: Available from the Jericho Conservation Commission

**Uplands Regional Large Habitat Block and Connectivity. November 14, 2011. Presentation to the Town of Jericho by Jens Hilke, Vermont Fish and Wildlife Department.**

Description: Presentation of a three-town project (Jericho, Underhill, and Richmond) to identify large blocks of wildlife habitat and the connections that link them. The project identified and mapped the habitat blocks and the potential connectivity areas, and verified the use of connectivity through winter monitoring of road crossings. Verification is an on-going activity.

Source: Available from the Jericho Conservation Commission

**Vermont Vernal Pool Mapping Project. 2009-2012. Vermont Center for Ecostudies, Norwich, VT, and Arrowwood Environmental, Huntington, VT.**

Description: Almost 5,000 vernal pools and potential vernal pools were identified throughout the state via remote sensing. Subsequently, many of these were verified on the ground by trained volunteers. Goals of the project were to identify vernal pools on the ground, since they rarely appear in the National Wetland Inventory maps and are impossible to confirm through remote sensing. Ground surveys concentrated on identifying the species of concern and assessing the confidence level of functionality as a vernal pool. Data from Jericho was contributed by the Jericho Conservation Commission.

Source: <http://vtecostudies.org/projects/forests/vernal-pool-conservation/vermont-vernal-pool-mapping-project/>

**Jericho Remote Wetlands Inventory and Assessment. Jan. 31, 2012. Prepared by Arrowwood Environmental, Huntington, VT.**

Description: Inventory and identification of wetlands in Jericho through the technique of remote-sensing. Areas are mapped and an assessment of the functions and values are also presented, also via remote-sensing. 470 wetlands and potential wetlands were identified, of 16 different natural community types. 34 of the wetlands were classified as high-functioning wetlands.

Source: Available from the Jericho Conservation Commission

**Science to Action: Four Town Natural Resources Inventory – Bolton, Huntington, Jericho, Richmond. December, 2013. Prepared by Arrowwood Environmental, Huntington, VT.**

Description: An intense project to map and assess the natural heritage elements in the four towns in a standardized format. Information is to be used in planning decisions and to establish priorities for protection of significant natural resources. Descriptions of a wide variety of wetland and upland communities and their locations, as well as extensive maps where they occur, are included.

Source: [https://s3-us-west-1.amazonaws.com/ehq-production-us-california/f1db02d42be650551e023619126f45cbc5f091d0/documents/attachments/000/003/020/original/Science\\_to\\_Action\\_Project\\_Report.pdf?1541431457](https://s3-us-west-1.amazonaws.com/ehq-production-us-california/f1db02d42be650551e023619126f45cbc5f091d0/documents/attachments/000/003/020/original/Science_to_Action_Project_Report.pdf?1541431457)