

Appendix 7.3.TDI-NE.4

**NECPL - Aesthetic and Orderly Development Analysis Report (T.J.
Boyle Associates, December 4, 2014)**

New England Clean Power Link



Aesthetic and Orderly Development Analysis Report

December 4, 2014

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I. Introduction

T. J. Boyle Associates, LLC (“TJBA”), a landscape architecture and planning firm located in Burlington, Vermont, was retained by Champlain VT, LLC, d/b/a TDI New England (“TDI-NE”) to conduct an aesthetic analysis to evaluate potential impacts due to the proposed New England Clean Power Link project (“NECPL” or the “Project”) and to evaluate whether the Project will unduly interfere with orderly growth in the region. NECPL is a proposed high voltage direct current (“HVDC”) electric transmission line that will run from the Canadian border at Alburgh, Vermont to Ludlow, Vermont along underwater and underground routes. The aesthetic analysis determines whether changes to the landscape’s visual character attributable to the proposed Project will be adverse, and if so, whether they will also be undue. This report presents the findings and conclusions of the aesthetic and orderly development analysis.

T. J. Boyle Associates has conducted field investigation, analyzed geographic information system (“GIS”) data, USGS maps, aerial photography, and detailed design plans, and used the latest computer technologies to best understand the Project and how planned improvements will alter the visual character of the landscapes for which they are proposed.

II. Project Description

The NECPL will provide electricity generated by renewable energy sources in Canada to the New England electric grid. The line will run from the Canadian border at Alburgh, Vermont to Ludlow, Vermont along underwater and underground routes. The transmission line will be comprised of two approximately 5” diameter cables – one positively charged and the other negatively charged – and will be solid-state dielectric and thus contain no fluids or gases. The nominal operating voltage of the line will be approximately 300 to 320 kV, and the system will be capable of delivering 1,000 megawatts (“MW”) of electricity.

The proposed underwater portion of the transmission line, approximately 97 miles in length, will be buried to a target depth of 3-4 feet in the bed of Lake Champlain except at water depths of greater than 150 feet where the cables will be placed on the bottom and self-burial of the cables in sediment will occur. In areas where there are obstacles to burial (e.g. existing infrastructure, bedrock), protective coverings will be installed.

The overland portion of the transmission line, approximately 56 miles in length, will be buried approximately four feet underground within existing public (state and town) road rights-of-way (“ROW”).¹ The cables will be installed within a railroad ROW for approximately 3.5 miles in the town of Shrewsbury and Wallingford. Very short sections of the route at the Lake Champlain entry and exit points, as well as at the converter site in Ludlow, will be located on private land that is owned or controlled by TDI-NE.

¹ The only potential areas where underground burial may not occur is at two stream/river crossings in Ludlow where the cables may be placed in conduit and attached to a bridge or culvert headwall.

In Ludlow, the HVDC line will terminate at a converter station that will convert the electrical power from direct current (“DC”) to alternating current (“AC”). An underground AC transmission line will then run to the existing 345 kV Coolidge Substation in Cavendish, Vermont located approximately 0.3 miles to the south that is owned and operated by the Vermont Electric Power Company (“VELCO”).

III. Aesthetic Analysis

A. Methodology

Section 248(b)(5) of Title 30 of the Vermont Statutes Annotated requires that the Vermont Public Service Board find a proposed project will not have an “undue adverse effect” on a proposed project site’s aesthetics. This requirement is outlined in the Quechee Lakes Decision (Quechee Lakes Corporation, #3EW0411-EB and #30349-EB [1986]).

The Vermont Public Service Board applies the Quechee Analysis in Section 248 proceedings according to the following:

In order to reach a determination as to whether the project will have undue adverse effect on the aesthetics of the area, the Board employs the two-part test first outlined by the Vermont Environmental Board in Quechee, and further defined in numerous other decisions.

Pursuant to this procedure, first a determination must be made as to whether a project will have an adverse impact on aesthetics and the scenic and natural beauty. In order to find that it will have an adverse impact, a project must be out of character with its surroundings. Specific factors used in making this evaluation include the nature of the project’s surroundings, the compatibility of the project’s design with those surroundings, the suitability of the project’s colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space.

The next step in the two part test, once a conclusion as to the adverse effect of the project has been reached, is to determine whether the adverse effect of the project is “undue.” The adverse effect is considered undue when a positive finding is reached regarding any one of the following factors:

1. Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?
2. Have the applicants failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings?
3. Does the project offend the sensibilities of the average person? Is it offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?

Our analysis, however, does not end with the results of the Quechee test. Instead, our assessment of whether a particular project will have an “undue” adverse effect on aesthetics and scenic or natural beauty is “significantly informed by overall societal benefits of the project.”

Petitions of the Vermont Electric Power Company, Inc. (VELCO), Vermont Transco, Docket No. 6860, Vt. Pub. Serv. Bd. (Jan. 28, 2005) at 79 (footnotes omitted).

In conducting the Quechee Analysis and preparing this report, the following three methods have been used: (1) background data collection, (2) GIS viewshed analysis mapping (for the converter station), and (3) field investigation. The background data and field investigation are used to characterize the study area. The GIS viewshed mapping and field investigation are used to identify areas with potential visibility of the Project. All three methods are used to evaluate whether there are in fact “adverse” impacts, and, if so, whether those impacts could be considered “undue.”

- (1) **Background Data Collection.** Standard data that can help describe the landscape of the Project site, the surrounding area, and the Project are assembled. These data include available Project plans and details, aerial photography, topographical maps, Geographical Information System (“GIS”) data including digital elevation model data, water and land cover information, transportation data and primary building data (public, commercial, residential), and applicable regulations such as the town plan, zoning ordinances, sub-division regulations, and the regional plan.
- (2) **GIS Viewshed Analysis.** Following the background data collection, ESRI ArcView software is used to calculate a GIS viewshed analysis of potential visibility of the Project. Viewshed analysis mapping can identify areas that may have potential views of a project by utilizing a line of sight method from a prescribed point (such as the top of solar equipment), or points, representing the Project to all other locations within a designated study area. Figure 1 illustrates how line of sight is determined in the viewshed analysis. The analysis results (portrayed as two viewshed maps), and background data review form the basis for organizing the field investigation.
 - a. First, a “Terrain Viewshed” map (see Section C. Evaluation of Impacts: Converter Station) is created to evaluate how the land form may block views of Project upgrades. The map differentiates potential viewing areas as “open” areas without forest cover or areas within forest cover. However, this analysis only accounts for intervening landform and does not incorporate how vegetation, buildings, hedgerows, street trees or any other vegetation or buildings will screen visibility of the Project. This map represents the maximum potential area from which the Project could be visible.
 - b. Next, a second map (see Section C. Evaluation of Impacts: Converter Station) is created to represent a “Vegetated Viewshed.” This map shows how forest trees, in addition to landform, may block views of the Project. Two data sources were used to represent forested areas. The first data used to identify forested areas is based on the 2012 National Land Cover Database (NLCD) and is used to represent the majority of forested areas within the viewshed. Vegetation

height is not provided with this data, so a conservative assumption of 40 feet has been used, even though the canopy in the study area is typically between 50' and 80' high. The screening effect of non-forest land cover (buildings, residential landscaping, hedgerows, street trees, and other roadside vegetation) cannot be incorporated with the NLCD data. The second data source is LIDAR data captured specifically for the planning and design of the NECPL. LIDAR is used to create a topographic survey for a particular area, but the raw data when captured, also accurately measures the height of all ground based objects, including canopy height. For the area directly around the proposed converter station, the LIDAR data was incorporated into the GIS viewshed analysis. Use of the LIDAR data significantly increases the accuracy of the vegetated viewshed. This map represents a more likely potential area from which the Project could be visible than the Terrain Viewshed.

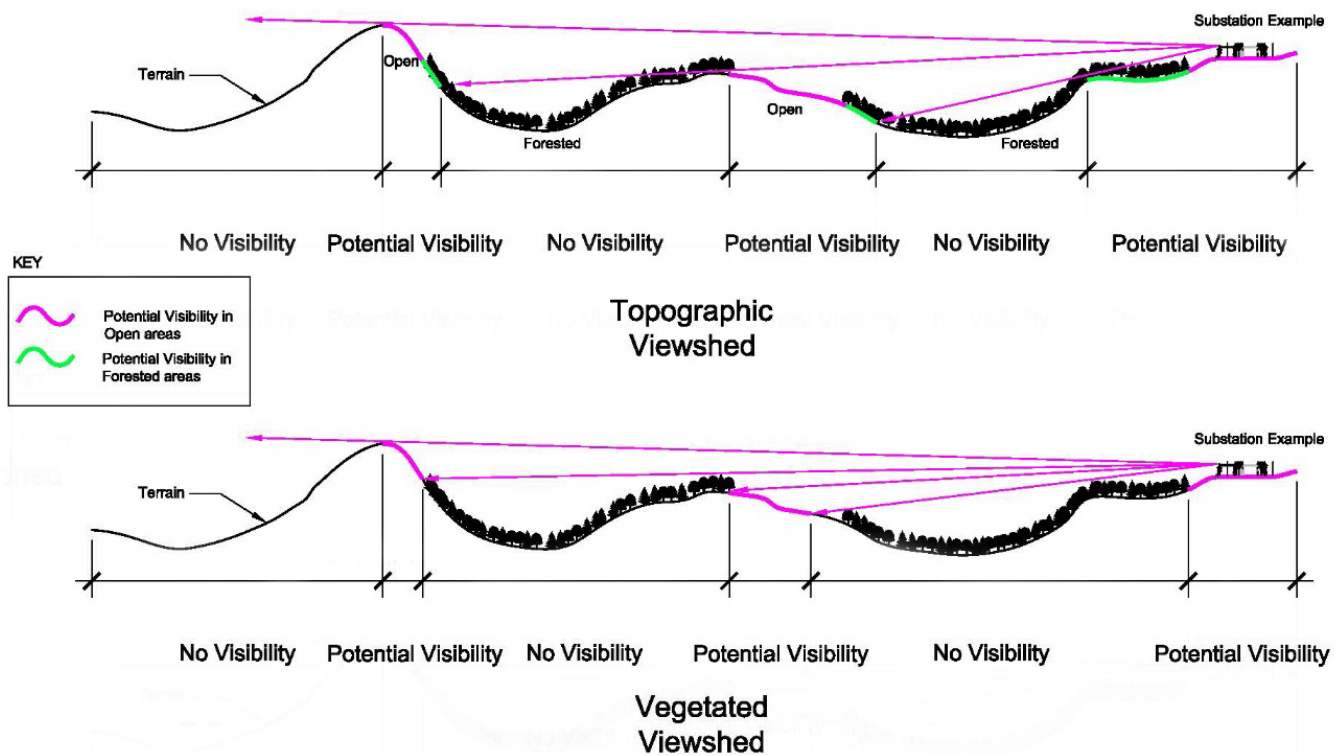


Figure 1: Terrain Viewshed and Vegetated Viewshed Diagrams. (Please note this diagram is to illustrate the results of a GIS Viewshed analysis and is not representative of the proposed Project.

When properly reviewed, these maps indicate areas most likely to have views, emphasizing areas vulnerable to the greatest impacts while also identifying areas that are unlikely to have views. The assumptions used to calculate these maps are conservative, and tend to over-estimate Project visibility. Rather than serving as a final result, these maps are primarily used in preparation of the field investigation, which more fully evaluates the landscape context, views, and potential impacts based on the visibility indicated on the maps. Therefore it is inappropriate to use these maps as the only basis to evaluate visual extent and impacts. Figure 2 illustrates the difference between the Terrain Viewshed and the Vegetated Viewshed maps.

(3) **Field Investigation.** The viewshed maps are used to focus the field investigation on areas most likely to have views of the Project. The purpose of the field investigation is to:

- a. Verify potential visibility as indicated on the viewshed maps
- b. Photograph views toward the Project from these and any other sensitive areas (parks, public facilities, etc.)
- c. Photographically document the landscape's visual character within the study area
- d. Record notes concerning each viewpoint where photographs are taken
- e. Identify location of photograph viewpoints using a global positioning system ("GPS") unit

Following completion of the field investigation, the GPS data is transferred to a GIS database and synchronization of the data and photograph locations are verified. Documentation of the field investigation is then prepared, which includes: (1) mapping of the routes traveled and locations of photograph viewpoints (Appendix A, Maps 1-3), (2) a catalog of photographs (Appendix B), and (3) a planting mitigation plan (Appendix C). All three components are coordinated through indexed viewpoint numbers. Unless specified otherwise, all photos included in Appendix B and throughout the report are captured with a 'normal lens' or a focal length equivalent to 50mm on a full frame camera, to most accurately replicate a person's field of view.

TJBA evaluates data from the steps above and compares existing conditions with plans for the proposed Project. The following sections of this report describe in detail the collection and evaluation of data and the resulting conclusions.

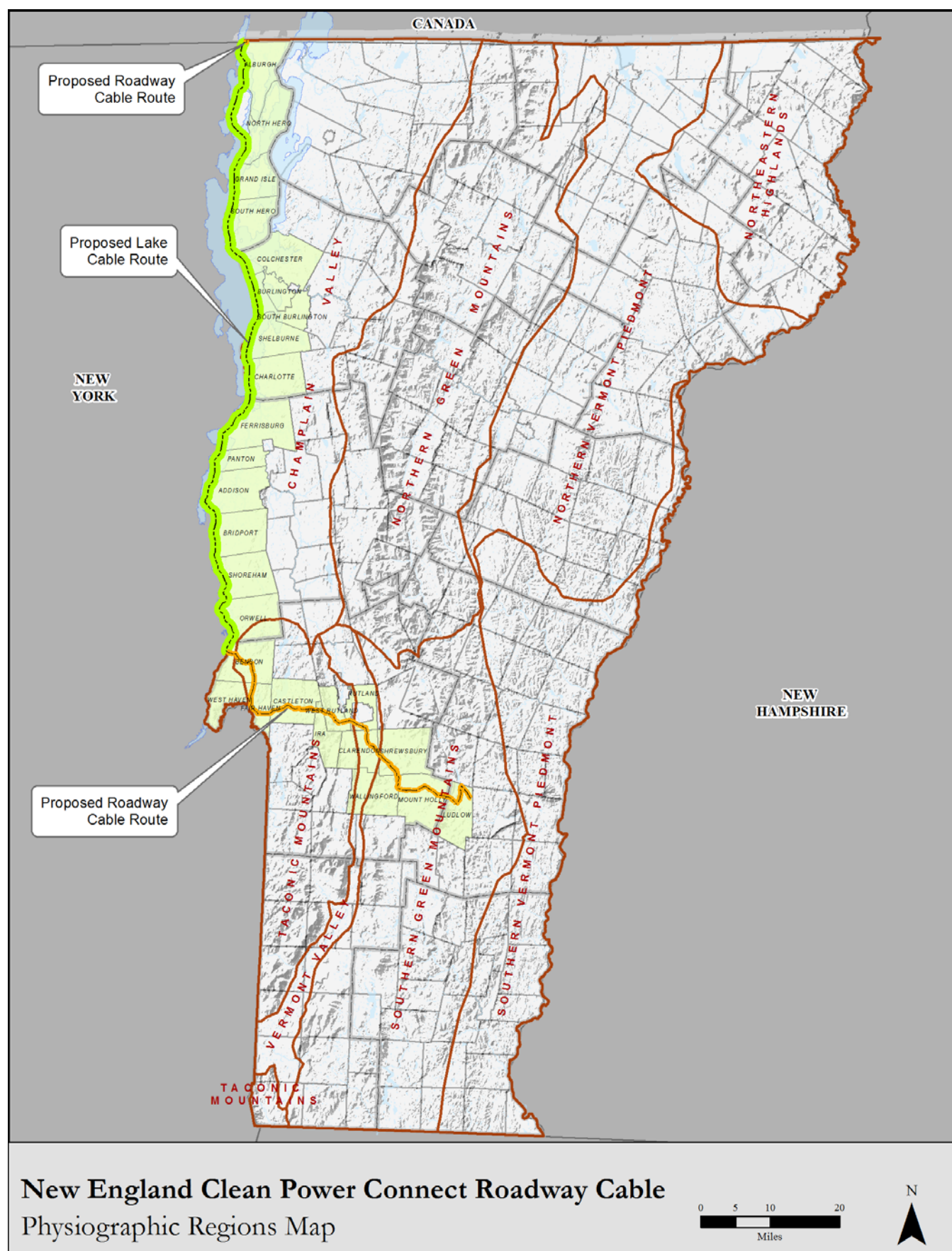


Figure 2: Physiographic Regions Map with Proposed Project Route

B. Description of the Study Area

For the review of potential impacts to aesthetics, this study focuses on two main components of the Project. First, we reviewed potential impacts for the overland portion of the HVDC line that will be buried along existing road ROWs and a short stretch of railroad ROW. The second component is the converter station in Ludlow. Visual impacts from the portion of the Project buried or laid at the bottom of Lake Champlain were not evaluated for visual impacts, because no visual impacts are expected. Overland locations of the Project include Alburgh from the Canadian border to where it transitions to beneath Lake Champlain, and from Benson where the line transitions back to an overland route, continuing through the towns of West Haven, Fair Haven, Castleton, Ira, West Rutland, Rutland Town, Clarendon, Shrewsbury, Wallingford, Mount Holly, Ludlow and ending at the existing VELCO substation in Cavendish, Vermont. The Project begins in and proceeds through the Champlain Valley physiographic region (also referred to as the Vermont Lowlands), continues across the northern end of the Taconic Mountains, through the Vermont Valley, and across the Southern Green Mountains.

Within the Champlain Valley region, the Project runs approximately one-half mile in Alburgh before transitioning beneath Lake Champlain. The Champlain Valley is located on the western side of the state, surrounding Lake Champlain and is characterized by flat and gently rolling land. It has a low average elevation and the climate is milder than the rest of the state. Agriculture is an important and prevalent use in this region.

Within Benson, the Project enters the Taconic Mountains region, which contains a random collection of peaks and ridgelines. The Taconic Mountains extend into southwestern Vermont from New York and Massachusetts. The Project route generally avoids mountains and ridgelines in this region, first running along the western edge of the region in Benson, West Haven and Fair Haven. This area is closer in character to the Champlain Valley, with a flat and gently rolling landscape and prevalent agricultural use. In Fair Haven, the Project route turns to the east and follows US Route 4 through a gap in the Taconic Mountains, along the Castleton River. On the west side of the Taconic Mountains, the Project enters the Vermont Valley.

The Vermont Valley is a narrow valley region between the Taconic Mountains and the Green Mountains. It runs from the southern edge of the Champlain Valley, in the Brandon area, to Bennington in the South. It consists of flat to rolling topography with streams, wetlands, and dry terraces. The Project enters the Valley of Vermont in the Town of Rutland and continues south along US Route 7 to Clarendon where it turns to the east and follows Vermont Route 103 into the Southern Green Mountains.

The Southern Green Mountains are characterized as a broad high plateau with a few prominent peaks. Overall, the Green Mountains are the backbone of Vermont and run the length of the state from Massachusetts to Canada. This region is predominantly forested.

C. Evaluation of Adverse Impacts

The following section provides an overview of changes to the visual landscape as a result of the project and whether changes will create an adverse impact to a particular area. It is first important to understand how the Project can potentially affect the visual landscape of the areas through which it is located.

Unlike most high voltage transmission lines within the state of Vermont, the HVDC line will be constructed entirely in an underwater and underground configuration. The only components that will be exposed at the surface are a limited number of manholes, which will be installed with the top of the manholes level with the existing grades, and the likely attachment of the cables to the side of bridge/culvert structures at two stream crossings within steel piping. Therefore there is very little potential for the transmission line to result in direct impacts to the aesthetics of the Project area. The avoidance of direct impacts to aesthetics is a significant mitigation measure that results in the avoidance of major impacts that would otherwise occur for a project of this sort. Indirect impacts are more likely to result from vegetation clearing that will be required to construct and maintain the line. In fact, the only visual changes along the entire cable route will be related to selective vegetation clearing adjacent to existing cleared road and rail right of ways. In particular, construction details call for temporary construction areas up to 50 feet wide and a permanently maintained cleared area of twelve (12) feet wide, centered above the line. However, there are numerous locations (over twenty locations extending nearly 5 miles) where Project plans call for the transmission line to be installed by horizontal directional drilling (“HDD”), a steerable trenchless method of installing underground pipes, conduits, and cables by using a surface stationed drilling rig. HDD results in minimal impact to the area above the drilled area, and vegetation will not be removed above the line at these locations. HDD installation does require a temporary cleared staging area at both the launch and receiver ends of the drilled section.

The Project component that has the greatest potential for aesthetic impacts is the HVDC converter station, proposed in Ludlow near the end of the proposed transmission line. This facility is a specialized type of transmission substation, necessary to convert electricity from DC to AC to be connected with New England electric grid. The evaluation of potential aesthetic impacts will first review the buried HVDC transmission line.

HVDC Transmission Line

As previously mentioned, evaluation of aesthetic impacts for the transmission line is limited to locations where the line will be buried along existing public ROWs. The HVDC line will be installed overland for approximately one-half mile in Alburgh, and over 55 miles from Benson to Ludlow. An approximately .5 mile of buried AC transmission line, will connect the converter station in Ludlow to the VELCO Coolidge Substation just over the town line in Cavendish. To assess potential impacts for the HVDC line, field investigation and review of Project plans were the primary methods used to evaluate impacts. Appendix A, Key Observation Points Maps and Photos, provides documentation and specific assessment at a series of representative locations along the overland portions of the line. Project plans were overlaid on aerial photos using GIS software and used to understand impacts to the existing landscape.

Within Alburgh, the line runs from the Canadian border along Bay Road, a gravel surfaced, class 3 town road for three tenths of a mile before proceeding through a TDI-NE controlled parcel and transitioning beneath Lake Champlain. The line transitions back to an overland configuration in Benson and proceeds just over four (4) miles along a combination of gravel and dirt surfaced, and paved class 2, 3, and 4 town roads. The line then turns south along VT Route 22A in Benson and continues for over eight (8) miles through West Haven and Fair Haven, where the line turns east along US Route 4. The line continues for over 17 miles from Fair Haven through Castleton, Ira, West Haven and the Town of Rutland along Route 4. In the Town of Rutland it turns south and follows along US Route 7 into Clarendon for less than three (3) miles. In Clarendon, the line turns along Vermont Route 103 and continues southeast through Shrewsbury, Wallingford, Mount Holly and Ludlow for the next 18 miles to Vermont Route 100, although the line diverges from the Route 103 ROW in Shrewsbury to follow the railroad ROW for three and one-half (3.5) miles into Wallingford, before reconnecting with Route 103. In Ludlow, the line will turn north along Vermont Route 100 for approximately .8 miles and then continues for just over four (4) miles along a series of gravel surfaced, class 3 town roads in Ludlow before terminating at the proposed converter station.

Impacts associated with the HVDC line are limited to indirect visual impacts that will result from clearing trees or vegetation to construct and maintain the line. This can be categorized into two specific types of indirect impacts.

The first type of indirect impact is clearing that will remove an established edge to existing wooded areas. At these locations up to 50 feet of clearing may be required and the new edge of woods will have a different character. The edge of existing wooded areas that have long been established includes trees that have limbs along the entire height of the tree and includes edge and understory plantings. Where clearing creates a new edge along roads that the Project follows, the new edge includes trees within branching confined to the very tops of the trees and little understory plantings. This creates a 'raw' edge that will be more pronounced during 'leaf-on' times of the year, or times when deciduous vegetation is in foliage. This is a temporary impact and will be naturally mitigated overtime as new understory plantings and foliage is generated. The design and placement of the line within road ROWs significantly limits the need for clearing across much of the Project.

For locations where the line runs along town roadways in Alburgh, Benson and Ludlow, and also for the stretch along Vermont Route 100, the Project will be buried beneath the traveled portion of the road and will not require vegetation clearing along the roads. Clearing, and associated potential impacts, is generally limited to locations along Vermont Route 22A, US Route 4, US Route 7 and Vermont Route 103.

The second type of indirect visual impact includes certain locations where the line will require clearing that results in vegetation removal, which currently provides screening and landscape value, such as landscape planting between an existing roadway and adjacent development. In locations where this type of impact has been identified, landscape mitigation is proposed to help to mitigate potential impacts. These locations are identified below.

In general, removal of vegetation in these select areas can be considered adverse, but these impacts can also be mitigated. It should be noted that Applicant spent considerable time attempting to avoid these impacts during design, but due to other constraints along these roads (i.e. wetlands, RTE plants, steep slopes) certain

impacts could not be entirely avoided. The Applicant has advised that it will continue to assess the potential to minimize adverse visual impacts as project details are prepared. The specific locations where vegetation may need to be removed that would result in adverse impacts include the following:

Vermont Route 22A, West Haven – MP 105.4

At the West Haven / Benson town line, the HVDC line will be installed along the west side of Route 22A and will require a line of trees within the road ROW to be removed. The line of trees currently provides a buffer between the road and an adjacent residential structure and contributes to the aesthetics along this portion of Route 22A. Attempts will be made to avoid impacting these trees, but if removal is required, it will have an adverse impact on the character of the roadway. To help mitigate this impact, a landscape mitigation plan has been prepared. Five (5) proposed American Elm trees to be planted along Route 22A are shown at this location, however, it is unlikely that these trees can be planted within the road ROW. The plan shows the trees planted just outside the road ROW on the adjacent property and will require permission from the landowner. The landscape mitigation plan is provided in Appendix B as sheet L-1. A map and photo of this location can be found in Appendix A on page A-25.

Vermont Route 22A, West Haven – MP 106.5

As currently designed, the line will likely require the removal of a large willow tree that provides the only buffer between the roadway and an adjacent farm house, which is sited relatively close to Route 22A. The size and location of this large, mature tree provide an important component to the character of the area as seen from the roadway at this location. According to TDI-NE, attempts will be made to shift the line closer to the edge of the road and implement tree preservation methods at this location to avoid impacts to this tree. If the tree can't be preserved, TDI-NE will offer to plant new trees outside of the ROW if the landowner consents. A map and photo of this location can be found in Appendix A on page A-26.

US Route 4, Exit 4 & Airport Road, Fair Haven – MP 110.4 to 110.5

At Exit 4, where the line turns from Route 22A to follow US Route 4, until Airport Road, a row of White Pine, approximately 900 feet long, may be removed as a result of the Project. It appears that these trees were plantings associated with Route 4 to provide a buffer between the road and areas north of the road. Removal of this buffer will create views between the roadway and adjacent development to the north, including the Green Mountain Mobile Home Park. Removal of this screen planting will result in an adverse impact to the aesthetics of this area. To mitigate these potential impacts, a proposed landscape mitigation plan has been prepared if needed. Up to sixty (60) new White Pine trees are proposed to be planted at the edge of the ROW. Where the Project crosses Airport Road, the line moves south, away from the edge of the ROW and avoids additional clearing at this location. The proposed landscape mitigation plan can be found as sheet L-2 in appendix B and a map and photos of this location can be found in Appendix A on pages A-29 and A-31.

US Route 4 / E. Hubbardton Road / Higgins Road, Castleton – MP 116.3

A HDD temporary staging area along US Route 4 at exit 5 may require clearing that would remove a row of pines that appear to have been installed as a buffer between Route 4, East Hubbardton Road and Higgins Road, possibly during the construction of US Route 4. Removal of these trees would eliminate part of the buffer and will have an adverse effect to the character of the area at this location. A proposed landscape mitigation plan has been prepared to replace any trees removed from the row of pines and is provided as

sheet L-3 in appendix B. It is possible that clearing of these trees can be avoided during construction, which would avoid an adverse impact or the need for mitigation plantings. A map and photos of this location can be found in Appendix A on pages A-36 and A-37.

US Route 4 / Vermont Route 4A / Whipple Hollow Road, West Rutland – MP 121.7

Where VT Route 4A crosses beneath US Route 4 in West Rutland, a temporary HDD staging area will require a large, wooded highway embankment to be cleared, opening views between Whipple Hollow Road and the surrounding properties to US Route 4. Removal of vegetation on the embankment will have an adverse effect to the character of the area, particularly from views traveling south on Whipple Hollow Road. To help mitigate and soften views, a proposed landscape mitigation plan has been prepared, which includes eleven (11) Red Maple trees to be planted along Whipple Hollow Road, and thirteen (13) White Spruce trees to be planted along the embankment to re-establish a vegetated buffer. The proposed landscape plan can be found as sheet L-4 in appendix B. A map and photos of this location can be found in Appendix A on pages A-40, A-41 and A-42.

US Route 4, West Rutland Recreational Area, West Rutland – MP 123.5

Near exit 6 in West Rutland, a recreational path, part of a larger recreational area / park, shares a portion of the US Route 4 ROW. An HDD staging area may result in clearing along a portion of the recreational path and will open views between parts of the park, recreation path and US Route 4. Removal of vegetation will have a negative effect to the aesthetics of this area. TDI-NE will work to avoid clearing trees that currently provide screening to this park and path during final design, but if avoidance is not feasible, a proposed landscape mitigation plan will be implemented. A map and photos of this location can be found in Appendix A on pages A-45 and A-46. A proposed landscape mitigation plan can be found in Appendix B as sheet L-5.

US Route 7, Clarendon – MP 128.2

In Clarendon, tree clearing for an HDD staging area, just south of the Cold River may remove an existing vegetative buffer and will open views between US Route 7 and the rear side of an adjacent residential structure and property. TDI-NE has shifted the proposed HDD closer to the road to attempt to alleviate these impacts and expects vegetation will be retained. If removal of this vegetation occurs it will allow views between Route 7 and this residential Property and will have a negative effect to the aesthetics of the area, which could be adverse depending on the extent of the removal required. If necessary, to mitigate these impacts, a proposed landscape mitigation plan has been prepared to re-establish and reinforce the vegetated buffer at this location. A map and photo of this location can be found in Appendix A on page A-50 and the proposed landscape mitigation plan can be found in Appendix B as sheet L-6.

Vermont Route 103, Shrewsbury – MP 132.7

Near MP 132.7, the Project could result in removal of roadside vegetation, including landscape plantings, opening views between an adjacent residential structure and Route 103. However, removal of trees may not be necessary. If vegetation is removed, replacement planting should be provided to retain the visual quality along this portion of Vermont Route 103.

Vermont Route 103 & Green Mountain Railroad, Shrewsbury – MP 134.1

Near MP 134.1 on Vermont Route 103, the line will turn from the road ROW to follow along the north side of the Green Mountain Railroad. To accommodate the Project, up to 26 feet of temporary clearing along the north side of the railroad will be required, opening a wider corridor along the railroad from Route 103. Especially just after construction, views from Route 103 along the railroad corridor will have diminished visual quality as a result of the Project. Much of this impact will soften as border vegetation and the edge of woods are re-established, but to help screen and limit views along the railroad corridor, a small clump of vegetation is proposed near the Route 103 ROW. A map and photos of this location can be found in Appendix A on page A-56 and A-57. A landscape mitigation plan has been prepared and is included as sheet L-7 in Appendix B.

Town Hill Road / Shunpike Road, Shrewsbury – MP 135.6 to 135.8

The line crosses Town Hill Road along the Green Mountain Railroad. Continuing east from the crossing, the Project will result in the removal of most vegetation within an existing hedgerow north of the tracks. The hedgerow softens views along the railroad when viewed from the crossing with Town Hill Road but also provides a buffer between the railroad and Shunpike Road. Shunpike Road parallels the railroad, slightly to the north. The hedgerow contributes to the overall scenic quality in this area and screens the railroad from views along Shunpike Road. Loss of this hedgerow will result in an adverse effect to the visual quality of the area. To mitigate impacts to this area, proposed landscape mitigation is recommended to re-establish the vegetated buffer along the railroad. A map and photos of this location can be found in Appendix A on pages A-58, A-59 and A-60. Proposed landscape mitigation plantings are shown on sheet L-8 in Appendix B.

Vermont Route 103, Wallingford – MP 137.6

The Project reconnects with Vermont Route 103 in Wallingford, near the railroad crossing of the Mill River. A 50 foot width of vegetation will be cleared along the east side of the railroad as the Project descends the steep slope to return to Route 103. An HDD staging area will require additional clearing along the edge of the roadway. Vegetation at this location frame views of the railroad trestle and contribute to the overall scenic quality of the area. Removal of vegetation will have an adverse effect to the visual quality of this area. Landscape mitigation plantings are proposed to help re-vegetate areas temporarily cleared for construction and to also block views along the corridor created adjacent to the railroad. A map and photo of this location can be found in Appendix A on page A-62 and a proposed landscape mitigation plan is provided on sheet L-9 in Appendix B.

Vermont Route 103, East Wallingford Village, Wallingford – MP 138.4 to 138.7

The line is proposed along the east/north side of Vermont Route 103 through East Wallingford Village. The line will result in the temporary removal of up to a 25-foot wide strip of vegetation along the road. Currently, the edge of existing woods along this side of the road grows relatively close to the edge of the roadway, which helps to visually narrow the roadway and contributes to the visual landscape at this location. Removal of this vegetation will have an adverse effect to the aesthetics. Due to the narrow width from the paved road to the edge of the Route 103 ROW, it is unlikely that additional landscape plantings can be installed along this section. To help limit the amount of impact, tree preservation methods should be utilized and the line should be installed as close to the edge of the roadway as possible to minimize clearing. A map and photos of this location can be found in Appendix A on pages A-63 and A-64.

Vermont Route 103 / Hortonville Road, Mount Holly – MP 141.2

Although relatively minor, the Project will result in the removal of a small clump of trees at the northeast corner of the intersection of Vermont Route 103 and Hortonville Road at the center of Mount Holly. However, this small clump of trees is the only vegetative relief on that corner and removal of it will impact the visual quality of the area. Proposed mitigation plantings, including three (3) Red Maple trees and one (1) Common Hackberry tree, are shown for this intersection on sheet L-10 in appendix B. A map and photo at this location can be found in Appendix A on page A-66.

In conclusion, all impacts assessed due to the HVDC line are indirect since virtually all of the infrastructure associated with this line will be buried underground. Potential adverse impacts have been identified for specific locations. Combined, these areas represent an extremely small percentage of the entire overland route. In addition, there will be an additional level of temporary minor impact due to clearing along the existing wooded areas. Overall, because these impacts are dispersed over a relatively large geographic area, the impacts caused by the Project are minor. As the design continues to advance TDI-NE has committed to reducing vegetation removal in these areas. The proposed landscape mitigation and tree preservation commitments will further reduce and mitigate adverse impacts. The level of adversity as a result of the Project will not be undue.

Ludlow Converter Station

The HVDC line will terminate in Ludlow at a proposed converter station that will convert electricity to AC and allow the NECPL to be connected to the New England electrical grid. The converter station is proposed in the town of Ludlow, along Nelson Road on a forested parcel of land, immediately adjacent to a VELCO transmission line corridor. T. J. Boyle Associates were part of a multi-discipline team, engaged early in the process to site and provide design input for the converter station. As a result of this effort, the proposed converter station location and design significantly avoid visibility of the facility from the surrounding area, including nearby public roads and adjacent private property.

Nelson Road is a gravel surface town roadway that provides access to rural residential properties in Ludlow and Cavendish, Vermont. Immediately south of the proposed converter station is a VELCO transmission corridor that includes a 345 kV and a 115 kV overhead transmission lines. Adjacent to the VELCO corridor to the south, and southeast of the converter site is the VELCO Coolidge Substation, at which the NECPL will connect into the New England electrical grid.

The converter station will be similar to an electrical transmission substation. It will include a fenced yard with a variety of electrical transmission components. However, this facility will also include a large building that will house the converter equipment. The building is approximately 325 feet long, by 170 feet wide and up to approximately 60 feet tall. There will also be several lightning masts within the yard, which will be approximately 68 feet tall, the tallest structures on the site.

The greatest potential for public visibility of the converter station will be from Nelson Road. When traveling from the south, Nelson Road includes a strong visual presence of existing electrical transmission infrastructure. The road begins as Quent Phelan Road in Cavendish and first passes through a VELCO

corridor with two 345 kV lines that connect to the Coolidge Substation from the south. The road continues to proceed immediately adjacent to the Coolidge Substation, where the road changes to Nelson Road and crosses the town line into Ludlow. After the VELCO substation, there is a short wooded stretch before entering the VELCO corridor south of the converter station. The road crosses the corridor at an obtuse angle, which extends the length of the roadway within the transmission corridor to approximately 1,000 feet. From the north, Nelson Road passes through a primarily forested landscape, punctuated by small roadside fields and rural residences up to the VELCO corridor.

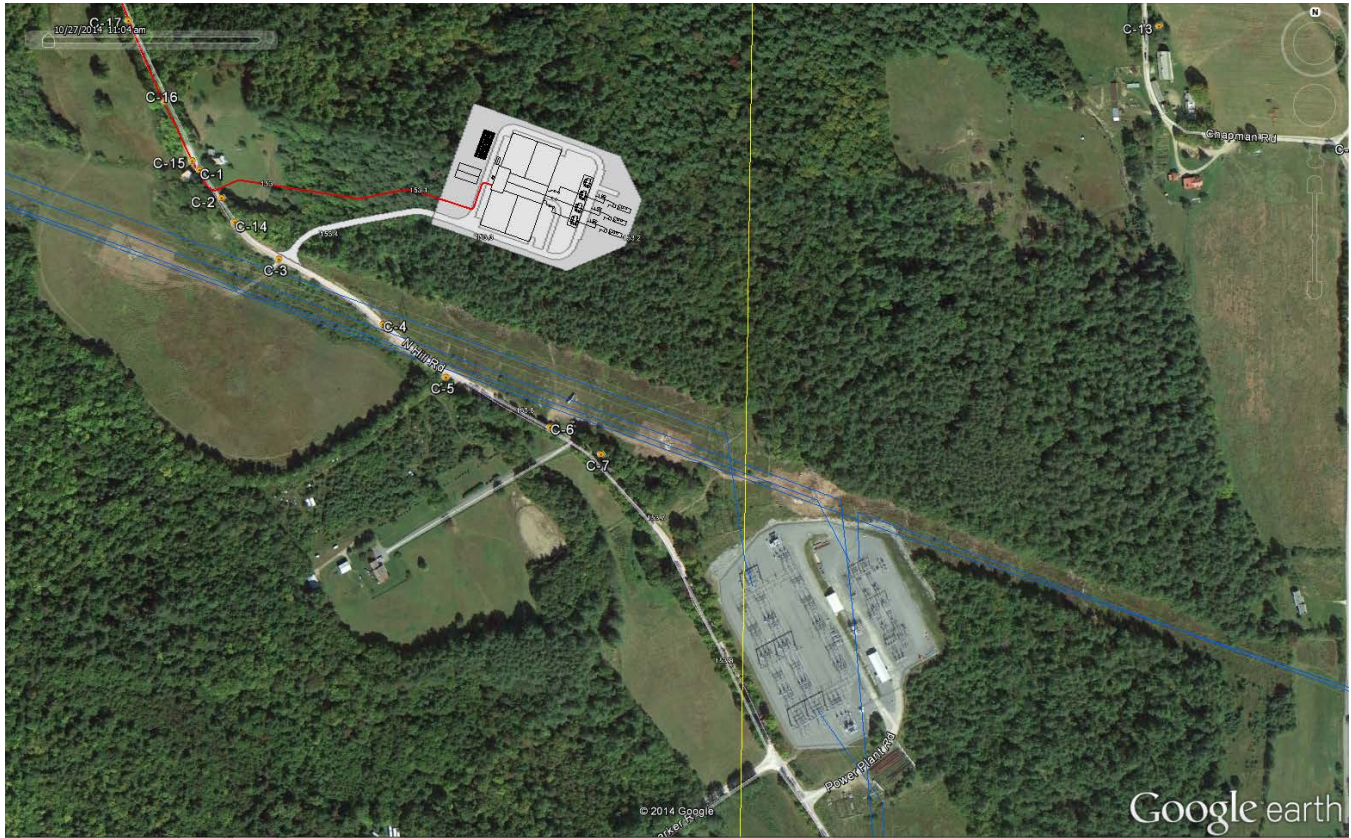


Figure 3: Aerial image of the proposed converter station in relation to existing VELCO transmission infrastructure.

The converter station is proposed to be located north of the VELCO corridor along the same stretch of corridor that Nelson Road passes through. The converter station site is currently forested with a mix of deciduous and evergreen trees. LIDAR data captured for the topographic survey of the site shows vegetation surrounding the converter to be up to 90 feet tall. The converter has been sited so that clearing for the facility will retain at least 200 feet of vegetation between the existing edge of clearing along the VELCO corridor and the converter. The surrounding vegetation will almost entirely screen all potential views of the converter station.

The following pages include a series of maps, cross sections and photos to portray potential visibility of the converter. The Aerial Context Map provides an overview of the surrounding area, the Topographic Viewshed Map shows potential visibility assuming no vegetative screening, and the Vegetative Viewshed Map shows potential visibility while incorporating the screening effect of the surrounding vegetation. The Vegetated Viewshed uses actual canopy heights of vegetation directly surrounding the proposed converter,

captured as part of the LIDAR data. As illustrated by the Vegetated Viewshed Map, the surrounding vegetation will screen almost all potential visibility of the converter. The cross sections provided in figure 7 and the associated images, figures 8, 9, 10 and 11, represent the surrounding conditions and further illustrate how the adjacent vegetation will screen views to the converter. The enlargement at the bottom of the Vegetated Viewshed Map indicates the only visibility from Nelson Road will be from the west of the converter. Two small clearings will be necessary to construct an access road and for the DC lines coming in and the AC lines leaving the converter. While these clearings have been designed to limit visibility, some limited exposure will be created. Views from Nelson Road will mostly be from clearing for the access road, which connects to Nelson Road at the western edge of VELCO corridor crossing. Views will be limited to less than a 100-foot stretch of road and the closest portion of the fenced yard will be approximately 500 feet away.

Significant effort has been made to limit views through the design and location of the converter station. Visibility will be extremely minimal and largely avoids adverse impacts as a result of this facility. Within the limited views that will be created, the scale and materials of the converter will result in a modest adverse impact for a project of this nature. Landscape mitigation plantings are proposed to narrow the width of the clearing and to screen and soften views of the converter within these limited views.

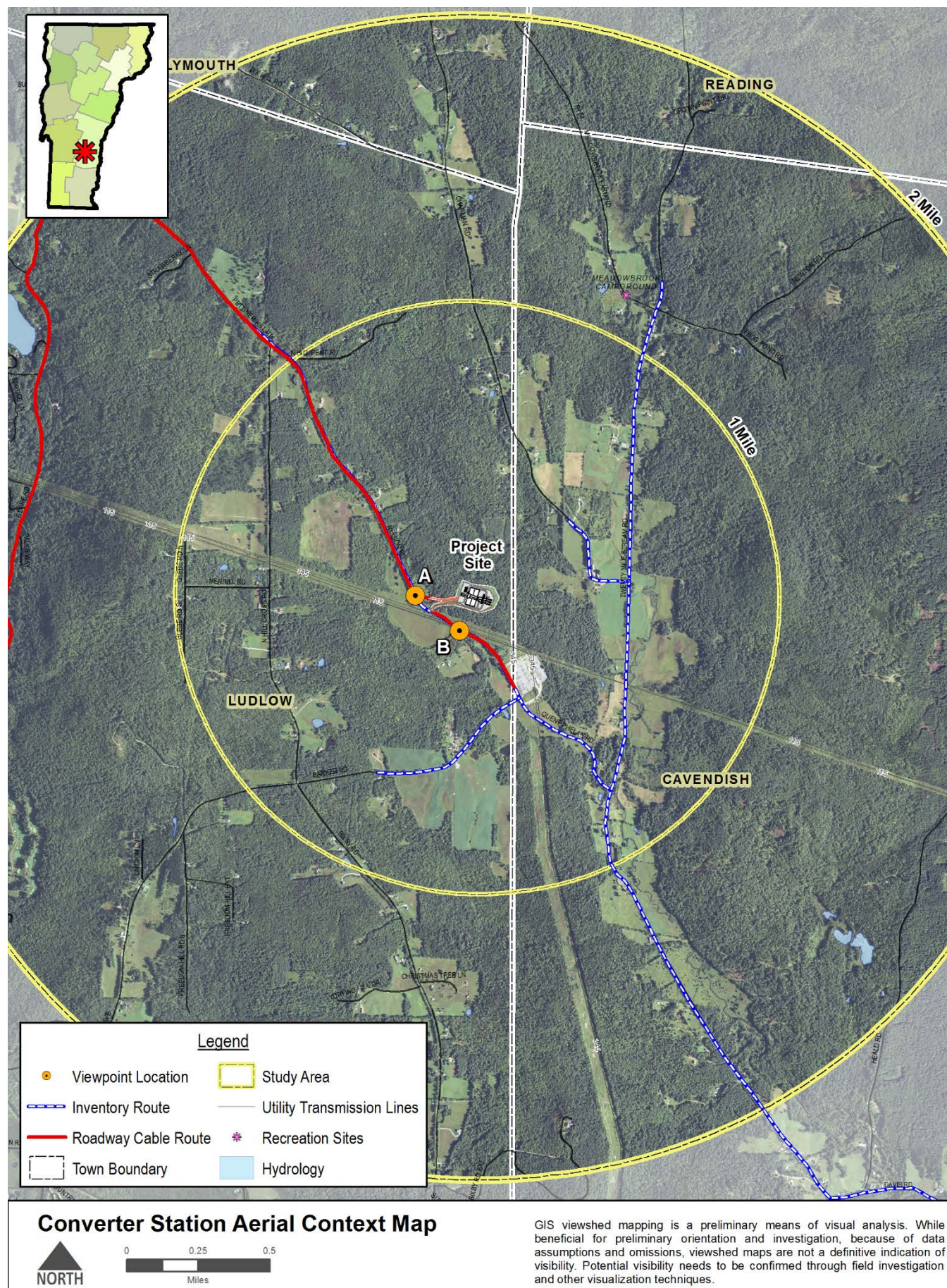


Figure 4: Converter Station Aerial Context Map

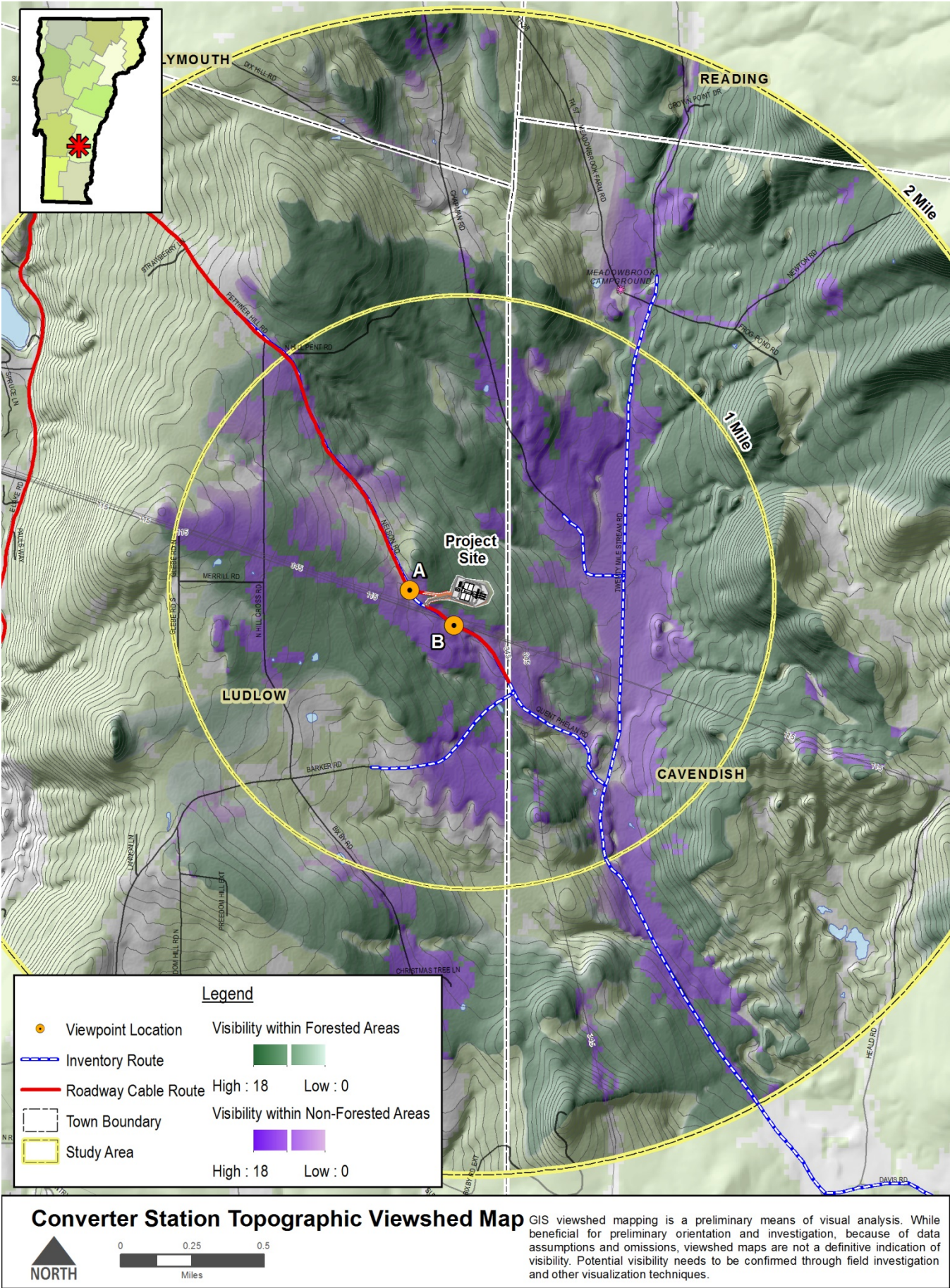


Figure 5: Converter Station Topographic Viewshed Map

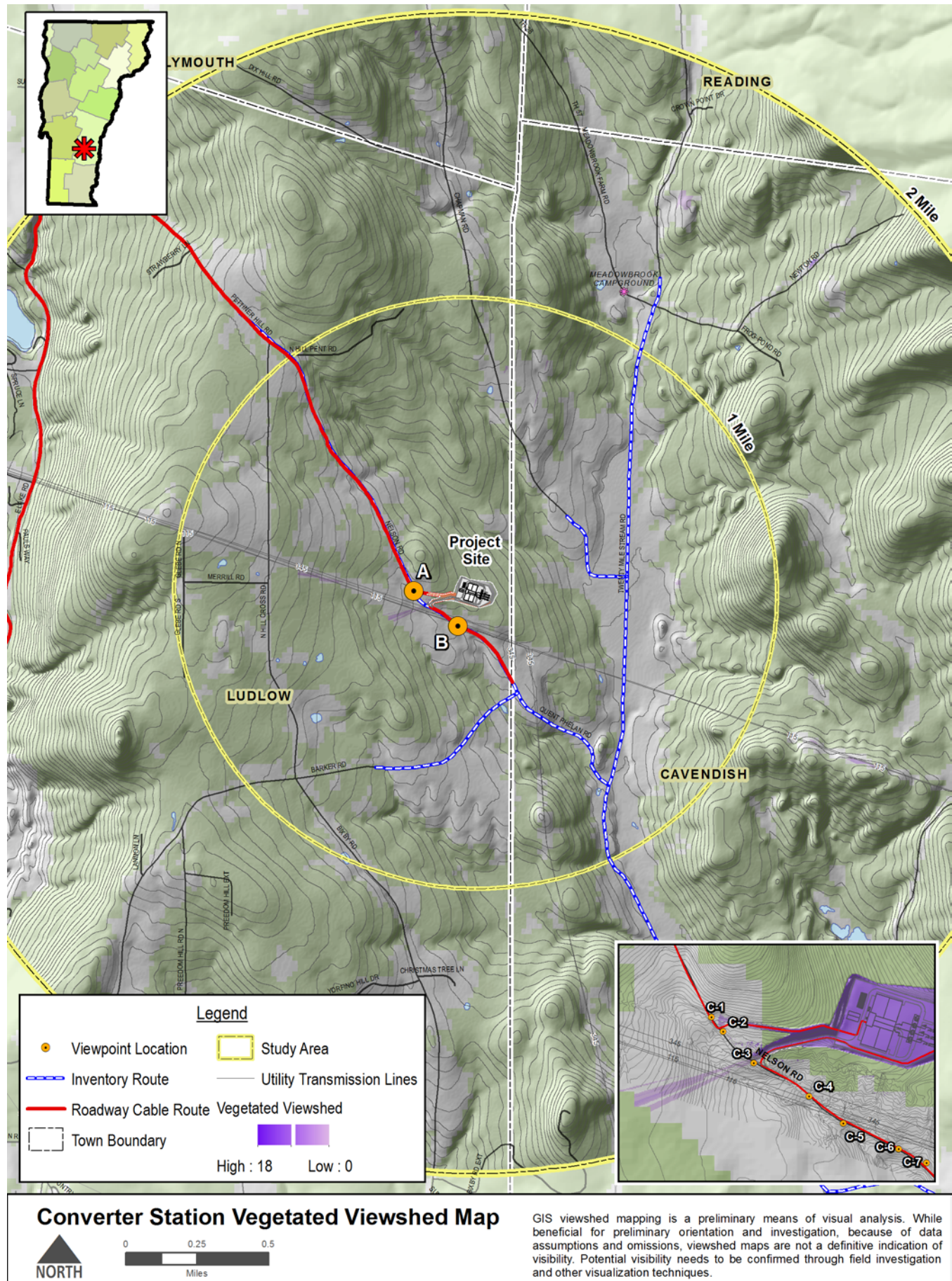
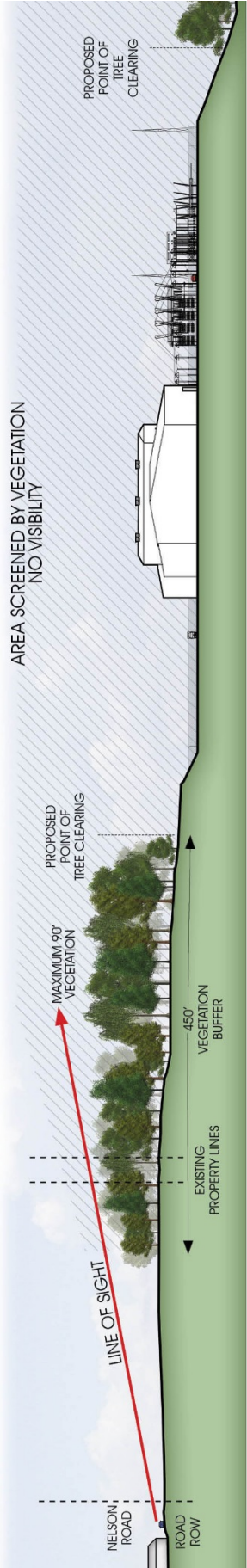
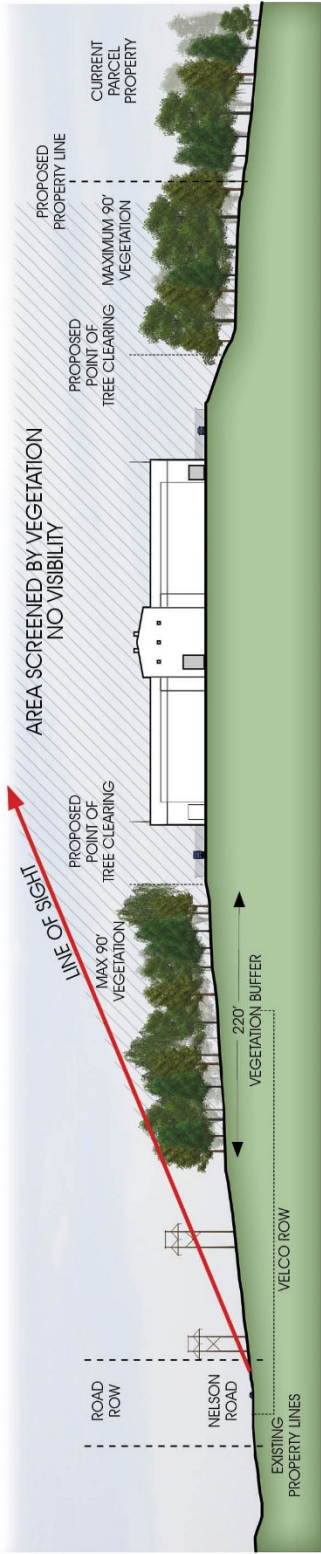


Figure 6: Converter Station Vegetated Viewshed Map



Section A

*TOPOGRAPHIC DATA IS BASED ON LIDAR DATA AT 2' CONTOURS



Section B

*TOPOGRAPHIC DATA IS BASED ON LIDAR DATA AT 2' CONTOURS

New England Clean Power Link - Proposed Converter Station Illustrative Sections

T. J. Boyle Associates
landscape architects • planning consultants



Figure 7: Line of Sight Illustrative Cross Sections



Figure 8 - Viewpoint A: +/- 125° Panoramic view from Nelson Road, west of the Project, panning east to south. The orange rectangle at the center of the photo represents the image below, which is captured with a 50mm normal lens, equivalent to the human 'field of view'. This panorama was digitally lightened.



Figure 9 - Viewpoint A: View looking east from Nelson Road, directly towards the proposed Project, as represented by the orange rectangle in the panoramic view above. Vegetation at the back of the open lawn will screen views of the converter station, although a small corridor will be cleared for the DC line to connect with the facility.

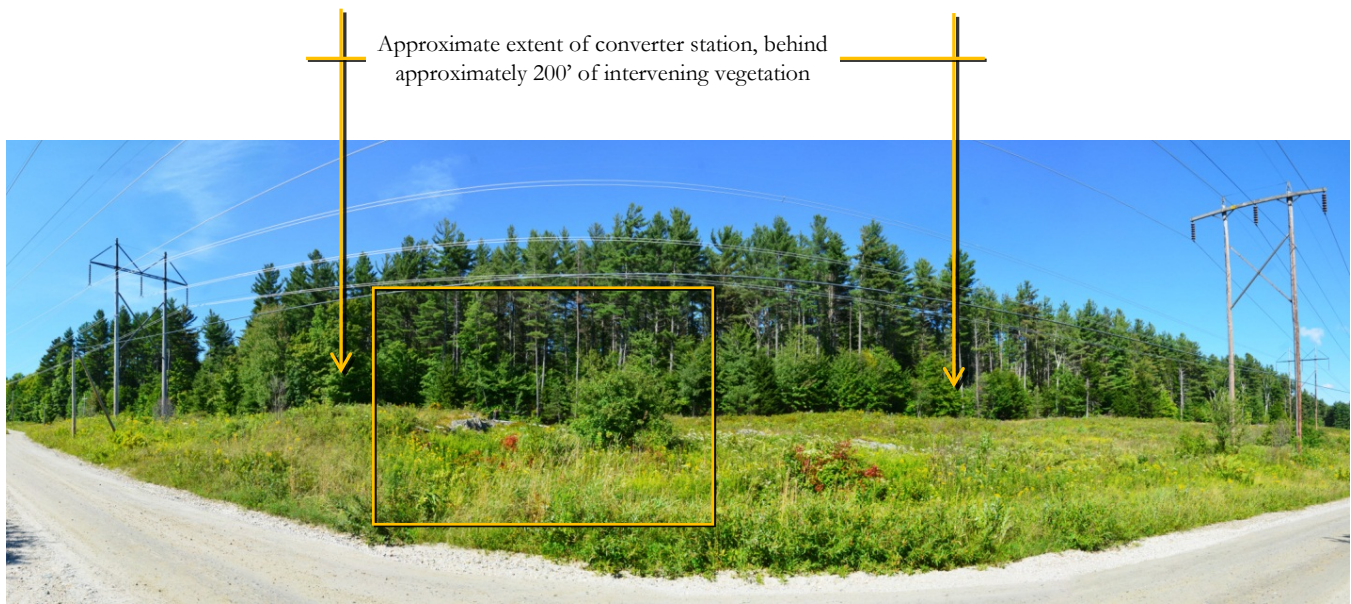


Figure 10 - Viewpoint B: +/- 125° Panoramic view from Nelson Road, within the transmission line right of way. Panning northwest to southeast. This view faces northeast toward the project. The orange rectangle at the center of the photo represents the image below, which is captured with a 50mm normal lens, equivalent to the human 'field of view'.



Figure 11 - Viewpoint B: View looking northeast to the project, while on Nelson Road. Over 200 feet of existing forest cover will be retained prior from the visible edge of forest in this image to the start of clearing for the proposed converter station.

D. Clear Written Community Standards

Although Section 248 does not require local permitting of projects seeking a Certificate of Public Good, local plans and regulations are reviewed under the second prong of the Quechee analysis (described in Section III of this Report) where it has been determined that a Project may have a potential adverse visual impact. Under Quechee, this involves an assessment as to whether or not a project violates a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area. The Public Service Board has noted that “[i]n order for a provision to be considered a clear, written community standard, it must be “intended to preserve the aesthetics or scenic beauty of the area” where the proposed project is located and must apply to specific resources in the proposed project area.” *Petition of Georgia Mountain Community Wind, LLC*, Docket No. 7508, Order of Vt. Pub. Serv. Bd. (Jun. 11. 2010) at 52. There, the Board clarified that generalized statements and general scenic resource policies that are not focused on a particular scenic resource or that fail to offer specific guidance or measures to protect the resource cannot be considered “clear written community standards.” *Id.* at 53.

To determine if the NECPL will violate a clear written community standard, available local and regional planning documents were reviewed for all municipalities directly affected by components of the Project, including the Town of Alburgh (a member of the Northwest Regional Planning Commission), Benson, West Haven, Fair Haven, Castleton, Ira, Rutland Town, Clarendon, Shrewsbury, Wallingford, Mount Holly (each of which is a member of the Rutland Regional Planning Commission), Ludlow, and Cavendish (each of which is a member of the Southern Windsor County Regional Planning Commission). A selection of pages from planning documents reviewed with all pertinent sections relating to clear written community standards to preserve the aesthetics or scenic beauty of the area are provided in Appendix C. However, there are only a few standards which were determined to be directly applicable to the Project, and they are identified below.

Within Chapter 10, Energy of the Shrewsbury Town Plan, Policy 63 includes specific standards regarding the siting and expansion of utility and transmission projects.

10.2 Energy Transmission

Shrewsbury currently has two major electrical power transmission corridors. These have environmental and aesthetic impacts on the Town such as electromagnetic radiation, noise, wildlife corridor interruption, and the visual impact of clear-cut swaths across ridgelines and hillsides.

Utility lines inappropriately sited along our roadsides also have an aesthetic impact. The tree-trimming required to maintain them can significantly change the character of a road where branches arch overhead. The web of overhead lines in village centers limits the size of trees that can grow there. On-site energy production can potentially offset the impact of power line installation and maintenance tree trimming. The Town encourages the burying of utility lines when appropriate.

Policy 63 – Energy Transmission

1. Utility line siting should take into consideration tree location.
2. Utility line tree maintenance shall be restricted to the minimum cutting possible.
3. Do not allow expansion of major energy (electric or gas) transmission outside of the two existing corridors, and require buffering of visual and environmental impacts of corridors.

(Shrewsbury Town Plan at 68)

Additionally, the Northwest Regional Plan, applicable for the Town of Alburgh, also includes specific standards regarding energy transmission facilities.

Chapter 4 – Utilities, Facilities & Services

Goals, Policies, & Objectives

- 4.11 Utility lines should be buried when crossing locally or regionally designated historic, cultural and scenic areas or otherwise be strategically located to minimize adverse impacts on these resources. (Northwest Regional Plan at 4.28)

Chapter 7 – Land Use

Goals, Policies, & Objectives

- 7.9 Construct corridors for new energy transmission facilities only when there is a demonstrated need, and then these should be built adjacent to and parallel to existing operational energy transmission corridors. Visual impact of these facilities should be minimized and should avoid sensitive natural features and historic resources. (Northwest Regional Plan at 7.16)

When evaluating the NECPL against these standards, the Project will not violate a clear written community standard. The Project will be buried underground using existing ROW corridors. It will result in minimal above-ground disturbance within the areas for which these plans are applicable thereby avoiding the necessity to buffer direct visual impacts. The layout and design of the HVDC line significantly avoid cutting of trees and the overall impact of the Project has been minimized through appropriate siting measures. Therefore the Project is consistent with provisions of the Shrewsbury Town Plan and the Regional Plan.

To the extent that other town plans specifically identify certain scenic resources, the Project is not located within these specified viewsheds. Based on our review of these documents, the Project does not violate a clear written community standard intended to preserve the aesthetics or scenic beauty of the area.

E. Project Mitigation

The NECPL has employed several forms of mitigation to significantly reduce the aesthetic impacts of the Project including:

- Most importantly, the entire length of the high voltage transmission line will be installed either underwater or underground. When compared to aerial high voltage transmission lines, this significantly reduces and avoids visual impacts to the areas in which the Project will be located.
- For portions of the Project where the HVDC line is located underground, with exception to where the line transitions between land and Lake Champlain, the Project will entirely utilize existing road and railroad ROWs. No new ROWs are being proposed.

- The Project design and route significantly avoids removing sensitive vegetation that could otherwise result in a greater change to the visual landscape of the Project area.
- The Project utilizes HDD installation at several locations that will not result in ground disturbance for the length of the drill paths.
- Where removal of vegetation is unavoidable along the HVDC line, and at specific locations where it results in impacts to aesthetics, landscape mitigation plantings are proposed to screen and soften views and to re-establish vegetation proposed to be removed. Landscape mitigation plans are provided in Appendix B.
- Early scoping efforts for the design and location of the converter station in Ludlow, resulted in a final site selection and design that significantly avoids visibility of the facility. Vegetation surrounding the site will be retained and will screen most if not all public views to the converter station.
- Additional landscape mitigation plantings are proposed from the converter station to screen and views that may be created.

With these measures, the NECPL proposes to use reasonable, generally available mitigation measures to minimize the limited adverse impacts caused by the Project.

F. Shocking and Offensive

When evaluating whether a Project would offend the sensibilities of the average person, the criteria to make this assessment is related back to the first part of the Quechee Test: how the Project ‘fits’ within its surroundings. An ‘average person’ is considered a disinterested party, not an affected neighbor. The threshold for a Project to be shocking or offensive is high and a project would need to be entirely inconsistent with the surrounding land uses or exceptionally out of scale with the surroundings.

Although the Project was found to result in adverse aesthetic impacts, the level of impact is relatively low. The Project would not offend the sensibility of the average person and it will not be offensive or shocking. This determination is based on a number of factors that were assessed during the aesthetic analysis.

- Most Project components will be installed underground. Adversity is largely based on the contrast of a proposed project’s components to the existing conditions of the surroundings where they are located. Since the Project will generally not result in visible infrastructure, there is little contrast to existing conditions.
- Most impacts are a result of vegetation removal. Proposed mitigation, including landscape plantings will in time reverse these impacts.

- The proposed converter station is not expected to have any significant visibility.
- The proposed location for the converter station is adjacent to significant existing transmission infrastructure, including a high voltage transmission corridor with two major overhead transmission lines and the VELCO Coolidge Substation. The converter station will be similar in character to existing transmission infrastructure in the area, which are established components of the visual landscape.

Overall, the adverse impacts that were identified as a result of the Project are relatively minor. The Project could not be considered shocking or offensive.

G. Findings and Conclusion

Overall, the Project will result in adverse impacts to the aesthetics and the scenic and natural beauty of the area that it will be located in. However, the level of adversity is low and the Project does not violate any of the three criteria of the second part of the Quechee Test.

In conclusion, the NECPL meets the Quechee Test insofar as its impact on aesthetics will NOT be UNDULY ADVERSE.

IV. Orderly Development

Section 248(b)(1) of Title 30 of the Vermont Statutes Annotated requires that the Vermont Public Service Board find that a proposed project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality.

For the NECPL, local and regional plans were reviewed for all of the municipalities directly affected by the overland components of the Project, including the Town of Alburgh (a member of the Northwest Regional Planning Commission), Benson, West Haven, Fair Haven, Castleton, Ira, Rutland Town, Clarendon, Shrewsbury, Wallingford, Mount Holly (each of which is a member of the Rutland Regional Planning Commission), Ludlow, and Cavendish (each of which is a member of the Southern Windsor County Regional Planning Commission). A review of each of these planning documents for the overland communities is provided below. A selection of pages with pertinent sections relating to orderly growth is provided in Appendix D.

Local and regional plans for Vermont communities that border Lake Champlain along the proposed Project route were also evaluated for any potentially relevant provisions, despite the fact that the Project will not be directly located on lands regulated by these communities, but rather will be in public trust waters in the middle of Lake Champlain. These communities included the Towns of Addison, Burlington, Charlotte, Colchester, Ferrisburgh, Grand Isle, Isle La Motte, North Hero, Orwell, Panton, Shelburne, Shoreham, South Burlington, and South Hero. The Town of Bridport Town Plan could not be obtained, and therefore was not reviewed. The regional plans adopted by the Addison County Regional Planning Commission and the Chittenden County Regional Planning Commission were also reviewed. No land conservation measures were identified in any of these plans which would apply to development of the Project in the lake bed in Lake Champlain, and the project will not unduly interfere with development in these lake communities.

Discussion of town and regional plans for the overland segment of the Project follows.

Town Plans

Alburgh

Alburgh's town plan specifies two conservation categories within their overall land use. The NECPL is not proposed within or adjacent to these areas. The Project will cross the Shoreland land use category. "To protect lake water quality a 50 foot undeveloped and vegetated buffer strip is required for new development, measured from the high water mark of 99 feet above sea level." (Alburgh Town Plan at 49) To install the HVDC line where it transitions from underground to underwater, the line will be horizontally drilled. The HDD staging area will be approximately 180 feet back from the 99 foot level. The Project will meet the Town of Alburgh's requirement for the Shoreland category as the HDD will not result in any aboveground disturbance or infrastructure within the 50 foot setback, nor will it require clearing of existing vegetation within 50 feet of the Lake. The Project supports the Town Plan under Chapter 9. Energy, which states, "Most energy sources have negative environmental impacts and the challenge for the future will be to reduce energy consumption in general, and to shift demand from the more harmful energy sources toward those that are renewable and have an overall low environmental impact." (Alburgh Town Plan at 67) The Project will create a new connection point from which Vermont utilities can purchase renewable energy.

Benson

Energy Goals, Policies and Programs listed in the Town Plan states, “(e)ncourage the development and use of renewable energy (including but not limited to Wind, Solar, micro-hydro, and methane generation) where such installations will not adversely affect the environment or scenic beauty in Benson.” (Benson Town Plan at 13). The Project generally supports this goal by encouraging the use renewable energy. The Town Plan also recognizes the importance of the several natural features within the town and supports conservation of those resources. The town plan states that “while our plan does not specifically protect specific areas, our policy of supporting The Nature Conservancy, Land Trust and State conservation efforts, our 20 acre density requirement to preserve open lands and forest and our publicizing the importance of maintaining wildlife corridors has this effect.” (Benson Town Plan at 15) The Town Plan includes a Lake Champlain Shoreline District, which promotes conservation and protection of lands adjacent to the lake but does not include specific standards. The NECPL is consistent with the Benson Town Plan insofar as the Project within Benson will be underground, along existing road ROWs and is design to minimize impacts to natural resources.

West Haven

The NECPL supports the West Haven Town Plan that states, “(t)he Town of West Haven is committed to encouraging energy efficiency and the use of renewable energy resources throughout the community.” (West Haven Town Plan a 29). The plan also denotes a specific Conservation District on Map 4, the Conceptual Future Land Use Map. The town plan specifies that “all forms of development should be directed to other areas of the town whenever possible;” (West Haven Town Plan at 41). The NECPL is not located within or adjacent to the Conservation District.

Fair Haven

The Fair Haven Town Plan includes the Resource Protection area, which “consists of the 100-year flood plain and a buffer area adjacent to other significant surface waters including Iman Pond, Glen Lake, Mud Brook, Castleton River and Poultney River.” (Fair Haven Town Plan at 16) “(D)evelopment, filling, and other incompatible uses” (Fair Haven Town Plan at 16) are restricted within the Resource Protection area. The plan also “encourages the conservation of land for forestry, farming, natural resource functions, and recreation” (Fair Haven Town Plan at 45), although no specific standards are provided. The Project is consistent with the Fair Haven Town Plan in that the HVDC line will be installed underground, within existing road ROWs and will avoid natural and cultural resources. Additionally, the Project will employ HDD to install the line at any location within the Resource Protection area. HDD installation will avoid any disturbance to these areas and will comply with restrictions on development in this area. The Project generally supports the Fair Haven Town Plan objective to encourage the use of renewable energy sources.

Castleton

The Castleton Town Plan generally supports the conservation of lands for natural resources but does not provide specific standards. The Project is consistent with this goal insofar that the line will be installed underground within the existing ROW for US Route 4. The NECPL supports the energy goals, policies, and programs of the Castleton Town Plan, which “encourages the use of renewable sources of energy such as wind, solar, wood and methane.” (Castletown Town Plan at 41).

Ira

The Ira Town Plan supports the use of renewable sources of energy, which is supported by the Project. The plan denotes a Highland Conservation District and notes “all forms of development should be directed to other areas of the Town whenever possible.” (Ira Town Plan at 31) All land in Ira north of US Route 4 is designated within the Highland Conservation District. While the Project abuts this district, it will be collocated within the US Route 4 ROW and will avoid important natural resources. The Project does not violate the standards set forth for this district.

West Rutland

Goal 1 under Natural Resources in the West Rutland Town Plan is to “(i)dentify, protect, and preserve the valuable natural areas within West Rutland.” (Town Plan at 9) Under the Land Use chapter, the plan includes Conservation District I and Conservation District II. The Project is consistent with the West Rutland Town Plan, insofar as the Project is located entirely within the US Route 4 ROW, will be installed underground, and is designed to minimize impacts to natural resources. At locations of particularly sensitive natural resources, such as at the Castleton River crossing near Whipple Hollow Road, the Project will use HDD to install the line, which will not require any disturbance or clearing in these areas. Furthermore, the Project supports the Energy section of the West Rutland Town Plan, by providing an additional option for Vermont utilities to purchase renewable energy.

Town of Rutland

The Town of Rutland Municipal Plan identifies a Conservation land use district. The Project is not located within or adjacent to this district. One goal of the Municipal Plan within the Energy section is to “(a)void or minimize the adverse impacts of energy development on public health, safety and welfare, the town’s historic and planned pattern of development, environmentally sensitive areas, and Rutland Town’s most highly valued natural, cultural and scenic resources, consistent with adopted plan policies and community standards for energy development, resource protection and land conservation.” (Rutland Municipal Plan at 40) A second goal within the Natural and Cultural Resources section is to “(p)rotect natural and cultural resources from the impacts of development...” (Rutland Municipal Plan at 45) This section goes on to discuss protection of agricultural soils, forested lands, wildlife habitats, flood plain and riparian zones, and historic, scenic, cultural and recreations resources. One of the listed strategies is that “(n)o development or earth disturbance of any kind should occur within fifty (50) feet of any shoreline...” (Rutland Municipal Plan at 53) The NECPL is consistent with the Town of Rutland Municipal Plan insofar as the line will be installed underground, entirely within the US Route 4 and US Route 7 ROWs and has been designed to minimize impacts to natural and cultural resources. Where the Project crosses the Otter Creek, HDD will be used to install the line. Staging areas for the HDD will be well over 100 feet from the Otter Creek and there will be no disturbance within 50 feet of the shores of the Otter Creek.

Clarendon

The Clarendon Town Plan includes goals and objectives to protect and preserve natural and cultural resources but do not provide specific standards. The NECPL is consistent with the Town Plan insofar as the Project will be installed underground, entirely within the US Route 7 and Vermont Route 103 ROWs and has been design to minimize impacts to natural and cultural resources. The Clarendon Town Plan does include a Conservation District within the Future Land Use section, but the Project is not within or adjacent to this district.

Shrewsbury

Several of the Shrewsbury's Town Plans objectives in section 3, focus on the conservation, preservation and protection of the town's natural and cultural resources. Section 4.3 Prospective Land Use goes into detailed description of the town's resources. The plan includes two land use areas, Conservation Areas and Protection Areas, which include sensitive natural resources. The Shrewsbury Town Plan also includes specific standards regarding Energy Transmission. "Utility lines inappropriately sited along our roadsides also have an aesthetic impact. The tree-trimming required to maintain them can significantly change the character of a road where branches arch overhead... The Town encourages the burying of utility lines when appropriate." (Shrewsbury Town Plan at 68) The NECPL is consistent with the Shrewsbury Town Plan insofar that the Project will be located along existing road and railroad ROWs and the line will be buried underground. In locations where sensitive natural resources exist, the Project will be installed by HDD and will result in minimal disturbance.

Wallingford

The Wallingford Town Plan includes general encouragement for the "reasonable balance between conservation and preservation of existing land uses and a viable economy that provides economic opportunity for our citizens." (Wallingford Town Plan at 60) The plan does not provide specific standards for land conservation measures, but does provide basic encouragement for preservation and protection of their natural and cultural resources. The Project will be buried underground within existing road and railroad ROWs. The Project will be consistent with the Wallingford Town Plan.

Mount Holly

A goal of the Mount Holly Town Plan is "(t)o preserve and enhance Mount Holly's natural resources, scenic landscape, environmental quality, and historic heritage for the benefit of current and future generations." (Mount Holly Town Plan at 107) Including lands within Vermont's Current Use program, 43% of the town land can be considered conserved or protected. The Town Plan includes policies to protect natural resources from development. Under the Transportation section within goals and policies, it notes "(t)he Town shall remove healthy trees from the right of way only where necessary for safety, visibility, snow removal, utilities, or drainage." The NECPL is consistent with the Mount Holly Town Plan insofar as the Project will be buried underground entirely within the Vermont Route 103 ROW. The Project is designed to minimize impacts to natural resources, including minimal tree clearing within the Rote 103 ROW.

Ludlow

The Ludlow Municipal Development Plan ("Ludlow Town Plan") states, "(p)rotection and preservation of Ludlow's important natural amenities are vital to maintaining a fundamental component of Ludlow's economic base." (Ludlow Town Plan at 9) The plan goes on to discuss specifics of forest resources, agricultural resources, water resources, and wildlife resources, including the conservation and preservation of lands that support these resources. The Ludlow Town Plan includes a Conservation land use district. "The purpose of this area is to provide for outdoor recreational activities, as well as to conserve forests for sustainable forestry, wildlife habitat, improved water quality and the preservation of Ludlow's rural character." (Ludlow Town Plan at 90) The plan includes goals from the promotion of renewable energy. Policies require the town to "(c)ontinue to evaluate the placement of electric lines and facilities for health, safety, and aesthetic concerns." (Ludlow Town Plan at 54) The NECPL is consistent with the Ludlow Town Plan insofar that the HVDC will be installed underground within existing public road ROWs. The converter station and the line have been designed to significantly minimize impacts to natural and cultural resources, including aesthetic concerns.

Cavendish

Within the Town of Cavendish, the Project is less than a few hundred feet into the town. Most improvements will be within the existing VELCO Coolidge Substation and will not conflict with the Cavendish Town Plan.

Regional Plans

Plan for the Northwest Regional

The Plan for the Northwest Region (“Northwest Regional Plan”) includes specific policies for utility ROWs.

- 4.9 Whenever feasible utilities should share rights-of-way and /or easements.
- 4.10 Utility rights of way and public investment should be planned so as to minimize environmental, cultural and environmental impacts, particularly seeking to minimize development pressure on agricultural and forest lands.
- 4.11 Utility lines should be buried when crossing locally or regionally designated historic, cultural and scenic areas or otherwise be strategically located to minimize adverse impacts on these resources.
- 4.12 Utility rights of way should not traverse resource and conservation lands including, but not limited to, agricultural lands.
- 4.13 Development or maintenance of utility systems or facilities that result in or create an undue adverse impact on municipal services, natural resources and/or other unique features shall be discouraged. (Northwest Regional Plan at 4.28)

Within the jurisdiction of the Northwest Regional Plan, the Project will be installed overland for less than one mile. Even so, the Project will be consistent with policies of the plan. It will be installed within an existing road ROW, with exception for a short stretch to connect with Lake Champlain. The Project design will minimize cultural and environmental impacts. Even though the HVDC will cross Agricultural/Resource Lands, the Project will be buried underground and will not impact the agricultural potential for this area. The NECPL is consistent with the goals, policies and objectives of the Northwest Regional Plan.

Rutland Regional Plan

The largest portion of the HVDC line route is located within the Rutland Region. The Rutland Regional Plan provides encouragement for the conservation of the natural landscape. The Future Use of Land Map includes Development-Constrained Area but is more conceptual. As is often the case with regional plans, the Rutland Regional Plan provides encouragement and support to member towns for the implementation of specific standards through their own plans and regulations. The NECPL is consistent with the general goals and policies of the Rutland Regional Plan, insofar as the Projects design will minimize impacts to cultural and natural resources.

Southern Windsor County Regional Plan

Similar to the Rutland Regional Plan, the Southern Windsor County Regional Plan (“SWC Regional Plan”) includes general goals, policies and objectives and provides encouragement and support to member towns for the implementation of specific standards. Within the Future Land Use section, the Resource area is provided to represent a combination of conserved lands. The plan states “(a)ll land uses, including roads and utilities should avoid fragmenting large blocks of forested lands, wildlife habitat and wildlife travel corridors.” The SWC Regional Plan continues to provide encouragement for the conservation of agricultural and forested lands, of wildlife habitat and scenic lands, and for the development of open space plans. The plan also promotes the use of cleaner and alternative energy resources. The NECPL is consistent with the Southern Windsor County Regional Plan, in that the Project is designed to minimize

impacts to important resources in the region. The HVDC line will be installed within public road ROWs and will avoid the fragmentation of contiguous resource lands. The converter station is located in an area that avoids natural resource impacts, while significantly avoiding aesthetic impacts.

Overall, a main focus of Municipal and Regional Plans is to direct development and ensure orderly development. All of the town plans reviewed included general provisions to encourage clustered development that preserves resources. Most of the plans also include statements supporting the use of renewable energy. The NECPL is consistent with these two general policies.

Summary of Project Conformity with Overland Town/Regional Plan Land Conservation Measures

Town or RPC	Does the Plan(s) Contain Relevant Provisions?	Do the Plan(s) Provisions Include Specific Land Conservation Standards?	Is the Project Consistent with the Provisions of the Town Plan?
Town Plans			
Alburgh	Yes	Yes	Yes
Benson	Yes	No	Yes
West Haven	Yes	Yes	Yes
Fair Haven	Yes	Yes	Yes
Castleton	Yes	No	Yes
Ira	Yes	Yes	Yes
West Rutland	Yes	Yes	Yes
Town of Rutland	Yes	Yes	Yes
Clarendon	Yes	No	Yes
Shrewsbury	Yes	Yes	Yes
Wallingford	Yes	No	Yes
Mount Holly	Yes	Yes	Yes
Ludlow	Yes	Yes	Yes
Cavendish	Yes	Yes	Yes
Regional Plans			
Northwest Regional Planning Commission	Yes	Yes	Yes
Rutland Regional Planning Commission	Yes	No	Yes
Southern Windsor County Regional Planning Commission	Yes	No	Yes

Based upon the review of these planning documents, the NECPL **will not** unduly interfere with the orderly development of the region

V. References

- Town of Alburgh, Town Plan, Adopted July 26, 2011 http://www.alburghvt.org/documents/2011_townplan.pdf
- Comprehensive Town Plan for the Town of Benson, Vermont, Adopted April 1, 2013, http://www.rutlandrpc.org/download.php?mode=towns_downloads&id=7&name=BensonPlan4-1-2013.pdf
- Town of West Haven, Town Plan 2008, http://www.rutlandrpc.org/download.php?mode=towns_downloads&id=46&name=West_Haven_Plan_adopted_2003.pdf
- Town of Fair Haven, Town Plan, Adopted September 24, 2003, Re-adopted 2008 http://www.fairhavenvt.org/wp-content/uploads/2011/06/Fair_Haven_Town_Plan_Adopted_9-24-2003.pdf
- 2010 Castleton Town Plan, Effective August 23, 2010, <http://castletonvermont.org/wp-content/uploads/2012/03/Town-Plan-Final-2010.pdf>
- Town Plan, Ira, Vermont, Adopted December 7, 2009 http://www.rutlandrpc.org/download.php?mode=towns_downloads&id=67&name=Ira_Town_Plan_12-7-09.pdf
- West Rutland, Town Plan, Adopted November 13, 2012, http://www.westrutlandtown.com/download.php?mode=forms&id=6&name=West_Rutland_Town_Plan_09.pdf
- Town of Rutland Municipal Plan, Adopted X/X/2014, <http://www.rutlandtown.com/various/tp14.pdf>
- Clarendon Town Plan, Adopted March 22, 2010, <http://www.clarendonvt.org/pdf/town-plan.pdf>
- Town of Shrewsbury, Vermont, Town Plan, Effective: November 2013 – November 2018, http://kevaco.net/shrewsburyvt/wp-content/uploads/2014/03/2013_Town_Plan.pdf
- Wallingford Town Plan, Wallingford, Vermont, Adopted February 4, 2013, <http://www.wallingfordvt.com/town-plan/>
- Mount Holly Town Plan, Adopted April 8, 2008, http://www.mounthollyvt.org/planning_commission_docs/TownPlan07/FINAL_Feb/S_CompiledFINAL.pdf
- The Town and Village of Ludlow, Vermont, Municipal Development Plan, Adopted March 5, 2013, [http://www.ludlow.vt.us/vertical/sites/%7B78E8DA21-0D46-4486-AF59-9D2B5A1048F3%7D/uploads/2012_Ludlow_Municipal_Plan_\(3\).pdf](http://www.ludlow.vt.us/vertical/sites/%7B78E8DA21-0D46-4486-AF59-9D2B5A1048F3%7D/uploads/2012_Ludlow_Municipal_Plan_(3).pdf)

Cavendish Town Plan, Adopted August 28, 2012, http://www.cavendishvt.org/images/2012_Cavendish_Town_Plan_w-maps_c_s.pdf

Plan for the Northwest Region 2007 – 2012, Effective October 3, 2007, <http://www.nrpcvt.com/Publications/Reports/RegionalPlan.pdf>

Rutland Regional Plan, Adopted June 17, 2014, <https://www.dropbox.com/s/f3ruya1aiich7uu/2014RegionalPlan.pdf>

Southern Windsor County Regional Planning Commission, 2009 Regional Plan, Volume 1 of 2, Effective July 21, 2009, <http://swcrpc.org/wp-content/uploads/2013/12/2009-Regional-Plan-Full-Document.pdf>

Appendix A
Key Observation Points
Maps and Photos

Appendix A: Key Observation Points

Most public visibility of the Project has been identified from public roadways. The Vermont Agency of Transportation (“AOT”) classifies roadways in Vermont. The different road classes provide an impression of the importance of a road and the extent of usage the area receives. Road class is used to portray the character of the landscape. The location and class for each roadway within the Project study area was derived from GIS data used by 911 Emergency Services (E911) available through the Vermont Center for Geographic Information. Areas we describe include the following road classifications:

- Class 4 – Undivided town highway: Class 4 roads are not funded by VTTrans, but are legally considered Class 3. These are local roads that mainly provide property access. They are not always maintained by the town and are typically not cleared of snow in the winter.
- Class 3 – Town highway: Typically these are local roads that provide access to rural and low-density properties. Within the study area, Class 3 roads include a mix of dirt surfaced and paved roads, and are typically maintained year round.
- Class 2 – Undivided town highway: These roads are regional collector roads and provide the only access to many Vermont communities. They are typically (although not always) paved roadways.
- Class 30 – Vermont State highway, undivided centerline (typically): These roads are major transportation routes and provide access between major regions within the state.
- Class 40 – U.S. highway, undivided centerline: US highways are major transportation routes that provide access between regions within and out of the state.
- Classes 41, 42, 43 and 44 – U.S. highway, divided centerline: US highways are major transportation routes that provide access between regions within and out of the state. The road class in this category are broken down to north bound, south bound, east bound and west bound respectively.

The Project passes through a variety of land uses. This include rural, residential, agricultural, commercial and industrial uses. Land uses are another important way to describe the character of a specific area and will be used throughout the section evaluating potential impacts. Land use characterizes the types of activities and development within a given area. Land use descriptions within this report are used only to describe the general landscape character and do not necessarily coincide with specific zoning regulations and bylaws for the individual towns in which the Project is located. Below is a description of land-use terms used in this report.

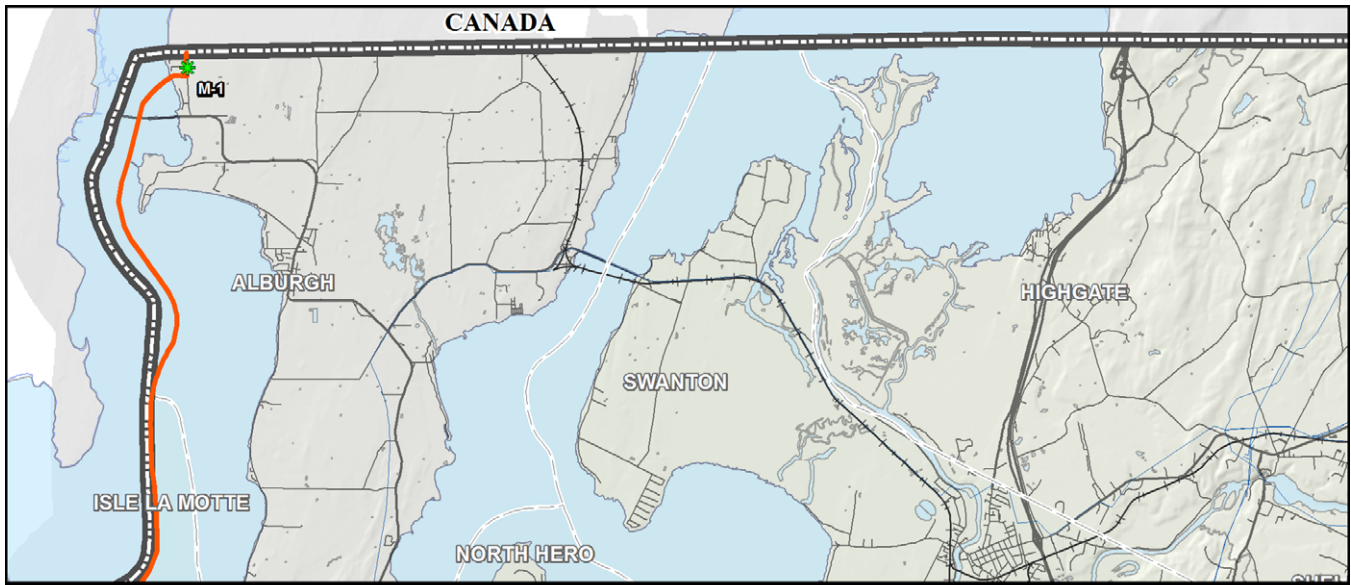
- Remote, Rural, or Rural Residential (RR): Consists of land that is not developed, nor being used for active farming or other uses. It can be isolated or secluded. Some individual residences may be present but are typically more than a road mile from another residence.
- Low Density Residential (LR): Residential development that consists of single-family houses on large, spacious lots. These are typically not subdivisions, and form patterns of residences fronting a single road. Densities are no more than one residential unit per two acres.

- Medium Density Residential (MR): Residential development that consists primarily of single family detached houses at densities between one-half to two acres per unit. Development patterns typically include clusters of units along roads and subdivisions.
- High Density Residential (HR): Residential development that includes single family and multi-family units. Densities are greater than one unit per one-half acre.
- Park or Recreational (PR): Areas specifically designated for recreational uses, or as town, state, or national forest lands.
- Agricultural (AG): Areas in active agricultural use, including crops and livestock.
- Commercial (CM): Customer-based businesses that typically do not involve exterior storage and warehouse facilities.
- Industrial (ID): Uses that portray a “manufacturing” type of appearance and includes utility-based infrastructure and warehouse style development.

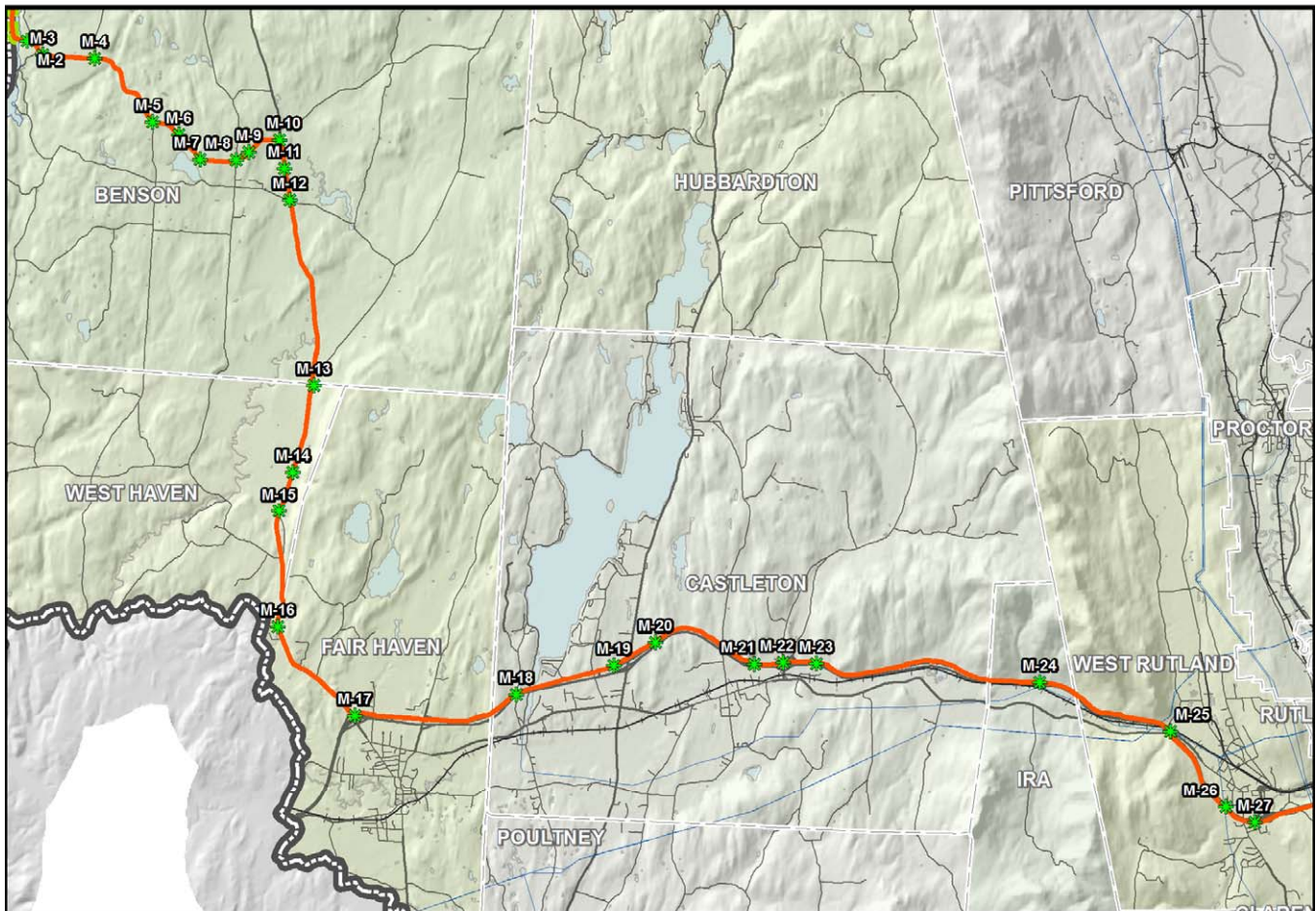
We have utilized both land-use and road classifications to help portray the character of the areas assessed in the study. At specific locations, the report text provides a more detailed description, which may include the scenic quality and diversity of the landscape; whether the Project components are in the foreground, middle ground, or background of views; the extent or duration of views; and how prominent the Project will appear within the view.

Areas assessed within this study are represented by aerial maps with viewpoint locations that correspond to photos shown within Appendix A. Photos are either used to illustrate the character of the area or to show the location of proposed Project infrastructure.

However, since the underground portion of the line will be located along almost 60 miles of public ROWs, this evaluation utilizes a selection of Key Observation Points (“KOP or KOPs”) to represent how the Project will affect the visual landscape of these areas. The following map and chart shows the location and lists all of the KOPs. The chart also provides a determination as to whether the Project will result in an Adverse or Undue Adverse impact within the area of each KOP. Additionally, road class, land use, references to maps and photos in appendix A, recommended tree protection, recommended mitigation planting, and locations where post-construction review is recommended, is listed for each KOP, as well as general comments and other recommendations. For locations where it was determined that the Project could result in an adverse impacts, a description of those areas are provided within the report.



- Marine Cable Underground in Lake Champlain (Not Shown) -



New England Clean Power Link Overland Route
Context Map 1 Roadway Cable Route

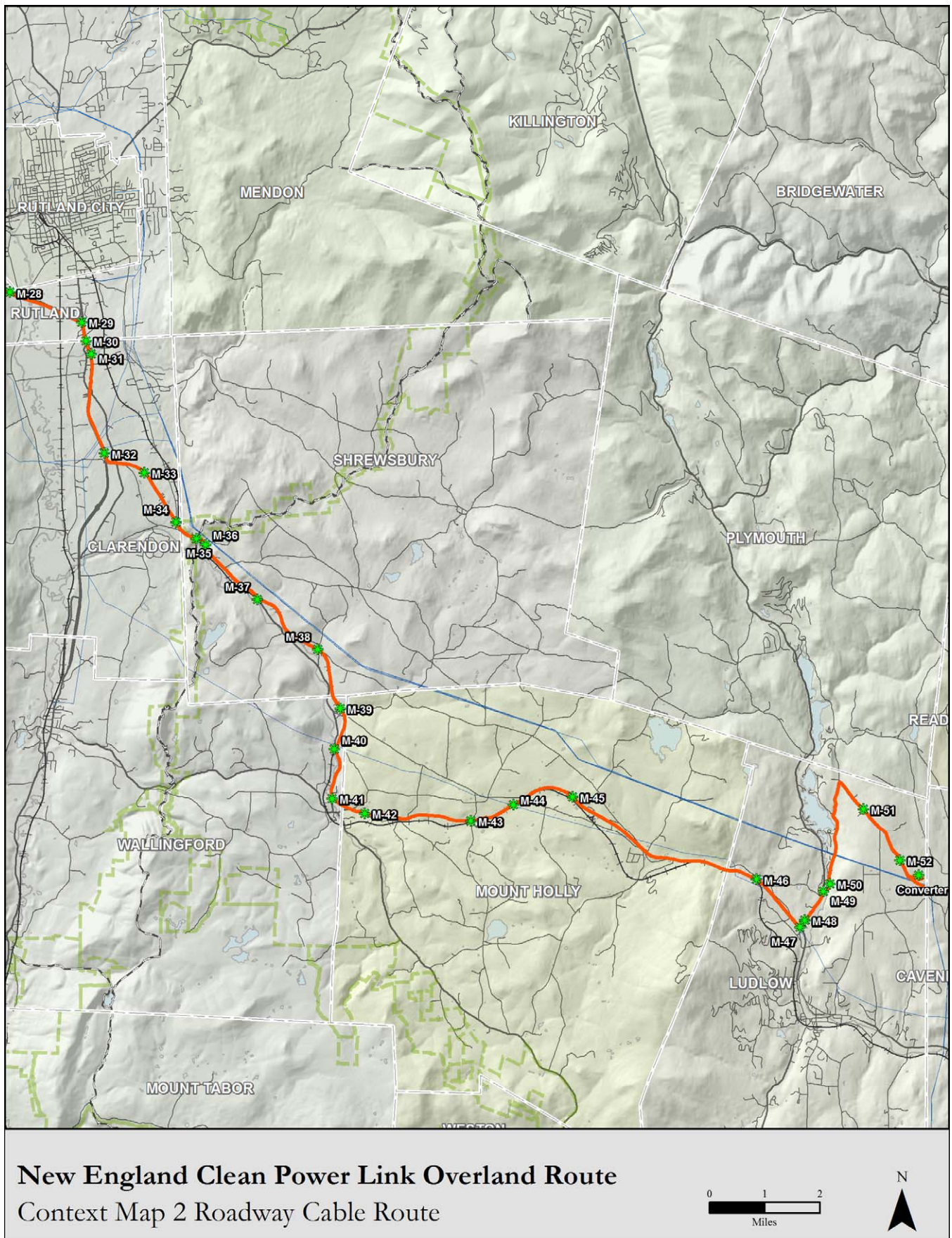


Chart of Key Observation Points

Key Observation Points (KOPs)	Road Class	Land Use	Map No.	Viewpoints	Appendix A Page(s)	Not Adverse	Adverse	Undue Adverse	Tree Protection	Mitigation Planting	Post-Const. Review	Comments / Recommendations
Alburgh, VT												
Bay Road	3	RR AG	1	1, 2	A-9 A-10	X			X			Line to be installed beneath or just outside the road surface. Care should be taken to reduce impacts to vegetation along the west side of Bay Road. Protect and avoid the removal of shade trees at MP 0.3 where the line angle towards Lake Champlain to the extent possible.
Benson, VT												
Stoney Point Road	3	RR	2	3, 4	A-11 A-12	X			X			Minimize removal of vegetation when entering Stoney Point Rd. at MP 97.75. Line to be installed beneath road surface. No clearing required.
North Lake Road	3	RR AG	3, 4, 5	5, 6, 7	A-13 A-14 A-15	X						Line to be installed beneath road surface. No clearing required.
Glenn Road (Old North Lake Road)	4	RR	5, 6	7, 8	A-15 A-16	X			X		X	Project plans call for the installation of the line beneath the road surface. Some vegetation loss is expected due to the narrow width of the road surface. Impacts to veg. should be minimized to the extent possible for the length of this portion of Glenn Rd.
Glenn Road (Old North Lake Road)	3	RR AG ID	7, 8	9, 10	A-17 A-18	X						Line to be installed beneath road surface. No clearing required.
Stage Road	2	CM MR	8	10, 11	A-18 A-19 A-20	X						Line to be installed beneath road surface. No clearing required.
Hulett Hill Road	2	MR	8, 9	11, 12	A-18 A-20 A-21	X			X			Line to be installed beneath road surface. No clearing required. Care should be taken to ensure no damage to trees close along the edge of road from MP 101.5 to 101.7.
Vermont Route 22A	30	AG RR	10, 11, 12	13, 14, 15	A-22 A-23 A-24	X						The line will be located outside of the road shoulder, within the ROW. The Project design significantly avoids removal of vegetation along Route 22A in Benson.
West Haven, VT												
Vermont Route 22A – MP 105.4	30	AG RR	13	21	A-25		X			X	X	At the town line with Benson, the Project will require the removal of several large shade trees lining the road.
Vermont Route 22A – MP 106.5	30	AG RR	14	112	A-26		X		X	X	X	Project plans indicate a large Willow tree between Route 22A and an adjacent farm house will be removed. It is suggested that the line be relocated closer to the road and tree preservation methods be employed to save this tree. If not possible, mitigation plantings will be proposed.
Vermont Route 22A	30	AG RR	15	22	A-27	X						Between MP 106.9 and 107.1, the line will diverge to the outside of a widened portion of the ROW at the base of a steep slope. Some clearing along the edge of wooded areas will be required.

Key Observation Points (KOPs)	Road Class	Land Use	Map No.	Viewpoints	Appendix A Page(s)	Not Adverse	Adverse	Undue Adverse	Tree Protection	Mitigation Planting	Post-Const. Review	Comments / Recommendations
Fair Haven, VT												
Vermont Route 22A, MP 108.6	30	RR	16	110	A-28	X						Near MP 108.6, to install the cable along the side of the road, the existing face of ledge will be removed to widen the clear zone along the east side of Vermont Route 22A.
Vermont Route 22A / Exit 2, US Route 4	30 44	RR	17	19	A-29 A-30	X						Along Vermont Route 22A, the line will be horizontal drilled from where it turns east at US Route 4 to north of Mud Brook. From Route 22A, the line continues east along the north side of the US Route 4 ROW.
US Route 4 Airport Road	44 3	MR AG	17	20 106	A-29 A-31		X		X	X	X	The line will move out away from the edge of the paved road and may require the removal of a row of mature white pine trees that appear to have been planted to provide a screen between Route 4 and adjacent development.
Castleton, VT												
US Route 4 MP 112.5	44	RR	18	36	A-32	X						Typically the lines will be located relatively close to the paved shoulder along US Route 4, within existing cleared areas. At this location the line will be located between the paved shoulder and the rock cut.
US Route 4 Exit 4	44	RR	19	35	A-33	X						A HDD staging area located near the end of the westbound on-ramp at exit 4 will require clearing into the wooded portion of the ROW at this location.
US Route 4 MP 114.4	44	RR	20	34	A-34	X					X	At a few locations, the line will be install away from the edge of the Route 4 paved area. At this location the line will be located on top of the rock cut and up to 50 feet of vegetation will be cleared from the edge of the rock cut.
US Route 4 MP 115.8	44	RR	21	35	A-35	X					X	This is a second location where the line will be installed on top of a rock cut and clearing of up to 50 of vegetation may be required to construction the line.
E. Hubbardton Rd. / Higgins Road	2 3	RR MR	22	31, 32	A-36 A-37		X		X	X	X	A HDD temporary staging area along US Route 4 at exit 5 indicates clearing that will remove a row of pines that appear to have been installed as a buffer between Route 4, E. Hubbardton Rd. and Higgins Rd.
US Route 4 MP 116.7	44	RR	23	30	A-38	X					X	A typical location were the existing edge of woods along US Route 4 may be cleared up to 40 feet further back from the edge of the road to install the cable.
Ira, VT												
US Route 4 pull-off	44	RR	24	28	A-39	X					X	Approximately 50 feet of wooded area near the west end of the Route 4 pull-off in Ira will be cleared to install the cable
West Rutland, VT												
US Route 4 VT Route 4A Whipple Hollow Road	44 30 3	RR MR IN	25	23, 24, 25, 26	A-40 A-41 A-42 A-43		X		X	X	X	Where VT Route 4A crosses beneath US Route 4 in West Rutland, a temporary HDD staging area will require a large, wooded highway embankment to be cleared, opening views between Whipple Hollow Road and the surrounding properties to US Route 4.

Key Observation Points (KOPs)	Road Class	Land Use	Map No.	Viewpoints	Appendix A Page(s)	Not Adverse	Adverse	Undue Adverse	Tree Protection	Mitigation Planting	Post-Const. Review	Comments / Recommendations
US Route 4 MP 123	43	MR IN RR	26	38	A-44	X					X	Up to 50 feet of vegetation will be removed from the bottom of the road embankment towards the edge of the US Route 4 ROW.
West Rutland Rec. Area Path US Route 4, Exit 6	43	MR PR	27	39, 40, 41	A-45 A-46		X			X	X	Removal of vegetation for a HDD staging area will open views between parts of the park, recreation path and US Route 4.
Town of Rutland, VT												
US Route 4 near Creek Rd. Overpass	43	AG RR	28	44	A-47	X					X	Up to 50 feet of clearing will be required along the southern edge of US Route 4, west of Creek Road.
US Route 4 US Route 7	43 42	CM AG RR	29	45	A-48	X						View of HDD staging area where the Project turns to the south and parallels the US Route 7 along the western side of the road.
Clarendon, VT												
US Route 7 at Clarendon / Rutland Town Line	42	CM	30	46	A-49	X						View of second HDD staging area along US Route 7. Minimal to no tree clearing will be required at this location.
US Route 7, south of Cold River	42	MR IN	31	47	A-50		X		X	X	X	Tree clearing for a third HDD staging area may remove buffer vegetation and open up views between US Route 7 and an adjacent residential structure.
US Route 7, just north of Vermont Route 103	42	RR AG CM	32	49	A-51	X						Minimal clearing will be required along most of US Route 7 where the line will be installed within existing open areas.
VT Route 103 MP 103.9	30	RR	33	53	A-52	X						The edge of woods along the north side of Vermont Route 103 at this location will be cleared back to the edge of the road ROW, or up to 26 feet further away from the edge of road.
VT Route 103 at E. Clarendon Rd.	30	RR CM	34	54	A-53	X					X	A second example along Route 103 where clearing up to the edge of the ROW is shown on Project plans.
Shrewsbury, VT												
VT Route 103 LT/AT Crossing	30	PR RR	35	55	A-53	X						The line will be installed by HDD at the Long Trail / Appalachian Trail crossing with minor clearing for the eastern HDD staging area.
VT Route 103 MP 132.6	30	RR	36	56	A-55		X		X	X	X	Near MP 132.7, Project plans show removal of roadside vegetation, including landscape plantings, opening views between an adjacent residential structure and Route 103.
VT Route 103 MP 133.9 to 134.1	30	RR	37	57 58	A-56 A-57		X			X	X	Along this stretch of Route 103, the Project will result in clearing of roadside vegetation in varying depths, up to 26 feet further back from the edge of the road. Clearing up to 30 feet along the north side of the railroad will also be required.
Town Hill Road / Shunpike Road	3 3	RR	38	64 100 101	A-58 A-59 A-60		X			X	X	The Project will create views along a widened utility corridor from Town Hill Road. Removal of most of the hedgerow, east from Town Hill Road and north of the railroad will remove the vegetative buffer between Shunpike Road and the railroad.

Key Observation Points (KOPs)	Road Class	Land Use	Map No.	Viewpoints	Appendix A Page(s)	Not Adverse	Adverse	Undue Adverse	Tree Protection	Mitigation Planting	Post-Const. Review	Comments / Recommendations
Wallingford, VT												
Freeman Brook Road	3	RR	39	67	A-60 A-61	X						The Line will be installed by HDD from north of Freeman Brook Road to south of Old Turnpike Road and will not require clearing in these areas.
VT Route 103	30	RR	40	69	A-62		X			X	X	A 50 foot width of vegetation will be clearing along the east side of the railroad as the Project descends the steep slope to return to the Vermont Route 103 ROW.
VT Route 103 East Wallingford Village	30	RR MR CM	41	70 71 72	A-63 A-64		X		X	X	X	The line will run along the east / north side of Route 103 within E. Wallingford Village. To install the cable, clearing up to 30 feet back from the edge of road will be required.
Mount Holly, VT												
VT Route 103 MP 139.2	30	RR	42	74	A-65	X						View along Route 103 in Mount Holly where the Project will be installed within the clearing along the sides of the road. Existing overhead utility lines will need to be relocated.
VT Route 103 Hortonville Road	30	RR CM	43	75	A-66		X			X		Although relatively minor, the Project will result in the removal of a small clump of trees at the northeast corner of the intersection at the center of Mount Holly, which are the only large trees on that corner.
VT Route 103 MP 141.7	30	RR	44	76	A-67	X						An example of long straight sections of Route 103 in Mount Holly where the Project will have no visual impacts.
VT Route 103 MP 142.9	30	RR	45	77	A-68	X			X		X	Tree preservation measure should be implemented to reduce any impact to the adjacent line of evergreen trees.
Ludlow, VT												
VT Route 103	30	RR	46	79	A-69	X						The Project will be installed near the edge of Route 103 within Ludlow and will not result in noticeable visual changes along the road.
VT Route 103 VT Route 100	30 30	RR	47	80	A-70	X						Where Route 103 intersects with Route 100, the line will turn northeast, leave Vermont Route 103 and then follow Route 100. A HDD staging area will be located just south of this intersection.
VT Route 100	30	CM MR RR	48 49	81 82	A-71 A-72	X						The line will be installed beneath the paved surface of Vermont Route 100. No construction activity or disturbance is proposed outside the road pavement.
East Lake Road	3	MR RR	50	84	A-73	X						The line will be installed beneath the gravel surface of East Lake Road. No construction activity or disturbance is proposed outside the area of the road surface.
Pettiner Hill Road	3	RR	51	87	A-74	X						The line will be installed beneath the gravel surface of Pettiner Hill Road. No construction activity or disturbance is proposed outside the area of the road surface.
Nelson Road	3	RR	52	88	A-75	X						The line will be installed beneath the gravel surface of Nelson Road. No construction activity or disturbance is proposed outside the area of the road surface.

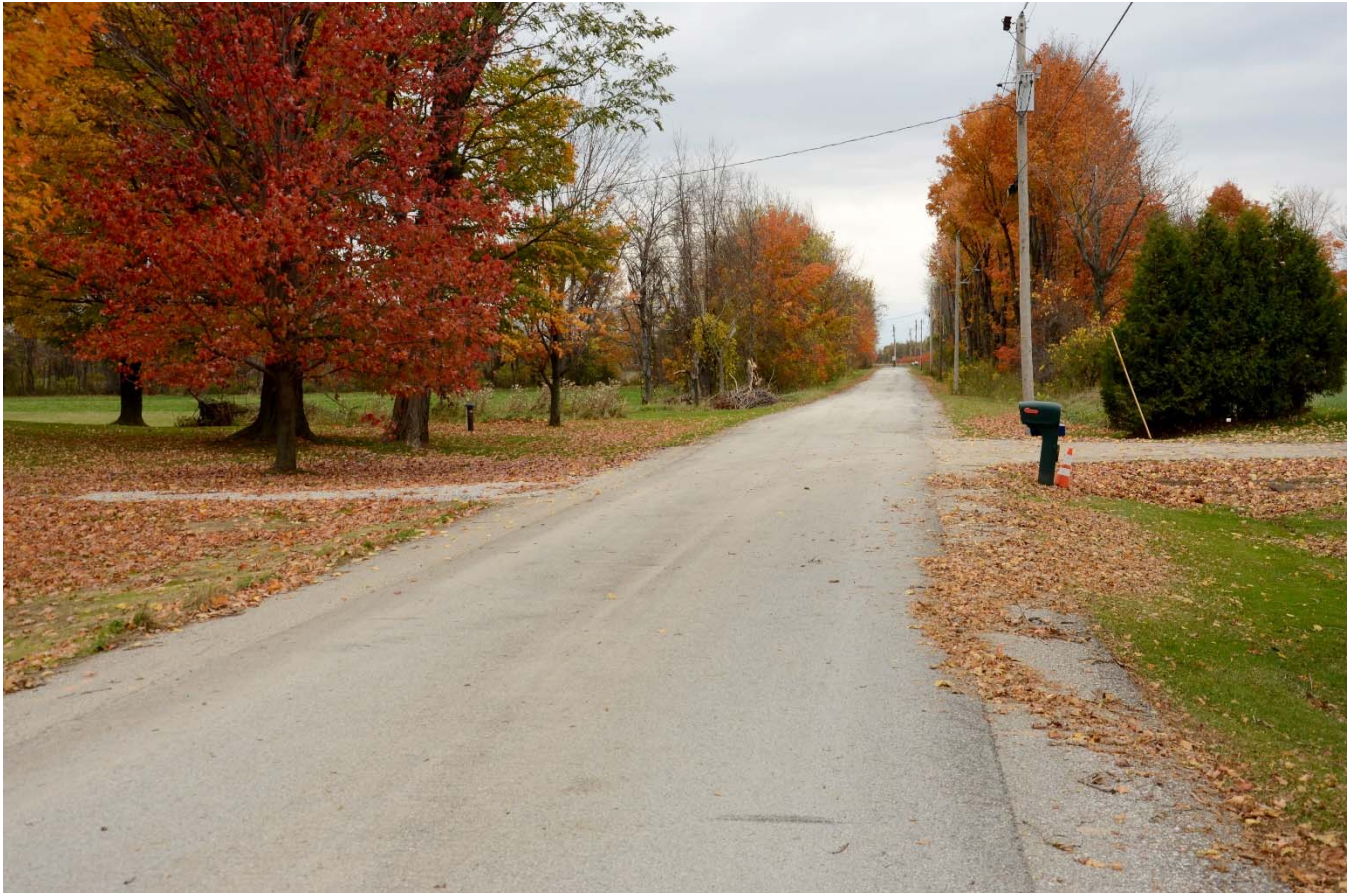
Bay Road, Alburgh: Class 3 Town Highway



Assessment Map 1: The NECPL will run beneath the road surface for the first 400 feet along Bay road before shifting to just outside the western edge of the road. Vegetation along the west side of the road should be protected during construction.



Viewpoint 1: View looking south along Bay Road from the Canadian border.



Viewpoint 2: View looking north from just south of where the line will turn west and proceed to Lake Champlain.



Viewpoint 2: View looking west across open fields through which the line will connect with Lake Champlain. The two deciduous trees in this view may be removed to accommodate the line.

Stoney Point Road, Benson: Class 3 Town Highway



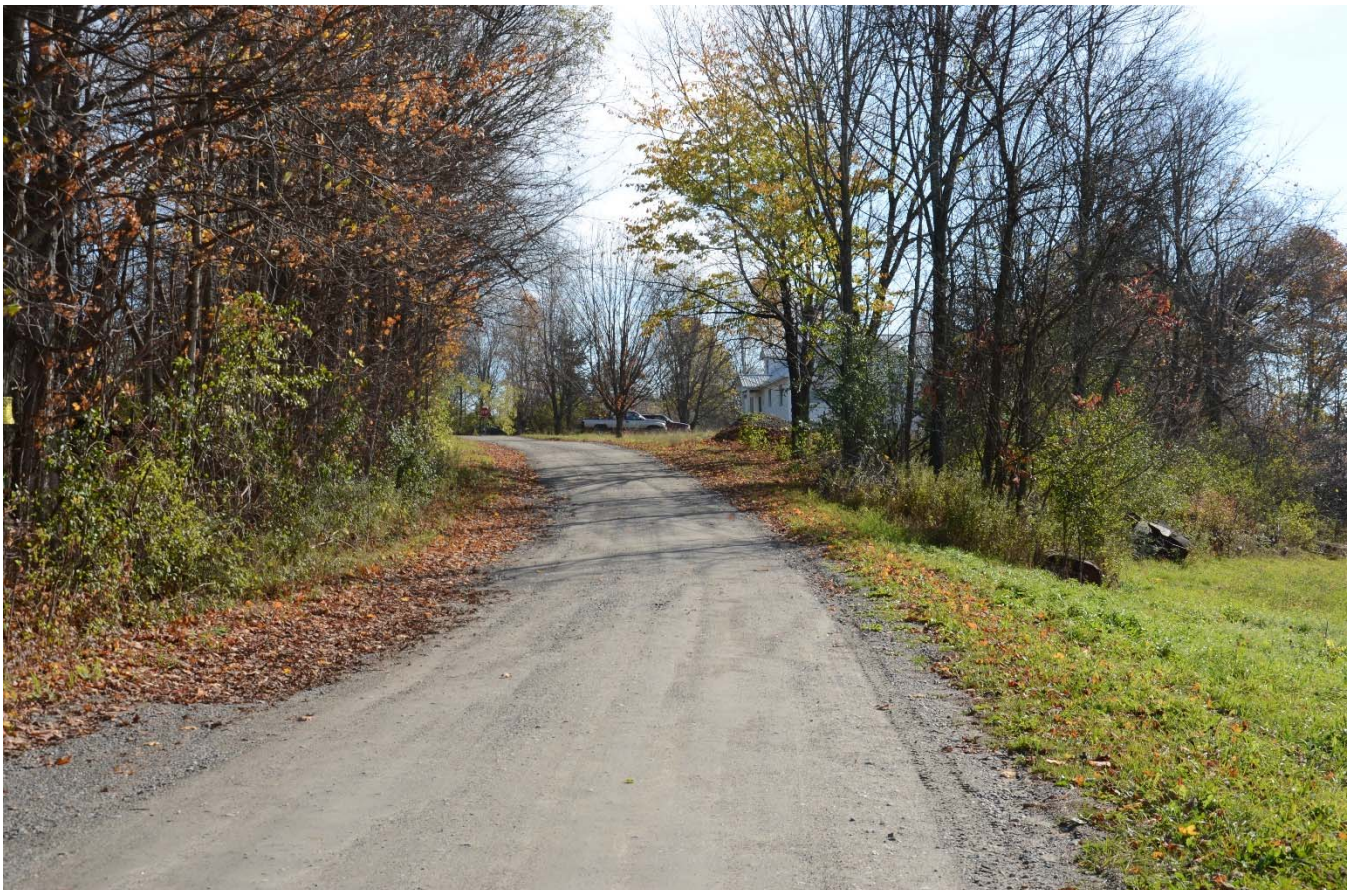
Assessment Map 2: From Lake Champlain, the NECPL will exit the lake, travel a short distance through a TDI-NE controlled parcel and then connect with Stoney Point Road and will be located beneath the road surface.



Viewpoint 4: View from Stoney Point Road looking west into the narrow field through which the line will be located after exiting Lake Champlain and before connecting with Stoney Point Road.

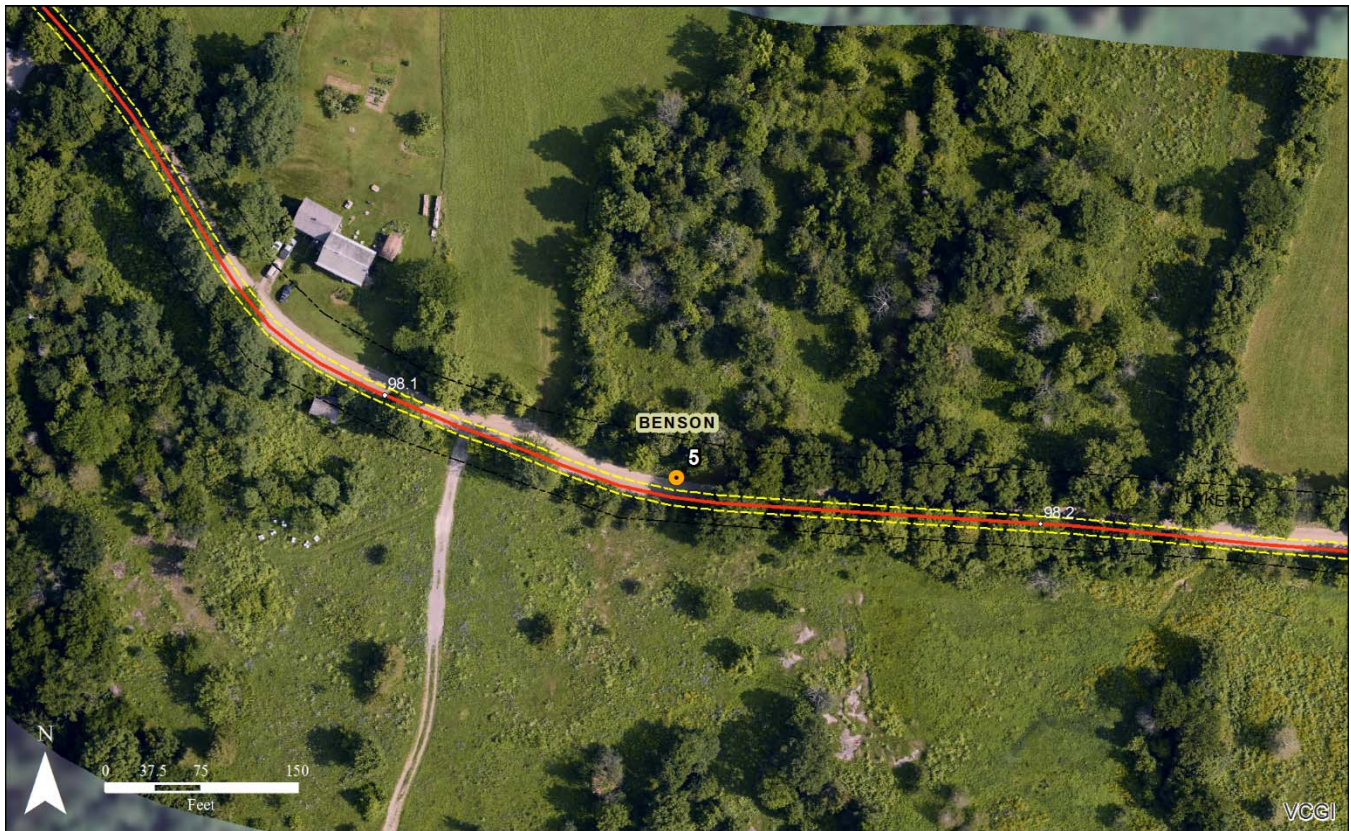


Viewpoint 3: View looking north where the Project connects with Stoney Point Road. Up to a 50-foot wide clearing of the existing vegetation in this photo will be necessary to connect between the road and an open field. ***Wide Angle Focal Length**



Viewpoint 3: View looking southeast along Stoney Point Road where the line will be buried beneath the road surface.

North Lake Road, Benson: Class 3 Town Highway



Assessment Map 3: Traveling south along the Project route, Stoney Point Road turns into North Lake Road, a similar dirt surfaced Class 3 Town Highway. The Project will be buried beneath the road surface and construction will not require removal of vegetation along the roadside.



Viewpoint 5: View looking south along North Lake Road.



Assessment Map 4: Further south along North Lake Road, at the intersection with Frazier Hill Road, this area is characterized by large agricultural fields with a few rural residential properties.



Viewpoint 6: View looking northeast along North Lake Road.



Assessment Map 5: Continuing southeast along North Lake Road from the intersection with Frazier Hill Road, the Project Route turns east onto Glenn Road, also known as Old North Lake Road. Glenn Road is a class 4 roadway and is only one lane wide at many locations with mature trees immediately adjacent to the road edge.

***Note:** The cable route shown does not properly align with the aerial image. The cable will be installed beneath the road surface.

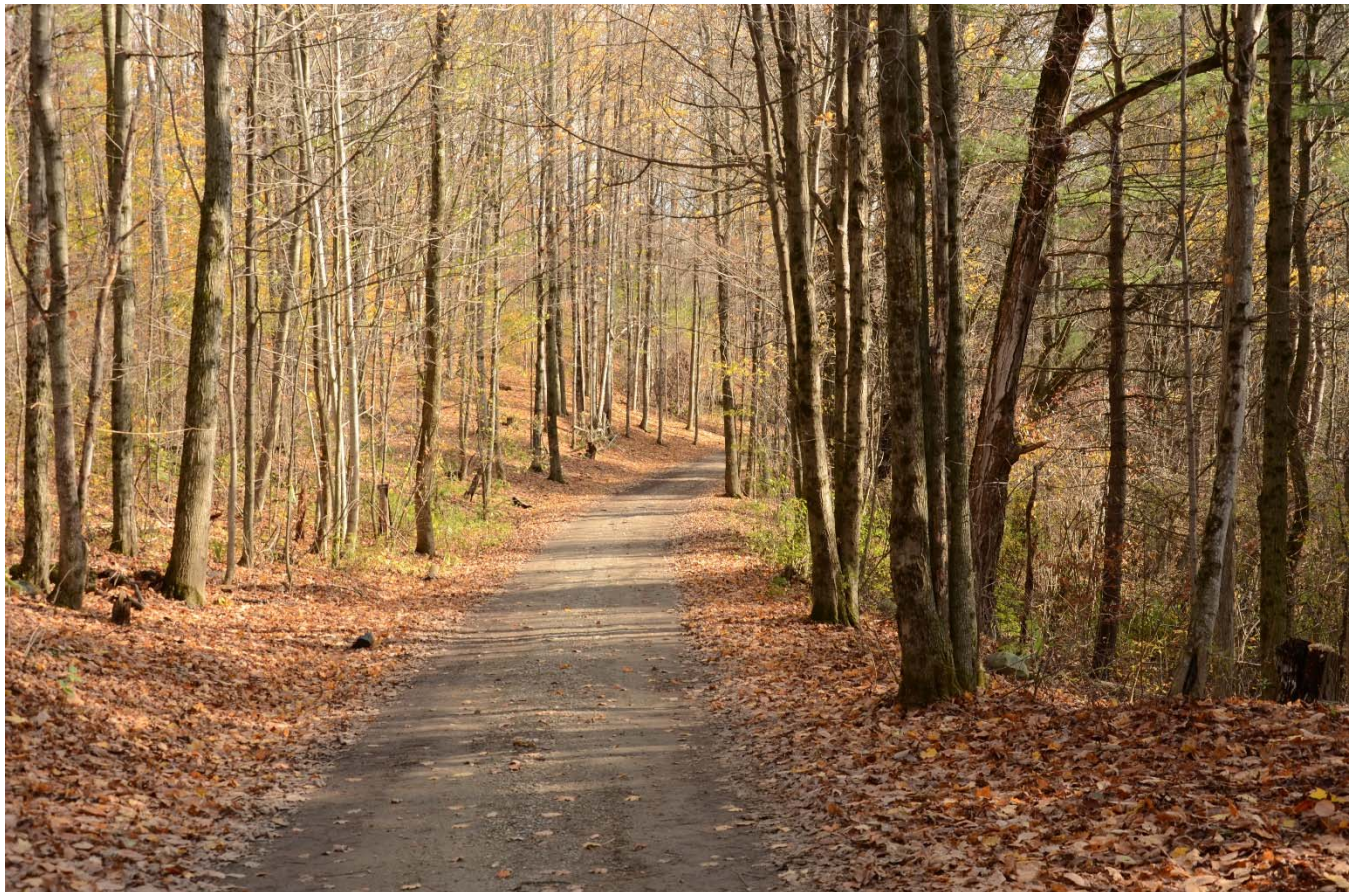


Viewpoint 7: View looking southeast from North Lake Road at the intersection with Glenn Road.

Glenn Road (Old North Lake Road), Benson: Class 4 Town Highway



Assessment Map 6: The Project follows along a stretch of Glenn Road categorized as a Class 4 Town Highway for less than 1 mile. Project plans indicate no tree clearing will be necessary along this section of Old Stage Road, although at least some limited impact is expected.



Viewpoint 8: View looking southeast along Glenn Road.

Glenn Road, Benson: Class 3 Town Highway



Assessment Map 7: Glenn Road (Old North Lake Road) at the Benson Transfer Station where the road classification changes from Class 4 (to the west) to Class 3 (to the east).



Viewpoint 9: View looking east from the Benson Transfer Station along the Class 3 portion of Glenn Road.

Stage Road, Benson: Class 2 Town Highway



Assessment Map 8: From Glenn Road, the Project turns north for approximately 300 feet along Stage Road and then turns to the east again and continues along Hulett Hill Road.



Viewpoint 10: View looking west along Glenn Road from the intersection with Stage Road.



Viewpoint 10: View looking north along Stage Road from the intersection with Glenn Road. The line will be buried beneath the paved travel lanes.



Viewpoint 11: View looking south along Stage Road from the intersection with Hulett Hill Road.



Viewpoint 4: View looking east along Hulett Hill Road from Stage Road.

Hulett Hill Road, Benson: Class 2 Town Highway



Assessment Map 9: From Stage Road, the Project route will connect to Vermont Route 22A via Hulett Hill Road. Similar to Stage Road, the line will be installed beneath the paved road surface for the length of Hulett Hill Road.



Viewpoint 12: View looking southwest along Hulett Hill Road.



Viewpoint 12: View looking northeast along Hulett Hill Road.

Vermont Route 22A, Benson: Class 30 State Highway



Assessment Map 10: At the east end of Hulett Hill Road, the Project will cross beneath Vermont Route 22A, angle south and run along the outside of the eastern shoulder of the road.



Viewpoint 13: View looking south along the eastern shoulder of Vermont Route 22A at the intersection with Hulett Hill Road. The line will be installed outside of the eastern shoulder of the road.



Assessment Map 11: Further south on Vermont Route 22A, a small stand of naturally occurring vegetation will likely be removed as a result of the Project.



Viewpoint 14: View looking north along Vermont Route 22A at a small isolated stand of vegetation to be removed.



Assessment Map 12: Vermont Route 22A at the intersection with Mill Pond Road and Lake Road. Most of the land along Route 22A in Benson consists of open agricultural fields. The Project will mostly result in the removal of small shrubby vegetation along the road. Signs, fences and other elements within the Project area will be reinstalled at the same approximate locations.

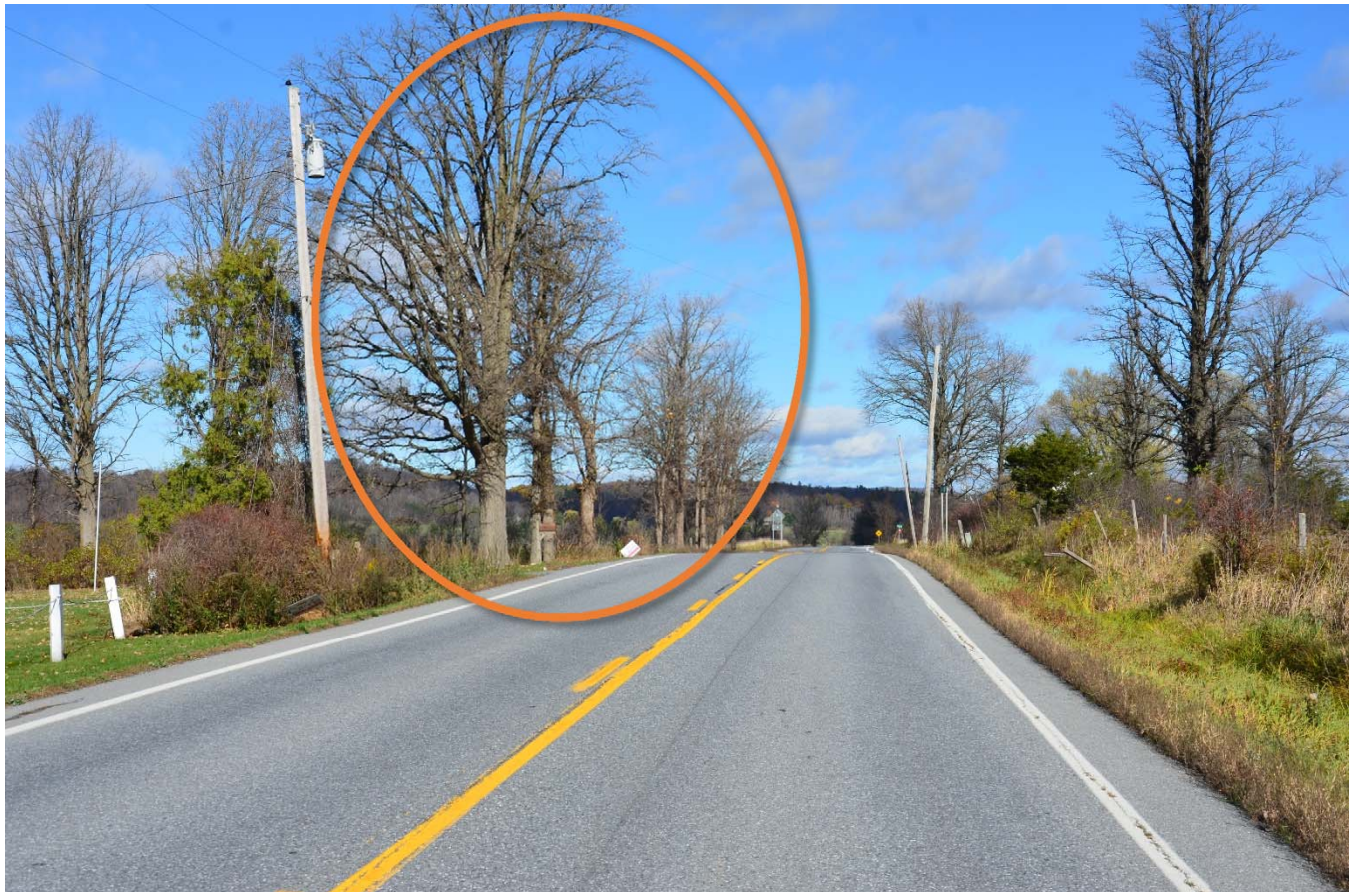


Viewpoint 15: View looking north along Vermont Route 22A from the intersection with Mill Pond Road.

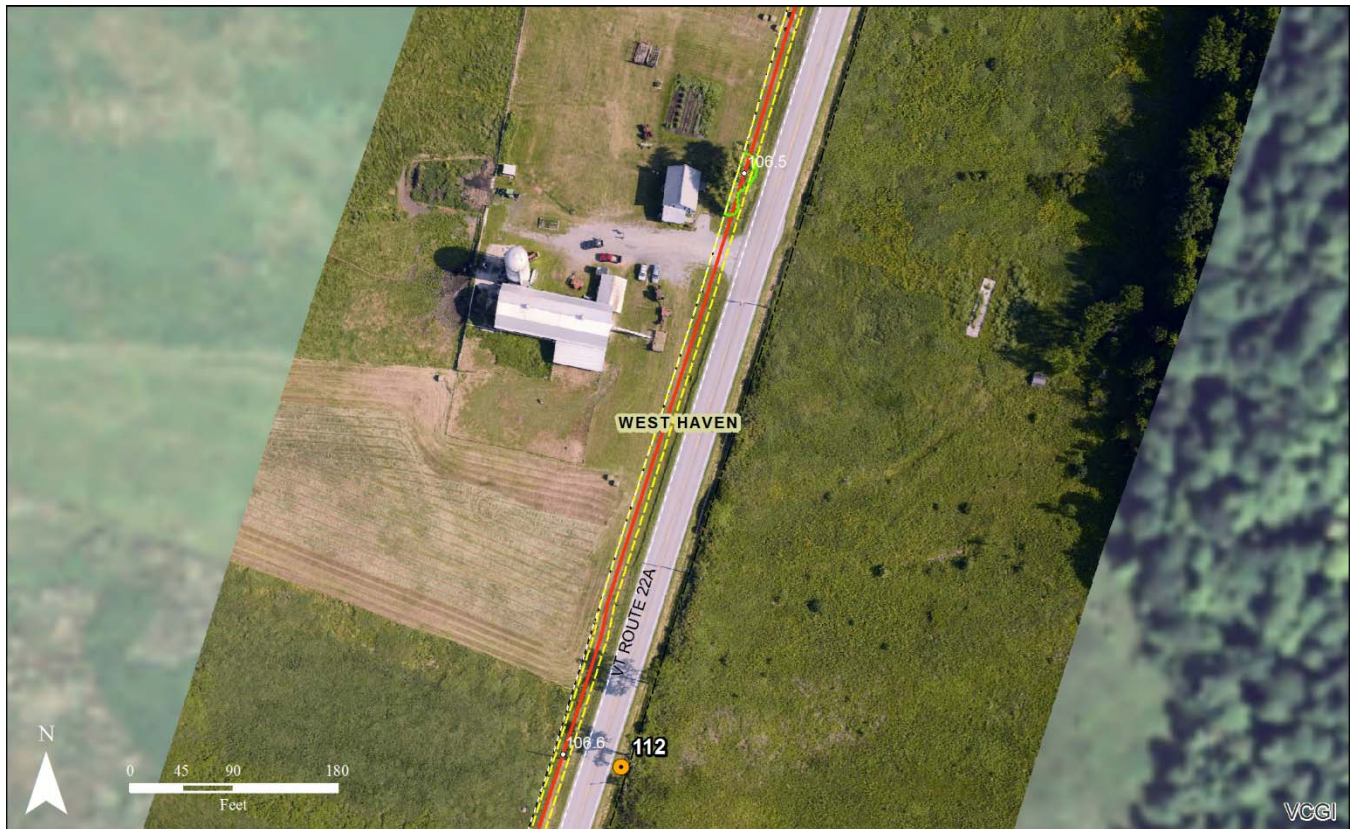
Vermont Route 22A, West Haven: Class 30 State Highway



Assessment Map 13: Within the Town of West Haven, the Project is located entirely along Vermont Route 22A, first along the western side of the road, and then along the eastern side of the road before entering Fair Haven.



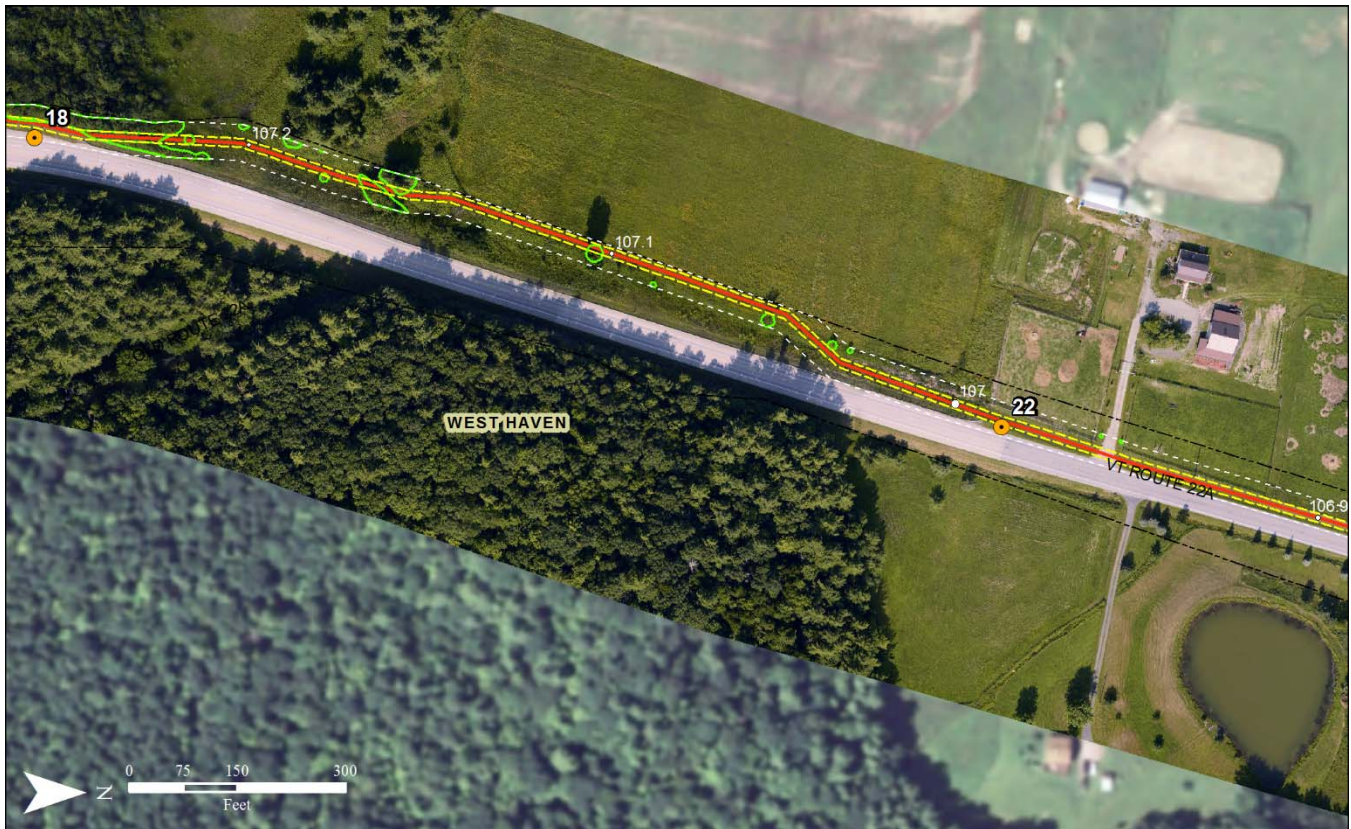
Viewpoint 21: At the Benson – West Haven town line, a line of shade trees along the side of the road will be removed, eliminating the buffer between the road and adjacent residential structure.



Assessment Map 14: Near MP 106.5, Project plans show potential removal of a large Willow tree which is the only vegetation between the adjacent farm house and Route 22A.



Viewpoint 112: View looking north along Route 22A in West Haven at large Willow tree.

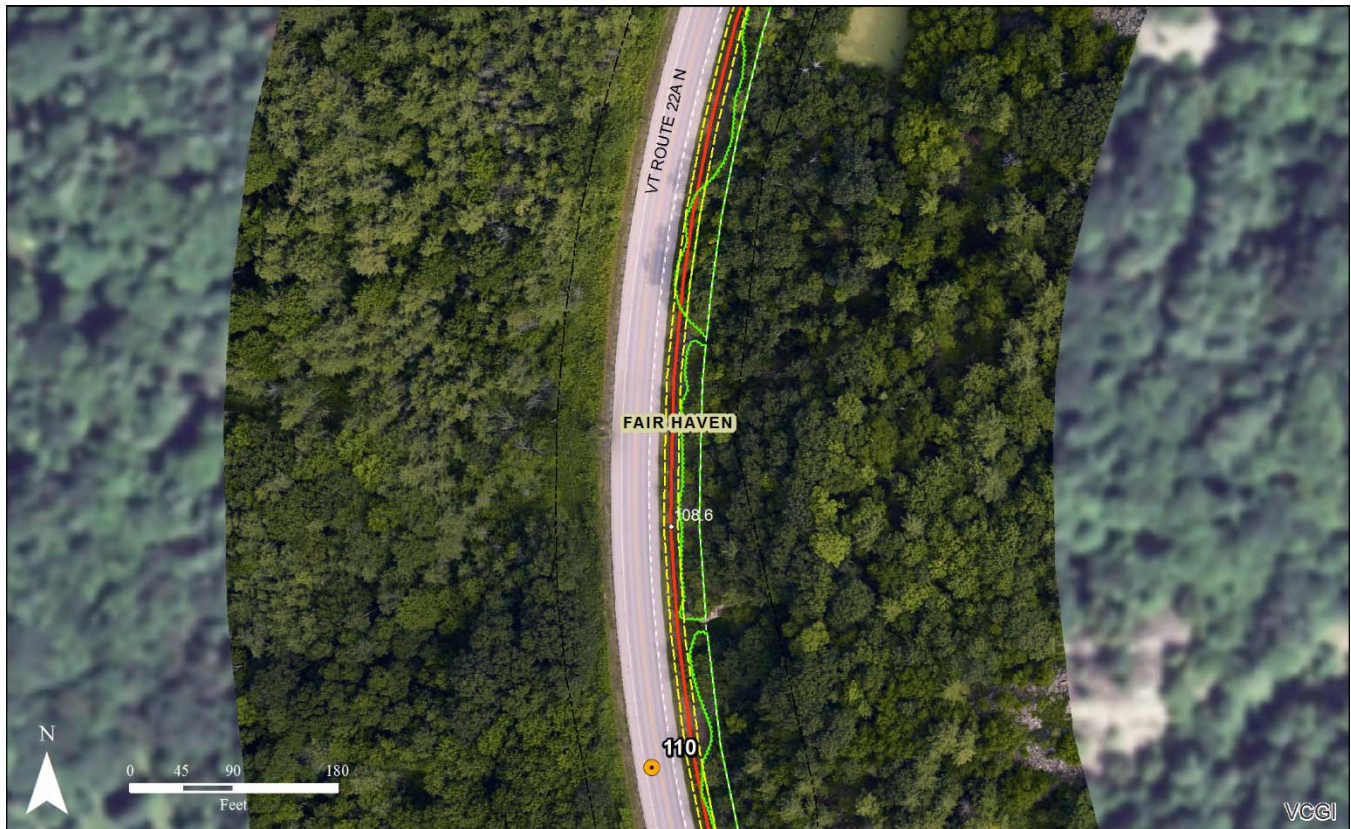


Assessment Map 15: As the route approaches MP 106.9 the line will diverge to the base of a highway embankment, along the outside of the right-of-way and will result in some minor vegetation removal on the embankment.



Viewpoint 22: View looking south along the highway embankment near MP 106.9. The line will run along the base of the slope and then merge back to the edge of the shoulder along the edge of the background vegetation.

Vermont Route 22A, Fair Haven: Class 30 State Highway



Assessment Map 16: From West Haven, the line continues into Fair Haven along the eastern side of Vermont Route 22A. Near MP 108.6, ledge may need to be removed along the edge of the roadway to install the cable.



Viewpoint 110: View looking north along Vermont Route 22A. Construction of the line at this location may require the existing face of the ledge to be removed and widen the clear zone along the highway where the cable will be installed.

Vermont Route 22A, US Route 4, Airport Road, Fair Haven: Class 30 State Highway, Class 44 US Highway, Class 3 Town Highway.



Assessment Map 17: The line continues along the eastern side of Vermont Route 22A until the Exit 2 exchange with US Route 4, where the Project will turn east and follow along the north side of the US Route 4 ROW.



Viewpoint 19: View looking north along Vermont Route 22A. The line will be horizontally drilled to the north side of the guard rail along the northbound lanes.



Viewpoint 19: View looking east at the Project route on the northern embankment of US Route 4.



Viewpoint 20: Slightly east from exit 2, this view is looking west from Airport Road along the Project Route running parallel to US Route 4. *Wide Angle View



Viewpoint 106: View looking at existing White Pines from Vermont Route 22A.

US Route 4, Fair Haven: Class 44 US Highway

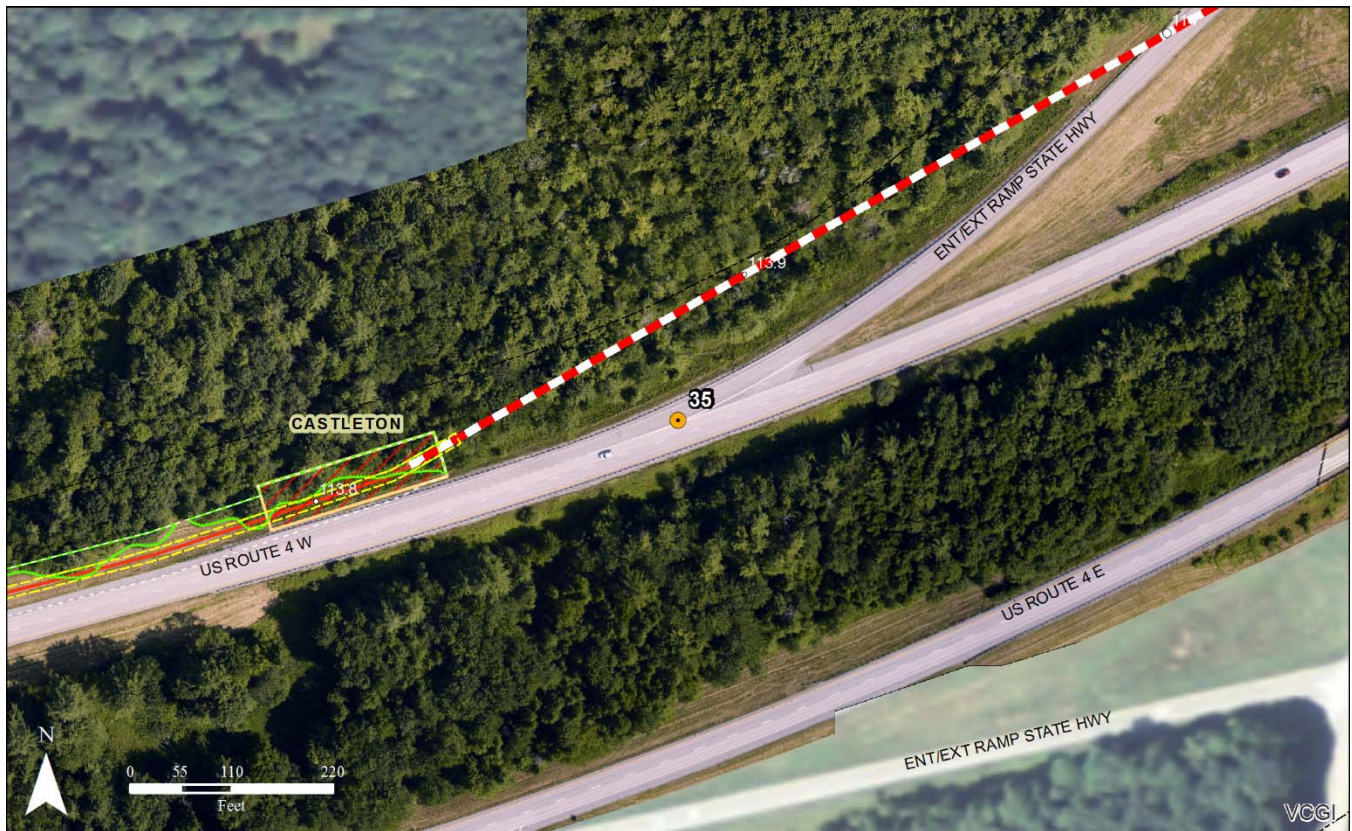


Assessment Map 18: A typical section of the Project along US Route 4 where the line will be installed between the edge of the paved shoulder and a rock cut.

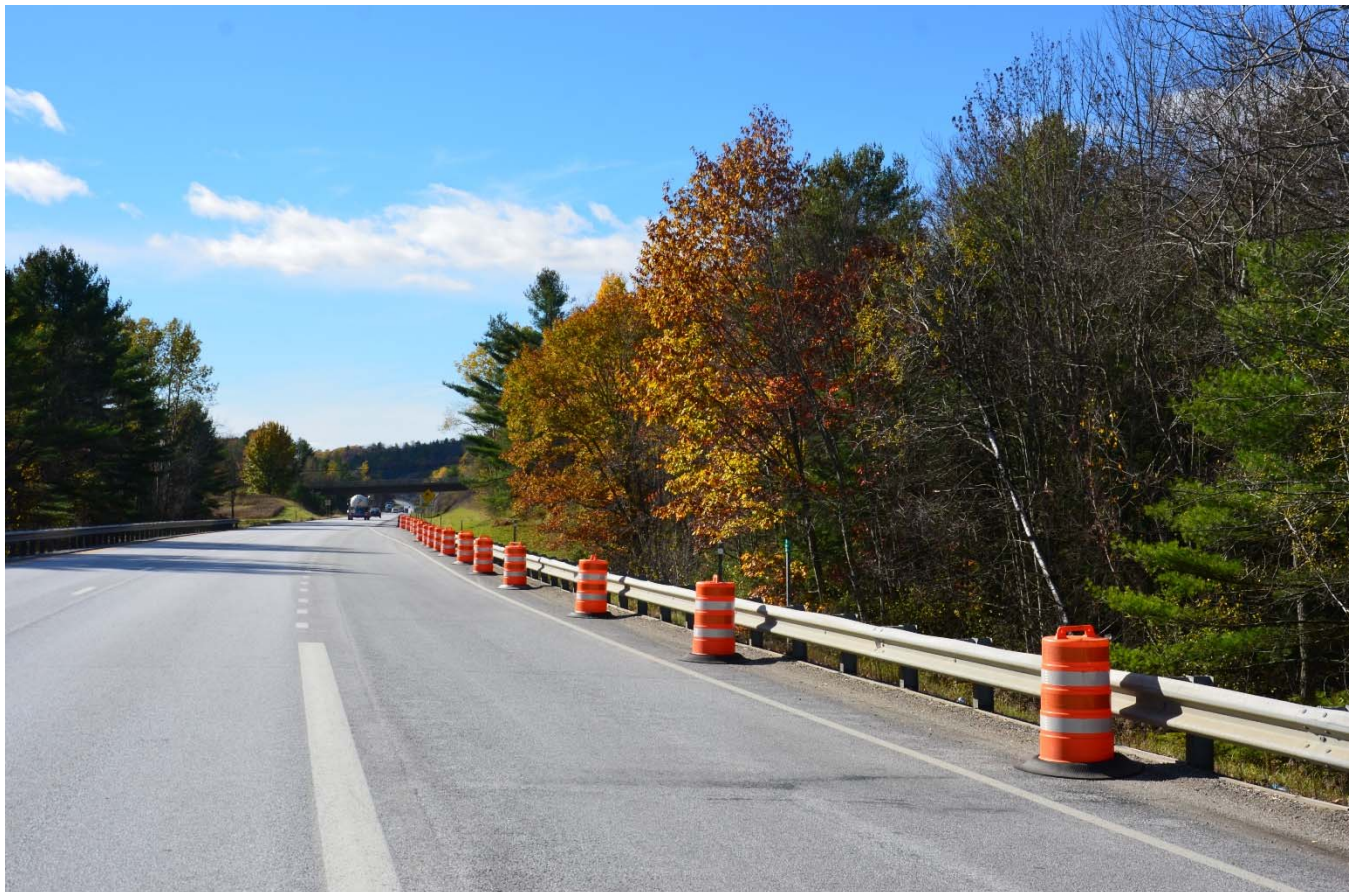


Viewpoint 36: View looking west along the westbound lanes of US Route 4 at typical section of the Project where the line will be installed between the paved shoulder and an adjacent rock cut.

US Route 4, Castleton: Class 4 US Highway



Assessment Map 19: Near the end of the US Route 4, exit 4 westbound on-ramp, a temporary staging area for a HDD, and trenching for the line continuing east, will require clearing along the road. Vegetation above the drill area will be retained.



Viewpoint 35: View looking west at the end of the on-ramp of exit 4, US Route 4 towards area of vegetation clearing.



Assessment Map 20: Traveling westbound on US Route 4, this example shows one of the few locations where the line will be located above the top of a highway rock cut. Up to 50 feet of vegetation will be cleared from along the top of the rock cut, back towards the edge of the ROW to the north.



Viewpoint 34: View looking westbound along US Route 4 where the line will be located on top of the rock cut along the roadside.

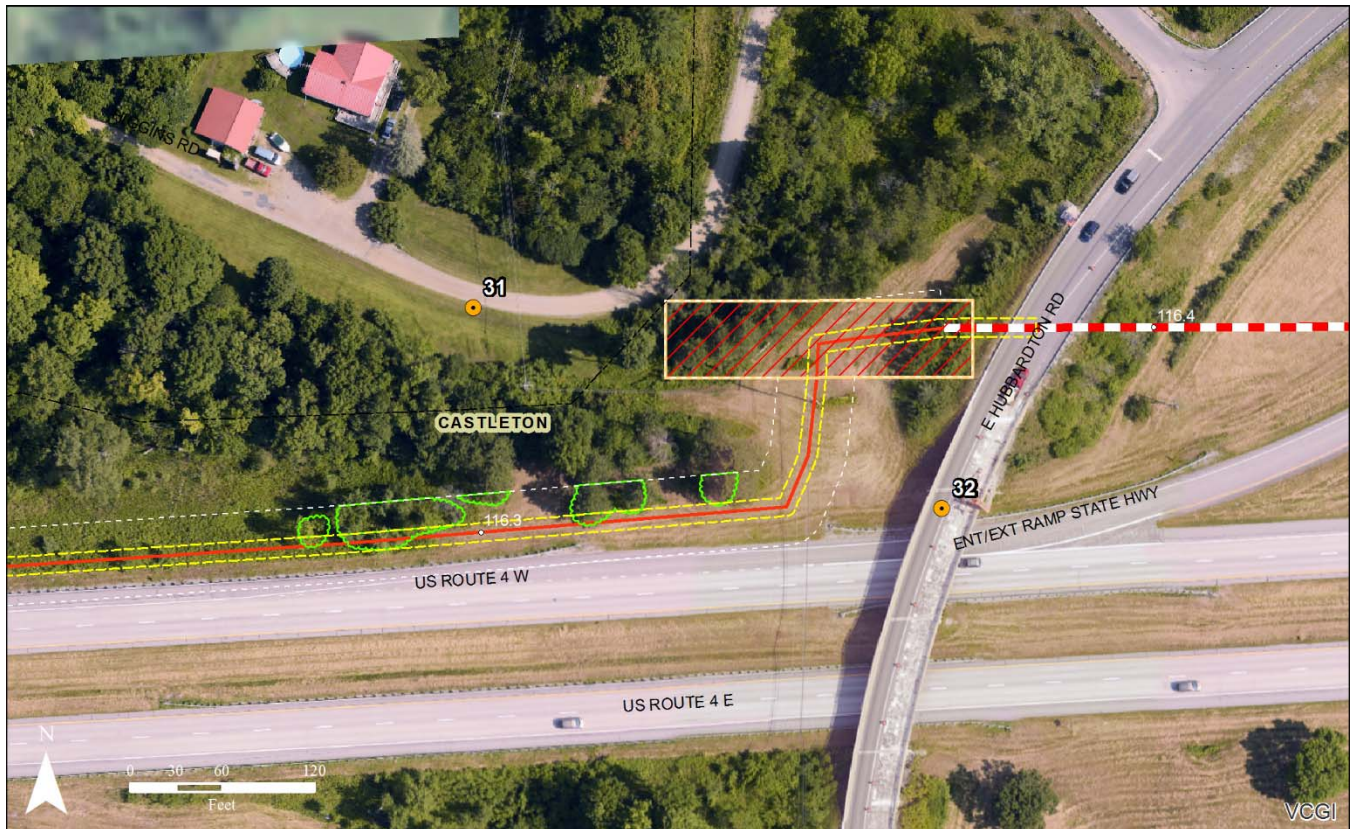


Assessment Map 21: The line will also be located above the rock cut along US Route 4 near MP 115.8, and the line will be setback up to 240 feet from the edge of the paved road surface, retaining vegetation between the road and clearing.



Viewpoint 33: View looking west where the line will be located above the rock cut along the roadway, up to 240 feet away from the paved edge of the road.

East Hubbardton Road & Higgins Road, Castleton: Class 2 Town Highway & Class 3 Town Highway



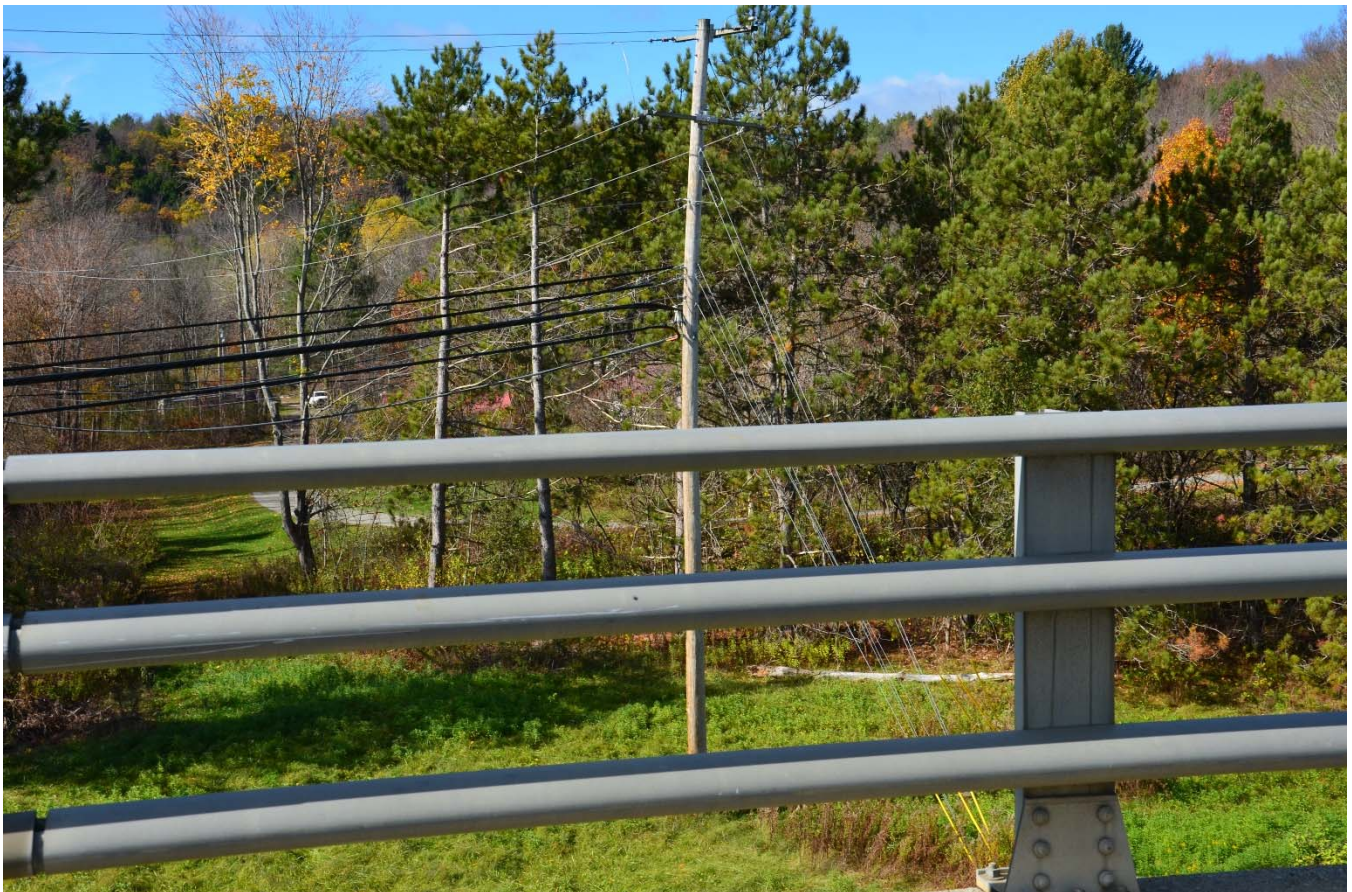
Assessment Map 22: An HDD staging area west of the East Hubbardton Road overpass at Exit 5, US Route 4, may clear trees that appear to have been planted as a screen between Route 4, East Hubbardton Road, and Higgins Road.



Viewpoint 31: View looking east from Higgins Road toward the East Hubbardton Road overpass at Exit 5, US Route 4.

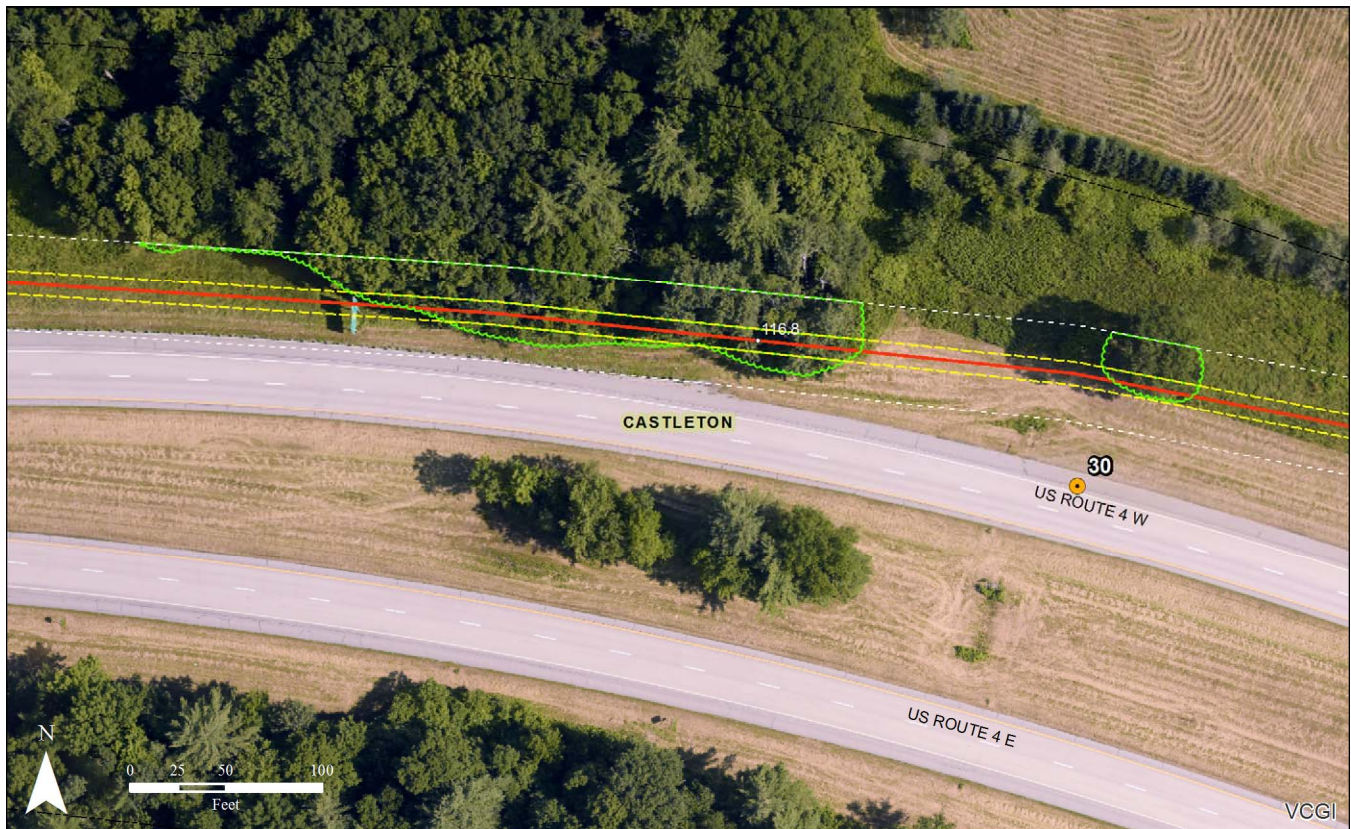


Viewpoint 32: View looking west from on top of the East Hubbardton Road overpass at Exit 5, US Route 4 towards a row of pines that would be partially removed to accommodate a HDD temporary staging area. ***Wide Angle Zoom**



Viewpoint 32: Same view as above, taken with a normal lens focal length.

US Route 4, Castleton: Class 44 US Highway



Assessment Map 23: US Route 4, westbound, this shows an typical example of several locations along Route 4 where some limited vegetation clearing will move the edge of woods slightly further back from the edge of road.



Viewpoint 30: View looking westbound along US Route 4 where clearing as a result of the Project will relocated the edge of woods up to 40 feet further back from the edge of the road.

US Route 4, Ira: Class 44 US Highway



Assessment Map 24: At the west end of the pull-off along the westbound lanes of US Route 4, a 50-foot wide clearing will be necessary to allow construction of the Project.



Viewpoint 28: View looking from the US Route 4 pull-off towards the west where an area 50-foot wide along the line will be cleared to allow construction of the Project.

Whipple Hollow Road, Vermont Route 4A, US Route 4, West Rutland: Class 2 Town Highway, Class 30 State Highway, Class 43 US Highway



Assessment Map 25: The Project Route will be horizontally drilled beneath the Castleton River and then transition to the southern edge of the eastbound lanes of US Route 4 at the Vermont 4A (Main Street/Castleton Road) underpass.



Viewpoint 25: Panoramic view from Whipple Hollow Road looking at vegetation to be cleared on the US Route 4 embankment. The orange rectangle towards the right of the image represents the image below, which is captured with a 50mm normal lens, equivalent to the human ‘field of view’.



Viewpoint 25: View looking south at vegetation on the US Route 4 embankment that will be cleared for a HDD staging area. Clearing of this vegetation will remove the buffer between Route 4 and Whipple Hollow Road and the surrounding properties.



Viewpoint 26: This viewpoint is further north on Whipple Hollow Road, looking south at the Route 4 embankment that will be cleared for the HDD temporary staging area.



Viewpoint 23: View looking northwest from the intersection of Whipple Hollow Rd and Route 4A at vegetation to be cleared.



Viewpoint 24: View looking southeast from Route 4A after the line has crossed beneath US Route 4 and will continue east along the southern edge of the eastbound lanes.

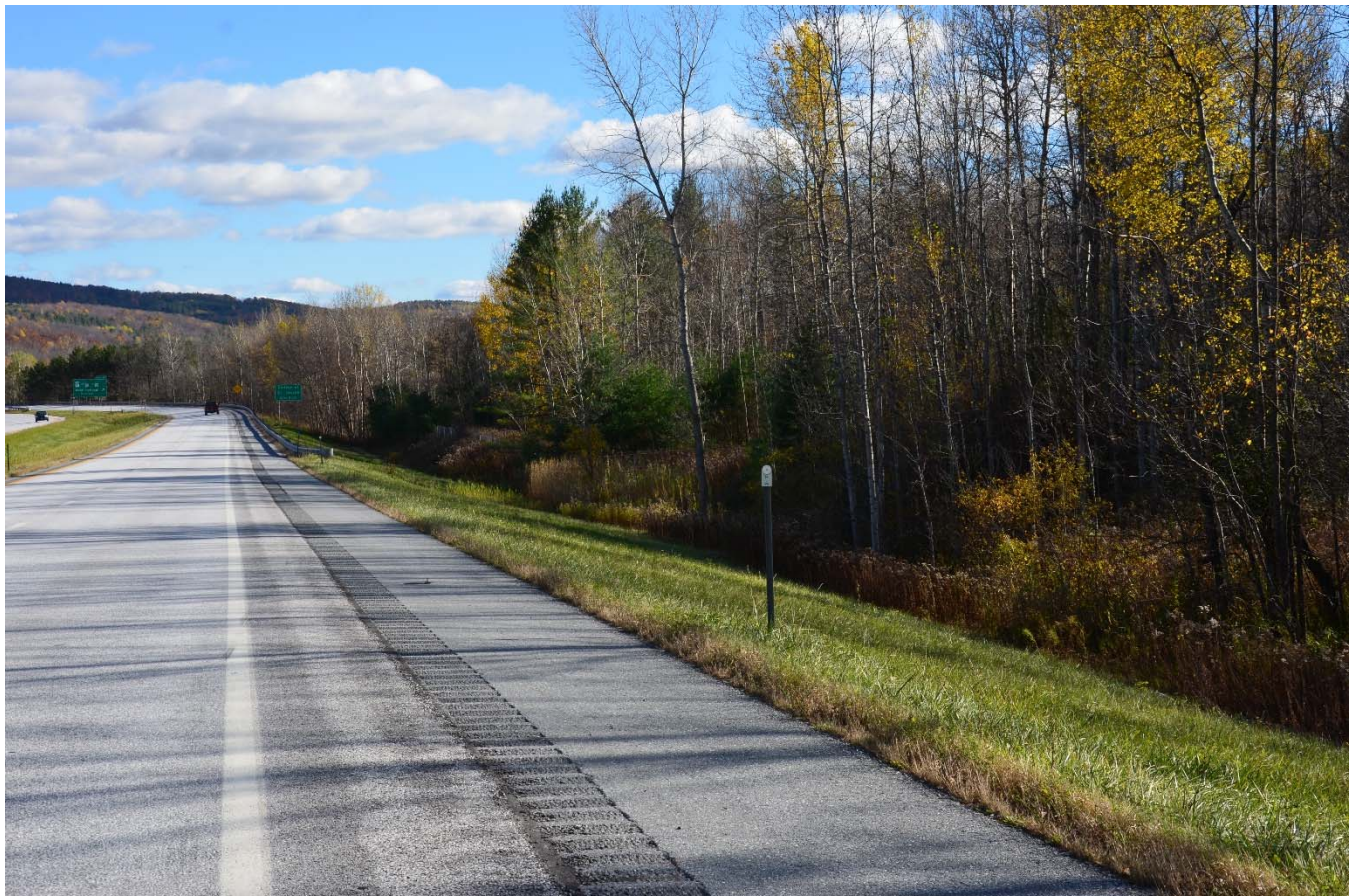


Viewpoint 37: The line will be installed in a narrow corridor between the paved road and rock cut along the eastbound lanes.

US Route 4, West Rutland: Class 43 US Highway



Assessment Map 26: Near MP 123, up to 50 feet of clearing from the bottom of the highway embankment towards the edge of the US Route 4 ROW is planned at this location.



Viewpoint 38: View looking southeast along the eastbound lanes of US Route 4. Up to 50 feet of clearing will be require from the bottom of the road embankment towards the edge of the ROW.

West Rutland Recreation Area Pathway, West Rutland



Assessment Map 27: The line will be located at the base of the roadway embankment along the Exit 6 eastbound exit ramp for US Route 4. A recreation path associated with a West Rutland Recreational area is also located at the bottom of the embankment within the US Route 4 ROW.



Viewpoint 39: View looking east at a small line of Willow trees that are within a HDD staging area.



Viewpoint 40: View looking west from the West Rutland Recreation Area rec. path back towards a HDD staging area that extends into a row of Willows.



Viewpoint 41: View looking east along the recreation path where the line will be installed along the left side of the pathway.

US Route 4, Rutland Town: US Class 43 Highway

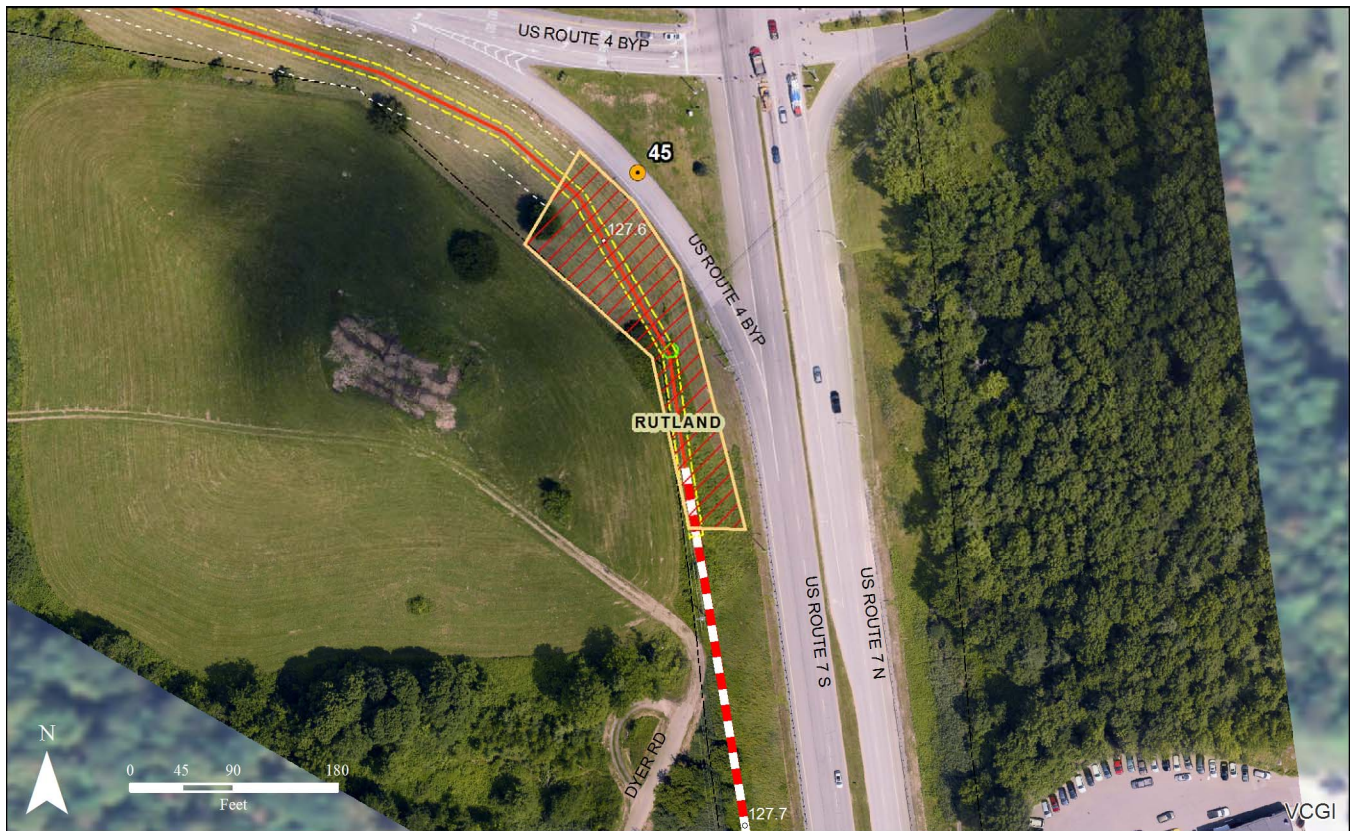


Assessment Map 28: The Project continues along the south side of the US Route 4 eastbound lanes in the Town of Rutland. Near the Creek Road overpass, the line will diverge from along the edge of the paved surface and will be located at the base of the highway embankment and will require removal of the hedgerow the separates the roadway from adjacent agricultural fields.



Viewpoint 44: View looking southeast at area where up to a 50-foot wide clearing will be made to construct the Project.

US Route 4 & US Route 7 Rutland Town: US Class 43 & 42 Highway

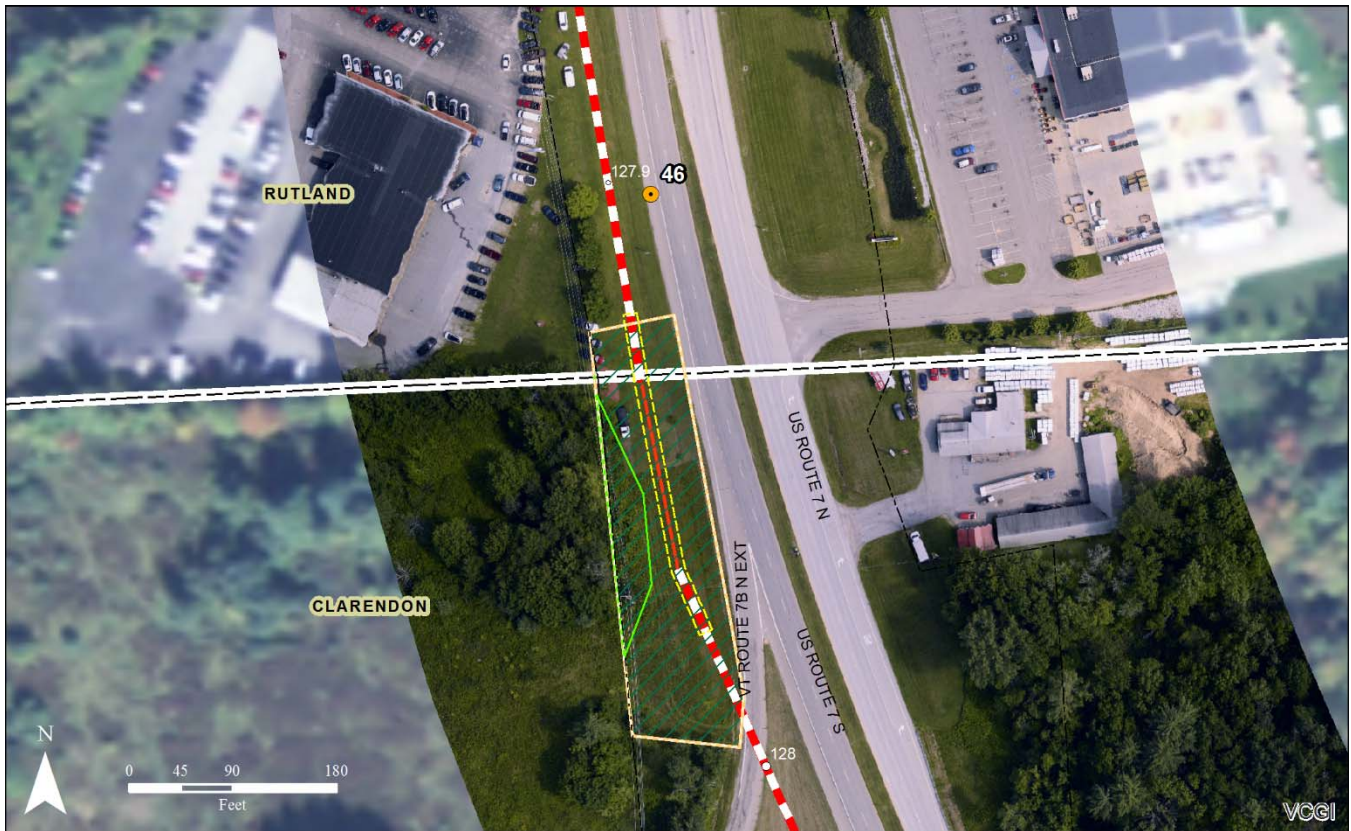


Assessment Map 29: US Route 4 merges with US Route 7 and continues to the north. However, the Project turns south and proceeds along the west side of US Route 7. For the entire extent of the Project along US Route 7, within the Town of Rutland, the Project will be installed by HDD.



Viewpoint 45: View looking at the HDD staging area at US Route 7. The existing overhead utilities will need to be relocated.

US Route 7, Rutland Town – Clarendon Town Line: US Class 42 Highway



Assessment Map 30: A second HDD temporary staging area will be located at the Rutland – Clarendon Town Line.



Viewpoint 46: View looking at the second HDD staging area when entering the Town of Clarendon. No clearing will be required at this location.

US Route 7, Clarendon: US Class 42 Highway



Assessment Map 31: A third HDD staging area will be located just south of the Cold River crossing. As currently shown, clearing at this location may remove buffer vegetation between US Route 7 and adjacent residential structures.

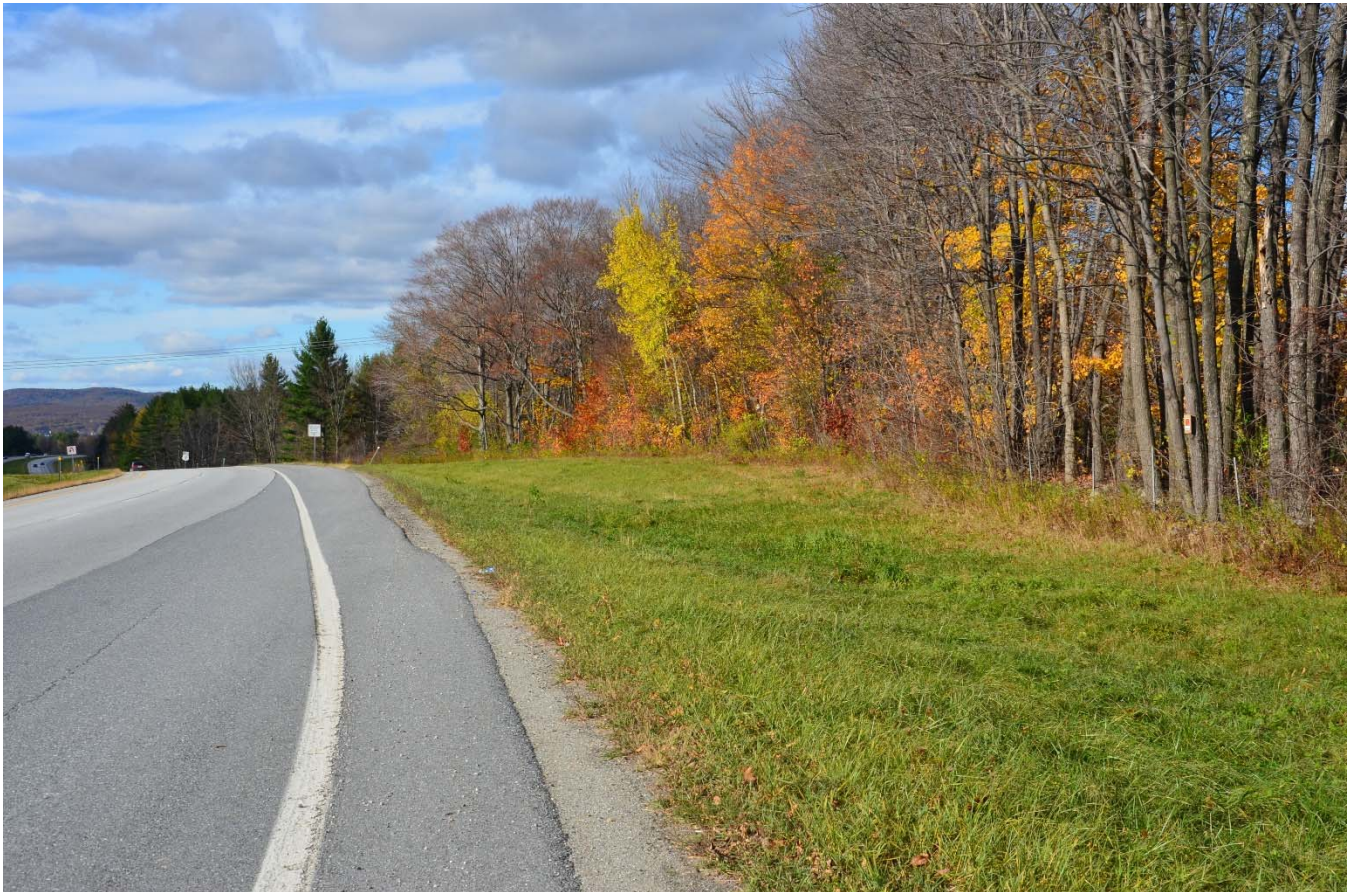


Viewpoint 47: View looking at a thin buffer of vegetation within and adjacent to the HDD staging area south of the Cold River crossing along US Route 7. * Wide Angle Zoom

US Route 7, Clarendon: US Class 41 Highway



Assessment Map 32: Traveling north along US Route 7, just north of the intersection of Vermont Route 103. Minimal disturbance to vegetation along the side of the road will be required along most of Route 7 in Clarendon.



Viewpoint 49: View looking north along the east side of US Route 7, just north of Vermont Route 103. Minimal tree clearing will be require at this location, but may be avoided with tree protection measures.

Vermont Route 103, Clarendon: US Class 30 Highway



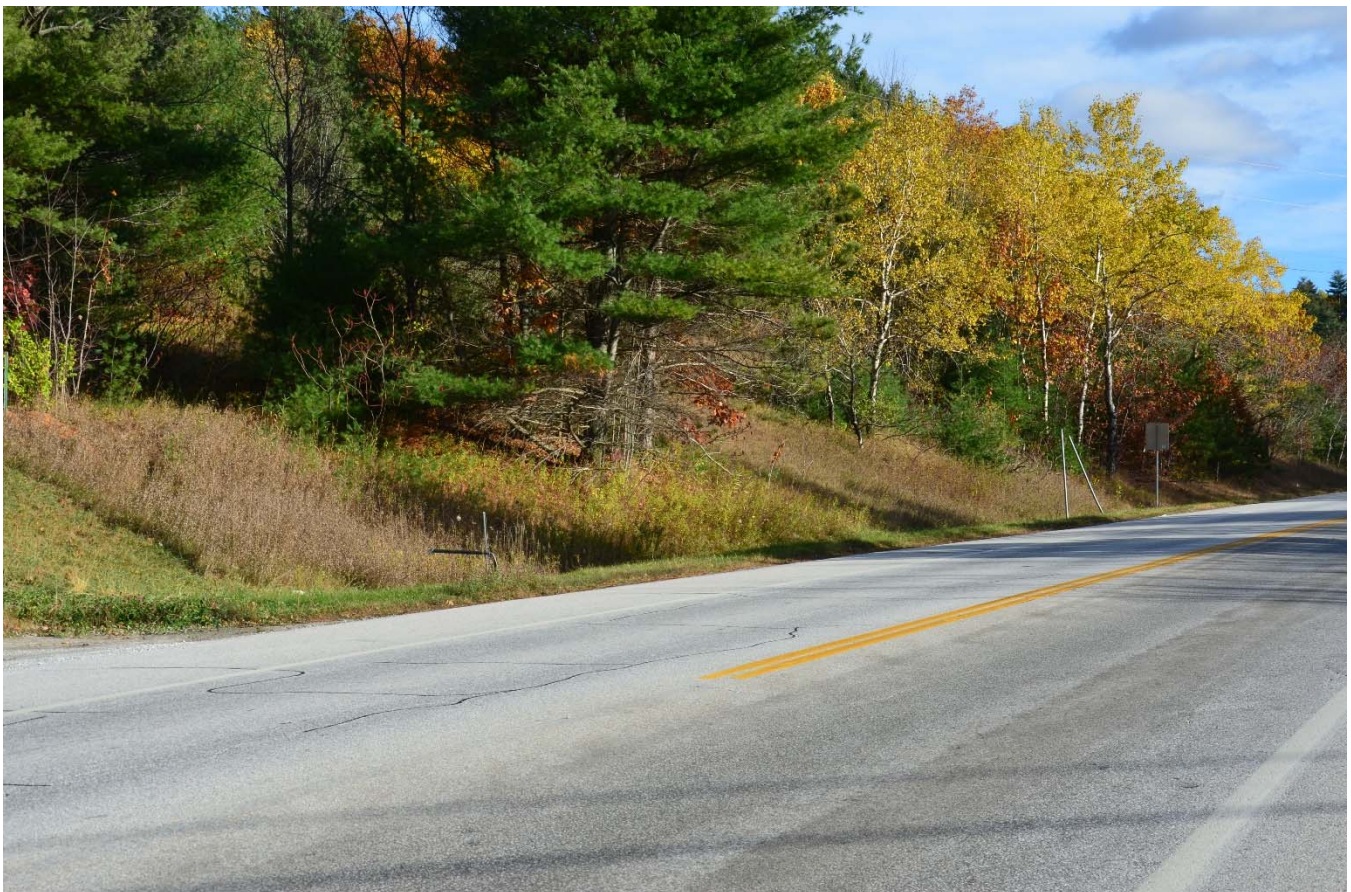
Assessment Map 33: At the intersection with Vermont Route 103, the Project turns east and continues along Vermont Route 103. Near MP 131.0, the line will be installed away from the edge of the road and clearing will be required up to the edge of the ROW, relocating the edge of woods up to 26 feet further from the road.



Viewpoint 53: View looking northeast from pull-off along Vermont Route 103 where up to 26 feet of clearing will be required.

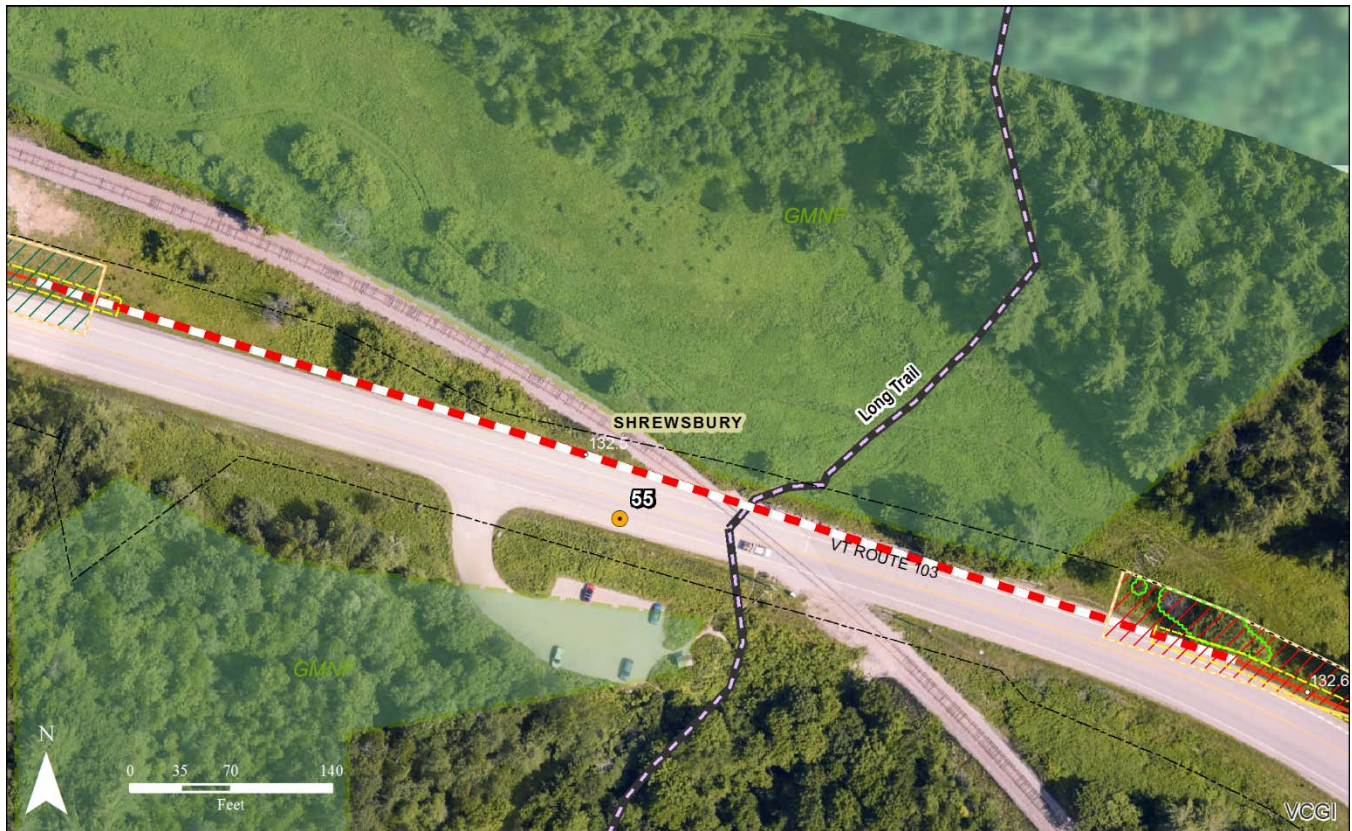


Assessment Map 34: Continuing southeast along Vermont Route 103, this area at the intersection with East Clarendon Road and Railroad Drive shows another example where clearing will be needed along the roadside.



Viewpoint 54: View looking southeast along Vermont Route 103 from the near the intersection with East Clarendon Road and Railroad Drive. Project plans indicate possible clearing up to the edge of the ROW at this location.

Vermont Route 103, Shrewsbury: Class 30 State Highway



Assessment Map 35: At the Long Trail / Appalachian Trail crossing on VT Route 103, the line will be installed by HDD. Some limited clearing of shrubs and individual trees will be necessary at the eastern HDD staging area.



Viewpoint 55: View looking east at the Long Trail / Appalachian Trail crossing along Vermont Route 103.



Assessment Map 36: Plans currently show clearing of roadside and landscape vegetation between the road and an adjacent residential structure near MP 132.7 to install the cable.



Viewpoint 56: View looking along the eastern edge of Vermont Route 103 where plans call for vegetation clearing along the side of the road that will eliminate the buffer between the road and residential structure.



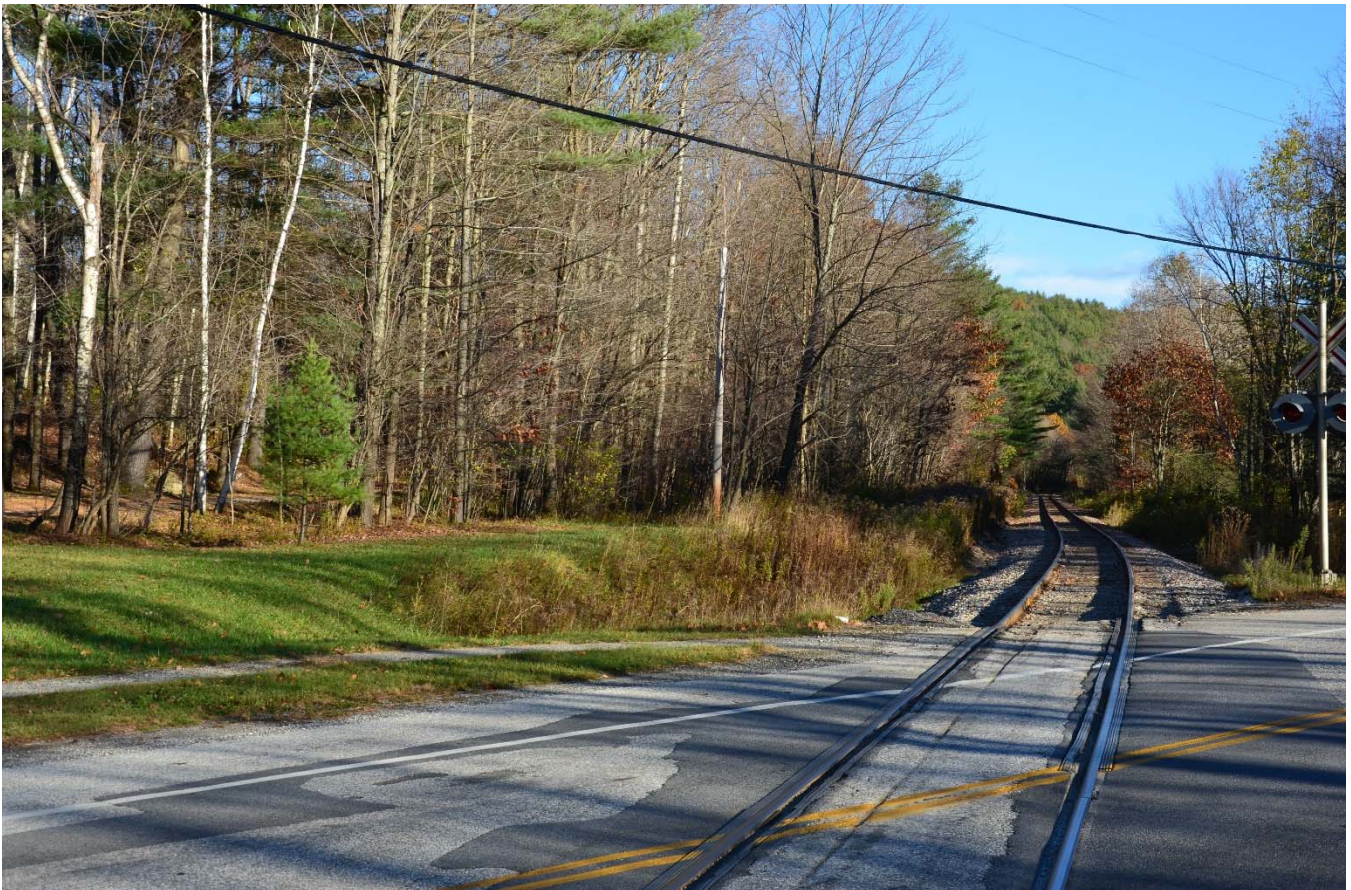
Assessment Map 37: The Project continues along the north/east side of Vermont Route 103, until MP 134.1, where the line leaves the side of the road and continues along the north side of the Green Mountain Railroad.



Viewpoint 57: The Project generally stay relatively close to the edge of Vermont Route 103 through Clarendon, but at this location the line will be located near the edge of the ROW, at the top of the embankment towards the right side of this image.



Viewpoint 58: View looking northwest along Vermont Route 103 just prior to the Project turning along the railroad. The edge of woods will be cleared up to 26 feet further from the edge of the road at this location.



Viewpoint 58: View looking southeast along the railroad where the line will be installed +/- 30 feet off the edge of the tracks.

Town Hill Road, Shrewsbury: Class 3 Town Highway



Assessment Map 38: At Town Hill Road, the line will be located to the northeast of the tracks and will require clearing up to 40 feet from the edge of the tracks.



Viewpoint 64: View looking northwest along the railroad from Town Hill Road. An HDD site at this crossing going northwest will retain some trees along the edge of the railroad that would otherwise be cleared.



Viewpoint 64: View looking southeast along the railroad from Town Hill Road. Most of the vegetation along the north side (to the left) of the tracks will need to be removed.

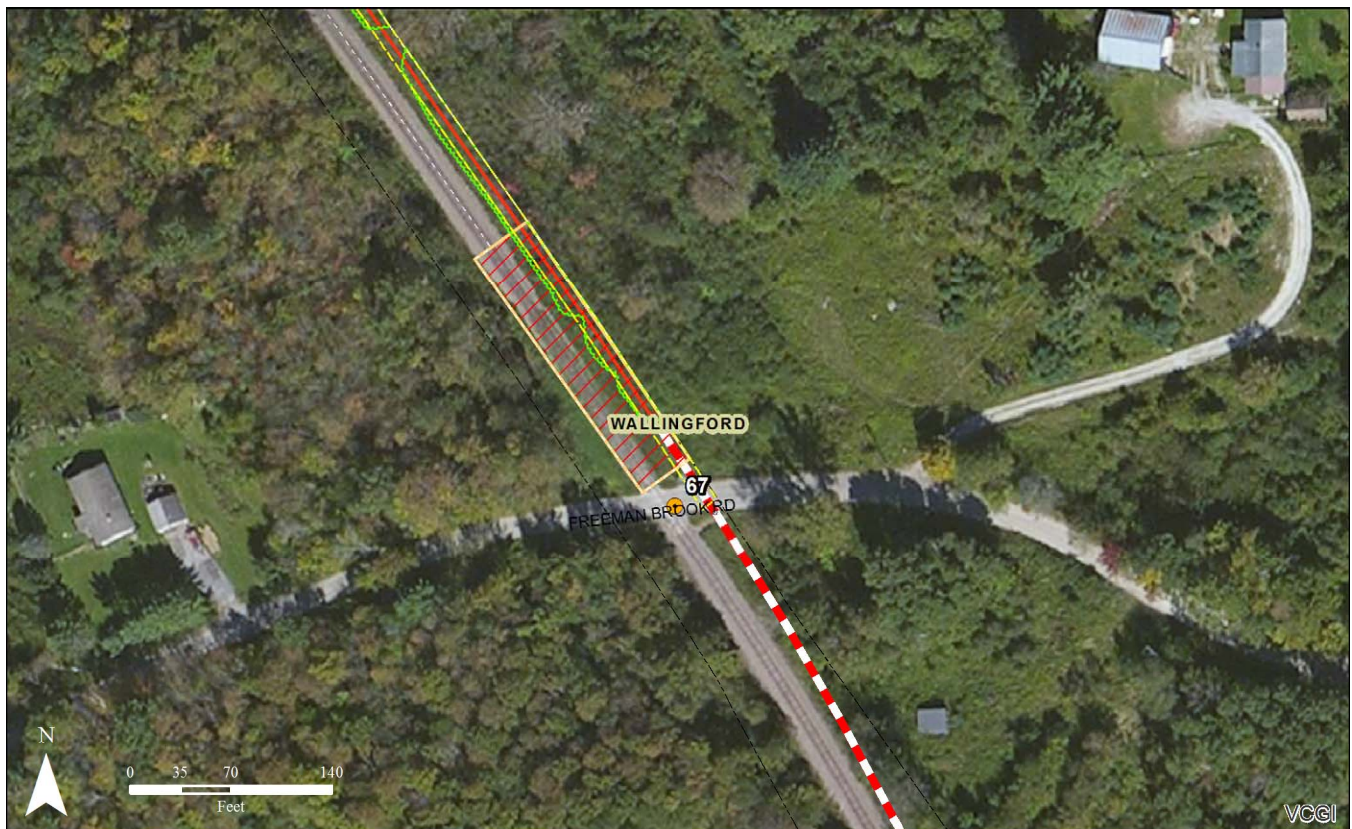


Viewpoint 100: View looking southeast from Shunpike Road at hedgerow of trees to be removed along the railroad.



Viewpoint 101: View looking west along Shunpike Road. Trees towards the left of the photo, at the back of the field adjacent to the road will mostly be cleared to install the cable along the railroad.

Freeman Brook Road, Wallingford: Class 3 Town Highway



Assessment Map 39: Project crossing of Freeman Brook Road in Wallingford while staying parallel to the railroad.



Viewpoint 67: View looking north at HDD staging area in foreground. The woods in the mid and background along the north (right) side of the tracks will be cleared 40 feet back from the edge of the closest rail.



Viewpoint 67: The line will be installed by HDD from north of Freeman Brook Road to south of Old Turnpike Road and will not require clearing along the side of the railroad in this image looking south from Freeman Brook Road.

Vermont Route 103, Wallingford: Class 30 State Highway



Assessment Map 40: Where the railroad crosses the Mill River, the Project returns to alongside Vermont Route 103.



Viewpoint 69: A 50-foot wide corridor will be cut alongside the railroad where the line descends the slope to meet with Vermont Route 103 and clearing for a HDD staging area is proposed at this location.



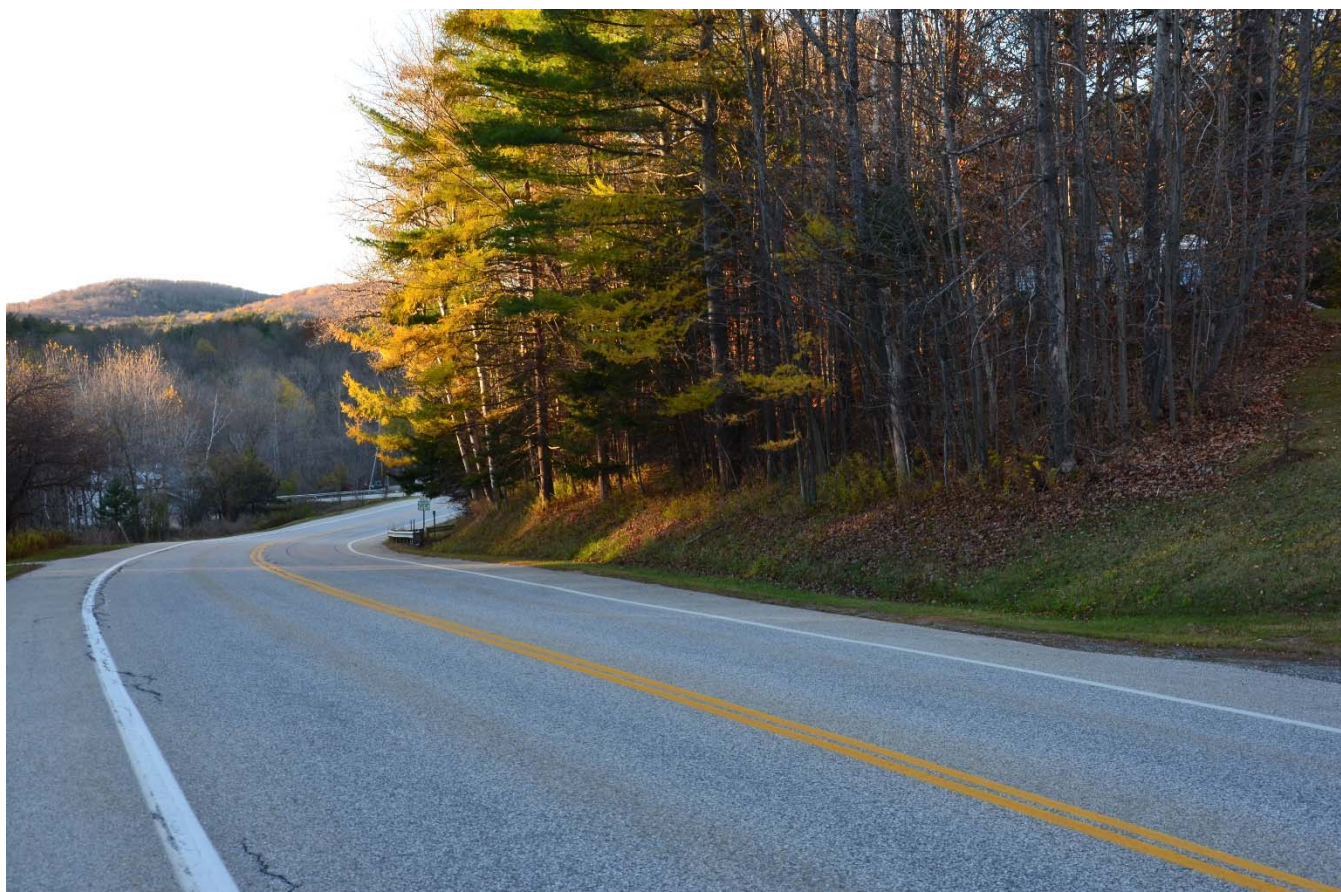
Assessment Map 41: As the Project proceeds through the village area of East Wallingford, the line will be installed along the east / north side of Vermont Route 103 and will require clearing of roadside vegetation.



Viewpoint 70: Vegetation along the east side of Vermont Route 103 when entering East Wallingford Village, between the edge of Route 103 and the gravel drive, will be removed.



Viewpoint 71: View looking north at vegetation to be removed from the road embankment in East Wallingford Village.

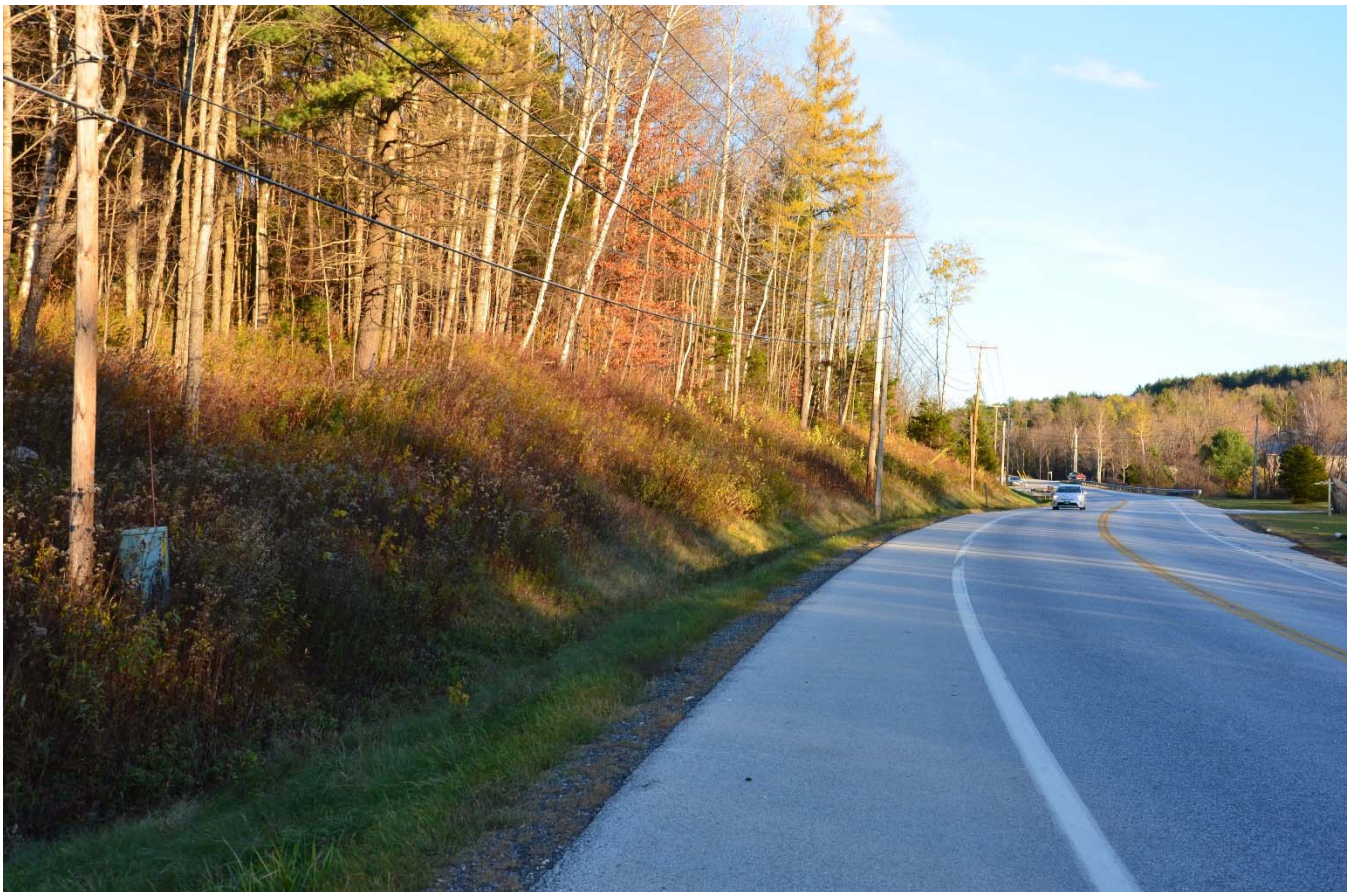


Viewpoint 72: View looking northwest from the southern end of Vermont Route 103 through East Wallingford Village. The existing edge of the woods will be cut up to 25 feet further away from the edge of the road at this location.

Vermont Route 103, Mount Holly: Class 30 State Highway



Assessment Map 42: The Project continues along Vermont Route 103 into Mount Holly. The area near MP 139.2 shows a typical location where the line will be installed within the existing clearing alongside the road.



Viewpoint 74: View looking east along Vermont Route 103 in Mount Holly. The line will not require clearing of roadside vegetation. Overhead utility lines will need to be relocated.



Assessment Map 43: This map depicts the line as it proceeds along the north side of Vermont Route 103 through the center of Mount Holly.



Viewpoint 75: View looking east along Vermont Route 7 at the center of Mount Holly. The small clump of trees at the northeast corner of this intersection, just left of the center of this photo, will be removed to install the cable.



Assessment Map 44: Another example further east along Vermont Route 103 in Mount Holly, illustrating the wide open areas along the road, which will allow the Project to be installed with little visual change after construction is completed.



Viewpoint 76: View looking northeast along Vermont Route 103 in Mount Holly.



Assessment Map 45: Further east along Vermont Route 103. This location is an example of where the line will not require removal of the adjacent line of evergreen trees, but construction could damage the roots within the critical root zone of the tree.



Viewpoint 77: View looking north at a row of evergreen trees planted as a buffer along Vermont Route 103.

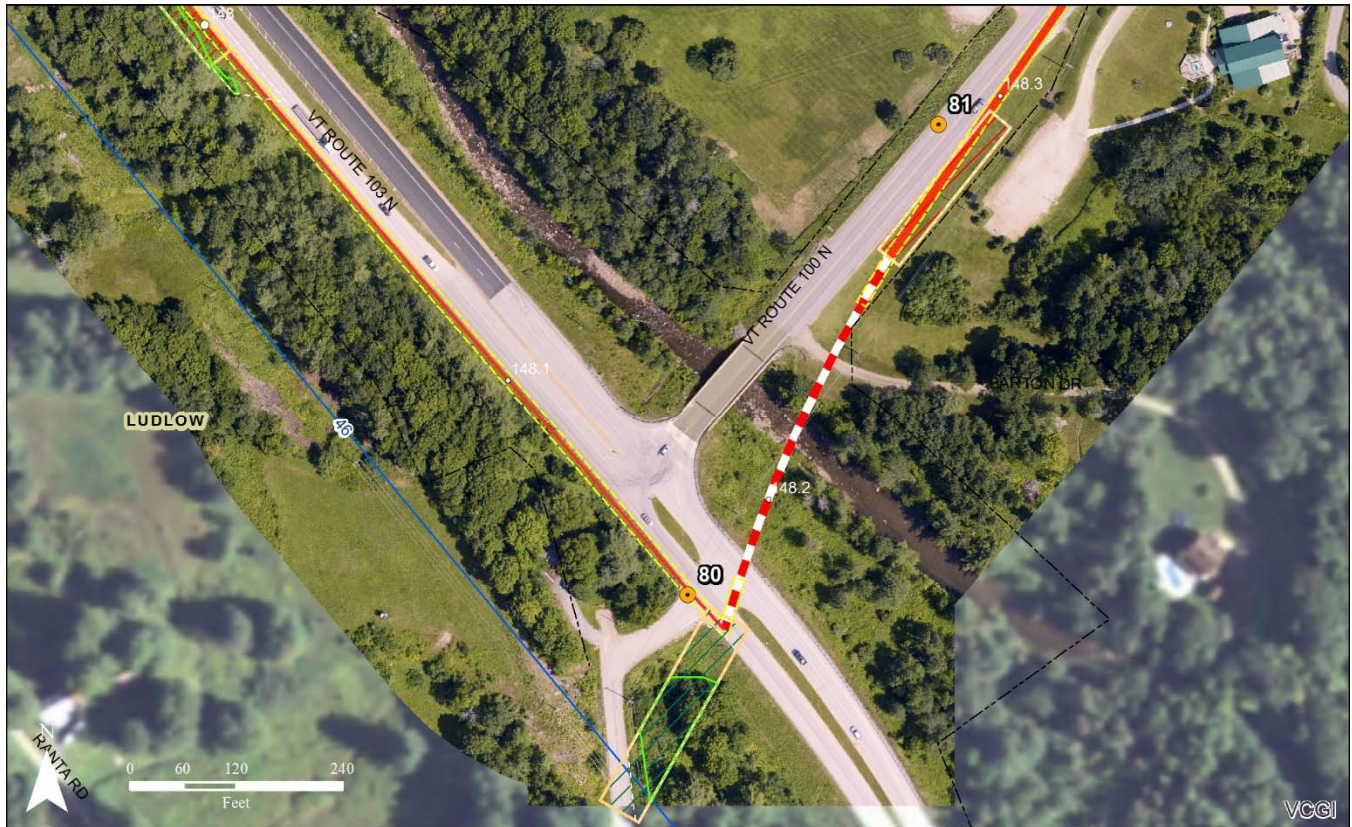
Vermont Route 103, Ludlow: Class 30 State Highway



Assessment Map 46: In Ludlow, the line runs along the south/west side of the road and is typically located very close to the paved shoulder and will result in minimal clearing of roadside vegetation.



Viewpoint 79: View looking southeast along Vermont Route 103 in Ludlow. The line will be installed immediately adjacent to the paved shoulder of the road.



Assessment Map 47: At the intersection with Vermont Route 100, the Project will leave Vermont Route 103 and continue northeast along Route 100.



Viewpoint 80: View looking south at HDD staging area where the line will turn to follow Vermont Route 100 *Wide Angle Zoom

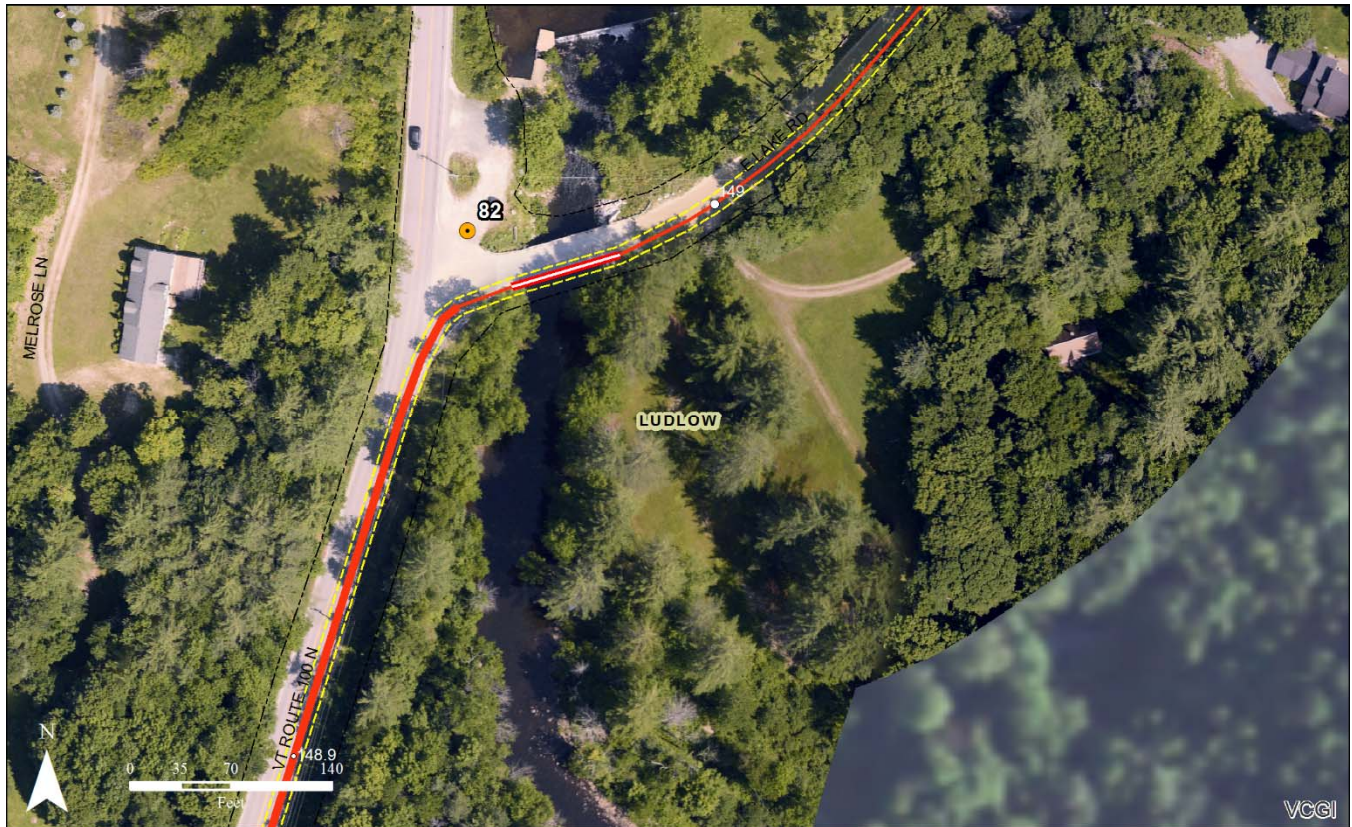
Vermont Route 100, Ludlow: Class 30 State Highway



Assessment Map 48: After the line crosses beneath the



Viewpoint 81: View looking northeast along Vermont Route 100. The line will be buried beneath the paved surface of the road and will not require any construction activities off the pavement.



Assessment Map 49: For the entire extent along Vermont Route 100, the line will be located beneath the paved road surface. Prior to MP 149.0, the Project route will leave Route 100 and continue up East Lake Road.



Viewpoint 82: View looking south along Vermont Route 100 from the intersection with East Lake Road.

East Lake Road, Ludlow: Class 3 Town Highway



Assessment Map 50: After the line leaves Vermont Route 100, it will navigate a short series of dirt surfaced, class 3 town roads before terminating at the proposed converter station. The line will be buried beneath the road surface and generally, there will not be any clearing of vegetation along the side of these roads. Viewpoint 84 is on East Lake Road.



Viewpoint 84: View looking north along East Lake Road.

Pettiner Hill Road, Ludlow: Class 3 Town Highway



Assessment Map 51: From East Lake Road, the line will turn to the southeast and continue along Pettiner Hill Road.



Viewpoint 87: View looking southeast along Pettiner Hill Road.

Nelson Road, Ludlow: Class 3 Town Highway



Assessment Map 52: After the intersection with North Hill Road, Pettiner Hill Road turns into Nelson Road. The Project enters the proposed converter station from Nelson Road

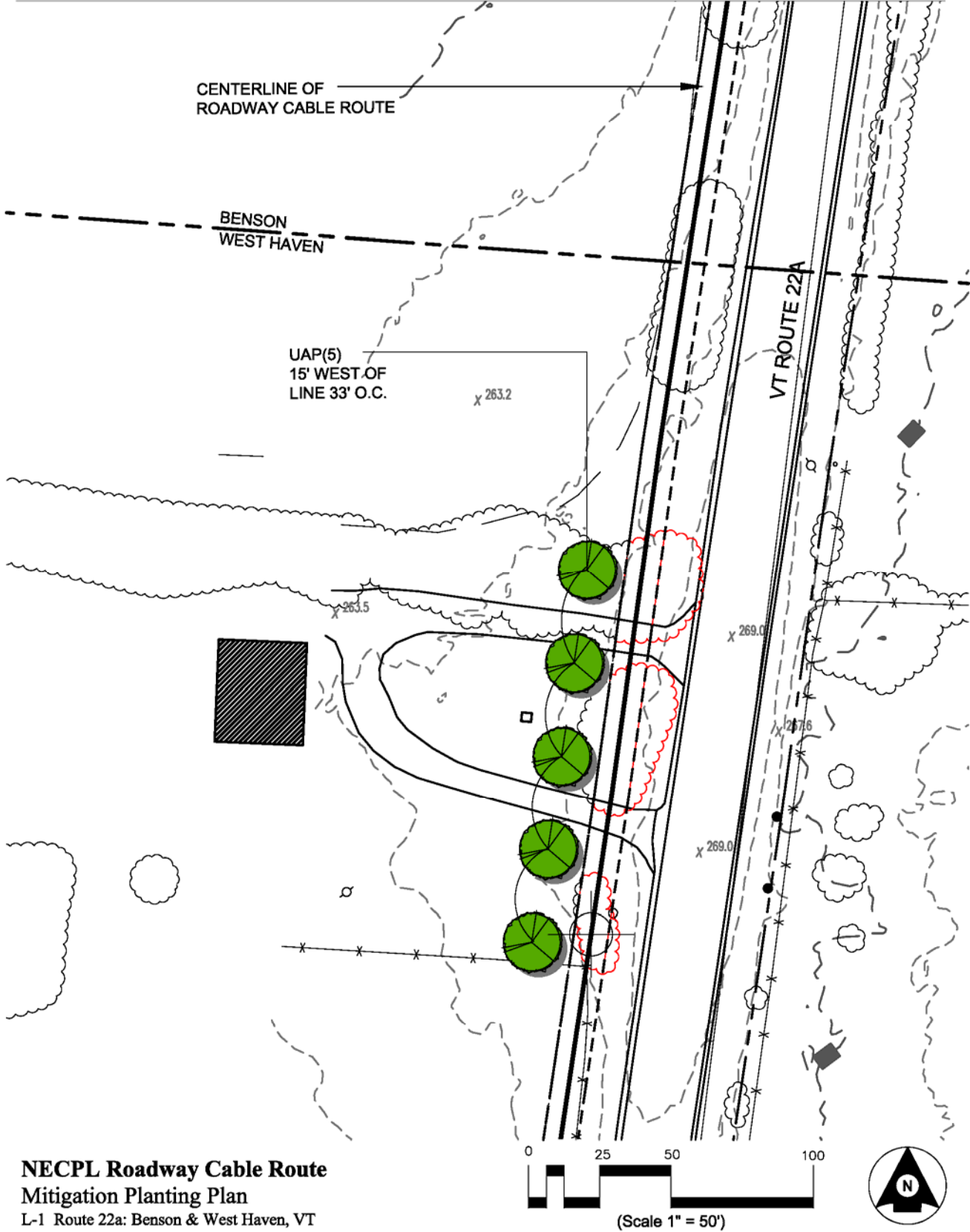


Viewpoint 88: View looking south along Nelson Road.

Appendix B

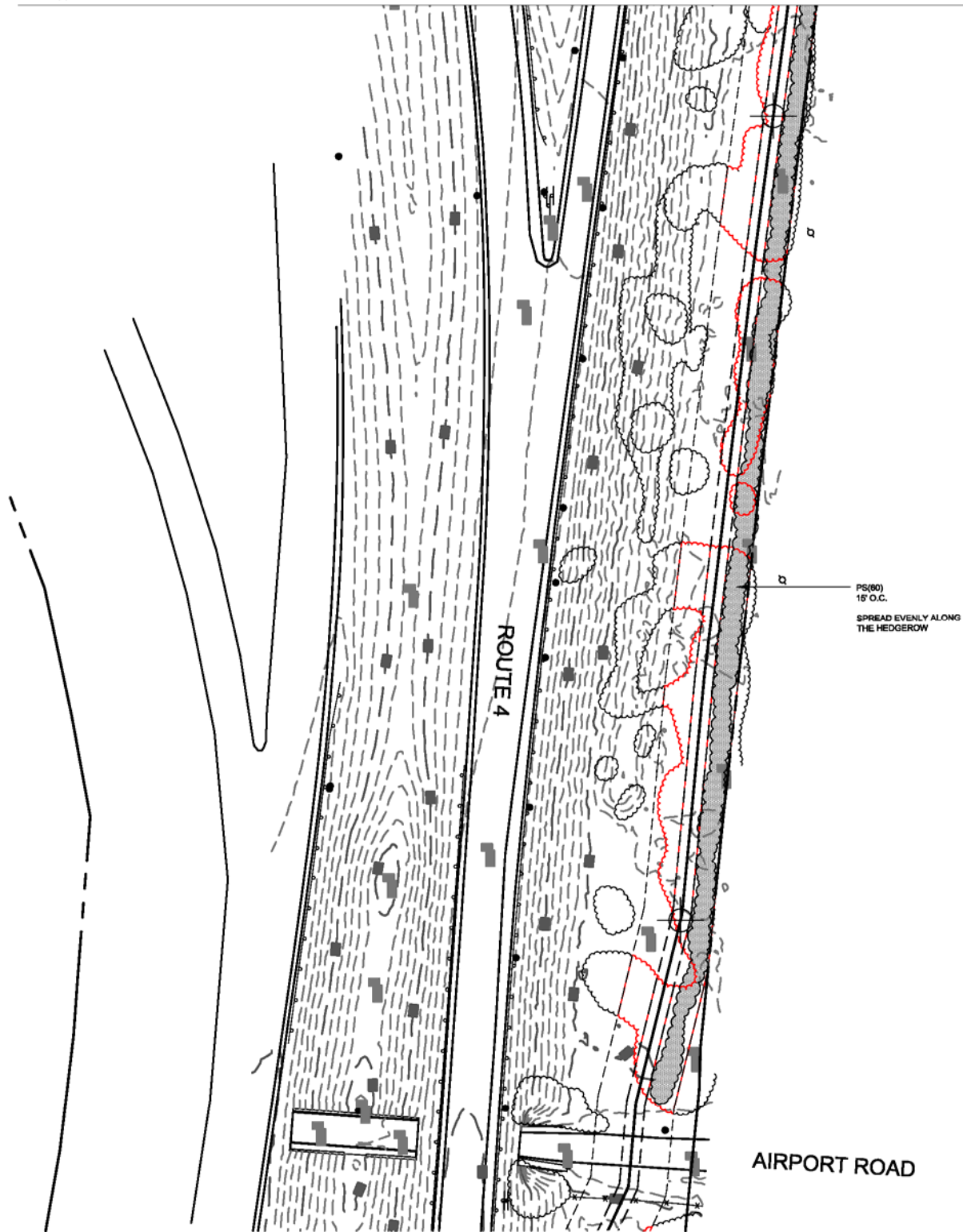
Landscape Mitigation Planting Plans

QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
5	UAP	Ulmus americana 'Princeton'	Princeton Elm	2" Cal.	B&B		Medium	50-70'
5								



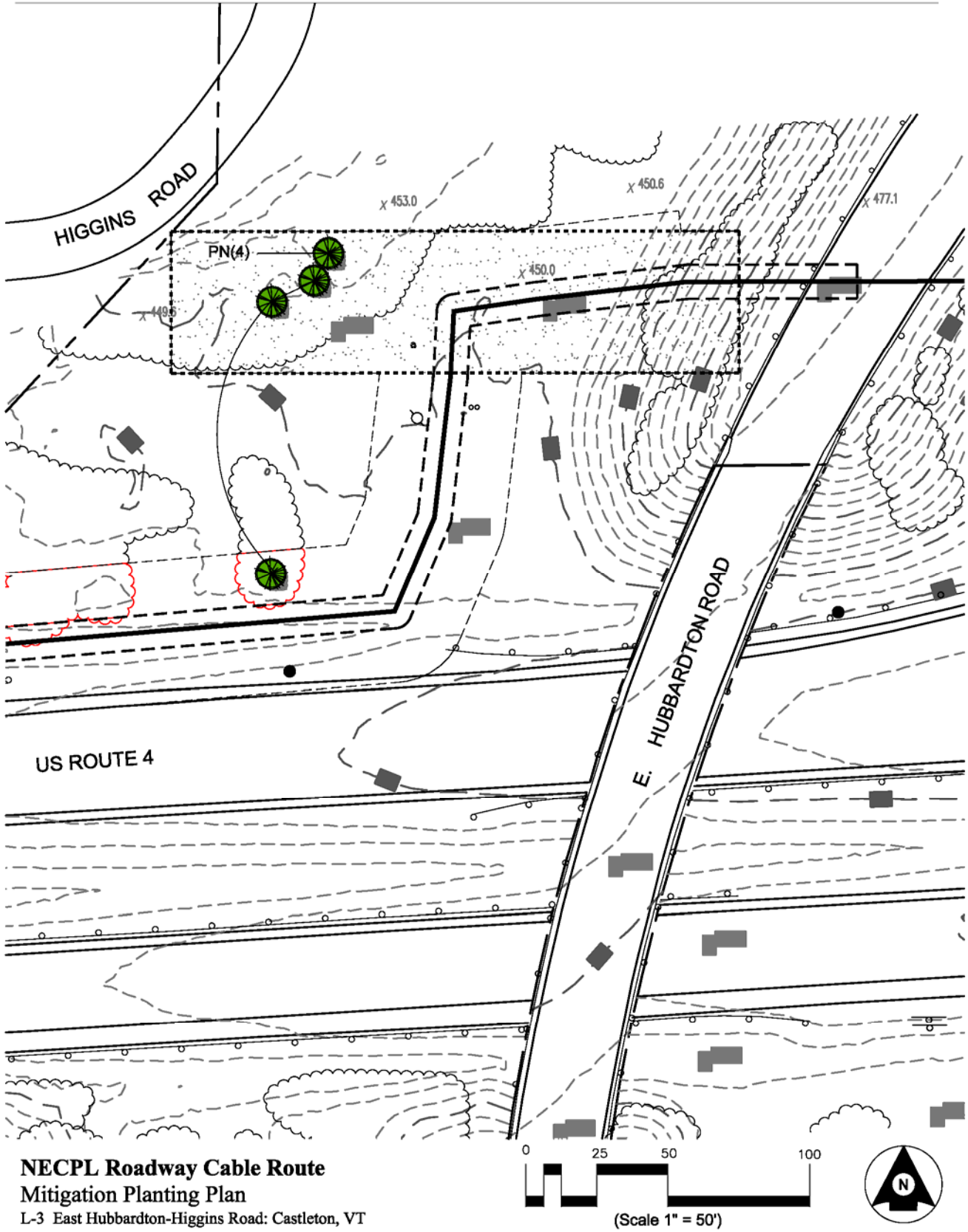
NECPL Roadway Cable Route
Mitigation Planting Plan
L-1 Route 22a: Benson & West Haven, VT

QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
60	PS	PINUS strobus	White Pine	6' Ht.	B&B		Fast	70-100'
60								



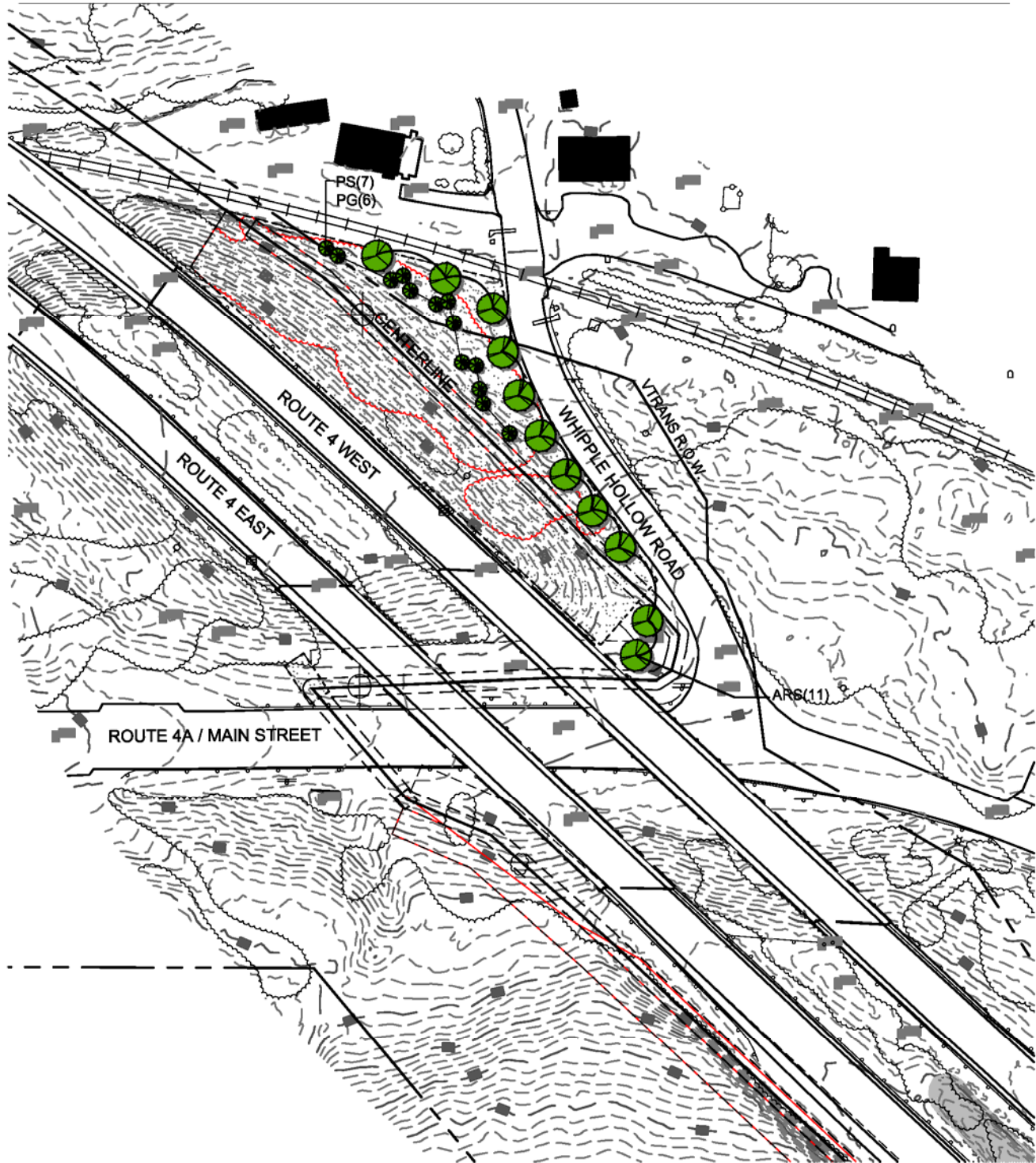
NECPL Roadway Cable Route
Mitigation Planting Plan
 L-2 Route 4/Airport Road: Fairhaven, VT

QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
4	PN	PINUS nigra	Austrian Pine	6' Ht.	B&B		Medium-Fast	50-70'
4								



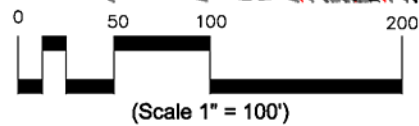
QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
11	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'
6	PG	PICEA glauca	White Spruce	6' Ht.	B&B		Medium	40-60'
7	PS	PINUS strobus	White Pine	6' Ht.	B&B		Fast	70-100'

24

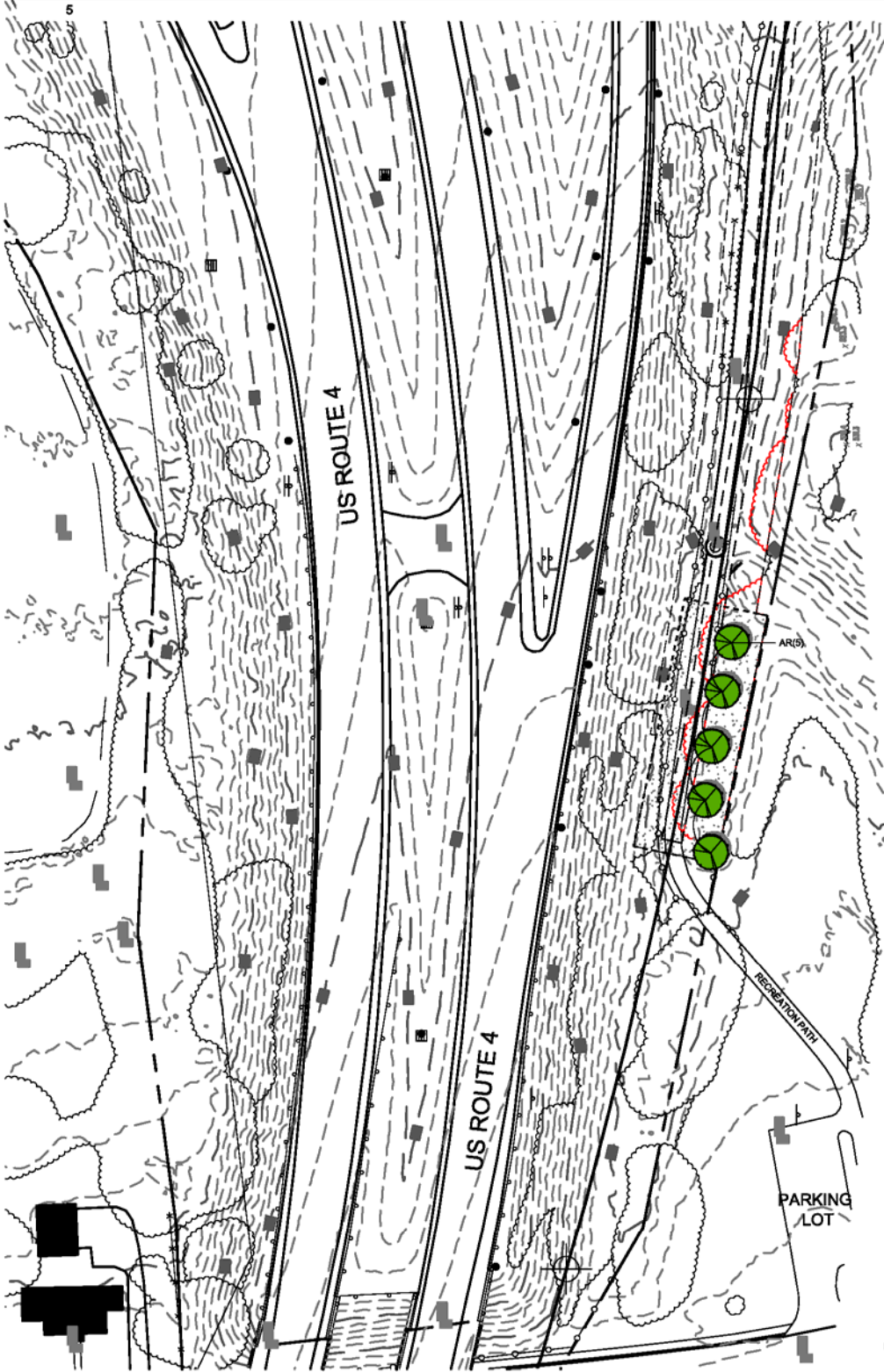


**NECPL Roadway Cable Route
Mitigation Planting Plan**

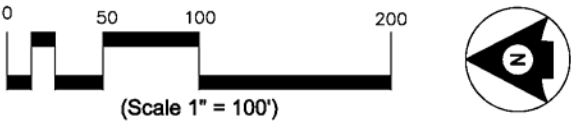
L-4 Route 4a & Whipple Hollow Road: West Rutland, VT



QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
5	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'



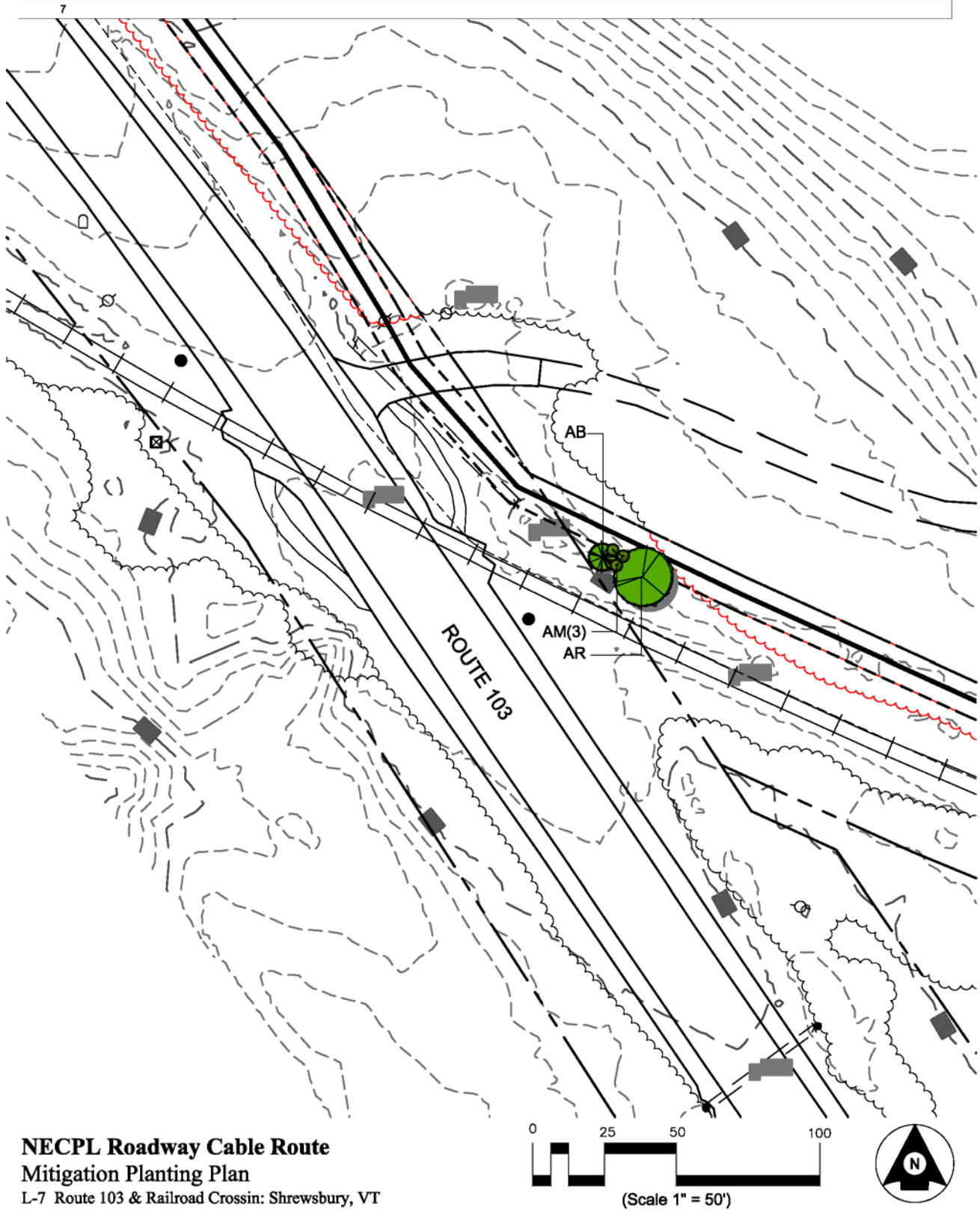
NECPL Roadway Cable Route
Mitigation Planting Plan
L-5 West Rutland Rec Path: West Rutland, VT



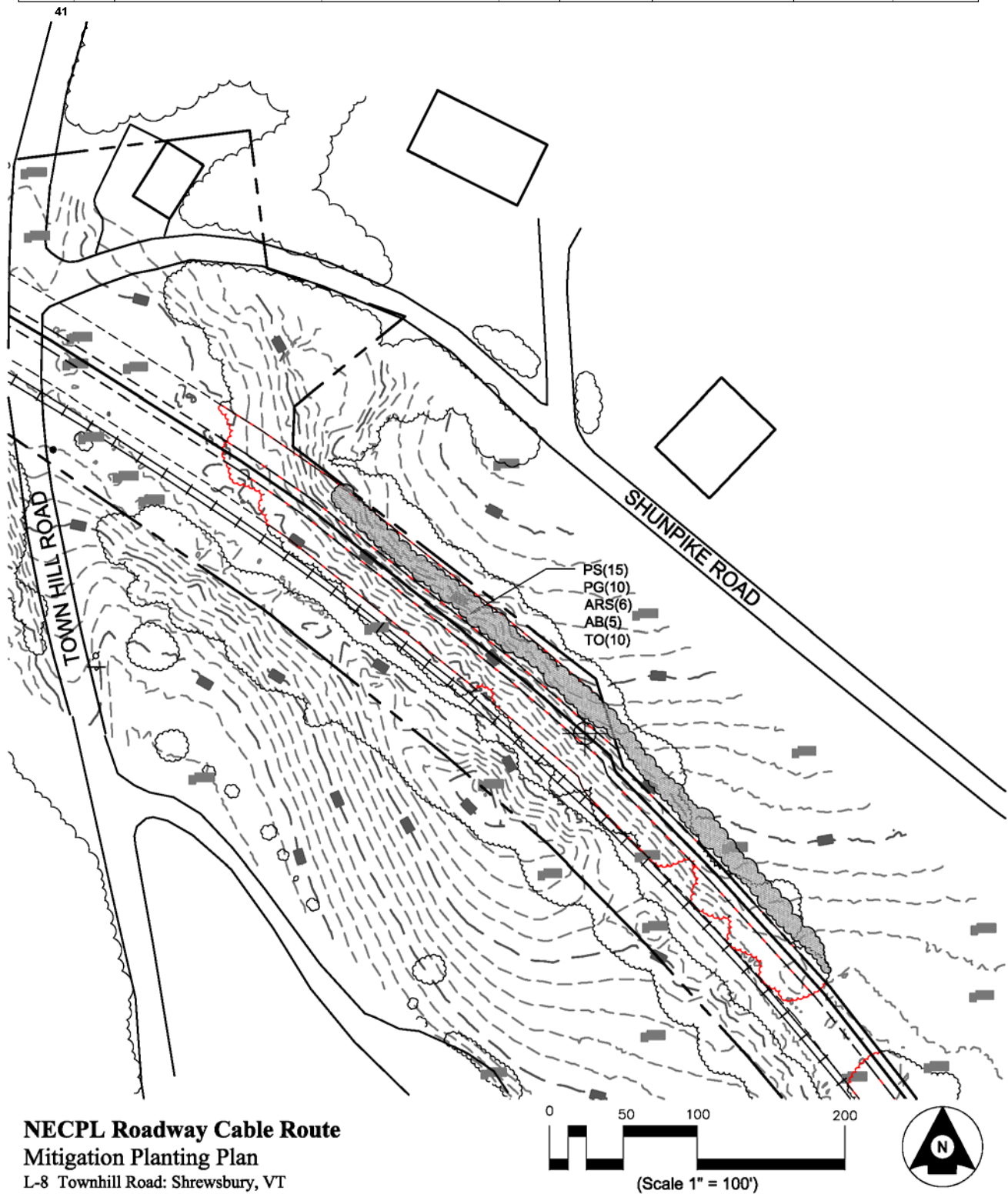
QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
3	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'
3	AL	AMELANCHIER laevis	Alleghany Serviceberry	6' Ht.	B&B		Medium	20-25'
7	PG	PICEA glauca	White Spruce	6' Ht.	B&B		Medium	40-50'
10	TO	THUJA occidentalis	White Cedar	5' Ht.	B&B		Medium	20-30'



QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
1	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'
3	AB	ABIES balsamea	Balsam Fir	6' Ht.	B&B		Slow	30-40'
3	AM	ARONIA melanocarpa	Black Chokeberry	36" Ht.	No. 5 Cont.		Medium	3-6'



QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
3	AB	ABIES balsamea	Balsam Fir	6' Ht.	B&B		Slow	30-40'
6	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'
10	PG	PICEA glauca	White Spruce	6' Ht.	B&B		Medium	40-60'
15	PS	PINUS strobus	White Pine	6' Ht.	B&B		Fast	70-100'
10	TO	THUJA occidentalis	White Cedar	5' Ht.	B&B		Medium	20-30'



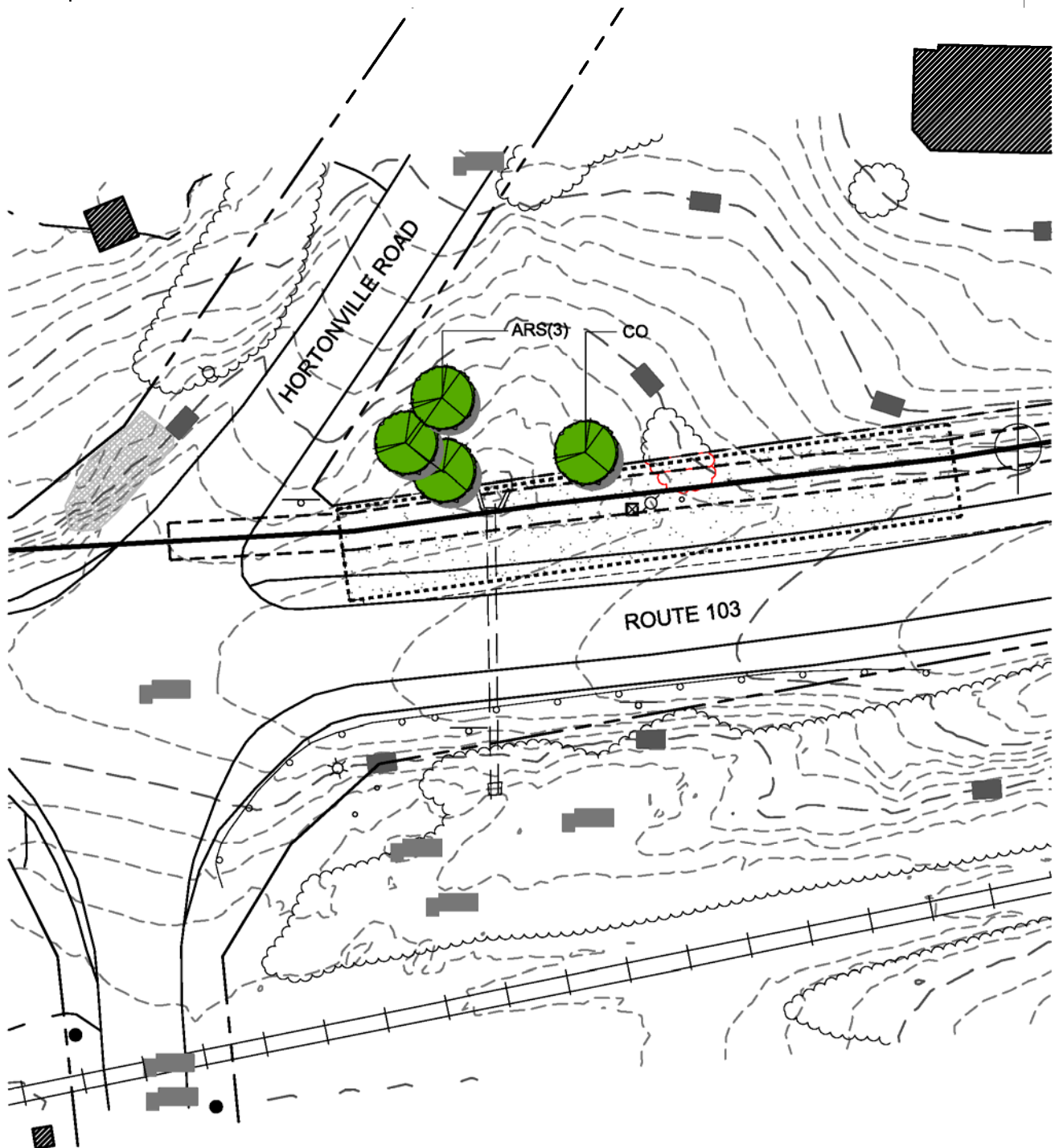
QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
2	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'
5	PS	PINUS strobus	White Pine	6' Ht.	B&B		Fast	70-100'



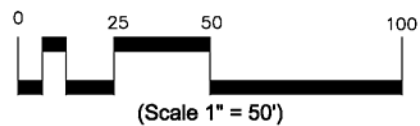
NECPL Roadway Cable Route
Mitigation Planting Plan
L-9 Route 103: Wallingford, VT

QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
3	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'
1	CO	CELTIS occidentalis	Common Hackberry	2" Cal.	B&B		Medium to Fast	40'

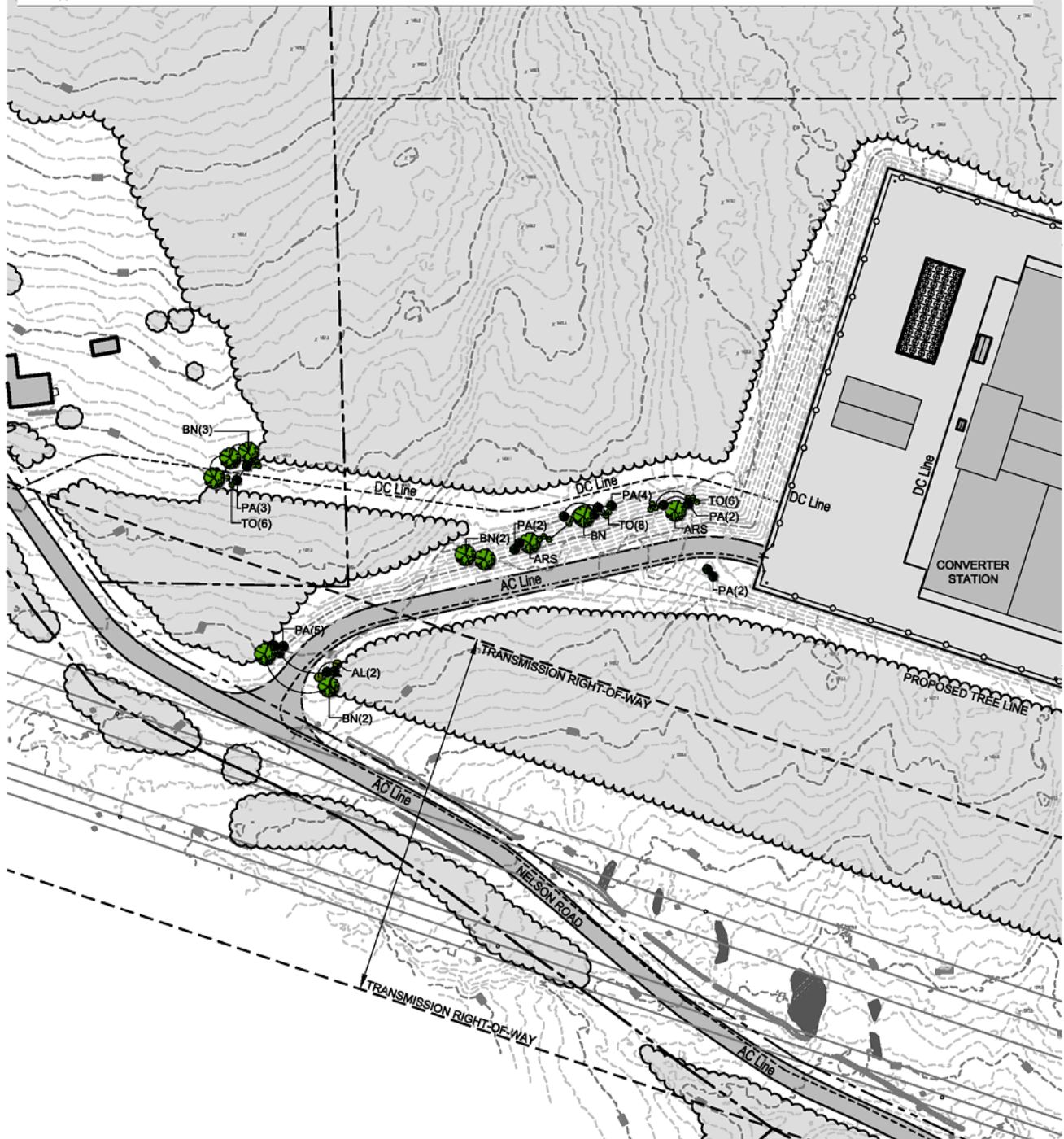
4



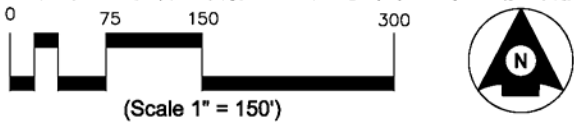
NECPL Roadway Cable Route
Mitigation Planting Plan
 L-10 Route 103-Hortonville Road: Mount Holly, VT



QTY	CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT
2	ARS	ACER rubrum 'Somerset'	Somerset Red Maple	2" Cal.	B&B		Medium to Fast	30'
2	AL	AMELANCHIER laevis	Alleghany Serviceberry	6' Ht.	B&B	multi-stem, 3-4 stems	Medium	20-25'
8	BN	BETULA nigra	River Birch	10' Ht.	B&B	multi-stem, 3-4 stems	Medium to Fast	30-50'
18	PA	PICEA abies	Norway Spruce	6' Ht.	B&B		Medium	40 - 60'
20	TO	THUJA occidentalis	White Cedar	6' Ht.	B&B		Medium to Fast	20-25'
50								



NECPL Converter Station
Mitigation Planting Plan
L-11 Converter Station: Ludlow, VT



Appendix C

Town and Regional Plan Excerpts: Clear Written Community Standards

Town of Alburgh

Town Plan

Adopted July 26, 2011

minimum state standards for wastewater disposal are met.

Objectives:

- N 3. Develop Town owned lakeshore in Alburgh Center.
- N-4 Improve and develop additional bicycle-friendly facilities and address the need for safer bicycle routes through town

Land Use

Goals:

Maintain economically and environmentally sound farms in Alburgh.

To preserve and protect scenic resources, including significant scenic roads, waterways and views, and important landscape features of the town.

To ensure that development in Alburgh is compatible with existing land uses.

To ensure that development occurs in areas where it will not impact water quality.

To ensure that development occurs only in those areas where soils are capable of supporting it with adequate depth to bedrock, stability and which do not have high water tables.

Policies:

- L-A. Discourage the subdivision of land into “spaghetti” lots, parcels of land that are exceptionally long and narrow.
- L-B. Support the conservation of agricultural lands and natural resources with a variety of strategies including purchase of development rights and local policies that encourage conservation.
- L-C. Protect water quality by limiting development in Wellhead Protection Areas, wetlands and along streambanks.
- L-D. Protect Lake Champlain water quality by discouraging development along the lakeshore closer than 50 feet from the high water mark of 99 feet above sea level.

Municipal Buildings



A Town Office building was constructed in 2004 in front of the Fire department building that was constructed in 2003. The library that was once in the same building as the Alburgh Town Clerk's Office was moved into its own building, freeing up more space for both the Library and the Clerk's office.

The library is run mostly by volunteers with the help of the town, donations, grants. In 2003, eighteen volunteers

donated 1,024 hours of their time. About 75% of their income comes from the town with the rest from grants, fund raisers and donations (Town of Alburgh, 2003)

Communications

Currently Alburgh is not served by a cable company but has been assigned a cable franchise by the State of Vermont., Grassroots Cable or Island Cable will be assigned to the town. People generally use conventional and satellite access television

The local telephone service is provided by Fairpoint New England with access to a variety of long distance providers. Residents of the town are able to access a variety of high kilowatt radio stations transmitting from Burlington, St. Albans as well as from New York and Canada.

There is one local daily newspapers published in the northwest region of Vermont, the St. Albans Messenger. The area is also served by a statewide daily, The Burlington Free Press. The County Courier, a weekly serving Franklin County and Alburgh; and the Islander, serving Grand Isle County also provide newspaper coverage for the town.

Proposals for new towers, upgrades to existing facilities, and upgrades to similar structures such as high voltage electric transmission lines must adequately address the following issues to be found compatible with this Plan:

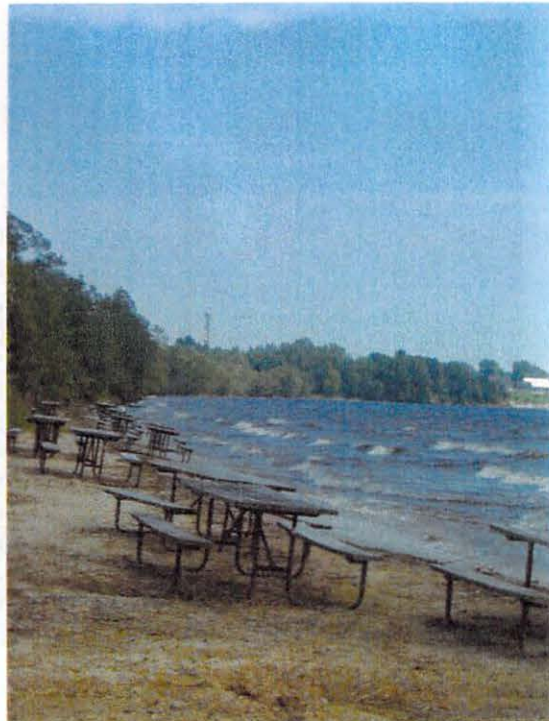
- ❖ All such facilities shall be located in appropriate areas, respecting the integrity of residential areas, aesthetic concerns, agricultural uses and natural resources. Protection of scenic beauty is of great importance.
- ❖ Wherever possible, facilities shall be co-located at or on existing structures or facilities, unless the Planning Commission determines that separate facilities will create less visual impact or disturbance to the community.
- ❖ Towers, related facilities and similar structures shall only be as tall as absolutely necessary. Where towers are located within treelines, they should be made

extendable, so they can “grow” with the trees, and maintain the minimum height above the treetops.

- ❖ Unless required by the FAA, towers shall not be illuminated. Where required, lights shall be shielded in order to minimize aesthetic impacts, and so that light is cast only where needed.
- ❖ Structures shall be designed to minimize aesthetic impacts. Equipment sheds can be hidden in trees; depending on site-specific circumstances, tower structures may be monopole or lattice, of appropriate colors and minimal reflectivity, or even disguised as steeples, trees or as part of silos. Towers, related facilities and similar structures shall be screened from view to the greatest extent possible.
- ❖ Electric or transmission lines shall be installed so as to minimize aesthetic and ecological impacts.
- ❖ Any permits granted for these facilities shall be for a limited time period. This will allow for periodic review, and new permit conditions reflecting advances in knowledge, experience and technology. Equipment shall be downsized as technology advances, and removed when no longer used or needed.
- ❖ Any towers, related facilities and similar structures that are not operated for a period of twelve (12) months shall be considered abandoned and hazardous to public health and safety, unless the owner of the said facility provides proof to the contrary through quarterly inspections. The owner shall remove the structure within 90 days of receipt of a declaration of abandonment from the Selectboard notifying the owner of such abandonment. A bond may be required to ensure that funds are available to accomplish these purposes.
- ❖ The Planning Commission may modify the above requirements if they determine such modifications to be necessary to protect public health, safety or welfare, or to promote the town goals outlined in this Plan.

Recreation

Alburgh is a town rich with recreational opportunities. Triangular in shape, the town is bordered on two sides by Lake Champlain, the town’s population swells in the summer with people coming to enjoy Alburgh’s lakeshore. In the winter ice fishing draws many outdoor enthusiasts, including many Canadian visitors. Many people access the lake from private land along the lake. Public access to the lake includes three public access points owned by Vermont Fish and Wildlife. Major public recreation facilities include the newly designated Alburgh Dunes State Park and the Alburgh Rail Trail. Smaller recreational facilities open to the public include the Alburgh Community Park and the park at St. Amadeus Parish.



Town of Benson

Comprehensive Town Plan

Adopted April 1, 2013

Open Space and Scenic Resources

Protecting Benson's open spaces and scenic resources for the enjoyment of present and future generations is a priority where consistent with efficient highway maintenance and safety considerations. Benson's diverse landscape includes rich agricultural lands, scenic ridges and wooded hills, unique wildlife habitats, streams and lakes, historic areas, and tree lined roads. A prime goal is to preserve and enhance Benson's uniqueness.

The Town has chosen not to specifically identify specific scenic roads, waterways and views but rather to consider the totality of the Town as such. These sites are far too numerous in Benson. Rather the Town has chosen to protect these sites by the 20 acres density requirement in the Land Use Regulations, the policy of no new roads and the restrictions on any major development. In addition, infrastructure limitations also protect these resources. Benson is a Town with tight clay soils and the cost of community water and waste facilities is prohibitive which discourages development

The Use Value Program was established by the legislature "to encourage and assist in the maintenance of Vermont's productive agricultural and forest land." Other stated anticipated outcomes include conservation, preservation, and protection of land and prevention of accelerated conversion to more intensive use.

The Vermont Land Trust has conserved many farms in Benson. Similarly, The Nature Conservancy has purchased land in Benson, and bought the conservation easements on land in Benson. The Poultney Mettowee Natural Resources Conservation District is protecting and replanting the clayplain forest in Benson. The Town should continue to support such efforts, especially when they protect water quality, watersheds, wetlands, and ecosystems.

Conservation Commission

State statute enables Towns to establish Conservation Commissions of 3-9 members. Conservation Commissions are advisory not regulatory in nature. The Town of Benson has opted not to establish a Conservation Commission.

Natural Resources Goals, Policies and Programs

1. Agriculture and Forestry

- Support small and family farms and encourage development of additional small and family farms.
- Encourage farming that provides a local food source to Town residents.
- Support the conservation of land for agricultural usage.
- Support clayplain forest restoration.
- Encourage landowners to preserve trees and other vegetation in existing clay plain forest fragments.
- Encourage the expansion of a "wooded corridor" that connects clayplain forest fragments along the edges of streams and rivers.

2. Water Resources

- Encourage the protection of the quality of ground water and water of our lakes, natural ponds, streams and rivers to protect drinking water, swimming, recreation, wildlife habitat, and fish consumption.
- Support the Partners For Fish and Wildlife project to protect stream and river banks.
- Encourage landowners to create buffer zones between waterways and agricultural and silvicultural land.
- Limit development along waterways, lakes and ponds.
- Discourage the use of pesticides and herbicides that contaminate water (both ground and surface waters).
- Protect wetlands from degradation.

3. Flood Hazard Areas

- Control development within the flood plain zones and enforce Town Flood Hazard Regulations.

4. Fragile, Unique Habitats and Open Space and Scenic Resources

- **Preserve and enhance Benson's uniqueness.**
- Encourage the identification and protection of ecosystems for rare, threatened and endangered species, environmentally fragile areas, critical wildlife habitats, wildlife corridors and unique natural areas in Benson, with the cooperation of landowners.
- Support efforts for ecological restoration.

5. Additional Goals

- Promote proper habitat for wild game and maintenance of naturally occurring plants and animals.
- Promote the preservation of lands and resources for recreational purposes.
- Support State efforts for compliance with State and Federal air quality regulations.

It is the Selectboard's policy not to accept or encourage new roads in Town. The Town has adopted State standards for access management of the Town's roads and the Town's land use regulations include restrictions on access to Route 22A; however, the State controls Route 22A access. The Town policy of restricting the construction of new roads and the implementation of several roadside ditching projects in recent years is reducing the negative impact of our road system on the environment.

A road classification system primarily based on types and volumes of traffic and connections to other roads and communities is used to group similar types of roads and allocate resources. Benson has no Class 1 roads; 14.960 miles of Class 2 roads; 36.61 miles of Class 3 roads; 4.18 of Class 4 roads; and 6.276 miles of State highway (Route 22A) for a total of 62.026 miles of highways.

In 2008, the Town discontinued all roads not included on the Town Highway map. Benson's transportation system is shown on the attached Community Facilities, Transportation and Education map.

The surface conditions of Benson's roads vary. Benson has mostly gravel roads, and a few paved roads. The paved roads are: Route 22A, Route 144, Hulett Hill Road, a portion of East Road, a portion of Lake Road, a portion of Sunset Lake Road and Stage Road in the Village area. The condition of these roads is good to excellent. The condition of gravel roads in Benson is largely dependent upon the weather conditions and season. Generally the roads are considered acceptable, and the Selectboard has created and updated a highway infrastructure report indicating conditions and areas for improvement. The report covers road surfaces, ditches, roadside trees, culverts, bridges and the 2000 foot storm drain in Benson Village. The Selectboard is responsible for the maintenance of the Town highways.

Generally, Benson is a rural Town and the highways are scenic rural roads. Many are tree lined with full or partial tree canopies. Vistas and long views of Benson's rolling landscape help to enhance the Town's charm and character. Roadside trees and vegetation have a role in erosion control as well as protecting the quality of our surface waters from road runoff. Protection of roadside vegetation is a consideration as well as maintaining safe visibility on Town Highways when doing highway maintenance projects.

Parking facilities in Benson are generally adequate at this time, except for the lack of parking in the village and in public access areas, such as along Sunset Lake and at Benson Landing and at the school. As the population increases, parking solutions need to be studied and recommendations considered for implementation. The Recreation Plan includes specific recommendations for additional parking in the area adjacent to the Town office and at the school. On road parking is authorized by the Traffic Ordinance at Sunset Lake when implemented by the Selectboard

Benson's Highway System

Minor Arterial Highways

VT 22A is the only arterial highway in the Town of Benson. A part of the National Highway System, VT 22A bisects Benson connecting Vergennes, to the north, with Fair Haven, to the south. Route 22A is the most important route for entering and exiting the Town, and is a heavily trafficked highway which is frequented by both light and heavy trucks, passenger vehicles and farm machinery. Traffic counts in 2002, 2004 and 2006 show adjusted average daily traffic (AADT) volumes ranging from 4,500 vehicles on the northern section to 3,400 to the south, with little or no change over that 4-

Unemployment Rate

Year	Unemployment Rate		
	<i>Benson</i>	<i>Rutland County</i>	<i>Vermont</i>
2000	2.6%	3.0%	2.7%
2001	2.8%	3.5%	3.3%
2002	3.8%	4.1%	4.0%
2003	3.5%	4.9%	4.5%
2004	2.8%	4.1%	3.7%
2005	2.4%	3.7%	3.5%
2006	2.6%	4.0%	3.7%
2007	2.4%	4.3%	3.9%
2008	3.2%	5.3%	4.5%
2009	6.8%	8.3%	6.9%
2010	6.6%	7.4%	6.4%
2011	5.9%	6.7%	5.6%
Source: VT Department of Labor			

According to the 2010 American Community Survey 5-Year Estimates, of the approximately 821 residents in Benson over 16 years of age, 535 were in the labor force. Forty were unemployed, which represented 4.9% of the civilian labor force. There were 286 people in Benson over the age of 16 who were not in the labor force.

Economic Development Goals, Policies and Programs

Tourism and agriculture are of importance to Benson's economy. Tourism brings customers to many of the Town's businesses; and for this reason, the Town's rural and scenic character and the well preserved ambiance of its village should be a consideration in land use decisions. There are 22 farms according to the most recent Listers' data and 14 woodland properties in the Town of Benson.

While Benson is a farming community, the Town also supports a range of other businesses and pursuits. There are 16 commercial properties and one commercial apartment in the Town of Benson according to the most recent Listers' data. The number of commercial properties has increased by 60% during the last 10 years. Business growth over the last decade has been steady, and additional businesses may move to the Town in the future. The most promising and undeveloped aspect of the local economy relates to tourism and recreation. The Town recognizes that tourism and agriculture are closely linked; and that the number of tourists will not increase if Benson's open and beautiful scenery is not maintained. The Town's economic goals are consistent with maintaining Benson's current landscape and maintaining environmental standards.

To improve Benson's economic base:

- Encourage the development of home occupations and cottage industries.
- Encourage the expansion of local businesses.
- Maintain the village core, the character of the Town, and the landscape and natural resources.

Town of West Haven

Town Plan

2009

3.0 Overall Goals and Objectives

3.1 Introduction

The Goals and Objectives of this Plan establish the overall direction for public and private actions that affect land use in the Town of West Haven. They are intended to guide the future growth and development of land and public services and facilities. They are also intended to guide the protection of the environment and the preservation of rare and irreplaceable natural areas, scenic and historic features, and special resources. Insofar as they address energy, they are the Town's statement of policy on the conservation of energy.

3.2 Overall Goals

It is the goal of the Town of West Haven to:

Land Use Goals

Maintain the historic settlement pattern of more densely settled villages and neighborhoods surrounded by working farm and forest land.

Protect and encourage the maintenance of agricultural lands for the production of food and other agricultural products. Conserve all working farmlands, particularly in the three primary farmland sections of town.

Encourage the types, locations and intensities of land use that are compatible with the long-term environmental and economic capability of the community.

Economic Goals

Nurture a strong and diverse economy that provides satisfying and rewarding job opportunities for residents and maintains high environmental and community standards.

Strengthen and protect the town's agricultural economy, including farming, forestry, and related activities.

Transportation Goals

Create a transportation system that promotes the other goals and policies of this plan and makes it easier - not harder - to direct efficient land use patterns and economic development.

Provide and maintain a transportation system that is safe and efficient.

Provide and maintain a transportation system that meets the needs of all segments of West Haven's population

Provide a level of public benefits from each component of the transportation system sufficient to outweigh the social, environmental, economic and energy costs.

Minimize transportation energy consumption and trips.

Water Quality

Improve or maintain water quality.

Establish public access, including visual access, to water and shoreline.

Maintain high quality groundwater and sufficient yields to adequately serve current and future residents of West Haven.

Wetlands Goals

Retain the present amount (no net loss) of significant (Class One and Class Two) wetlands and the values and functions that they serve.

Protect and enhance the ability of wetlands to provide values and functions of significance to the nation and state or of importance to the town.

Wildlife Habitat and Natural Areas Goals

Maintain and improve wildlife habitat and natural areas in the town and region to the fullest extent possible.

Cultural and Historic Resources Goals

Protect and preserve significant historic structures, sites, or districts; known prehistoric archeological sites; and areas where prehistoric sites are likely to be found.

Preserve the historic traditions and values that give West Haven its rural character and make it a special place to live.

Energy Goals

Conserve renewable and nonrenewable energy resources.

Reduce reliance on nonrenewable energy sources such as oil and gas, and increase use of renewable energy sources such as wood, methane, solar and wind.

Public Facilities, Utilities, and Services Goals

Provide educational opportunities that enable every child to become a competent, self-assured, caring, productive, responsible individual and citizen who is committed to continued learning throughout life and prepared for a world of rapid change and unforeseen demands.

Maintain a safe, secure learning environment where quality educational opportunities are provided to all students.

Provide an environmentally sound, and energy and cost efficient system of public facilities and services to meet present and future demands for fire protection, public safety, emergency medical services, water supply, sewage treatment, solid waste management and disposal, and other essential needs.

Provide the desired levels of public facilities and services, including Wireless and land-based telecommunications infrastructure to meet the needs of residents and businesses.

Encourage maximum flexibility for parents to have access to quality child care providers.

Recreation Goals

Maintain and enhance outdoor recreational opportunities and public access to them.

Establish and maintain a community based system of trails and greenways linking village centers, concentrated residential settlements, centers of employment and commerce, public places (eg. schools, parks, churches), and important recreation sites (eg. lakes, ponds, streams, vistas, woodland areas).

Protect and enhance the natural beauty and scenic characteristics of significance to local landscapes, including focal points and characteristics such as:

landscape diversity,
order and harmony of landscape elements,
unique combinations of natural +/- or cultural features,
distinctive distant views,
foregrounds in harmony with distinctive distant views,
skylines,

shorelines,
steep slopes,
agricultural and forest land,
traditional villages and streetscapes,
historic buildings and cultural features,
significant scenic roads and pathways.

Housing Goals

3.3 Overall Objectives

It is the objective of the Town of West Haven to:

Land Use Objectives

Work actively with landowners and land developers to achieve the goals, policies and objectives of this plan.

Approve subdivisions or developments only if they are consistent with the broad goals of the plan.

Conserve undeveloped lands surrounding existing built-up areas.

Discourage strip development along roads.

Base development densities for different areas of town on existing and desired settlement patterns, distance to and availability of town services, physical capability of the land for development, the presence of important natural resources, the size of parcels, the need for affordable housing, and consistency with goals and policies of the town plan.

Conserve the town's primary agricultural soils for agricultural uses.

Economic Objectives

Cooperate with other towns to maintain a balance between jobs created and natural growth in the region's workforce.

Provide housing that meets the needs of a diversity of social and income groups, particularly households of low and moderate income.

Provide safe, sanitary housing that is conveniently located to public facilities and services, and employment and commercial centers.

Participate in Act 250 reviews of business proposals that could accelerate development pressures in West Haven.

Support the creation of job opportunities that enable employees to use fully and develop their skills and abilities.

Support development of local businesses that create markets for locally produced goods and services or which themselves create value added products from locally produced goods.

Encourage manufacturing and marketing of value added agricultural and forest products.

Encourage use of locally grown agricultural and forest products.

Transportation Objectives

Manage roads to meet community level demand and maintain a rural character.

Analyze and compare a reasonable range of alternatives before supporting any new transportation projects, policies or improvements.

Examine alternatives in terms of environmental costs, energy use or

West Haven's primary water bodies—the Poultney and Hubbardton rivers- are both used for recreational and educational opportunities, as well as providing wildlife habitat and harboring archeological resources. In June 1991, the Lower Poultney River was designated as an Outstanding Resource Water (ORW) because of its exceptional natural, cultural, and scenic values.

Lakes and ponds constitute the other surface water resources in West Haven. Major lakes and ponds include Lake Champlain, Coggman Pond, and Billings Marsh Pond. These resources offer recreational opportunities as well as supporting warmwater fisheries. Recently, the discovery of aquatic invasive species, such as the water chestnut, potentially limits their uses. The Nature Conservancy has launched an eradication campaign to manage these aquatic plant infestations.

Discharges to the surface waters in West Haven occur from a variety of sources and involve a wide range of pollutants. Pollution occurs in the form of point source pollutants, or those discharged directly into the water body, and non-point source pollutants, which can include agricultural and other surface runoff that affect the water quality of the rivers and streams. When surface waters become polluted, humans can be affected directly through exposure to pollutant concentrations in the aquatic environment, or indirectly through exposure to secondary impacts, such as algal blooms associated with excessive nutrient discharges. Incidental contact with contaminated water, as well as the consumption of contaminated water or aquatic organisms can also affect human and animal health. Please refer to the Natural Resources Technical Appendix for a detailed discussion of specific pollutants affecting the Poultney and Hubbardton rivers, as well as West Haven's lakes, ponds and streams.

Wetlands

Wetlands are land areas that are saturated with water at least part of the year and include marshes, swamps, sloughs, fens, and mud flats and bogs. Wetlands provide important wildlife habitats, but also provide other benefits such as storing storm water runoff, purifying surface and groundwater supplies, recharging aquifers, controlling erosion, and providing areas for recreation.

Wetland losses may be incurred both directly and indirectly. In addition to direct loss of acreage, the quality of the habitat may deteriorate due to several factors— the infestation of exotic weeds, vulnerability to a variety of pollutants; litter from recreational users; and atmospheric pollutants that alter chemical compositions of wetland waters. Because of their many beneficial functions, direct loss of wetlands due to filling can have dramatic ecological effects besides habitat losses.²

The majority of West Haven's wetlands are found along the shore of Lake Champlain and East Bay; along the banks of Coggman Creek and the Hubbardton River; and in the northeast corner of Town. Horton Marsh, East Bay Marsh, Schoolhouse Marsh, Billings Marsh, and Coggman Marsh comprise the significant portion of West Haven's 1,300 acres of wetlands.

Ground Water

Ground water is water that has infiltrated into the soil through sand, gravel, or rock. The areas where groundwater is stored are called aquifers. An aquifer is a geologic formation containing enough water to

²Rutland Regional Plan, Rutland Regional Planning Commission

yield significant quantities to wells and springs. Places where groundwater is replenished by surface waters are known as recharge areas. Groundwater is drawn from aquifers through wells. Areas surrounding wells are called areas of influence. In the same way that pollutants introduced from watersheds can affect the water quality of streams, rivers, and lakes, contaminants can be introduced into groundwater supplies through areas of influence as well as through direct discharge to the subsurface (as through an abandoned well or leaky storage tank). Groundwater pollution in rural areas is primarily associated with agricultural practices, road salt, and septic tank problems.³

Groundwater is a critical water resource for West Haven. It meets the needs of residences, agriculture and businesses. Groundwater in the town is usually of high quality and quantity. According to the Water Supply Division of the Vermont Department of Environmental Conservation, 95 wells have been recorded for West Haven between 1967 and 2007. Wells drilled before data was kept by the department and still operating are unaccounted for in this analysis. Yields of these wells vary widely.

The approximate location of aquifers and recharge areas have been developed through geology, soils and well log data. The limestone and dolomite bedrock found to the east and west of Bald Mountain are conducive to the occurrence of bedrock aquifers. The eastern edge West Haven along the Great Ledge has been identified as the most productive areas in Town. Please refer to the Natural Resources Technical Appendix for a detailed discussion on types and classifications of aquifers.

4.4 Scenic Resources

In the course of planning for West Haven's future, it is important that the presence of high quality open space and scenic resources, broad scenic areas as well as scenic landmarks, are recognized and the integrity of such resources is preserved. Scenic resources have aesthetic, historical and economic value. Siting of future construction, as well as community facilities and infrastructure, should always consider the potential impact on the aesthetic qualities of the community and preserve the undisturbed integrity, wherever possible, of West Haven's quality scenic and open space resources. Scenic resources enhance the quality of life of West Haven's residents, but these resources are fragile. Use of these areas must be balanced with their protection and preservation so that misuse and overuse do not destroy the delicate balance of form and pattern that defines scenic beauty.

West Haven residents have identified the view from Bald Mountain, Buckner Preserve, and views along the Poultney River corridor to represent important scenic landmarks within the Town.

³Rutland Region Natural Environment Technical Report, Rutland Regional Planning Commission.

4.5 Natural Resource Implementation Strategies

Develop a program to ensure that agriculture remains a viable land use.

Create overlay zones to ensure protection of sensitive areas and resources.

Establish and implement voluntary programs for stream conservation and water quality protection.

Establish stream buffers that conserve water quality, natural habitats, wildlife movement and other ecological processes along the Poultney and Hubbardton Rivers and other important sections of streams.

Implement a program to inventory, evaluate and protect West Haven's scenic resources, including scenic roads.

In local zoning, require appropriate setbacks from surface waters for maintenance yards and storage areas for road salt, fuel, and other potential sources of pollution.

Establish a program to coordinate West Haven's stream conservation activities with other governmental plans and programs.

Encourage farms to protect stream banks by fencing animals out of waterways and developing appropriate crossing points.

Support Nature Conservancy projects on the Hubbardton and Poultney rivers.

Coordinate with neighboring towns to establish and implement an intermunicipal program for groundwater protection, study and monitoring. Establish a program to gather more detailed information about the town's wetlands and evaluate their importance to the town.

Develop and implement a community-based wildlife conservation program. Encourage

owners of existing developments, farms and forests to minimize the effects of their activities on biologically significant areas.

Establish a program to create and sustain functionally interconnected areas of lowlands, large woodlands and other areas of biological significance.

Create a program of incentives for landowners who protect and improve important wildlife habitats.

Create a program to encourage cooperation among adjacent landowners to protect and improve important habitats and corridors.

Work with the Historic Society to develop an overall program to study and preserve West Haven's rich past and important traditions.

Again with the help of the Historical Society develop a program to help citizens understand the importance of the town's prehistoric and historic resources and ways residents can help preserve them.

Enact regulatory tools that improve the energy efficiency of land uses.

Encourage management of woodlots for fuel production.

Educate citizens about the need for sustainable energy practices.

Make public buildings models of energy efficiency.

Distribute energy efficiency guidelines to homeowners planning major additions or renovations to existing structures and to landowners/builders planning new construction.

5.0 Transportation

5.1 Introduction

The Transportation Plan is based upon the information and analyses contained in the Transportation Technical appendix.

5.2 Present Facilities and Services

Transportation facilities and services in or available to residents of the Town include highways, rail, bus and paratransit, air, and trails for biking and walking.

There are 3.0 miles of state highways (VT Route 22A) and 35.2 miles of town highways in West Haven. The town's highways are further divided into two classes: Class 2 and Class 3. West Haven contains 12.6 miles (33 percent) of class 2 highways, which are those that are judged to be the most important in the community. The 22.6 miles of Class 3 highways are routes negotiable by a standard automobile on a year-round basis. All other routes, private and public, are Class 4 highways.

The condition of highways in West Haven is generally good. Surface conditions are adequate, although extensive sections of Main Road require attention. Initial examinations suggest that these sections may need to be rebuilt before being repaved in order to solve the problems.

None of the roads in West Haven are so dangerous so as to be classified as High Accident Locations (HALs) by the Vermont Agency of Transportation. The town recognizes, however, that problems do exist and should be addressed. Local officials have identified several safety concerns; more easily fixed problems are listed at the end of this section, while longer-term projects are described in the Technical Appendix.

Traffic volumes are well below design capacity. The average daily traffic on VT 22A in 1991 was estimated at 4640 trips in northern West Haven and 5090 trips in southern West Haven. The average daily traffic on Main Road was 440. Traffic on some roads is so low so as to raise questions about the need for continued maintenance by the town. The roads - TH 6 (Bay Road) and TH 26 (old 22A), - could be reclassified as class 4 roads if the town found that year round maintenance was not required.

While West Haven has no officially designated scenic highways, several highways in the Town might warrant such a designation.

Given West Haven's rural nature, there is very little need for public parking. Parking at public buildings like the church and grange hall is generally adequate.

Transportation in West Haven is dominated by automobiles and highways. Although the town is not directly served by any other major modes of transportation, the existence of alternatives to traditional automobile travel needs to be recognized.

Access to freight oriented rail service is possible at Rutland. The nearest tracks pass south of West Haven through Fair Haven and Whitehall. The nearest air service is found at Rutland State Airport in

Town of Fair Haven

Town Plan

Adopted September 24, 2003 – Re-adopted 2008

and civic activities as well as provide a variety of housing opportunities.

These uses reinforce a compact development pattern consistent with Vermont's village centers. The character of existing residential neighborhoods will be protected as new development occurs throughout the village areas. Priorities for this district include restoration and reuse of existing structures, maximizing the use of public facilities and services, creating a pedestrian-friendly atmosphere, and fostering a vibrant commercial/residential center.

Gateway

The purpose of the Gateway Area at Exit 1 is to protect an area that has importance as a scenic entrance to the Town of Fair Haven and the entire State of Vermont, while providing for carefully planned commercial development.

The size and shape of commercial buildings to be constructed in this area shall reflect those found in the village. Access to this area will be controlled by limiting curb cuts to VT Route 4A and an internal circulation road for new commercial development.

Green space, landscaping to help screen parking from VT Route 4A and US Route 4, and other characteristics of the neighborhood criteria must be met in order to retain the flavor of an entranceway to a rural and historic small town. As elsewhere in the Town, restoration and reuse of existing historic structures in this district are encouraged, if existing or possible and reasonable.

Commercial/Industrial

The Commercial/Industrial areas provide for commercial and Industrial uses in selected areas outside of the Gateway, Village compact and Exit 2 Areas. The four locales, which make up this area, are located:

On the southwest side of Town at the old Race track.

On the north side of Town at Exit 2 near its intersection with US RT 4 and VT RT 22A

On both sides of VT RT 4A at Exit 1; and

In the area on the north side of US RT 4 at the Airport.

Allowed uses in these areas will accommodate the future industrial/commercial growth of the Town and allow a sufficient mixture of parcel sizes, ownership patterns, and locations to service a variety of commercial and industrial needs.

Development must occur in a manner that minimizes environmental and aesthetic impact. Planning standards will include provision for buffer areas to lessen any impact on adjacent areas. Any new development must not overburden the road network or utility capacity and should use the existing rail network that runs through town.

Development will maintain the small town character of Fair Haven. These four commercial/industrial areas should be carefully examined through the planning process (within the next year planning window) to determine their ability to attract and retain businesses, with discussion of such issues as the restrictions to development in the zoning districts standards,

earlier sections of this plan. As such, the problems, implications and objectives specific to land use can be considered as a summary of the problems, implications and objectives described with each of the previous sections therefore, they will not be repeated here.

IMPLEMENTATION

The Town will promote the preservation of its character by maintaining the historic settlement pattern of compact village centers and designated outlying commercial and industrial areas, separated by rural countryside.

The Town will provide for residential and commercial growth consistent with this historic settlement pattern.

The Town of Fair Haven should create a Recreation Path Committee. This committee should develop the recreation paths along the Poultney River, Poultney bike trail, and upland parcels. These trails could be used year round and would become an important recreational asset for the Town. Even though the Town has made significant gains as noted above, there is still a shortage in the amount of land available for more developed facilities and programs such as those needed for non-school sports, adult and youth league sports and non-sport activities.

The Town will provide for the continued availability of agricultural and forest land by supporting and encouraging sustainable farming and forestry as viable economic enterprises.

The Town will cooperate with farm and forest landowners who are pursuing the permanent protection of their working land through local, state, and national programs that do not degrade the tax base but continues to participate in the existing tax structure.

Fair Haven Village will continue to serve as the commercial and municipal center of the Town.

The Village will be the highest priority location for future economic development opportunities.

Similarly, the Town will pursue development opportunities within the village, which are consistent with maintaining the character of Fair Haven neighborhoods and within the constraints imposed by topography.

Future growth shall be managed to occur at a pace that will not overburden the school system, police and fire departments, water and sewer facilities, transportation network, and available recreation land, as determined by the Planning Commission in conjunction with the facilities providing such services.

The Planning Commission will facilitate a community-wide discussion of Fair Haven's growth trends and vision for future growth so as not to over burden the capability of the land. In preparation for such discussion, the Commission and staff will conduct a future build out analysis based on existing regulations and proposed scenarios.

The Town recognizes that conservation, outdoor recreation, and open space lands are increasingly important to the well being of Town residents. In order to ensure that these lands

are available for future generations, the Town will develop an Open Space Plan. This Plan will include information on the location of significant agricultural and natural resources, high priority scenic areas, potential greenways and outdoor recreational areas, environmentally sensitive lands including flood plains, and water resources.

The purpose of this Plan will not be to exclude all development from these lands but to serve as a framework for prioritizing and developing a network of interconnected open space. A program for the protection of significant features identified in the Open Space Plan by public and private means will be developed.

Existing infrastructure will not be extended if the extension will utilize resources that may be needed for the future development of the village. Regulations shall protect the property values of private landowners by maintaining Fair Haven's small town character and the safety and welfare of its residents.

The water power available because of the sharp drop in the Castleton River between River Street and the West Street bridge was one of the main reasons for the original location of the village in 1779, and now again, Fair Haven could utilize this resource with the potential to use it for the electrical needs of the community.

Balance the needs of residential, commercial and industrial development with the needs of agriculture and the need of the citizens for a comfortable, pleasing environment.

Amend and improve Zoning Regulations, possibly adding a "Downtown Commercial Zone".

Find creative ways to further the goals and the quality of life in Fair Haven.

The Selectboard, in cooperation with the Planning Commission should encourage the development of office space on the upper floors of the downtown buildings. This will utilize existing structures and plan for the future growth of existing home occupations that are in need of expansion, allow for the residents of Fair Haven to maintain their places of employment within Fair Haven as they continue to add additional employees without additional open space use.

The Selectboard, at the recommendation of the Planning Commission shall, if presented, create a Historic District.

The Selectboard, at the recommendation of the Planning Commission shall, if presented, create a Downtown Program and District.

The Planning Commission shall establish a Capital Budget Plan that supports the economical and appropriate use of the lands within the town borders.

The Fair Haven Selectboard should adopt a traffic Control Ordinance that will delineate traffic control features within the town. In addition to setting speed limits and stop sign locations on town roads, this ordinance should establish parking regulations for town highways and municipal parking areas. The Traffic Control Ordinance should limit parking to two hours in the Downtown Business District. In addition, it should create two 15 minute parking spaces in front of the Cleaning Center and Video One. Handicapped parking spaces on the easterly side of Main Street should be clearly marked with symbol painting and signs.

Roads and Bridges

Generally, arterial roads serve primarily to move traffic between principal traffic generators, collectors serve internal traffic movements within a town and connect it with the arterial system, and local roads provide access to adjacent land as their primary function.

The Utilities and Educational Facilities map (Map 2) depicts the transportation routes and facilities existing in Fair Haven today. Of Fair Haven's approximately 40 miles of roadway, 65% are town maintained, 30% are state maintained and the remaining 5% are maintained privately. Each town highway is classified as a major collector identified as a Class 2 town highway (8.15 miles) or a minor collector/local road identified as Class 3 town highways. (14.32 miles) The functional classifications of Fair Haven roads include a principal arterial, US RT 4; a minor arterial, Vermont Route 22A; one major collector including US Route 4; with the remainder classified as local roads.

Aggregate Travel Time To Work (In Minutes, 2000	19.8 Minutes
Vehicle Miles traveled for (Non-Interstate) State Highways, 2000	63758.0
Total Number of Accidents, 1997	7
Total Property Damage caused by Automobile Accidents, 1997	\$18,500
Number of Injuries caused by Automobile Accidents, 1997	9
Number of Accidents involving fatalities, 1997	0
Lane Highway Mileage, 2001	0.048
Class 1 Highway Mileage, 2001	2.785
Class 2 Highway Mileage, 2001	8.16
Class 3 Highway Mileage, 2001	14.25
Class 4 highway Mileage, 2001	1.19
State Highway Mileage, 2001	10.636
Scenic Highway Mileage, 2001	0.0
Percent Population, which Drove Alone to Work, 2000	80.37%
Percent Population, which Carpooled to Work, 2000	13.56%
Percent Population, using Public Transportation to Work, 2000	0.0
Percent Population, which Motorcycle to Work, 2000	0.0
Percent Population, which Bike to Work, 2000	0.67%
Percent Population, Walking to Work, 2000	2.4%
Percent Population, using Other means to Work, 2000	1.05%
Percent Population, Worked at Home, 2000	1.95%

Source: Census 2000 File 3 (SF-3)

Due to its location within commuting distance of Rutland the Town has experienced significant increases in traffic along key commuting routes. In addition to Fair Haven's growing number of residents, commuters from surrounding communities travel through Fair Haven en route to and from US RT 4. As a result, levels of service, which are used to measure the effect on capacity of current roadway conditions, are likely to decline at

relief from harsh winter conditions.

Certain Fair Haven streams support populations of native trout, which are excellent indicators of a healthy aquatic environment. Native trout are extremely sensitive to increases in sedimentation and temperature that may result from incompatible land use activities. Some local streams are also home to stocked fish.

Flora, Fauna and Natural Communities

Fair Haven is also known to be home to certain rare species and natural communities -- species or communities that are restricted in occurrence relative to other species or communities, or that may have declined significantly due to natural or human-induced causes.

The largest unbroken wooded area in town is in what is known as the "North Woods", and involves roughly the northeasterly quarter of the town. Again there is much water there, including Inman Pond (our local water supply), the Howard Dam, the Sheldon Dam, and Old Marsh Pond ("The Marsh" locally). Also located in the "North Woods" is a very fragile "den", one of the only two presently viable habitats known to exist in the state, of timber rattlesnakes. Relatively few are ever sighted (and then never near the village), and their natural camouflage and ability to avoid people, even while gathering the sunlight so much needed for their survival, is probably the reason for their survival thus far. Until the early 1970s towns people hunted them for state bounties, and there seems to be much local prejudice, largely based on unfounded fears and ignorance of the snakes biology and habitat, against them. Local people, and for that matter everyone else, should be encouraged not to kill the remaining snakes, but to try to preserve this denning area near the very northern extreme of the snakes habitat. While the unusual coloring of the local snakes does not make them a subspecies, they do seem to be an endangered species in Vermont.

Scenic Views

Two major features dominate Fair Haven's landscape: the foothills of the Green Mountains and the Poultney River Valley. Much of Fair Haven's rural character and appeal results from the scenic vistas that can be observed in many parts of the town and include an interplay of villages, mountains, forested hills, unbroken ridge lines, farms, fields, rivers, streams, ponds and wood lands. Fair Haven is also fortunate to have many tree-lined streets in its village and along its outlying roads. Trees provide shade, beauty and habitat; can serve as food sources, and reduce air and noise pollution. They also can increase property values as much as 10%. Species in Fair Haven include the stately sugar maple.

Air Quality

There are a number of significant sources of air pollution in Vermont. The biggest source is the automobile. Several steps have been taken over the last years to improve the emissions from automobiles nation wide. However, while the controls have reduced the amount of pollution from each vehicle, the number of vehicles on Vermont roads and the number of miles they travel have increased dramatically. Although fuel-efficient vehicles are in popular use it is hoped that alternative energy sources will become available in the future. The increase in vehicles and road miles is a trend that is expected to continue into the foreseeable future.

runoff from hard surfaces such as roads and parking areas. In addition, groundwater resources may be depleted where over-development increases impervious cover and decreases filtration.

Development of open land may reduce outdoor recreation alternatives.

It's becoming more expensive to purchase and maintain open land.

Fair Haven does not have a plan to protect its ridgelines from development.

Scenic views are extremely important to town residents, but they are increasingly threatened by factors ranging from increasing residential development pressures to the potential construction of wireless communications towers. The next generation of wireless communications may be satellite and the need for sun-setting of existing tower sights is something that Fair Haven may need to consider.

Fair Haven contributes to air pollution through car emissions, wood and trash burning and other activities.

OBJECTIVES

Encourage the conservation of land for forestry, farming, natural resource functions, and recreation.

Promote a viable agricultural sector as a way to maintain open spaces and natural resources on private lands.

Educate residents as to the effect of human activities on Fair Haven's natural environment and human health.

Focus development in suitable areas and promote rates of development and methods that minimize impacts on Fair Haven's natural resources.

Research current and evolving strategies for the protection of natural resources. Maintain high air quality standards for current and future residential, commercial and industrial development.

Ensure that air quality standards are fairly and equitably applied to existing residential, commercial and industrial development, and not just to new residential, commercial and industrial development.

Wetlands and waterways should be protected against unreasonable incursions, in hopes that they may be enjoyed by future generations in much the same state.

The Town should keep apprised of the State's plans for lands and should request the right of first refusal if the State ever decides to sell land within the Town of Fair Haven.

Every effort should be made to preserve the Timber Rattler denning area, as the snakes have

never been known to do much damage, even though they are the source of much local legend.

Fair Haven should pursue all available avenues, both public and private, to preserve the Timber Rattle Snakes.

Relate development to potential pollution of off-site public and private water supplies. Investigate a mechanism and funding source for possible municipal acquisition of land either for public use or for species protection.

Encourage the use of the falls on the Castleton River for hydro power.

Residential, commercial, and industrial expansion should be compatible with the above long range goal that will enhance our quality of life, encourage local employment and improve our tax base.

IMPLEMENTATION

A Conservation Committee should be considered by the Planning Commission to help in determining the current and potential status of land use, identify threats to Fair Haven's natural resources, and develop plans for the preservation of these resources. This process must seek extensive public involvement in the creation of inventory maps to identify natural resources and potential sites of development and the development of an open space plan.

The Conservation Committee, Selectboard, Town Manager and Zoning Administrator will collaborate with local conservation and state agencies, and Fair Haven property owners on the promotion, enforcement and adherence to environmental regulations that protect water quality, wildlife and other natural resources and to conserve agricultural and natural areas. Efforts should be made to obtain funding and support for these purposes, including a Conservation Fund, if approved by voters, to provide seed money for conservation efforts.

The Fair Haven Economic Development Committee, Planning Commission and Conservation Committee should work with farmers, conservation groups, state agencies, legislators, and local businesses to develop marketing strategies and support sustainable agriculture, green industries and enterprises

The Planning Commission will design zoning and subdivision regulations in accordance with state and federal laws to protect croplands, water resources, scenic sites, wildlife habitat and other natural resources. The process of reviewing and modifying these regulations will include extensive public input. The Recreation Path Committee and Conservation Committee will sponsor educational programs to foster appreciation of Fair Haven's natural resources.

The Selectboard shall support regional, state and national policies that promote the goals of the town plan.

The Planning Commission will develop specific regulations to require appropriate riparian buffers of natural vegetation to minimize the environmental impacts of future development. The Conservation Committee, Town Manager and Road Foreman will demonstrate best

Policies on Preservation of Resources

This is a statement on the preservation of rare and irreplaceable natural areas, scenic and historic features and resources for the town of Fair Haven. Most of these policies have been stated in other section of the plan and will therefore not be repeated here but rather referenced. The Referenced section is not meant to be restrictive, definitive or exclusive of other parts of the entire plan for the Town of Fair Haven. The policies put forth in this section are to be part of the policies as stated in the plan's entirety.

Furthermore the policies stated in this section are not the complete and final statement of the policies of the Planning Commission. The Commission reserves that right for itself and may make or promulgate such policies as it sees fit at any time. The planning process is a continuous process that will change and be redefined in a manor that is faster then the governmental process allows for in the written form of this plan and as such the sitting planning commission has the final authority as to it's policies and procedures. These policies should be clearly defined in the minutes of the Planning Commission as retained on file by the town clerk

1. Policies to identify, protect and preserve important natural and historic features of the Vermont landscape, Including significant natural and fragile areas; outstanding water resources, including lakes, rivers, aquifers, shorelines; wetland; outstanding land resources including significant scenic roads, views; and the quality of air, and encourage and strengthen agriculture and forest industries would be contained in the section on Natural Resources.

2. Land resources, such as mineral resources should be planned for use and development according to the principles set forth in 10 VSA section 6086(a) and the land use section as well as economic development section.

3. Policies to identify, protect and preserve important historic structures, sites, or district, archaeological sites and/or archaeological sensitive areas would be contained in the Historical Resources Section

4 Policies to encourage the efficient use of energy and the development of renewable energy resources would be contained in Energy Section.

5. Policies and Strategies to protect long term viability of agriculture and forest lands should be encouraged and should include maintaining low overall density and would be listed in the economic development and natural resources section and having the following objectives:

1. The manufacture and marketing of value added agriculture and forest products along with the use of locally grown food products should be encouraged by forming a Farmers Market to be held

Town of Castleton

2010 Castleton Town Plan

Effective August 23, 2010

LAND USE AND GROWTH GOALS, POLICIES AND PROGRAMS

Goal

Provide for development that fits the character of existing development, functions in an efficient and coordinated fashion and supports the vitality of the community.

Rationale

The proposed land use patterns in this section are the basis for a preferred pattern of development. Proposed land use patterns are intended to accommodate future growth in harmony with the natural capabilities of the land and the ability of the town to adequately provide municipal services. Castleton's scenic and natural resources are among the town's primary assets. Future land use and development should proceed in such a way that these assets are protected and enhanced while establishing a built environment that is both functional and aesthetically pleasing.

Policy 1

Maintain a sound land use policy to regulate, preserve and encourage further growth and development.

Programs

- ❖ Restrict development in areas of severe limitations for septic systems unless they can be overcome through proper engineering and design.
- ❖ Adopt regulations for ridgeline development, shoreland, groundwater recharge areas and other identified natural areas to carefully regulate development in these areas.
- ❖ Generally restrict development on slopes in excess of 25% in grade.

Policy 2

Encourage orderly and attractive development of commercial uses.

Programs

- ❖ Discourage strip development.
- ❖ Create additional industrial zones.
- ❖ Encourage Bed and Breakfast establishments around the college, on Main Street and around Lake Bomoseen where there is an existing sewer line.

Policy 3

Maintain and protect the quality and character of historic settlement patterns.

Programs

- ❖ Study the feasibility of establishing design control districts to protect historic structures, particularly in the village area.
- ❖ Encourage future residential development to be concentrated where community facilities and services are currently provided.
- ❖ Establish a Zoning Ordinance section to regulate outdoor advertising through uniform sign codes.

- ❖ Channel non-residential growth into existing growth areas and areas serviced by sewer and/or water.
- ❖ Continue to require site plan review of all commercial development proposals to encourage the sound design, orderly maintenance and establishment of infrastructure responsibility.
- ❖ Encourage the preservation and renovation of existing housing stock.

Policy 4

Preserve agriculture, scenic resources and open space.

Programs

- ❖ Inventory significant scenic resources and open space.
- ❖ Contact area land trusts for assistance in inventorying landowners' interest in preserving scenic resources and open spaces.
- ❖ Provide economic incentives for those property owners keeping land in agricultural uses or maintaining open space uses.
- ❖ Ensure future development provides for adequate streets, utilities and open space and the preservation of the character of surrounding properties.
- ❖ Support use-value taxation, cluster subdivision techniques and other methods of conserving agricultural land and open space.
- ❖ Encourage the inclusion of greenbelts and common land areas in subdivision design.

*Aerial view of
Lake Bomoseen*



ENERGY GOALS, POLICIES AND PROGRAMS

Goal

Reduce energy consumption where possible.

Policy 1

Improve energy efficiency of town operations as well as public, commercial and residential buildings.

Programs

- ❖ Encourage all new public and commercial construction to meet advanced energy standards.
- ❖ Encourage residents to take advantage of NeighborWorks of Western Vermont for energy efficient testing and loans for insulation, windows, etc.
- ❖ Encourage residents and businesses to utilize the resources of energy efficient programs such as “Efficiency Vermont” and CVPS’s economic development incentives to help improve home and commercial energy efficiency.
- ❖ Conduct an energy audit of public buildings to evaluate potential energy savings and encourage local businesses to do the same.
- ❖ Encourage installation of outdoor lighting in accordance with the guidelines in the *Outdoor Lighting Manual for Vermont Municipalities*.
- ❖ Encourage the use of renewable sources of energy such as wind, solar, wood and methane.

Policy 2

Promote more energy efficient methods of land use and transportation.

Programs

- ❖ Encourage siting of buildings so as to reduce energy costs, such as solar orientation, use of natural windbreaks and shade trees, and development in previously existing growth centers.
- ❖ Allow flexibility in the siting of solar energy systems in the Castleton zoning regulations.
- ❖ Encourage the use of carpools, vanpools, and public transit for commuters and others.

Policy 3

Educate and encourage citizen participation in statewide and local energy conservation programs.

Programs

- ❖ Form a Castleton Energy Committee.
- ❖ Use Town Meeting Day to increase energy awareness.
- ❖ Promote energy conservation programs such as Button-Up VT, Way-To-Go commuter challenge and Vermont Community Energy Mobilization Project.

NATURAL RESOURCES

The natural environment has played an important role in shaping Castleton’s image, appearance and attractiveness to town residents, seasonal homeowners, and tourists alike. Lake Bomoseen is one of the most actively used water bodies in Vermont and clearly of great importance to Castleton’s

seasonal visitor economy. Many rolling forested hills and mountains, quiet trails, and scenic rivers, ponds, and wetlands round out the town's lush landscape. Castleton Natural Resource Maps 1 and 2, located at the end of this section, depict each of Castleton's principal natural resources as well as areas of land use regulation designed to protect natural features as well as the health and safety of humans and wildlife. These maps are referenced frequently throughout the detailed discussion of Castleton's natural resources that follows.

Climate

Castleton's climate is classified as humid, continental, with cool summers; meaning there is wide daily and annual variation in temperature and variability between the same seasons in different years. The average annual precipitation in the town ranges from 38 to 42 inches and the mean annual snowfall is just less than 60 inches. Higher elevations may, however, receive considerably higher amounts of precipitation. The average wind speed is slightly higher in the winter months and predominately from the northwest, while during the summer months the prevailing winds are from west-southwest. Sun orientation generally ranges from northeast to northwest in the summer and southeast to southwest in the winter.

Topography

The Town of Castleton is located entirely within the Taconic Range characterized by rugged mountains with irregular topography and elevations approaching 2,200 feet. The town may be further subdivided into the Taconic Foothills and the Taconic Mountains. The western half of the town consists of Taconic Foothills, which are a series of oval shaped, north-trending hills averaging 500 feet in elevation. The higher elevations of the Taconic Mountains rise in the eastern half of the town, including Bird Mountain (elevation 2,216'), Grandpa's Knob (elevation 1,976') and Blueberry Hill Peaks ranging in elevation from 1,245 to 1,918 feet.

Geology

The geological formation of the town accounts for deposits of slate. The most common formation underlying the town yields purple, gray, green, and variegated slates, important sources of commercial slate, particularly in the western foothill portion of the town. The West Castleton formation is another dominant geological formation in the town. This formation is a gray to black slate of limited economic importance.

Agriculture and Forest Resources

Agriculture and silviculture are not only important economic activities in Vermont, but are also the foundation of a highly valued rural lifestyle and a significant factor in shaping the landscape. Land capable of supporting agricultural uses requires prime agricultural soils as well as moderate slope, adequate parcel size, and access. Like agriculture, forestry is an important activity in the state and region. Lands capable of supporting forests are critical to the support of silviculture, a Vermont tradition, as well as providing wildlife habitat, and places for recreation.

Primary agriculture soils are depicted on Castleton Natural Resources Map 2. The Natural Resource Conservation Service (NRCS) has classified Vermont's soils into four categories with respect to their potential for agriculture – highest, good, low and limited. NRCS recommends that highest and good categories qualify as primary agricultural soils as defined in Act 250. These classifications only consider physical and chemical soil properties. They do not consider location of specific areas,

on-site evaluations are conducted by appropriate staff. The recommendations in the draft buffer procedure are directed at projects subject to Act 250 permitting or other Agency of Natural Resources regulatory programs.

The Vermont League of Cities and Towns has produced a model riparian buffer ordinance and technical paper to offer guidance to towns that are interested in adopting regulations that protect and conserve riparian buffers. The model riparian buffer ordinance can easily be modified and incorporated into existing land use regulations. It can also dovetail with the objectives of the National Flood Insurance Program and River Corridor Protection Plans.

Air Quality

Air quality has a great impact on the quality of life and the ecology of an area. Due to relatively low emission densities and relatively favorable meteorological conditions, ambient concentrations of locally generated pollutants are relatively low in Vermont by national standards. However, the Air Pollution Control Division has reported the Rutland area's particulate matter levels to be among the highest in the state, while 24 hour sulfur dioxide levels are higher than the Burlington area's. Nitrogen dioxide levels are comparable to or lower than other parts of Vermont. Overall, the Rutland Region's air pollution levels have not violated EPA standards for air pollutants. Town's like Castleton can help to maintain and improve air quality by promoting the use of public transit and car pooling, enforcing prohibitions on the burning of trash, and protecting forest resources, which can help to filter out a number of potentially harmful pollutants.

Open Space and Scenic Resources

In the course of planning for Castleton's future, it is important that the presence of high quality open space and scenic resources, broad scenic areas as well as scenic landmarks, are recognized and the integrity of such resources is preserved. Scenic resources have aesthetic, historical, and economic value. Siting of future construction as well as community facilities and infrastructure should always consider the potential impact on the aesthetic qualities of the community and preserve the undisturbed integrity, wherever possible, of Castleton's quality scenic and open space resources.

Town of Ira

Town Plan

Adopted December 7, 2009

wetlands, streams and rivers, coupled with a low water table in much of the Town, directly affects the capabilities of the land to support development.

The varying land uses taking place in a watershed play a critical role in the quality of the water draining from it and the ability of a watershed to support economic activities such as agriculture, and recreational activities like swimming, boating and fishing. Surface waters and wetlands also serve as habitat for wildlife and as an important component of the hydrologic cycle.

Ground water is a critical resource for Ira, as most residences depend on private wells drilled into underground aquifers. Aquifers are recharged through the infiltration of surface water. Pollutants introduced into areas of influence surrounding wells can contaminate the groundwater used in residences.

Earth Resources

Although no formal mapping or inventory has been undertaken, some sources of sand and gravel are likely to exist in Ira, as well as sources of aggregate (crushed rock). None is in use today, but there was a gravel pit located where the development at Sunrise Place is now located, and gravel has been excavated from a small site on the north side of the West Road west of the bridge. Commercial sand and gravel excavation from streambeds is now prohibited by State law.

Statewide, sand and gravel resources are increasingly in short supply. Certain grades of gravel such as that used in leach fields for subsurface sewage disposal systems and for some types of sub-base in roads are particularly in short supply. The Town of Ira purchases sand and “shur-pack” for its roads, annually. The Town should identify potential sources of material not in Ira’s Highland Conservation District which are of sufficient quality, and for which the impacts of extraction can be successfully mitigated.

Scenic Resources

In the course of planning for Ira’s future, it is important that the presence of high quality open space and scenic resources, broad scenic areas as well as scenic landmarks, are recognized and the integrity of such resources preserved. Scenic resources have aesthetic, historical and economic value. Siting of future construction, community facilities and infrastructure should always consider the potential impact on the aesthetic, as well as the physical health of the community. Wherever possible, development should be located and tailored to preserve the undisturbed integrity of Ira’s quality scenic and open space resources. The undeveloped mountain peaks and ridgelines in Ira’s Highland Conservation District, especially those close to municipal boundaries and described in the appendix to the Plan, define and frame the Town. They are prominent physical features which make up much of the Town’s land mass and unique character, and are visible from many communities in the region. They provide the backdrop for a very rural and sparsely settled community that has no commercial land use and is therefore quite peaceful.

Goals and Objectives

Goal 1

Protect and preserve the natural features in Ira, particularly the areas of high elevation, and promote land uses appropriate to the natural character of the land.

Objective

Keep the rugged and poorly accessible mountain and forest areas free from development and reserved for forestry and other suitable uses.

Objective

Further identify and map areas of particular scenic and ecological importance to the community and the environment.

Objective

Maintain or improve surface water quality to protect drinking water, aquatic habitat, and recreation.

Objective

Encourage pollution abatement in the Town's water sources.

Objective

Activities that are potential sources of non-point pollution, including but not limited to agriculture and silviculture, should be conducted as follows:

- (a) Logging practices should follow Acceptable Management Practices developed by the Vermont Agency of Natural Resources or other practices recognized by public agencies or professional associations.
- (b) Agricultural activities should follow Best Management Practices for Agriculture.

Objective

Encourage development which will minimize run-off in vulnerable areas.

Objective

Continue to support the road crew in employing gravel road maintenance techniques that prevent soil erosion and road surface deterioration.

Goal 2

Maintain and enhance the quality of ground water resources and their resource protection areas from adverse development.

Objective

Encourage on-site sewage disposal systems to be installed in appropriate areas.

Objective

Land use activities, which potentially threaten ground water quality, should be carefully studied to prevent undue loss of groundwater quality.

In general, there are two kinds of aquifers, unconsolidated and consolidated. Unconsolidated aquifers are mainly composed of materials such as sand and gravel. The coarse texture of these deposits typically allows for storage of large volumes of groundwater. Consolidated aquifers, also known as bedrock aquifers, are composed of fractured rock. These aquifers differ from unconsolidated aquifers because there are no spaces between individual grains of rock materials to store and transmit water. Instead, water is stored and transmitted in the fractures, joints, or faults in the rock.

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

Class I aquifers are aquifers suitable for public water supply, with uniformly excellent character and no exposure to activities posing a risk to current or potential use as a public water supply. Class II aquifers are suitable for public water supply and have uniformly excellent character but are exposed to activities that pose a risk to current or potential use as a public water supply. Aquifers suitable as a source of water for individual domestic water supply, irrigation, agricultural use, and general commercial and industrial use are designated Class III aquifers. Class IV aquifers are not suitable as sources of potable water but are suitable for some agricultural, industrial, and commercial use.

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

Scenic Resources

Scenic resources have aesthetic, historical and economic value, enhancing the quality of life of Ira's residents. There are many pleasing views and vistas available to travelers on the Town's existing highways. Route 133 extends lengthwise through Ira valley, which contains a large portion of the Town's open and agricultural low lands; the southern portion of the valley is flanked by steep, wooded ridges to the east and west. To the east is the ridge running along the boundary with Clarendon, which includes Susie's Peak. To the west is Train Brook Ridge running along the boundary with Middletown Springs. The West Road also provides travelers with pleasing views of other working farms, yet from generally higher elevations, and in some places, with long-range views across neighboring towns to Killington, Pico and Shrewsbury peaks.

The Ira Birdseye Road in North Ira also affords travelers with excellent views of the steep mountains that flank that portion of Town. To the east is a long ridge extending from near Spruce Knob at the south end (where the boundaries of Ira, Poultney and Middletown Springs intersect) to Route 4A at the north end, which includes Herrick Mountain and the peak of Ben's Slide. The undeveloped ridgelines lying along Ira's boundaries with Clarendon and Poultney are prominent viewsheds visible from many municipalities in Rutland county.

Town of West Rutland

Town Plan

Adopted November 13, 2012

Metamorphism of Sediments

In Middle or Late Ordovician time, the unstable belt stopped sinking. It was as if the land areas to the east rose and moved westward causing a "squeezing" of the sediments in the unstable belt. The solid rocks were folded, and some of them (particularly the marbles) flowed or oozed plastically, becoming thicker in some places and thinner in others. The limestone was metamorphosed to very finely crystalline marbles (locally known as "lime"); and the mudstone became slate. Also, the sandstone and mudstone far to the east slid westward across West Rutland on a thrust fault. The Taconic Mountains, and Herrick and Bird Mountains near West Rutland, are interpreted as parts of this thrust sheet.

Erosion: Following the "mountain building" of Late Ordovician time, we have no geologic record for the West Rutland area until the last million years. Evidently the old mountains wore down, but there may have been later times of "squeezing" and mountain building.

In the last 50 million years the region may have been a land area that was being eroded. Just before glaciation, the land looked about as it does now - the main hill and valleys were there.

Glaciation: In the last million years or less, continental ice sheets oozed slowly southward in several main advances, separated by a melting back of the ice. The glaciers modified the landscape by scouring valleys, smoothing the hills, and depositing glacial drift. The melt water must have been torrential. The valleys of the Castleton River is underlain by a hundred feet of glacial and melt water deposits, these represent the "dirt" that lies on the marble.

Accessible and usable upland tables and gently sloping areas exist, creating the eastern boundary lands of the town. The soils are of the Nellis Amenia Association, which are well drained, loamy, deep, and apt to be stony. The soils are also found in the Whipple Hollow area and in the southeast corner of the town.

Soils: The severely limiting MuckPeat soils of the lower Castleton River Valley and the steeply sloping NassauDutchess soils of the high hills and mountains determine uses for the largest portion of West Rutland's land. Elevation, slope, shallow soils, and fragile vegetation require that extreme care be taken to protect these areas from uses that would promote erosion and change the ecological balance.

A moderately to severely limiting soil of the Strockbridge - Bernardson - Amenia Association lies in the southwest quadrant of the town, bounded in a semicircle from the Clarendon border north to the Castleton River and then east from the Castleton border to the narrow West Rutland Gap. The soils are rocky, loamy, well drained, and deep. They form sloping upland tables useful for rural development and agricultural uses.

Recommendations:

1. Inventory and digitally map the existing quarries in the Town of West Rutland.
2. Encourage quarry owners to implement safety measures to protect citizens.

Scenic Resources

West Rutland lies in a valley that provides many opportunities for scenic vistas along the mountainsides surrounding the town. In West Rutland, almost the entire western side has a slope classification greater than 25%. In the northeast part there are also slopes greater than 25% as well as a few small areas located in the southeast part of town. These many hillside views provide a sense of enclosure to this community. Clark Hill, Durgy Hill Ridgeline between West Rutland and Proctor, Hanley Mountain/Grandpa's Knob/Taconic Mountain Range are specific scenic resources to be protected from industrial/commercial development.

Our wetlands play an important role in our ecosystem. They add not only to the scenic beauty of our area, but they add harmony and continuity to our area. In 2002, the Vermont Supreme Court wrote in a summary statement addressing aesthetics and 30 VSA 248, "Under Vermont's Two-Part Quechee Test, a determination must first be made as to whether a proposed project will have an adverse impact on aesthetics and the scenic and natural beauty of an

area because it would not be in harmony with its surroundings."

Industrial/Commercial wind turbines will have a significant adverse impact upon the scenic quality of our ridgeline vistas and as such, will have a negative impact on the aesthetics of the community for its residents. Industrial/Commercial wind development in the Town of West Rutland is prohibited.

Goal 1:

Encourage landowners to avoid undue adverse impacts on natural areas and scenic resources.

Water Impact:

Development in areas with excessive slopes are regulated as they may cause irreversible damage to the natural environment in the form of soil erosion, stream siltation and contamination of ground water. Upland slopes also perform a beneficial function in the replenishment of valley water tables. Rainwater and moisture occurring at higher elevations filters down through forest soils and accumulates in the basins of the watershed. Development of these slopes can result in a reduction of the surface area of absorption for precipitation, thereby degrading the quality of groundwater supplies.

Recommendations:

1. To continue to protect mountaintops and ridgelines with development restrictions and regulations utilizing specific Ridgeline Overlays.

WILDLIFE AND ENDANGERED/UNIQUE FLORA AND FAUNA HABITATS

West Rutland has many unique natural areas that provide habitat for a wide variety of wildlife. For example, the Marsh provides a natural environment for numerous species of birds. This excellent, large, cattail marsh is located in the valley of the Castleton River. Birds that have been seen or heard in the marsh include American Bittern, Least Bittern, American Black Duck, and Virginia Rail. Rare birds in West Rutland include the Whippoorwill, Carolina Wren and the Sedge Wren. In addition, several deer wintering areas have been identified, and mapped, in the northern half of West Rutland. These areas are identified by evidence such as bud and bark scars, and droppings.

There are numerous rare flora species within West Rutland. The following plant species are ranked extremely rare by the State of Vermont: Smooth Forked Chickweed, Green RockCress, LargeBracted, Foxtail Sedge, Sharp MannaGrass, Nodding Trillium, American Dragon, and the Douglas Knotweed.

The Taconic Ridgeline and other scenic resources noted above are prohibited from Industrial/Commercial solar or wind project development. The eco-systems with their wetlands recharge wells, provide animals with connectivity and are home to rare flora and fauna species.

Recommendations:

1. Develop a strategy to manage and eradicate non-native invasive plants.
2. Maintain and improve wildlife habitat and natural areas in the town and region to the fullest extent possible.
3. Create and protect a functional, interconnected system of habitats within the town that link to similar systems of habitats in the region and state.
4. Consider West Rutland's major habitat components as areas of regional significance because of their relative scarcity and important role in this portion of Rutland County and interconnectedness with other habitats in the region.
5. Minimize impacts of development on the system of interconnected habitats and the functional qualities of individual areas of biological significance.
6. Help landowners design development proposals that will fully comply with the goals and policies for biological diversity and protection.
7. Protect deer wintering areas from development and other uses that threaten deer habitat.

ELECTRICITY

Green Mountain Power (GMP), a Canadian company privately owned by GazMetro, serves the Town. There are also electrical facilities in Town owned by Vermont Electric Power Company (VELCO). A substation on Barnes Street supplies the electrical distribution system in West Rutland. The transmission system that supplies the area consists of two 46,000 volt lines; one from the Rutland area and one from the Poultney area. In emergency situations the Green Mountain Power system can be supplied from Proctor transmission lines. There are two major transmission corridors and a transmission substation owned by VELCO. The east-west corridor is a 115kV tie from New York State. The north-south corridor is a line from Vermont Yankee Nuclear Plant to the Chittenden County area. The segment from Vermont Yankee to the West Rutland substation is built and operated at 345kV, and the segment from West Rutland to Chittenden County is built and operated at 115kV. The project to extend 345kV to the New Haven, Vermont area is complete. The existing 3-phase distribution covers most of the existing urban compact that is zoned industrial and/or commercial. According to a VELCO study the region has adequate power until 2038 without any further development.

Present Vermont Tariff structures require that developers pay the cost of extending or upgrading electrical facilities to serve the developments. Subdivision regulations require that energy conservation be considered in the planning of developments. Easements must be made for the extension of private utilities such as telephone, electricity and cable television, and public utilities such as water and sewerage where available. Programs, such as Efficiency Vermont, have been developed to further electric conservation for residential, commercial and industrial customers.

NATURAL GAS

Currently, natural gas is not available in West Rutland. There have been many proposals over the years for a natural gas pipeline in Vermont. The town might support natural gas as an alternative energy source/option for both residents and commercial users, but none of the current proposals have any benefits for the citizens of West Rutland.

ALTERNATIVE ENERGY RESOURCES

Utility scale wind or solar, also referred to in this Plan as industrial/commercial wind or solar, is defined as any project that would fall under 30 VSA § 248 and residential wind or solar projects are those which would fall under 24 VSA § 4412, as well as under any of the restrictions within this Town Plan.

Wind, Solar and Water

Solar energy is commonly used for water and space heating. Some use passive solar design to reduce home heating costs by up to 10%. Any alternative energy source should be properly sited, appropriately scaled and implemented in a way as to not conflict with any other portion of the Town Plan. Any industrial/commercial-scaled project should also utilize the input of the citizens of West Rutland and adjacent towns. Industrial/Commercial wind projects are prohibited.

In order to maintain the scenic vistas and aesthetics so important to the character of the community, alternative energy sources, such as wind and solar, should be limited to residential and small agricultural usage. Commercial/Industrial wind development is counter to the aesthetics of the community and is prohibited.

The potential for waterpower exists and should be explored and encouraged if found to be economically feasible.

Highways

The most important component of the transportation system in West Rutland is the system of roads and highways. The highway system provides vehicle circulation to all parts of the town and between neighboring communities. The highway system is necessary to facilitate travel to benefit the inhabitants of the town for commerce, safety, and leisure travel. An inventory of West Rutland roads is included in the *Technical Appendix – Section G* along with information pertaining to traffic volumes, capital improvements projects, paving history, and high accident locations.

Parking

In the downtown area of West Rutland, defined as the Urban Compact, parking is often only available on street for both residents and patrons of the commercial establishments. Some of the streets are narrow and the houses are close together causing some issues with lack of adequate parking. Alternatives should be examined to mitigate parking issues, especially parking on the sidewalk. Vacant lots and unused property should be reviewed as possible public, off-street parking lots.

New Road Development

New roads shall be designed to minimize the impact on traffic patterns.

Site plan review, zoning regulations, town road standards, and subdivision regulations govern new roads serving new development and commercial locations. Site plan review allows the Planning Commission to address access and circulation at commercial developments and subdivision regulations address roadway and intersection designs and circulation patterns for subdivisions, especially if this transportation infrastructure is to be maintained by the town.

Scenic Roads

The State of Vermont has a program that protects roads for their scenic qualities. The information for designating scenic roads is in the pamphlet "Designating Scenic Roads: A Vermont Field Guide". The Town of West Rutland should consider designating the following town roads:

Boardman Hill Road

Durgy Hill Road

Clark Hill Road

Old Town Farm Road

Marble Street Extension

Whipple Hollow Road

Pleasant Street Extension

Air Transportation

Rutland State Airport, is located in Clarendon, and is one of ten state owned and operated public use airports in Vermont. The next nearest air carrier airport to the Rutland market is Burlington International, located about 67 miles to the north, the next nearest is Albany County Airport in New York State, about 80 miles to the southwest. The airport in Manchester, NH while farther away, also serves increasing numbers of residents due to the presence of budget airlines. Plans to improve service are under review to increase access to the Rutland Region.

The Rutland airport supports one schedule air carrier, ComAir, which is affiliated with Continental Airways. In terms of number of passengers carried and relative volume of goods moved, air travel is not a large component of the region's transportation system.

Bicycle/Pedestrian Transportation

Bicycle and pedestrian travel are important elements in creating a balanced and sustainable transportation system. Within West Rutland, the most heavily trafficked pedestrian area is the Urban Compact in the downtown. Sidewalk plans should establish safe, interconnected walkways within the center of West Rutland with adequate buffering, in the form of median strips and vegetation, from the roadway.

Bicycling for recreation and transportation requires different types of facilities. Recreational bicycle paths, for

Jagazinski Farm. Extending sewer and water lines to the commercial district would also increase the development potential. This Commercial District is the appropriate location for local and regionally oriented businesses and services that require good automobile accessibility.

Development projects which enhance the cohesiveness of the Business 4 corridor, especially since it serves as a major “gateway” to West Rutland, both at the entrance/exit to the Route 4 Highway and at the border with Rutland Town, should be considered a priority. Most of the parcels along this corridor are highly visible and consideration should be given to site development and design. Access points and curb cuts should be designed to insure that Business Route 4 continues to serve as an important transportation link with neighboring communities.

Residential District I -

“Neighborhood Residential District”

The district should be served by municipal water and sewer and is suitable for medium density residential development including subdivisions, multifamily structures, condo/townhouse units and mobile home parks in addition to single family homes. Every effort should be made to provide “neighborhood amenities” such as sidewalks and “pocket parks”, among others, in this area of medium density residential development.

Residential District II -

“Farming/Agricultural and Rural Residential District”

This district is intended to provide land area for low density residential development, farming, forestry, recreation and other rural land uses. A large portion of this district is not served by municipal sewer or water and necessitates low density. Growth should be managed and consistent with the rural character of the area, the availability of municipal services, and site conditions. Conservation of open spaces and natural resources should be a high priority.

Protection and support of the remaining farms are important component of this district’s provisions, therefore, uses compatible with agricultural operations should be encouraged. For example, roads should be maintained to permit easy transportation of commodities and to accommodate farm purposes.

Conservation Districts (I and II)

Conservation areas contain lands that are very sensitive to development for a variety of reasons. They are generally characterized by significant natural resources such as dense forests, steep hills often with shallow soils, wetland areas and stream banks, among others or areas of scenic, cultural or historical significance.

These lands have been divided roughly into two conservation districts denoting the sensitivity of the land.

The Town of West Rutland has designated a “Ridgeline Overlay” to protect the scenic vistas within the Town. In general, buildings shall be sited below ridgelines and below any sight lines to the ridgeline, so that they do not intrude upon the skyline and vistas. New development should blend into the natural landscape.

Conservation District I

This land serves as a buffer zone between the most restrictive of the land use areas and the other districts. Development above the 800foot contour has been designed to blend and harmonize with the landscape. Natural features such as forests, meadows and ridgelines should be conserved, and development shall be clustered in more appropriate areas.

Roads should follow natural contours, and not carve straight lines across the landscape. Shared driveways are encouraged, as they minimize the number of curb cuts along public roads and are economically and ecologically more efficient.

Conservation District II

This is the most restrictive district containing lands on which development would have a very detrimental effect. These include lands above the 1,000foot contour, lands that are very steep, and lands that are in the floodplain.

Town of Rutland

Municipal Plan

Adopted X/X/2014

See 30 V.S.A. §248(b)(1).

The PSB must also determine whether a proposed solar facility will have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, the use of natural resources, and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) (outstanding resource waters) and the Act 250 criteria set forth in 10 V.S.A. §6086(a)(1) through (8) and 9(K).

See 30 V.S.A. §248(b)(5).

To determine whether the proposed solar energy facility would have an adverse impact on the considerations set forth as identified in:

§248(b) (5) above, PSB Rule 5.108(A) requires the PSB to conduct the so-called "Quechee analysis" to assess whether a proposed solar project would have an adverse impact by virtue of being "out of character with its surroundings," and if so, whether the adverse impact qualifies as "undue." Rule 5.108(A). The PSB therefore must consider "the nature of the project's surroundings, the compatibility of the project's design with those surroundings, the suitability of the project's colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space." Rule 5.108(A)(1).

A solar project's location, size, and visibility, together with the context of the surrounding land uses, will be relevant in the PSB's consideration of whether the proposed project would have an undue adverse impact. Among other things, the Quechee analysis requires the PSB to consider whether the proposed project would violate a "clear written community standard".

Therefore, the effective participation of the Rutland Town in the PSB's review process requires the development of specific community standards in order to ensure that local conservation and development objectives are considered and weighed by the PSB in its review of a CPG application for a solar energy facility. Toward that end, the Rutland Town Planning Commission has developed the following specific community standards for the siting and development of a solar energy facility in Rutland Town.

RUTLAND TOWN COMMUNITY STANDARDS REGARDING ENERGY FACILITIES

Purpose

The purpose of these community standards is to regulate the development of renewable energy resources and solar energy facilities in Rutland Town. These policies should also be considered in undertaking municipal solar energy projects and programs, in enacting or updating the town's bylaws to address renewable energy development and in the review of new or upgraded energy facilities and systems by the town and in Section 248 PSB proceedings.

GOALS

1. Promote sustainable development in Rutland Town by reinforcing traditional land use patterns and municipal development policies, maximizing energy conservation through weatherization of existing structures and appropriate siting of new development, encouraging appropriate development and use of renewable energy resources, protecting natural and cultural resources.
2. Ensure the long-term availability of safe, reliable and affordable energy supplies to meet the needs of the town and neighboring communities.
3. Reduce municipal energy consumption and costs, community reliance on fossil fuels and foreign oil supplies, and greenhouse gas emissions that contribute to climate change through increased

energy and fuel efficiency, energy conservation, and active transition to alternative fuels and renewable energy sources.

4. Sustainably develop Rutland Town's renewable energy resources and local distributed energy generation capacity – including municipal and community generation and supporting smart grid technology – consistent with adopted plan policies and community energy facility and siting standards.

5. Avoid or minimize the adverse impacts of energy development on public health, safety and welfare, the town's historic and planned pattern of development, environmentally sensitive areas, and Rutland Town's most highly valued natural, cultural and scenic resources, consistent with adopted plan policies and community standards for energy development, resource protection and land conservation.

POLICIES

1. Encourage energy efficiency and conservation as primary considerations in new municipal construction projects, equipment purchases and operations. Life cycle costing shall be used by the town in evaluating capital expenditures as appropriate.

2. Encourage, to the extent practical, the use of energy efficient municipal vehicles (e.g., hybrid, bio-diesel).

3. Development should be directed toward designated growth centers and limited in the least accessible areas of the community to minimize the need for new road infrastructure and reliance on the private automobile.

4. Support land use and conservation policies that encourage ongoing forest management to maintain a local source of fuel-wood.

5. Support land use and conservation policies that encourage agricultural uses on prime agricultural soils to increase the supply of and access to locally produced food and reduce the total food transport miles required to sustain Rutland Town families.

6. Encourage small scale and appropriately sited development of renewable energy generation solar panels. Such encouragement should consider, but not be limited to the prevention of:

A. Undue adverse visual impacts on adjacent properties, scenic corridors and Rutland Town view sheds;

B. Forest fragmentation, environmental degradation, and habitat disruption;

C. Impacts to sediment transport and aquatic organisms' passage in streams;

D. Their use of land with prime agricultural soil.

7. Prohibit free-standing solar generation structures on forest land above 1000 feet elevation.

8. The town – in collaboration with the Rutland Regional Planning Commission, neighboring communities and utilities serving the town – will participate in long- range utility. Planning to ensure that adopted plan policies and community standards are identified and considered in future energy planning and development.

9. Existing and proposed municipal policies, programs and regulations will be evaluated for their effect on municipal energy use, and revised as needed to promote reduced energy consumption, increased energy efficiency, and the sustainable development and use of local renewable energy resources.

10. Energy and fuel efficiency will be primary considerations in municipal construction projects.

equipment and vehicle purchases and facility operations.

11. The town will collaborate with the NeighborWorks of Western Vermont, area utilities and service providers to promote community energy literacy, and to provide information about available energy assistance and incentive programs, state energy codes and energy system permitting.

12. The town may participate before the PSB in Section 248 review of new and upgraded energy generation and transmission facilities as necessary to ensure that adopted community standards are given due consideration in proposed energy facility development.

13. New energy facility development within or that may affect Rutland Town must conform to adopted community standards for energy facility siting and design to receive municipal support or approval.

14. New development shall not exceed the capacity of existing and planned generation, transmission and distribution systems. Development with high energy demand must maximize energy efficiency, incorporate on-site generation, or undergo project phasing in relation to planned system upgrades as necessary to mitigate anticipated service or facility impacts.

15. New development must be designed and constructed to at minimum meet state energy standards, through site and building design, material selection and the use of energy-efficient lighting, heating, venting and air conditioning systems.

16. The town will work in cooperation with local agencies, emergency service providers, and regional suppliers to develop emergency contingency plans that ensure access to critical energy supplies and measures to reduce nonessential energy consumption in the event of an abrupt energy shortage.

GENERAL STANDARDS FOR ENERGY PROJECTS

Rutland Town supports the following appropriately sited types of energy development, “appropriately sited” defined as meeting the general setback and aesthetic standards contained herein:

- Increased system capacity through state, utility and municipally-supported energy efficiency and conservation programs.

- Individual and group net-metered renewable energy projects, community-based projects, and other small-scale distributed renewable energy systems serving individual users, in appropriate, context-sensitive locations.

- In-place upgrades of existing facilities, including existing transmission lines, distribution lines and substations as needed to serve the town and region.

- New community-scale solar energy facilities, including new transmission and distribution lines, substations and solar farms designed to meet the expected needs of Rutland Town.

To the extent physically and functionally feasible, existing utility systems, including transmission lines, distribution lines and substations, shall be upgraded or expanded on site or within existing utility corridors before new facilities or corridors are considered.

Rutland Town will endorse or permit the development and installation of energy facilities that conform to community energy facility development and siting standards through participation in Section 248 PSB proceedings or, where applicable, through local financing and incentive programs and regulations.

PUBLIC HEALTH AND SAFETY STANDARDS AND USE CLASSIFICATION

A small net-metered or off-grid solar energy project, including a solar array system intended solely to serve an individual residence or business, is allowed in all land use districts

- Roof or building-mounted systems on a historic building shall not physically damage the structure or alter its character-defining features.

- Roof-mounted installations shall be placed below and behind existing parapet walls. Panels are to be mounted flush with and at the same existing angle as the existing sloped roof surface. On flat roofs solar panels shall be set back from the edge of the roof to minimize visibility.

NATURAL AND CULTURAL RESOURCES

Introduction

Before a community can plan for its future, it must identify natural and cultural resource assets and create clear standards for their protection. Natural and Cultural Resources are shown on Natural Resource Maps #1 and #2, which are hereby incorporated with this plan.

Goal:

- **Protect natural and cultural resources from the impacts of development, while maintaining access to and appropriate use of those resources.**

Agricultural Resources

Although agriculture has been a prominent land use in the town since its original settlement, large-scale agricultural use of land has been steadily decreasing due to the proximity to Rutland City, demand for housing, and the increasing economic pressure on farmers within Vermont. Agricultural are located primarily along Otter Creek in the west/southwest sector of town and between North Grove Street and East Pittsford Road/Blueberry Lane in the north sector. A recent upswing in smaller-scale agricultural activities has increased the number of farms in the region and is supporting a growing agricultural economy.

An analysis of settlement patterns in Rutland Town indicate that only a small number of structures are currently standing on the highest quality soils in the community. Land designated as “prime” agricultural lands comprise 22% of the town’s total and land. 17 structures (1%) of the total number of buildings in town are located on what are considered to be prime or statewide agricultural soils.

Forest Resources

Most of the forestland is located on slopes bounded by West Rutland and Proctor to the west and by Mendon to the east. There is a small amount of valuable timber, but most of the land is used as a scenic and recreational resource--hunting, hiking, bicycling, and cross-country skiing.

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

The most critical component of wildlife survival, according to Conserving Vermont's Natural Heritage, a book produced by the Agency of Natural Resources, is the maintenance of blocks of connected habitat and migration land. In other words, it is critical that large tracts of land be connected versus existing in isolation.

Deer, the largest of the animals typically found in Rutland Town, have several mapped deer wintering areas in the Town, which occupy a total of 1,627 acres, 13% of town. Typically, deer wintering areas are located predominantly in areas of low, south facing slopes and along watercourses. In Rutland Town, they are located at the extreme northwest corner of the town, east of Prospect Hill, and in the southeast corner of the town.

Rare and Endangered Plants and Animals and Wildlife areas are shown on Natural Resource Maps #1 and #2. Development shall occur in these areas or in ways that minimize the loss of connected habitat areas.

Open Space and Scenic Resources

In the course of planning for Rutland Town's future, it is important that the presence of high quality open space and scenic resources--broad scenic areas as well as scenic landmarks--be recognized and the integrity of such resources be preserved. Open space and scenery entice many people to visit the area and add greatly to the quality of life enjoyed by the people who live here.

Open space and scenic resources are fragile. Misuse or overuse can destroy the delicate balance of form and pattern that defines scenic beauty and attractive open space. Open space and scenic resources shall be considered during subdivision review and protected from development.

Historic Structures

Areas that have historic value to present and future residents of the Town enrich the community greatly. As the Regional Plan states, "Standing buildings and structures may be important because of their significant architectural design and fine material and craftsmanship or because they illustrate an important aspect of history."

Often they too help tell the stories of everyday life that were never written down. These clues to understanding our past can be found in such individual structures as elaborate mansions, simple workers' houses, bridges, factories, and barns, as well as the groups they form in village centers, residential neighborhoods, and farm or industrial complexes. Historic structures, through their locations, architectural features, and historical associations, testify to patterns of Vermont life in the late 18th, 19th, and early 20th centuries and serve as the visible reminders of the occupations, activities, philosophies, and priorities of Vermonters who came before us.

The Town has a large number of historic structures, which are described in the Rutland Town chapter of "The Historic Architecture of Rutland County". According to this report, there are 86 properties listed on the Vermont Historic Places Register. Of these, the majority are residences. However, they also include farms, mills, a powerhouse, a bridge, a post office, and a church.

The Town also includes one officially recognized historic district. This district, which is located at the intersection of Business Route 4 and East Proctor Road and called the Center Rutland historic district, consists of 24 of the Town's 86 historic properties.

impairment to surface waters in the Rutland Town. Unlike point source pollution, such as a direct discharge or outfall pipe, non-point source pollution is more diffuse, harder to quantify and more difficult to control. Examples of these are runoff from parking lots, back roads, fertilized lawns, and runoff from agricultural fields. It has been well documented that urban and suburban non-point sources contribute more phosphorus and sediment per acre than runoff from the working landscape.

Natural and Cultural Resources Strategies

Land Resource Strategies

- Incorporate measures that provide protection for land resources during development
- The Town's primary agricultural soils should be conserved for agricultural uses if they are economically viable; development should be steered away from prime agricultural soils.
- **Forested lands should be conserved to protect against erosion and to preserve their scenic and recreational qualities.**
- Wildlife habitats in the Town should be conserved; the impacts of development and land use change on these habitats should be minimized through the use of conservation easements, purchase, lease, tax incentives, or other measures. prohibited
- Land development is discouraged on slopes greater than 15%.
- Sand and gravel operations should be carefully reviewed to ensure the public's safety and freedom from noise, dust, traffic and other intrusions in residential areas.
- Identify other lands to prevent flooding by maintaining vegetated buffer strips in riparian zones surrounding streams and rivers; maintaining upland forests and watersheds for predominately forest use; and requiring new development to preserve vegetated riparian buffer zones that are consistent with state riparian buffer guidelines.

Historic Resource Strategy

- **Preserve historic structures and scenic, cultural, recreational, and unique natural resources during development.**

Water Resource Strategies

- Protect water resources so that water quality is maintained, access is preserved, erosion and encroachment are minimized, and public interests are advanced.
- Gravel aquifer and wellhead areas should be protected from development that would pollute or restrict the flow of water through porous soils.
- Any use or development proposed to be located within or adjacent to the watershed of a public water supply or community well system shall be carefully reviewed for potential detrimental effect to both the quality and quantity of the supply.

Town of Clarendon

Town Plan

Adopted March 22, 2010

Mineral Resources

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

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

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

There are currently two stone crushing quarries in the community as well as sand and gravel pits.

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

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

Wildlife Habitats, Fragile Areas and Geologically Significant Locations

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

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

There are seven mapped deer wintering areas in the Town located predominantly in areas of low, south facing slopes and along watercourses. They cover 2424 acres, or 12 percent of the Town's land area. Vermont is near the northern limit of white-tailed deer range in North America, and adequate food and shelter must be available if deer are to survive the deep snows and cold temperatures. There are also 1415 acres of bear habitat in the town. These occupy seven percent of the town's total land area. See Table 10.

Natural heritage sites are also located in the town. See Map 3A. Natural heritage sites incorporate rare plants and animals that are native to the state and considered rare for one or more reasons, as well as natural communities that are either rare habitat types in Vermont or among the best examples in the state of a common community type.

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

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

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

Table 10. Selected Wildlife Habitat in Clarendon

Type	Acreage	Percent of Total Area
Deer Yards	2423.81	12
Bear Habitat	1415.13	7

Source: Rutland Regional Planning Commission

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

Water Resources

Watersheds

In order to discuss a community's water resources in a meaningful way, it is important to first understand the nature of the community's watersheds. A watershed is a distinct, topographically defined land area that drains into a single river, river system, or standing body of water. Because rivers join to become larger rivers, many watersheds may be considered "sub watersheds" of larger watersheds. As one would expect, the activities taking place in a watershed play a critical role in the quality of the water draining from it. If a watershed is mostly agricultural, for

Goals and Objectives to Guide Future Growth

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

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

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

Provide and maintain a transportation system that is safe and efficient and meets the needs of all segments of Clarendon's population.

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

Minimize energy consumption. Reduce reliance on nonrenewable energy sources. Assure that energy development is environmentally neutral and does not impact the health of residents and does not result in a negative impact on property values.

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

Policies for the Preservation of Natural and Cultural Resources

The Town will work to observe the following policies:

Agricultural and Forest Lands and Mineral Resource Areas

Encourage the continued use of agricultural lands for food production and other agricultural purposes.

Support management of forestry resources.

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

Wildlife Habitat, Fragile Areas and Geologically Significant Locations

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

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

Rivers and Streams

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

Ponds

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

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

Wetlands

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

Groundwater

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

Energy Conservation

Encourage settlement patterns that reduce travel requirements for work, services, shopping and recreation. Promote opportunities for walking, cycling and other energy efficient, non-motorized alternatives to the automobile. Encourage energy efficiency in residential and public buildings so as to reduce dependence on energy sources.

Cultural Resources

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

Cooperate with historians and archaeologists researching Clarendon's past.

FUTURE LAND USE

Land Use Plan

The growth of Clarendon is apparent; populations will increase, the use of the land will change and the demand and need for community services will increase. The principal objective of sound, rational land use planning is to accommodate this anticipated growth while minimizing the adverse impacts on the land, the environment and public and private investments.

The following districts - displayed on Map 2 - are proposed to ensure these objectives. They will also serve as the basis of zoning regulations in the Town of Clarendon.

Conservation District

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

Residential and Commercial District

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

The residential portion of this district is to allow for residential and commercial/retail uses at densities appropriate with the physical capability of the land and the availability of community facilities and services. Other uses incompatible with residential and commercial uses, such as industrial and/or manufacturing shall not be allowed for the health, safety and welfare of the community.

The village area of the town shall be supported by the ideals of this district. The village has a role in our community by being a social and economic activity center. This area will also be able to provide for residential, commercial and other compatible development that serves the needs of the community. Such development should occur at densities and uses that will maintain the traditional, social and physical character of the village and that will not exceed the capability of the lands, waters, services and facilities.

Commercial and Industrial District

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

Town of Shrewsbury

Town Plan

Effective November 2013 – November 2018

Use of the town plan is not limited to regulations and adopted capital budgets. A wide range of projects, sponsored by the town itself or groups serving the town can implement the goals of the plan to ensure that Shrewsbury's plans for its future are being coordinated. Programs or initiatives that further the purposes of the plan could include such projects as the development of advisory commissions which would address issues like affordable housing and historic preservation, the development of tax stabilization contracts which would allow the town to promote the growth of specific types of businesses or the municipal purchase of development rights which could preserve undeveloped lands.

The following list of maps in the Appendix, together with those maps noted below that are on file in the Shrewsbury Town Clerk's Office, are made part of this Plan and incorporated herein by reference. It should be noted that these maps exist only as a general representation of existing conditions, to facilitate on-site analysis and the planning process.

List of Maps in Appendix:

1. Shrewsbury, VT Municipal Map
2. Future Land Use
3. Natural Resources, Shrewsbury, Map 1 of 2
4. Natural Resources, Shrewsbury, Map 2 of 2
5. Shrewsbury, VT Contours
6. Shrewsbury, VT Aerial Photograph
7. Shrewsbury, VT Watersheds
8. Flood Plan map.

Additional Maps to be on File at Town Office:

1. Flood Plan map
2. Official Highway map
3. Parcel map (available in hard copy and electronically)

3. OBJECTIVES

It is the purpose of this Plan to guide future growth and development within the Town of Shrewsbury by providing a framework of planning policies and recommendations which will assure that decisions made at the local, regional, and state levels are consistent with the following objectives:

3.1 To protect and preserve the rural nature, scenic quality and sense of community of Shrewsbury;

3.2 To protect public health and welfare and property values from air, noise, water and light pollution, and other disturbing physical influences;

3.3 To assure that basic needs of health, safety, education, housing and recreation will be met and maintained at appropriate levels in accordance with the Town Plan;

3.4 To provide for the conservation and prudent use of natural resources, the protection of fragile areas, and the preservation of agricultural land, forest land and wild lands. Wild lands are unsettled, uncultivated land left in or returning to its natural condition.

3.5 To protect and preserve scenic and historic features;

3.6 To maintain and encourage agriculture and forestry as a part of our Town;

3.7 To require that public utilities be located and maintained in such a way that they will not have an adverse effect on the scenic quality, biological and general health, and land use in the Town;

3.8 To mitigate any incompatible or uncoordinated development activity;

3.9 To allow for future growth in a way that will meet the needs but will not place an undue burden, financial or otherwise, on the Town to provide community facilities and services;

3.10 To encourage that the Town and State roads permit safe travel within and through the Town in the least disruptive manner to the land and within the limits of Town financial resources and the State Scenic Road Act;

3.11 To protect aquatic and upland ecosystems, critical animal habitats and corridors, and wild areas;

3.12 To encourage energy efficiency, energy conservation and non-polluting renewable energy production.

4. LAND USE PLAN

4.1. Natural Factors

4.1.1. Geology

Bedrock Geology of the Shrewsbury, VT Area, by Charles A. Ratte, State Geologist.

The bedrock underlying the Town of Shrewsbury is composed of ancient metamorphic rocks of Precambrian Age (600 million years and older.) The region has been mapped by William F. Brace (1953) and the results of his work have been published by the Vermont Geological Survey (see reference below).

The rock units mapped by Brace (1953) include the Wilcox Formation which is composed of a group of gray-to-black schist, buff-to-tan-colored dolomite and white-to-black gneiss about 3000 feet thick. This formation is exposed in out-croppings in the western part of the Town of Mendon and Shrewsbury and can be seen in exposure along Mendon Brook, Cold River and on Wilcox Hill. The major Precambrian rock unit mapped by Brace (1953) is known as the Mt. Holly Complex. This unit is composed of metamorphic rocks known as gneiss, quartzite, schist, and marble. Gneiss is by far the dominant rock variety. An interesting bright green Schist with chromium-bearing mica is exposed in a small saddle on the north side of Round Hill in Shrewsbury (Brace, p. 27).

steep, and fewer varieties of plants exist. Such characteristics create an environment which is intolerant of intensive use or development.

Excessive erosion may result when these high-elevation areas are disturbed because the few natural species of plants at these altitudes grow quite slowly, thus reducing their ability to control erosion.

These high mountain areas play a vital role in the water cycle. The greater amounts of precipitation filter through the thin soils, eventually reaching major groundwater supplies. Uses which result in excessive soil compaction or the removal of vegetation or soil cover are especially detrimental to the natural drainage of water. Also, the natural topography of Shrewsbury is such that the high elevation peaks and ridgelines that bound Shrewsbury's watersheds on the north lie not within Shrewsbury, but in the neighboring town of Mendon. While beyond the direct control of Shrewsbury's Town Plan or Zoning Ordinance, settlement or development on these adjacent lands may directly and adversely affect the Town of Shrewsbury, the health, safety and welfare of the Town's residents and the aesthetic and scenic resources of the Town.

POLICY 5- Elevations Above 2,000 Feet

1. Elevations above 2000 feet shall be protected with respect to intensive uses and commercial recreation. The Shrewsbury zoning bylaws shall require a site review procedure for development at elevations between 2000 and 2300 feet in order to assure that any development in these zones will not adversely affect the fragile ecosystems and scenic quality of the terrain. No development of any kind shall be allowed over 2300 feet.

2. The Town of Shrewsbury should work closely with other municipalities in the region in planning and reviewing development along the Town's boundaries. This would include participation in Act 250 and Section 248 hearings, in local zoning proceedings and in regional discussions as appropriate to achieve these goals and to safeguard Shrewsbury's interests.

4.3.2.2 Wetlands (see Fragile Areas map.)

Wetlands in Shrewsbury are extensive, including but not limited to: Fletcher Swamp, Johnson & Cook's Ponds, Hebert Swamp, Elliot House Beaver Pond, and Black Swamp. These areas fulfill many important functions. Because of their high water-absorptive and holding capacity, they serve to retain runoff, thereby reducing the hazards of flooding and providing an important link in replenishing groundwater supplies. These areas are commonly known as ponds, bogs, fens, marshes, wet meadows, shrub swamps, and wooded swamps. Wetlands often occur in association with lakes, ponds, rivers, and streams, creating transitional areas between dry land and open water. Wetlands are the source of major food chains, thus providing a unique habitat for a wide range of wildlife. Many recreational and educational opportunities such as hunting, fishing, hiking, bird watching and nature study are provided by these areas. The Town's zoning regulations require that any proposal for development or agricultural use should be set back by at least 100 feet from Wetlands. The Vermont Use Value Appraisal (UVA) program now recognizes riparian areas as one of six designated Environmentally Significant

4.3.4.3 Rural Areas

The preservation of Shrewsbury's rural and agricultural nature and the maintenance of the viewsapes that give the Town its charm are threatened, both by the pressure of large-scale development, and by the gradual "parcelization" and subsequent development of the Town as a consequence of many individual and well-intended development decisions.

The charm of the New England landscape resides in the juxtaposition of clustered homes in a village setting with outlying farms and wooded areas. The danger where residential development pressure is significant, as it is in Shrewsbury, is that the important components of a working and natural landscape may be consumed by development that could be more appropriately sited in other locations. The Town seeks a rural rather than a suburban pattern of residential land use.

An approach to maintaining and promoting the Rural Residential Landscape might be found in one or more of the following techniques:

- clustering development
- transfer of development rights
- use of planned residential and unit development
- conservation easements
- incentives to promote development in villages
- incentives to keep land in production
- combined driveways
- Vermont current use program
- protection of undeveloped areas.

POLICY 18 - Rural Areas

1. The retention of the Town's scenic and rural character is a primary goal. The density and location of rural settlement shall be guided by the policies set forth in this Plan and by the provisions of the Shrewsbury zoning bylaws and subdivision ordinance.

2. To assist landowners in complying with the objectives and policies of this Plan, the Town may consider setting up a voluntary "Site Assistance Program." This program would be carried out by a committee of Townspeople with skills in engineering, architecture, forestry, agriculture, and landscaping. The committee would advise landowners on ways to carry out planned development and construction so as to preserve agricultural and forest productivity, and to protect the scenic quality of the Town.

4.3.4.4 Conservation Areas

Conservation areas consist of all land subject to settlement constraints as defined in Section 4.3.1. These areas are based on the Natural Resources maps and include land subject to one or more of the following characteristics:

(1) Shallow soils;

* A focus on lot size tends to divert attention from more important questions involving the configuration and inherent characteristics of the parcel being developed.

* Rigid lot requirements can lead to illogical land use decisions, such as not allowing the creation of a 3.9-acre lot in a 4-acre zone when in reality the smaller lot may be better suited, with appropriate boundaries, for development.

An optimal approach to guiding the nature and intensity of development would be one that would gradually move the Town away from minimum-lot zoning to a more flexible and case-specific approach. This could include a blend of acreage limitations and permitting appropriate development including clustering and density-based zoning.

POLICY 21 - Residential Development and Acreage Requirements

1. Acreage limitations should be abandoned in favor of targeted and flexible approaches that are better suited to the land use objectives set forth in this document. This should not be done, however, until an effective alternative system for guiding development is designed and put into place.
2. The review and approval of subdivision of land should follow the natural boundaries of physical or biological features when feasible.

5. PRESERVATION OF SCENIC AND HISTORIC FEATURES

5.1 Scenic Features

5.1.1 Landscape Form

Shrewsbury is predominantly mountainous; thus, its topography includes:

- a) Ridgelines, mountain peaks and hilltops;
- b) Steep slopes;
- c) Intermediate slopes and terraces; and
- d) Valley floors.

5.1.1.1 Ridgelines, Mountain Peaks and Hilltops

Ridgelines, mountain peaks and hilltops are prominent features of the Town. These formations have influenced the courses of our streams and the land uses, most notably, the location of our villages and the physical pattern of agriculture. These features are a source of unspoiled beauty and contribute to the unique scenic and aesthetic quality of Shrewsbury. Shrewsbury Peak, Smith Peak, Salt Ash Mountain, Saddle Mountain, Copperas Hill, Robinson Hill, Jockey Hill, Angelo's Hill and Kinsman Hill are a few examples of such landforms. Since they are often the focal point of distant or local views

5.1.1.4 Valley Floors

Shrewsbury has only a small amount of the flat land associated with valley floors and this is found mostly along the Mill River and, to a lesser extent, the Cold River. The land of valley floors, or bottom land, was traditionally prized for its high agricultural value. The Mill River valley retains much of its acreage as open and useful farmland while the Cold River valley has seen more of its area return to forestland. With the decline of farming, the use of the valley floors for residential development has increased. The narrow confines of these river valleys experience periodic flooding, which demands that development adheres to the flood plain regulations.

POLICY 25 - LANDSCAPE FORM: Valley Floors

1. Settlement of valley floors shall be restricted to locations that will have minimal impact on agricultural land and the scenic qualities of the valley.
2. The expansion of any existing roadway(s) should be prohibited.
3. Development shall be subject to guidelines set for floodway and floodplain areas by this Town Plan and Town's Flood Hazard Area Regulations. A Floodway is a channel of a stream, plus any adjacent flood plain areas that must be kept free from encroachment in order that the 100-year flood may be carried without any substantial increases and height. The flood plain is the height of the water level of the 100-year flood.

5.1.2. Landscape Pattern

The landscape pattern of Shrewsbury is made up of a combination of elements:

- a) Villages;
- b) Open fields;
- c) Farms;
- d) Forestlands;
- e) Scenic views;
- f) Scenic back roads;
- g) Surface waters and wetlands;
- h) Trails; and
- i) Utility corridors.

5.1.2.1 Villages

Shrewsbury is still an overwhelmingly rural town with three main focal points of population and services. These are Cuttingsville, Shrewsbury, and North Shrewsbury.

POLICY 26-LANDSCAPE PATTERN: Villages

See Section 4.3.4.1.

5.1.2.2 Open Fields

One of the most apparent aspects of Shrewsbury's landscape pattern is the contrast between open fields bordered by stone walls and the surrounding woodlands. Although agriculture is not the dominant land use in Shrewsbury today, it was and is the agricultural use of suitable lands that created and helps to maintain this important visual and economic asset.

POLICY 27 - LANDSCAPE PATTERN: Open Fields

1. Agricultural and open lands shall be identified and shown on maps.
2. Any development in these lands shall avoid interference with possible agriculture to the greatest extent possible, shall be sited to minimize impairment of the scenic qualities of the landscape, and be in harmony with the natural terrain and vegetation.
3. Stone walls shall be preserved.

5.1.2.3 Farms

Shrewsbury's landscape pattern has been largely influenced by the farm activities of the past. The isolated groupings of farm dwellings and outbuildings are characteristic of these activities. They provide focal points of scenic and historic interest. The traditional mix of open land, woodland and farm or village cluster is threatened by the decline in farming activity. The contrast created by distinctly different land uses from one parcel to another is being lost to a repetitive pattern of emerging woodlands and residential development.

POLICY 28 - LANDSCAPE PATTERN: Farms

1. Emphasis shall be given to the preservation and encouragement of suitably scaled agricultural activities in Shrewsbury. The size, scale, or stocking level of agricultural enterprises should be appropriate in terms of such factors as the economic viability and ecological sustainability of the operation and the operation's off-site impacts of noise, odors, lighting, and potential air and water pollution.
2. The Town encourages organic farming.
3. The Town discourages factory farms.

5.1.2.4 Public and Private Forest Lands

The principal state and federal lands within the Town are the Coolidge State Forest, Plymbsbury Wildlife Management Area, and the Long Trail/Appalachian Trail Corridor. They total approximately 7,714 acres (The source of these acreages is the 2013 Town of Shrewsbury Grand List). These lands are an important shared community resource.

They encompass most of the higher elevation ridges and peaks that constitute the most widely visible features of the Town. Private landowners and the Town own the remaining forests.

POLICY 29 - LANDSCAPE PATTERN: Public and Private Forest Lands

1. The Town shall encourage preservation of the scenic vistas of forest lands, and protect the scenic resources within them. The Town's official bodies, working cooperatively with State agencies for long-range management plans, shall include identification of scenic areas, wildlife habitat for game and non-game species (deer yards, bear, bird, and amphibian habitats), wetlands, fragile soils, wild lands, areas for quiet recreation, and techniques for their protection.

2. The Town should support transfer to public agencies of forest land that private landowners and non-profit organizations wish voluntarily to sell, donate, or otherwise convey for the purpose of conserving natural resources and/or allowing public recreation use.

5.1.2.5 Scenic Views

Shrewsbury is well endowed with scenic views both within our borders and extending well beyond. The striking distant views are some of the best and provide a glimpse of the Green Mountains as they might have looked at the time Vermont was first settled. A pleasing contrast to these mountain vistas is provided by the near and middle-distance views within the Town. These views include the villages, farmsteads, ponds, meadows and lower hills.

POLICY 30 - LANDSCAPE PATTERN: Scenic Views

1. The Town shall preserve these scenic views and cooperate with neighboring towns to preserve scenic views.

5.1.2.6 Scenic Back Roads

An important aspect of Shrewsbury is the network of back roads comprising the Town's highway system. The character of the roads themselves, their winding nature and borders of trees and stone walls, as well as the views they often provide, is sometimes compromised by improvements (see Policy 42).

POLICY 31 - LANDSCAPE PATTERN: Scenic Back Roads

1. Improvements and maintenance of Town roads should be carried out in a manner that will protect and enhance scenic features while maintaining safety and durability. The Town should consider officially designating certain sections of road as "scenic" in accordance with the Vermont Scenic Highway Law. Planting and maintenance of roadside trees should be encouraged where appropriate, as should voluntary efforts to

enhance the appearance of all roadsides, such as Green-up Days and restoration of stone walls.

2. Town roadways should be managed as necessary to control and eliminate invasive plants and pests.

5.1.2.7 Surface Waters and Wetlands

Rivers, streams, ponds, lakes, and wetlands are all of high scenic, recreational and wildlife value. Activities in a watershed can affect the quality of the waters downstream.

POLICY 32 - LANDSCAPE PATTERN: Surface Waters and Wetlands

1. Surface water (streams, lakes, and ponds) and wetlands shall be protected from settlement and uses which would reduce their water quality and/or wildlife habitat, or despoil the scenic quality of their banks and shorelines.

5.1.2.8 Utility Lines and Corridors

There are a number of utility lines and corridors within the Town. These include the railway corridor, a major electric transmission line corridor owned by Vermont Electric Power Company, and a Green Mountain Power line cutting across the southwest corner of Town. The trend in construction and maintenance of distribution lines serving residential demand is to follow roadways, rather than travel cross lots as was the practice when farms represented the bulk of rural service. The Town discourages the use of herbicides in controlling the growth of vegetation in and around these utility lines and corridors.

POLICY 33 - LANDSCAPE PATTERN: Utility Lines and Corridors

1. It is the policy of the Town to discourage new electric transmission or gas line corridor or other new right-of-way nor any new transmission lines be constructed within the Town except within the aforementioned transmission corridor right-of-way that exists at the time of enactment of this Plan.

2. The existing corridors shall be maintained to minimize soil erosion, maximize wildlife habitat, and protect the scenic and aesthetic qualities of the landscape. The Town, being concerned about water quality, discourages the use of herbicides and recognizes the need to maintain vegetated buffer zone around surface waters. The Town will continue to work with the Railroad owner to minimize all the biological impacts of the maintenance on the railroad's right-of-way.

3. Before construction or reconstruction of lines or other changes in the existing corridors are permitted, the applicant shall furnish a bond sufficient to permit and require the completion of all screening and other landscaping required by the Town, Public Service Board or other Governmental body.

4. The Town shall continue to review all proposals to relocate, construct or reconstruct utility lines within the Town with regard to locations, tree-cutting and trimming, scenic and aesthetic considerations, and natural resource considerations.

5.2 Historic Sites

The historic sites in the Town of Shrewsbury provide an insight into the lives of the Town's early settlers. The surviving structures and sites constitute some of our most valuable resources.

At present, historic sites and structures are offered a limited degree of protection under Vermont Statutes, Title 10, Chapter 151. In granting Act 250 permits for subdivision or development of land, the District Environmental Commission must find that the proposed project "will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, or rare and irreplaceable natural areas."*

Implementation of Design Review Districts offers another means of protecting areas containing structures of historic, architectural or cultural merit. Such districts may be recommended by the Planning Commission and approved by the Select Board. Within such designated Design Review Districts, no structure may be erected, reconstructed, substantially altered, restored, moved, demolished, or changed in use or type of occupancy without approval of the project by the Development Review Board (DRB).

An inventory of the historic sites and a map are included. In addition to sites there are a number of original houses built in the 1800s which are of historic and architectural importance to the Town.

*Vermont Statutes Annotated, Title 10, Section 6085. (REPEALED)

**Vermont Statutes Annotated, Title 24, Section 4407. (REPEALED)

***Title 10, § 6086 (8)

****Title 24, § 4414 (1) E

POLICY 34 - Historic Sites

1. Structures and sites of historical significance shall be preserved or converted to new uses which maintain their architectural and/or aesthetic value to the community.
2. Shrewsbury Center, Northam Center, Brown Covered Bridge, and Cuttingsville are designated as historic districts. Construction in these areas requires compliance with historic district zoning regulations.
3. It is recommended that important historic sites be identified with plaques (by the Shrewsbury Historical Society, or others) to encourage their preservation.

POLICY 42 - Class 4 Town Highways

1. The primary function of non-maintained Rights-of-Way should be to provide paths for non-commercial recreational activities that do not degrade these highways. Class 4 Town highways should not be upgraded to Class 3 Town highways.

8.3 Scenic Roads

Among the four classifications, there is a special category for State and Town roads of scenic importance. Through a formal notification and hearing process, such roads may be officially designated "scenic roads" to protect their existing historic and rural character. Presently there are no officially designated scenic roads.

POLICY 43 - Designated Scenic Roads

1. The following Town highways should be designated as "scenic roads" as recommended by the Shrewsbury Historical Society and the Planning Commission. Town highway numbers are noted after each:

- a. Bailey Road (Town highway #30)
- b. Comtois Hill/ Tip Top Road/ Crown Point Road (#28)
- c. CCC Road (#3: mostly State Forest Road, but 2.5+/- miles Town road)
- d. Lottery Road (#21)
- e. Lincoln Hill Road (#4)
- f. Shunpike (#35)
- g. Eastham Road (#3)
- h. Upper Cold River Road (#6)
- i. Spring Lake Ranch Road (#25)
- j. Keiffer Road (#45)
- k. Button Hill Road (#26)
- l. Coldham Road (#17)
- m. Mitchell Road (#23)

Any road should be considered for scenic designation when and if residents think the designation would be useful for its preservation.

Special provisions should be provided with regard to setbacks, access driveways, and population density to preserve the scenic character of these roads. Unpaved scenic (or potentially scenic) roads shall not be paved.

8.4 Non- Vehicular Modes

8.4.1 Bicycle/Pedestrian Transportation

Shrewsbury's topography and settlement pattern constrain the potential for bicycle and pedestrian traffic; however, several routes are frequented by bicyclists, namely VT 103,

clustered to preserve the soils and allow for continued use of the land for agricultural purposes.

7. Shrewsbury encourages woodland owners to manage woodlots both environmentally and economically, and encourages forest products to be utilized in biomass production through accepted environmentally sound forestry and timber harvesting practices.

8. Removal of biomass for energy from Town woodlands and public forest land must require retention of adequate biomass residue from timber and sufficient woody debris to ensure long-term soil health and forest ecosystem sustainability.

9. Water energy conversion systems shall be sited appropriately and designed to be in full compliance with all Vermont laws and regulations. Hydro sites should also maintain and protect the environmental and biological integrity of our streams, brooks, and rivers.

10.2 Energy Transmission

Shrewsbury currently has two major electrical power transmission corridors. These have environmental and aesthetic impacts on the Town such as electromagnetic radiation, noise, wildlife corridor interruption, and the visual impact of clear-cut swaths across ridgelines and hillsides.

Utility lines inappropriately sited along our roadsides also have an aesthetic impact. The tree-trimming required to maintain them can significantly change the character of a road where branches arch overhead. The web of overhead lines in village centers limits the size of trees that can grow there. On-site energy production can potentially offset the impact of power line installation and maintenance tree trimming. The Town encourages the burying of utility lines when appropriate.

POLICY 63 - Energy Transmission

1. Utility line siting should take into consideration tree location.

2. Utility line tree maintenance shall be restricted to the minimum cutting possible.

3. Do not allow expansion of major energy (electric or gas) transmission outside of the two existing corridors, and require buffering of visual and environmental impacts of corridors.

4. The Town recommends the non-use of herbicides on all utility rights-of-way. We encourage the use of transmission corridors for pasture as an environmentally friendly way of keeping this land cleared.

5. Monitor the data on the danger of powerline transmission to populations of animals and people. Take action as required.

Town of Wallingford

Town Plan

Adopted February 4, 2013

- Encourage new development near streams to be designed and sited to blend with the natural surrounding as much as reasonably possible, and to avoid unreasonable interference with recreational uses, scenery or ecological functions of the stream corridor.
- Ensure that adequate erosion control measures are taken in areas of high erosion potential (e.g. steep slopes and thin soils) and high susceptibility to surface water pollution (e.g. along wetlands, streams and ponds).
- Establish and implement voluntary programs for stream conservation and water quality protection.
- Establish reasonable, site-specific stream buffers that conserve water quality, natural habitats, wildlife movement, and other ecological processes along aesthetically and recreationally important sections of streams.
- Incorporate into zoning regulations measures to address sediment and storm water runoff during and after construction.

Scenic and Aesthetic Qualities

Goals

- Encourage and create incentives for the protection and enhancement of the natural beauty and scenic characteristics of significance to local landscapes, including landscape diversity, order and harmony of landscape elements, unique combinations of natural and cultural features, distinctive distant views, foregrounds in harmony with distinctive distant views, skylines, shorelines, steep slopes, agricultural and forest lands, traditional villages and streetscapes, historic buildings and cultural features, and significant scenic roads and pathways.
- Encourage and provide incentives for residential, industrial and commercial development to avoid undue adverse impact on significant natural areas to the greatest extent possible.

Policies and Implementation Strategies

- Establish a process for conceptual review of proposed large scale developments in order to influence project design to protect scenic resources and natural areas.
- Encourage the preservation of significant scenic and aesthetic values and qualities through regulatory provisions that create benefits for property owners who protect and preserve such values and qualities.
- Incorporate into local land use laws and regulations incentives to encourage landowners to avoid undue adverse impact on natural areas and historic and scenic resources that are designated as significant.
- Investigate and evaluate the availability of a natural area Transfer of Development rights program to protect important natural areas and historic and scenic resources while, at the same time, respecting the economic interests of property owners.

Historic Features

Goals

- Recognize the role played by the historic quality and character of Wallingford in creating the town's identity, character and sense of community.

Town of Mount Holly

Town Plan

Adopted April 8, 2008

Wildlife has identified eight white deer yard areas in Mount Holly (Map II b 4). Remote sensing mapping – currently in progress - indicates that the number of deer wintering areas may be larger.

Other Wildlife

Mount Holly is home to about 25 species of mammals that are on the state's protection lists. In addition there are birds, fish, invertebrates, reptiles and amphibians, and plants that will disappear if their habitats are not protected.

SCENIC BEAUTY

Scenic Roads

The beauty of Mount Holly is seen all over Town – particularly where roads provide vistas of adjacent farm land and buildings and distant mountains with their patchwork of agricultural land and forest. Perhaps nothing typifies New England and Vermont more than tree-lined gravel roads defined by stonewalls. Maple Hill Road (Town Highway 22) is one such road. It is designated a Scenic Road by Town policy. The road has maple trees along the roadside and stone walls. It has been suggested that designation as a Vermont Scenic Road be explored. (Map II b 5).

Previous Town plans have suggested that sections of these roads be added to the list of Town scenic roads:

- Old Turnpike
- Healdville
- Packer Cemetery
- Shunpike
- Cole
- Hedgehog Hill North
- Okemo Mountain

Scenic Ridge Lines

Views of hills and mountains either forested or in agricultural use are important aesthetic resources for Mount Holly.

Early Vermonters built below ridge lines (probably in part to avoid the buffeting of winter winds), which created the vistas valued today. The historically significant fire tower on the ridge line of Okemo Mountain has been, until recently, the one exception to the general avoidance of ridge line building.

The Select Board passed an ordinance regulating Telecommunications facilities in the Town on Dec 8, 2001 under the provisions of Vermont's Telecommunications Law (24 V.S.A. ss 2291 (19), 24 V.S.A. Chapter 59, and 24 V.S.A. Chapter 117)

A photographic inventory of scenic areas

The inventory – primarily roads and vistas in Mount Holly - was made in early 2003 by the Working Group of the Planning Commission. The documentation of the scenic beauty of the Town continues to be seen in the Annual Mount Holly Photo Contest and Calendar.

LOCAL PLANNING PROCESS TASKS	RESPONSIBILITY	PRIORITY
<i>(Note: Tasks are not listed in any particular order)</i>		
1. Provide an open, accessible, and civil government to all citizens.	Select Board	on-going
2. Foster enhanced communication among all elected and appointed bodies.	Select Board	on-going
3. Review current maintenance and use of the Town web site to identify opportunities to expand its effectiveness as a means for keeping citizens informed of local government activities.	Select Board Planning Commission	on-going
4. Continue to publish meeting schedules and meeting agendas for local boards and committees.	Committee Chairs	on-going
5. Establish an annual planning forum where community members can be heard and where a policy of pro-active involvement is fostered.	Planning Commission	short-term
6. Conduct surveys to solicit public opinion regarding policy priorities of the Town and the preferred rate of community growth and development.	Planning Commission	on-going
7. Hold periodic meetings to evaluate the Town's performance in implementing the Town Plan.	Planning Comm Work Gp	on-going

II. PRESERVATION

GOAL

To preserve and enhance Mount Holly's natural resources, scenic landscape, environmental quality, and historic heritage for the benefit of current and future generations.

POLICIES

1. Support the efforts of land conservation organizations to identify and to preserve land and other important natural resources.
2. Protect water quality in streams by ensuring:
 - a. adequate sewage disposal
 - b. riparian buffers to protect water quality and fisheries habitat
 - c. control of runoff and erosion
 - d. restricted development in designated flood plains
 - e. protection of groundwater supplies.
3. Protect important natural resources and fragile features including wetlands, floodplains, unique geologic features, prime agricultural soils, and slopes in excess of 25%.
4. Protect critical wildlife habitat and important ecological communities including but not limited to deer wintering areas, rare and/or endangered species habitat, local fisheries, critical bear habitat and identified travel corridors from inappropriate or destructive development and land management activities.

6. Encourage active management and preservation of historic pastures and meadows.

Planning Commission on-going

7. Update the Town's flood hazard bylaws for the National Flood Insurance Program

Select Board
Planning Commission short-term

("x" = Organization to be asked for assistance with task)

PRESERVATION TASKS

RESPONSIBILITY

PRIORITY

1 Designate roads in addition to Maple Hill Road as "Town Scenic Roads" and encourage road work and private development to preserve and to enhance the scenic value of the roads including, but not limited to, the design of residential and non-residential subdivisions and the placement of buildings on subdivisions in order to preserve views, open space, stone walls, and natural and historical features.

Planning Commission
MH Conservation Trust "x" on-going

2. Work with interested Town organizations to inventory historic resources, including, but not limited to, hamlets, school districts and schools, cemeteries, churches, town halls, mills, cheese factories, blacksmiths, railroad stations, bridges, barns, buildings on the National and State Registers of Historic Places, stone walls, cellar holes, Jackson Gore boundaries, and other features.

Planning Commission
MH Comm Hist Museum "x" on-going

3. Nominate sites to be included on the State Historic Register.

Planning Commission
MH Comm Hist Museum "x" on-going

4. Protect Mount Holly's scenic landscape and rural character by the careful siting of residential development, to avoid placement in highly visible locations on hillsides and ridgelines, or on open meadows and farmland.

Planning Commission mid-term

5. Encourage the Designated Village of Belmont to develop design review guidelines and process, so that development is compatible with the historic character and varied architectural heritage of the Designated Village of Belmont.

Planning Commission
Belmont Designated Village "x" short-term

6 Encourage the upgrade and maintenance of historic barns and other historic structures through adaptive reuse provisions.

Planning Commission
MH Comm Hist Museum "x"
MH Barn Pres Assn "x" mid-term

7. Discourage the demolition of historic buildings.

Planning Commission
MH Comm Hist Museum "x" mid-term

III. GROWTH & DEVELOPMENT

GOAL

To accommodate a rate of growth and development that meets the needs of the community and, as expressed in the Town's vision, to remain a rural town with open spaces and significant undeveloped lands.

POLICIES

- 1. Growth and development trends will be monitored on an annual basis using the best available data, estimates, and projections.**
- 2. Local infrastructure and services will be planned to accommodate anticipated increases in the Town's population.**
- 3. Each new development will be evaluated for conformance with the Mount Holly Town Plan and associated policies, bylaws, and programs.**
- 4. New development shall be sited to conserve significant undeveloped land, natural resources, and conservation lands, and to prevent strip development.**
- 5. The rural landscape and rural character of most of Mount Holly's countryside, consisting of moderate to low density residential development, farming and forestry, and limited commercial enterprises such as outdoor recreation, home occupations, and cottage industries shall be maintained by:**
 - a. ensuring that land subdivision is carefully designed to avoid, to the extent practical, adverse impacts to natural or fragile features, productive farmland, and other features which help to define the Town's rural character and working landscape;**
 - b. the careful siting and landscaping of subdivisions on steep slopes, hillsides, and ridgelines;**
 - c. encouraging land use that retains as much undisturbed rural and forest land as feasible.**

6. Mount Holly will protect itself from untoward results of development by establishing guidelines pertaining to:

- Access for emergency vehicles
- Peace and quiet of neighborhood
- Trees and scenic quality of ridge lines
- Scenic views
- Air and water quality
- Off-street parking
- Wildlife habitat
- Exterior lights

	MH Conservation Trust "x" VAST "x"	mid-term
3. Review and update management plans for public recreation facilities and properties.	Select Board	short-term
4 Organize and/or work with volunteer groups to maintain the School's athletic fields and gym and Star Lake beach, skating area, and swimming water quality	Select Board	short-term
5. Request Vermont Fish and Wildlife Department to expand the list of acceptable use of the Lake Ninevah access point	Planning Commission	short term

("x" = Organization to be asked for assistance with task)

VIII. TRANSPORTATION

GOAL

To provide an efficient, cost effective, multi-modal transportation network that provides for the needs of the community.

POLICIES

1 Preserve the rural, historic, scenic character of Mount Holly by:

- a. Retaining existing paved and unpaved roads with no widening or increase in paving unless necessary for public safety;
- b. Maintaining safe and passable roads throughout the year consistent with the Vermont "Safe Roads at Safe Speeds" policy;
- c. Requiring that all road maintenance activities focus on safety, efficiency, cost-effectiveness and prevention of deterioration, rather than on facilitation of greater traffic volume or speed;
- d. Maintaining roads that can accommodate multiple modes of transportation, and recreation.

2. The Town shall provide a range of transportation options, including roads, transit, bicycle, and pedestrian facilities, to accommodate the current population.

3. The Town shall explore possible transportation systems within the Town and surrounding region to meet the needs of the elderly, disabled, and others without means of transportation.

4. Class 2 roads shall be maintained, as needed, to promote the efficient movement of traffic within and through Town, without undermining historic character or pedestrian safety.

5. Class 3 roads shall be maintained, as needed, to accommodate current traffic volumes, while maintaining the unique character of the Town's residential neighborhoods and rural areas.

6. The Vermont State Standards for the Design of Transportation Construction, Reconstruction and Rehabilitation on Freeways, Roads and Streets, dated October 1997 and prepared by the Agency of Transportation, shall serve as the Town's standards for maintenance and upgrade of public roads.

7. The Mount Holly Municipal Center and Belmont Village should serve as the transportation hubs of the community.

8. Provide adequate parking to meet the parking demand generated by new development.
9. Advocate for a Route 103 Corridor Management Plan as a means to address traffic concerns in Mount Holly and access to Ludlow and elsewhere on Route 103
10. The Town shall accept new roads, only if related to the existing road system, in order to minimize the impact of new roads on areas of historic, scenic, or natural resources. The Town shall require, to the extent possible, that new roads form an interconnected network of roads, especially in proximity to higher density residential districts, and the Town will avoid roads that transect contiguous forest areas.
11. The Town shall seek, to the extent practical, regional solutions to traffic management and transportation issues through active local participation on the Rutland Regional Planning Commission's Rutland Region Transportation Council and coordination with the Vermont Agency of Transportation.
12. The Town shall protect and maintain the historic and scenic features located within the rights-of-way of scenic roads.
13. All road construction public or private shall have as little impact as possible on important natural areas, and shall preserve historic and scenic features of the landscape.
14. The Town shall retain stone walls along roads as part of the rural, scenic, and historic character of the Town.
15. The Town shall remove healthy trees from the right of way only where necessary for safety, visibility, snow removal, utilities, or drainage.

TRANSPORTATION TASKS	RESPONSIBILITY	PRIORITY
1. Through the Town's development regulations and driveway rules, continue to carefully control access to public roads in accordance with appropriate standards.	Road Commissioner Select Board	ongoing
2. Create and adopt an official map for the Town that indicates all existing and planned transportation routes, which might include: intersection improvements; traffic circulation improvements in Belmont (parking, one-way streets, traffic control, sidewalks); sidewalks; recreation paths; wetlands walkway.	Belmont Designated Village "x" Road Commissioner Planning Commission Select Board MHConservation Trust "x"	short-term
3. Through the Town's subdivision regulations, consider opportunities for proposed development roads to connect to contiguous existing or planned roads.	Planning Commission	on-going
4. Prepare and submit to the Town a Scenic Road Ordinance,		

and maintain designated scenic roads, in accordance with approved scenic road maintenance plans.

Planning Commission
Road Commissioner ongoing

5. Prepare a bicycle and pedestrian improvement plan for the Town that, at a minimum, addresses the following:

a. the creation and extension of trails along "ancient roads",

b. the feasibility of creating horse trails in conjunction with neighboring towns

Planning Commission
Road Commissioner
Select Board short-term

6. Explore with the Rutland Region Transportation Council ways to improve transportation for those without access to private transportation, including transportation during emergencies.

Planning Commission mid term

7. Keep abreast of changing regulations or funding regarding rail services and their effect on the Town.

Planning Commission
Rut Reg Trans Council Rep ongoing

8. Amend subdivision regulations to assist in the implementation of policies cited above.

Planning Commission short term

("x" = Organization to be asked for assistance with task)

IX. ENERGY

GOAL.

To encourage the efficient use of energy including the development and use of renewable energy resources.

POLICIES

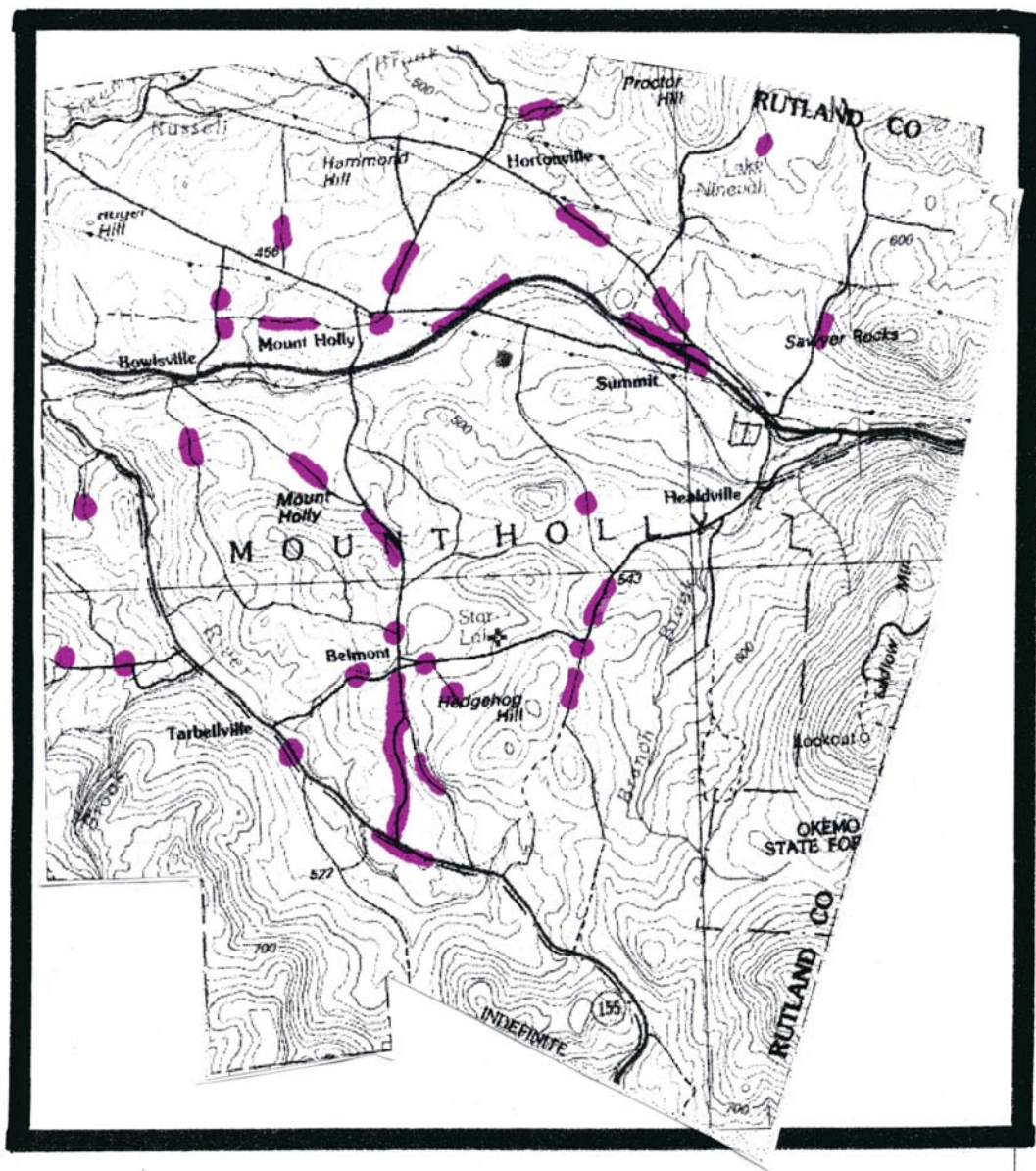
1. Town energy expenditures shall be reduced to the extent feasible through energy efficiency and conservation.

2. Energy efficiency, conservation, and renewable energy resources shall be considered in new Town construction projects, equipment purchases, and operations.

3. Energy efficient building and site design which reduce energy requirements for lighting, heating, cooling, and transportation, including but not limited to the clustering and siting of buildings and the use of landscaping and screening shall be encouraged as applicable under local regulations and ordinances.

4. Encourage energy efficiency, energy conservation, recycling, and the use of renewable and alternative power and fuel sources (including wind, water, solar) within the Town of Mount Holly.

5. Ensure that development of alternative energy sources does not negatively impact the environment or the character of the community.



Map II b 5

SCENIC ROADS and VISTAS
 Working Group of the Planning Commission, 2003

Town of Ludlow Municipal Development Plan

Adopted March 5, 2013

3. NATURAL RESOURCES



One of Ludlow's greatest assets is the abundance of natural resources and attractions including: Ludlow (Okemo) Mountain, Buttermilk Falls and the Ludlow area lakes, which are available for the use and enjoyment of residents, visitors, businesses, and industries. Ludlow's natural environment provides shelter and sustenance for wildlife and serves as the foundation for much of the municipality's economy.

The intrinsic value of the natural resources in Ludlow can be traced from the Town's early history. The early agrarian society, based on sheep and dairy farming, relied on the land to support their livestock and families. Later, Ludlow's woolen textile mills depended on the Black River to meet needs for power and water. Today, the commercial agrarian segment of the economy has been reduced to next to nothing. Earth mineral resources, including talc, gravel, and gold, have also played a role in Ludlow's development but most have also been greatly reduced in recent years.

Today, the recreational and scenic values of Ludlow's natural environment attract the travel and tourism market. The tourism industry attracts people with a desire to participate in all varieties of outdoor activities. These activities include: skiing, hiking, biking, swimming, snowmobiling, golf, hunting and fishing to name just a few.

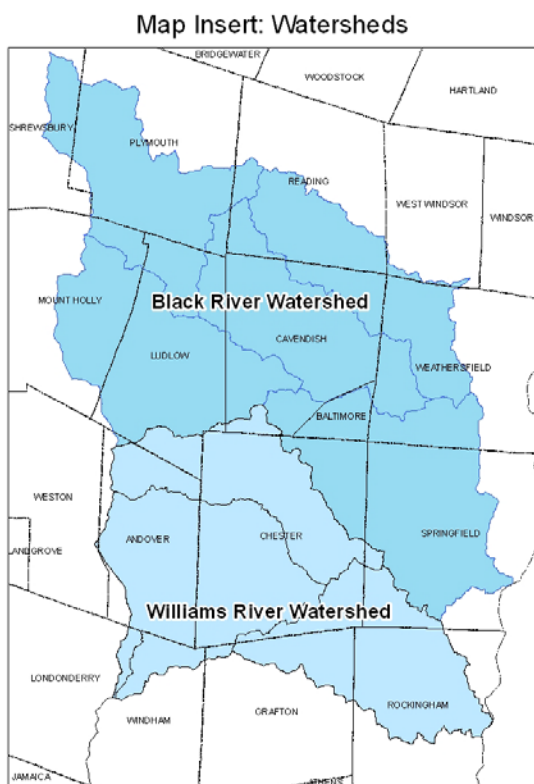
Protection and preservation of Ludlow's important natural amenities are vital to maintaining a fundamental component of Ludlow's economic base. Economic pressures on landowners to subdivide and develop large forested areas, fallow

Water Resources: Surface and Groundwater

Surface Waters

General Description: Ludlow's profusion of streams, lakes, ponds and wetlands are interspersed with other landscape elements to provide pleasing visual contrasts throughout the landscape. These surface waters offer a number of important uses, such as but not limited to recreation, wildlife habitat, food supply and industrial or commercial uses.

Much of Ludlow lies within the Black River Watershed (see the Watersheds Map Insert), a subwatershed of the Connecticut River. The southern portion of town is within the Williams River Watershed. Major waterways in Ludlow include the Black River and its tributaries, Jewell Brook and the Branch Brook. The Black River forms a generally narrow valley, surrounded by hilly and mountainous terrain. The source of the Black River is at the outlet of Black Pond in Plymouth. In Ludlow, the Black River flows into and through two large lakes, Lake Rescue and Lake Pauline, in the northern part of town. A local lake association was formed in August of 1954 to address lake related issues. The lakes are a popular destination, and many homes have been developed along the lake shores. In addition, many ponds and wetlands dot the landscape providing visual interest, recreational opportunities, and habitat for wildlife.



Buttermilk Falls on Branch Brook consists of a series of three falls with a large, shallow pool beneath each with sunny cobble and gravel shores. This area is very scenic and serves as a popular swimming hole.

Historic Usage: Ludlow developed as a mill town using the river and brooks as sources of power for textile mills. The Black River runs through the center of town and is paralleled by a major transportation corridor. As a consequence to the proximity of the rivers to municipal infrastructure and buildings, it is important for the municipal plan to evaluate related considerations, such as stormwater controls, and flood and erosion hazards.

4. SCENIC AND HISTORIC RESOURCES



State planning goals encourage maintaining historic settlement patterns in villages surrounded by a rural countryside, as well as protecting important scenic and historic resources [24 V.S.A. §4302(c)(1) and (5)]. Scenic and historic resources are among Ludlow's most valued assets identified by the 2008 Ludlow Town Plan Survey. Residents value the small town feel of the Village, surrounded by open fields, the lakes and rivers, hills and large tracts of forested lands. This Plan seeks to encourage future growth that also protects these scenic and historic resources articulated in this chapter.

Ridgelines and Scenic Resources

Certain outstanding scenic resources are an essential component of the rural character that defines the outlying areas and serves as a scenic backdrop for the Village of Ludlow and major roadways. Maintaining these scenic qualities is a very important consideration, especially as the features listed below greatly contribute to the tourism-based sector of the local economy.

The dark night sky is also considered as a scenic resource for the purpose of this Plan. Light pollution from development can negatively impact the rural character and quality of

life enjoyed by residents.

The following are identified as Ludlow's important scenic resources:

- The Lakes (Rescue, Pauline, Round Pond)
- Tiny Pond
- Black River
- Buttermilk Falls
- State Forest
- Cemetery
- Forested areas within the Ludlow public water source protection area
- Dark night sky
- Scenic vistas along VT Route 100

Prominent hills and ridgelines are valued by Ludlow residents, including:

- Bear Hill
- The Pinnacle
- Whetstone Hill
- South Hill
- Ludlow (Okemo) Mountain (the portion of which that is within Ludlow)
- North Hill
- East Hill
- Terrible Mountain (the portion of which that is within Ludlow)

These ridgelines provide a scenic view from the Village and major roadways in Ludlow (see the Topography Map). In addition, these areas are fragile due to high elevation and steep slopes, and are also valued for their scenic, wildlife habitat and forestry attributes.

Ridgeline and Scenic Resources – Goals:

1. Preserve the identified scenic views and ridgelines that most contribute to Ludlow's rural character.
2. Maintain Ludlow's clear dark sky.

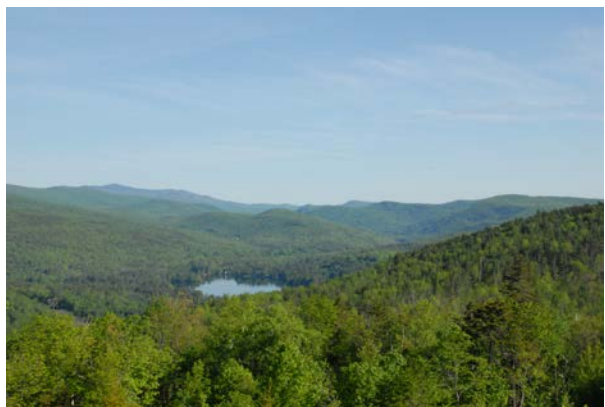


Abby Hemmenway, author of *The Vermont Gazetteer*.

Abby Hemmenway was born October 7, 1828. She had 2 sisters named Lydia and Carrie. She was born in Ludlow and completed her education at the Black River Academy. Her father's name was Daniel and her mother's name was Abigail Dana Barton. From age fourteen, Abby worked as a teacher. She always had a desire to write. She especially loved history books and she loved Vermont. She wanted to preserve the history of every Vermont village and every Vermont town, so she wrote the *Gazetteer*. Abby Hemmenway died February 24, 1890 from a stroke. She was sixty-two years old when she died. She died in Chicago and was buried in Pleasant View of Ludlow, Vermont. Abby was an amazing woman that was meant to write. She inspired many writers around the world. The history and memories of Vermont will always be cherished because of her.

Ridgeline and Scenic Resources – Policies:

1. Development is discouraged in identified scenic areas and ridgelines. Any development in these areas should minimize negative visual and environmental impacts, by limiting tree cutting, using building materials that minimize reflective glare, landscaping to minimize visibility of structures or through other means of visually integrating development sites into the surrounding landscape.



Photograph by Tom Johnson

2. No clear cutting of trees shall be allowed within 50 feet of the high-water mark of Lakes Pauline and Rescue and Round Pond.
3. Proposed new lighting shall avoid glare and other unnecessary light pollution by utilizing full cut-off exterior lighting fixtures.
4. Telecommunication towers are subject to the requirements of the Ludlow's Telecommunications Facilities Ordinance.
5. Residential-scale wind power generating facilities are encouraged in Ludlow. All such facilities should minimize negative visual and environmental impacts as discussed in policy statement #1.
6. Commercial wind energy systems are prohibited on scenic ridgelines and are subject to the siting policies listed in the Energy Chapter for any project subject to review by the Vermont Public Service Board.

Ridgeline and Scenic Resources – Recommendations:

1. Consider land use regulations for development along ridgelines and in scenic areas in order to achieve developments that minimize visual impacts.
2. Review land use regulations to ensure conformance with exterior lighting policies.
3. Coordinate with the Okemo Valley Chamber of Commerce and other partners to support and promote the VT Route 100 Scenic Byway.

2012 LUDLOW MUNICIPAL DEVELOPMENT PLAN

7. Explore, promote and develop expanded use of passenger and freight rail service both within the community (to Imerys Talc Vermont, Inc. and the Dean R. Brown Jr. Industrial Park) and in nearby communities (Amtrak service to Windsor, Bellows Falls and Rutland).
8. Development roads and driveways must meet all applicable municipal standards in order to provide adequate safety and emergency vehicle access.
9. Development is allowed on Class 4 town highways only with written permission from the local legislative body or after the road is legally reclassified as a Class 3 town highway. In order to reclassify a road, the developer will be responsible for upgrading the road to town standards.

Transportation – Recommendations

1. Continue to implement the special peak seasonal traffic management program in the Village, and continue to explore other traffic management alternatives.
2. Maintain local road, bridge and culvert inventories, and use the inventories as a basis for managing the local transportation system and to inform an on-going six-year capital budget and planning process.
3. Coordinate local and state land use permitting procedures in order to encourage sound access management along VT Routes 103 and 100 in Ludlow with both the Southern Windsor County Regional Planning Commission and Vermont Agency of Transportation.
4. Explore cost-effective ways to improve safety and intersection performance at high crash locations in coordination with the Southern Windsor County Regional Planning Commission and Vermont Agency of Transportation.
5. Develop and implement a parking management plan, including effective directional signs. Continue to explore cooperative agreements between landowners and the municipalities to meet parking needs.
6. Continue to monitor traffic volumes on all four major ingress and egress travel corridors for Ludlow.

7. Inventory and identify scenic roads, and consider the designation of such roads as "Scenic Roads".

8. Identify funding to improve the Walker Bridge on Main Street and Mill Street Bridge.
9. Seek alternative ways to develop the Calvin Coolidge Bike and Recreation Greenway.

2012 LUDLOW MUNICIPAL DEVELOPMENT PLAN

Ludlow should request that the Regional Planning Commission review the Municipal Plan for compliance with the requirements of Act 200. Benefits of Act 200 approval and confirmation include:

- Eligibility for Municipal Planning Grant funding and Village Center designation;
- Ability to levy impact fees if the municipality wishes to do so;
- State agency plans shall be compatible with the Municipal Plan; and,
- An approved plan is not subject to state review under 24 V.S.A. §4351.

At the local level, the Town and Village may take some of the following actions to implement the goals of this Plan:

1. Update bylaws and enforcement procedures to be consistent with the *Ludlow Municipal Development Plan* and as authorized by Vermont statutes.
2. Ensure that bylaws are:
 - a. Clearly written and easily understood.
 - b. Consistent with any State or Federal legislation.
 - c. Compatible with the Municipal Plan.
3. Prepare a six-year Capital Budget and Program to address scheduling and funding for desired municipal projects and expenses.
4. Refer to the Municipal Plan when planning additions and improvements to local infrastructure such as local roads and public utilities. Such additions or improvements should be used to plan for appropriate growth and development.
5. Utilize this Municipal Plan to guide development and public service investments under both Act 250 and Act 248 proceedings.
6. Continue to plan and work to conserve important resource lands.
7. Encourage non-regulatory conservation through a variety of available programs, such as a local conservation fund, Vermont's Use Value Appraisal (or Current Use) program, public or private conservation easements, and Forest Legacy and other programs.
8. Identify new and review existing regulatory conservation provisions to minimize the negative impacts of development on important resource lands.
9. Coordinate with the Okemo Valley Chamber of Commerce and other partners to market and promote the VT Route 100 Scenic Byway.
10. Work with the Regional Planning Commission and Windham and Windsor Housing Trust to evaluate local housing needs and target appropriate strategies to address the identified needs.
11. Consider establishing a Conservation Commission, Energy Coordinator or Energy Committee in order to better address energy or conservation efforts in Ludlow.

Town of Cavendish

Town Plan

Adopted August 28, 2012

3. Support community-wide cultural events and activities.
4. It is important to the town to have a community elementary school.

Goal 4: Promote and maintain a safe, convenient, economic, and energy-efficient transportation network that respects the integrity of the natural environment, as well as the historical and esthetic value of the existing roads.

Objectives:

1. Improvement or expansion of public utilities and transportation should occur in existing corridors to encourage desired development patterns.
2. Alternative forms of transportation, such as walking, bicycling and public transportation should be encouraged.
3. Promote use of esthetically compatible options for guard rails on roads such as cable, rusted rail, or pressure treated wood.
4. Maintain the tree canopies and stone walls on the existing roads.

Goal 5: To protect important natural and historic features of the Cavendish landscape, including woodland, wetlands, scenic sites, significant architecture, villages, wildlife habitats, view sheds, and agricultural land.

Objectives:

1. Identify and include additional important resource areas on Future Land Use Map and develop a conservation plan to protect and preserve those features.
2. Encourage the renovation and preservation of historic buildings and structures.
3. Develop additional policies and plans for the long-term protection of significant scenic roads and highways, waterways, and views; cultural and historic resources; and important resources and recreation lands.
4. Prevent development within floodplains that will cause damage to natural or manmade resources.
5. Inventory and update the resources.

Goal 6: To maintain and improve the quality of air, water, wildlife, and land resources.

Objectives:

1. Insure development in areas of natural, cultural, and scenic significance is not detrimental to the resources of the town.
2. Protect and improve the water quality of the Town's rivers, lakes, streams, groundwater, and drinking water supplies.
3. Establish conservation measures for critical wildlife habitat.
4. Encourage the use of transportation systems that have minimal impacts on air quality.
5. Extraction of earth minerals and resources must ensure that land and water resources are minimally impacted and restored after extraction.

Goal 7: To promote the efficient use of energy through conservation and encourage the use of renewable energy resources, such as solar, wind, hydro and biomass.

Objectives:

1. Promote use of public transportation, ridesharing, non-motorized vehicles, and

- pedestrian traffic. Emphasize connections between schools, stores, work, and home.
2. Ensure that the design, location, and maintenance of existing and future transportation systems are consistent with the land use patterns recommended in this Plan.
 3. Promote alternative and energy efficient resources with residential development.
 4. Encourage the concentration of energy-intensive facilities, housing, and other uses to avoid the expense of distributing energy over large geographic areas.
 5. Promote the location of community service structures, retail sites, public utilities, day care centers, state offices, and other frequently visited sites within walking distance of residential areas.
 6. Ensure that post offices remain in village centers.

Goal 8: To maintain and enhance recreational opportunities.

Objectives:

1. Develop and maintain recreation facilities and infrastructure to provide recreation opportunities for all residents.
2. Ensure the preservation of and access to important natural and scenic resource areas for recreational use.
3. Enact a capital plan for a local bike path.

Goal 9: To strengthen agricultural and forest industries.

Objectives:

1. Support Current Use Program for agricultural and forest lands.
2. Develop additional conservation plans to ensure that primary agricultural soils are devoted to farming or to such uses which will maintain the potential for agricultural use.
3. Forest and agricultural lands should be considered for their forest and agricultural productivity prior to any non-forest or agricultural uses.
4. Encourage businesses and industries that add value to locally produced agricultural or forestry products.

Goal 10: To plan for, finance, and provide an efficient system of public facilities and services to meet present and future needs.

Objectives:

1. Analyze current facilities and assess future needs to determine potential demands of infrastructure.
2. Enact a Capital Program and Budget Plan for public utilities and facilities.

Goal 11: To encourage availability of safe and adequate housing for anyone choosing to live in the town of Cavendish.

Objectives:

1. Housing should meet the needs of diverse social and income groups.
2. New and rehabilitated housing should be safe, sanitary, and coordinated with the provision of necessary public facilities and utilities.
3. The development of diverse and appropriate housing should be encouraged in the Town of Cavendish.

Natural, Cultural, Historic, and Scenic Resources

Water Resources

Surface water, in the form of brooks, rivers, ponds, and wetlands, is abundant in many parts of Cavendish. Surface waters are vital to the town, providing scenic beauty, recreational opportunities, and groundwater recharge, as well as fish and wildlife habitat. The Black River is the most prominent body of surface water in the town. The river runs parallel to Route 131 along much of its length, and prompted the road's designation as a State Scenic Highway. The river is popular among kayakers and canoeists in early spring. A section of the river is stocked with trophy-sized fish during the fishing season. There are a number of fishing accesses including a newly designed access area along Route 131 that accommodates people with disabilities. The Cavendish Gorge, just below the village of Cavendish is an important scenic resource.

The Black River is an important resource for many recreational opportunities including swimming, and it is our policy to maximize sewage treatment improvement opportunities. The portion of the Black River that flows through Cavendish is impacted by both the Ludlow and Cavendish Sewage Treatment Plants.

Other important surface waters in Cavendish include Knapp Brook and Knapp Ponds, Twenty-Mile Stream, and several brooks and streams that flow into the Black River. Cavendish hosts Class II wetland areas, including Heald Swamp. Class III wetlands and vernal pools are also important since they serve as feeding and breeding areas for a number of plant and animal species. They provide safe breeding grounds for insects and amphibians because they do not support fish populations.

The town has two public wells and a state-approved wellhead protection plan which is in compliance with state and federal standards. (see Utilities and Facilities chapter). These public water sources supply the villages of Cavendish and Proctorsville. Water is supplied to residences in rural areas through private wells. The town wishes to maintain and improve the quality of its groundwater resources to insure the health and safety of those who depend on them.

Policies

1. Development that creates negative impacts shall be prohibited in headwaters of watersheds or areas supplying recharge water to aquifers.
2. Development shall be prohibited in areas where soil conditions and topography will cause pollution of ground or surface waters.
3. Development shall be prohibited on steep slopes where erosion is likely to occur.
4. The Black River is valued as both a scenic and recreational resource; in order to protect that resource, development is prohibited along the Black River corridor when such values will be negatively impacted.
5. Naturally vegetated buffer strips of at least 50-100 feet should be left next to all rivers, lakes, and ponds, and at least 50 feet next to streams and wetlands, so as to filter pollution, prevent erosion, and protect fisheries and wildlife habitat.
6. Development projects shall provide continued public access for recreational purposes to the Black River.
7. Development shall not degrade the water quality of the Black River and its tributaries.

conducted by the Southern Windsor County Regional Planning Commission, the most important historic structures in Cavendish are the Universalist Church, the Academy Building, the Historic Society Building, the Old Jenny House, the recently relocated and renovated Freeman House, Bates Mansion, The Castle, The Cavendish Inn (aka Glimmerstone), the Joshua Parker Farm, the Henry Wiley house, the Cecilia Davis house, the James Down house, and the Crown Point Road.

In addition to its historic structures, the town has several cultural resources that are valuable to the community. These include the elementary school, Fletcher Memorial Library, the Historical Society museum in the Old Town Hall, and the war memorials in Proctorsville and Cavendish Villages.

Policies

1. Land adjacent to, land with views to, or land including areas of cultural or historic value shall be developed in a manner that will not reduce or destroy the value of the resource. Adverse impacts include noise, lighting, incompatible visual impacts, and traffic that affect the and enjoyment of these important resources.
2. Re-use of historically significant buildings and sites while maintaining and preserving their architectural and historic character is required unless the building is determined to be structurally unsound.
3. Necessary renovations of significant historic buildings and sites shall reflect the historic character of the resource and the historic district it is in, if so situated.
4. Renovations of buildings included in the state or national register of historic sites shall follow the standards of the Secretary of Interiors for renovation of historic structures. Renovations of buildings eligible for but not included in the state or national register of historic sites should be encouraged to follow the standards of the Secretary of Interiors for renovation of historic structures

Recommendations

1. Provide management and protection guidelines to insure the conservation of cultural and historic resources.

Scenic Resources

Preservation of scenic resources is of paramount importance to the citizens of Cavendish. Scenic resources are part of our rural character, our history and the reason many people choose to live and visit here. The scenic resources are a combination of natural, cultural, and historic elements in the town. Significant scenic resources have been identified in the Town of Cavendish that require preservation. A threat to our scenic rural countryside is uncontrolled subdivision. Poor planning, rapid changes, and uncontrolled subdivision can drastically affect the rural atmosphere, open space, and scenic values.

Visual Access

The Visual Access Map prepared by The Cavendish Partnership in March 1986 shows the location of important visual access and scenic viewpoints in the Town of Cavendish. This map shall be referred to in review of any Act 250 applications.

Scenic Roads

A significant and essential scenic resource that runs through the town is the Black River Corridor. The Black River Corridor travels east from the intersection of Route 103 to Weathersfield along the Black River and includes Scenic Route 131 which was designated as

one of three State Scenic Highways in 1998. The Route 131 Scenic Highway Management Plan, also completed in 1998, provides recommendations for maintenance and construction, and gives the Town a greater role in all work that is done along the route. It is the Town's intention to maintain the scenic values along Route 131 while maintaining high standards of safety. Two other important corridors are Davis Road/20-Mile Stream corridor, and 20-Mile Stream Road/20-Mile Stream corridor.

Another valuable town scenic resource is the outlying rural forests and fields and the network of country and local low volume roads that connect our rural neighborhoods. Several town roads have been identified as having important scenic and rural qualities as well. Qualities include canopies over the roadway, scenic views, stonewalls, open fields, and lack of utility poles and streetlights.

Local Scenic Resources Include But Are Not Limited to the Following:

Resources	Location	Scenic Qualities
Scenic Route 131	The entire length of Route 131 in the Town of Cavendish	Follows the Black River. Unobstructed view of the river and lack of development along the river valley. No utility poles along the eastern portion of roadway.
Black River Corridor (East End)	From the Weathersfield Town Line to Whitesville Road	Characterized by spectacular views of the Black River, ridgelines and hillsides, and, but for a few exceptions, evidence of development is absent.
Black River Corridor (West End)	From Whitesville Road to Route 103	Characterized by the two villages, and the open, undeveloped areas on either sides of the two villages.
20-Mile Stream Road/20-Mile Stream Corridor	From Heald Road to the Reading Town Line	Open, pastoral views contained by ridges on either side. Scenic agricultural land along most of road.
Davis Road	From Heald Road to Center Road.	Closed in area with ravines on either side with very little development, flat rocks, swimming holes, remote and quiet area. Very dense canopy. Davis Road follows closely to the banks of Twenty-Mile Stream. Nice visual association with stream. Open fields and stonewalls that parallel road closer to Center Road. Views to adjacent hillsides.
South Reading Road	Top of Derby Hill	Outstanding combination of a well maintained row of maples and long-range views to the South. Maples are 10' or so off edge of road. Woods up hill have been selectively pruned, exposing a stonewall.
Felchville Gulf Road	From Senna Road to Town line	Dense canopy, closely follows stream, nice row of rock outcroppings.
Atkinson Road	1/2 mile from Center Road	Overhead canopy of maples.
East Road	Between Chambers and Chubb Hill	Stone walls, nice long-range view to Hawks Mountain, large maples.
Old County Road	South of Chaos Turnpike	Nice overhead canopy.
Brook Road	Entire road up to East	Follows brook, overhead canopy, views of brook.

	Road	
Greenbush and Stevens Roads	From Tarbell Hill Road to Town line	Follows brook, overhead canopy, views of Mount Ascutney.
Cavendish Gulf Road	Entire road	Tree canopies, rural qualities, historic railroad line, stonewalls along places in road. One of the first roads in town.
Areas Shown on Visual Access Map	All	Prepared by The Cavendish Partnership, March 1986

Policies

1. Proposed changes or development in these areas shall only be permitted if it does not detract from scenic resources.
2. The Route 131 Inventory and Management Plan (1998) should be referred to for specific recommendations regarding maintenance and resources along this road.
3. Maintain overhead canopies of trees on, and stonewalls along, scenic roads wherever possible.
4. Historic stone walls should not be destroyed or removed.
5. Ridgelines, hillsides, and wetlands are all important elements of the scenic views of Cavendish, as well as other bodies of water such as lakes, streams, and ponds and all require protection.
6. Scenic corridors shall be considered as a valuable town resource and shall be protected.
7. Land development such as subdivision shall be done in a manner to maintain or enhance the scenic resources described above.
8. Subdivision design shall preserve open space, incorporate clustering, preserve important features such as stonewalls, ridgelines, hillsides, and wetlands, avoid developing on steep slopes, and consider off-site views.

Recommendations

1. The Planning Commission will work with the Select Board to develop additional Land Use Regulations.
2. The Planning Commission should update the 1986 visual access map of the Town.
3. The Town should develop a policy regarding the maintenance of Town roads with reasonable impacts in road aesthetics including canopies.

Solid Waste Disposal and Recycling

Cavendish is part of the Southern Windsor/Windham Counties Solid Waste Management District (SWCSWMD), which has prepared a Solid Waste Implementation Plan. This Plan has been submitted to the State and is currently in the review process. The SWCSWMD has hired a Solid Waste Program Coordinator to assist District towns with solid waste issues and recycling efforts. The Coordinator's position is contracted to and housed at the Regional Planning Commission. All SWCSWMD member towns are also members of the bi-state agreement under the NH/VT Solid Waste Project. Member towns have entered into a contract requiring all municipal waste to be tipped at the Wheelabrator incineration facility in Claremont, NH. The Project's contract with Wheelabrator is scheduled to expire in 2007, at which time the Town must seek alternative options for waste disposal. It is important for town officials, District Representatives, and local residents to contribute to the planning process in anticipation of these changes. The SWCSWMD also operates a household hazardous waste collection program twice a year, with collection points that vary among towns in the region.

Cavendish has a transfer station next to the sewer plant on Route 131 that handles normal household refuse and a limited amount of non-toxic construction debris. It also has a recycling station that can handle glass and tin, mixed metals, and non-contaminated waste oil. Toxic waste is not allowed at the transfer station. The Cavendish Transfer Station has sufficient capacity to accommodate the current population needs. The Springfield Recycling Center handles a broader range of materials and is often used by Cavendish residents. Appropriate storage and disposal of waste materials is vital in maintaining the environmental quality of Cavendish. The Town of Cavendish is a member of the New England Resource Recovery Association. The Town would not allow the establishment of any long term waste disposal facility for radioactive, toxic or hazardous substances.

Policies

1. Waste material, whether from agricultural, industrial, household, mining or other sources, should be:
 - Limited at the source. It is better to prevent waste from developing within rather than transport to the transfer station and having to manage it.
 - Managed to prevent environmental damage, to avoid negative impacts on natural resources, and prevent nuisance to neighbors.
 - Maximize recycling opportunities.
 - Waste material should be disposed of in an efficient, cost-effective, and environmentally sound manner

Recommendations

1. Educate residents about ways to reduce waste at the source through methods such as home composting, recycling, and environmentally-conscious buying habits.
2. Investigate the possibilities for increasing the number of types of recyclable materials collected at the Town transfer station.

Electric Utilities

The Town of Cavendish is served by two electric utility providers, Ludlow Electric and Central Vermont Public Service (CVPS). Ludlow Electric serves the village of Proctorsville and a limited number of residents on the west side of town, while CVPS serves the remainder of town

including the Cavendish Village. There is a CVPS hydroelectric plant at the Cavendish Gorge that is capable of generating up to 1,600 KW per hour. Vermont Electric Power Corporation (VELCO) owns a major substation and a transmission line that runs through the town.

Policies

1. Provide residents with safe, effective and efficient electric utility service at reasonable rates.
2. Utility lines should be placed in areas designated for growth.
3. New utility lines should be placed along existing corridors whenever possible; multipurpose use of utility corridors is encouraged.
4. The location or relocation shall not have a negative impact upon aesthetic and natural resources.
5. Encourage common use of utility poles for telephone, electric, cable, and fiber optic lines.
6. The town encourages the installation of underground utility lines for new construction.
7. For the relocation of existing overhead lines to areas where no existing lines exist these lines shall be installed underground.

Communications Towers and Structures

The maintenance of a modern and accessible telecommunications network is essential to the public welfare. Public safety agencies, such as emergency medical services, fire and police departments, rely on broadcast and communications facilities to provide essential services. In addition, a modern and accessible telecommunications network provides communities with economic, social and cultural benefits.

At the same time, network infrastructure should be developed in an efficient, safe, and thoughtful manner. Possible impacts upon scenic and cultural resources, aesthetics, and public health and safety should all be considered during the planning process.

One subject of particular concern is the location and construction of communications towers. These structures and their supporting infrastructure (such as power lines, access corridors, and support buildings) can alter mountaintops and ridge lines in ways which negatively impact scenic resources vital to the Town's economic future and cultural richness. Aesthetic concerns will increase as the number of undeveloped mountaintops and ridge lines decreases. In addition, there are concerns about the health effects of the electromagnetic fields generated by broadcast and telecommunications facilities, and the safety of the structures once they are built. These concerns must be addressed as new opportunities are made available to the Town through emerging telecommunications technology.

Policies

1. Provide residents with the benefits of an integrated and modern telecommunications network while minimizing the economic, aesthetic and cultural costs of its development.
2. Existing tower space and supporting infrastructure should be utilized to the fullest extent possible.
3. New towers, access corridors, and utility poles serving towers should not be sited or constructed where a practicable alternative exists. Those wishing to provide new or expanded communications services should utilize existing structures whenever possible. Owners or operators of existing tower space should facilitate the sharing of space to the

Policies

1. Provide the residents of Cavendish the best possible fire fighting and emergency medical services by supporting improvements to these services that are prudent and necessary.
2. Support any prudent measures that would increase the State police and Windsor County Sheriff patrols of our roads.
2. Reduce the speed limit on Route 131 within the Town and then enforce it.

Recreation

The Town currently has two playgrounds, one next to the Town Office and one at the Elementary School, and two little league fields at Greven Field. Fletcher Field offers additional baseball and soccer fields. Knapp Ponds offer fishing, canoeing and kayaking opportunities. Proctor Piper State Forest offers good hiking and hunting opportunities. **The Black River is an important recreational resource, and is a popular designation for fishing, kayaking and canoeing, and enjoyment of its scenic qualities.** A section of the river, from Tarbell Hill to the Weathersfield Town line, on the east end of town is designated as a trophy trout stream and is specially stocked by the State Fish and Wildlife Department.

The Town recognizes the importance of a bike and pedestrian path system that connects both villages as well as bike paths from other towns. In addition, residents enjoy hunting, hiking, biking, cross-country skiing, snowshoeing and snowmobiling on many of the trails located in town.

Policies

1. Maintain and develop Town recreation areas to ensure continued use and enjoyment of these facilities by all residents.
2. **Maintain and enhance important scenic and natural resource areas for long-term enjoyment by current and future generations.**
3. Roads that are classified as Class IV town highways or trails shall remain in Town ownership and should remain available for recreational purposes.

Recommendations

1. Include Town recreation facilities in a long-term capital improvement plan.
2. Work with local sportsmen's organizations and the State Fish and Wildlife Department to assure a continuing program of stocking to maintain an adequate supply of game fish and proper stream management to provide desirable fish habitat.
3. Coordinate open space plans and river preservation plans to protect the Black River as a valuable scenic and recreational resource.

Child Care Facilities

Eight home-based, registered (ten or fewer children) childcare facilities and one licensed center in Cavendish are currently listed with the State of Vermont. In addition to these facilities, residents rely on informal childcare arrangements within the town or regional resources outside of town that are either licensed or registered. The childcare resource and referral agency for Cavendish is the Springfield Area Parent Child Center, which is located in North Springfield.

Plan For the Northwest Region 2007 – 2012

Effective October 3, 2007

VISION STATEMENT

Northwestern Vermont's greatest asset is its diversity. A healthy, clean environment, a good mix of farms, forests, village and urban centers, combined with a growing employment base make this area a great place in which to live, work and raise a family. It is the goal of the Northwest Regional Planning Commission to foster this diversity by supporting a strong tradition of local planning and community development, while considering the needs of adjoining communities and the region as a whole.

The region will continue to be a group of locally connected communities working toward common goals to address issues which will affect them into the next century. Communities will work together to ensure that long-term economic, social and environmental factors are balanced in the planning and decision-making process. This balance will ensure the region's continued growth and well-being by promoting a healthy and sustainable quality of life based on the following:

1. A diverse and sustainable economy, including agriculture and forestry, small businesses, manufacturing and commerce, education, health care and tourism which will provide expanded job opportunities and living wages for all area residents. Local and regional self-sufficiency and the growth and expansion of existing businesses will continue to be a priority.
2. Efficient, targeted public investment in infrastructure and services to support new development in designated regional and local growth centers.
3. More pervasive use of technology in industry, schooling, transportation, health care and communications. Low-traffic business enterprises will no longer need to be located in the larger urban centers; rural residents will have increased access to educational, employment and health care opportunities.
4. More opportunities for enjoyment of the arts and culture - concerts, plays, exhibits and celebrations will be more common. Recreational opportunities for all ages will continue to increase.
5. Continued improvements in the quality of the region's natural and built environment, including improved air and water quality and the protection of the region's most important natural, cultural and scenic features.
6. A viable working landscape, including protection and sustainable use of the region's resource lands in support of healthy, diverse agricultural and forestry industries. The region will continue to be the premier agricultural region in the state; the increased production of value added products will add to the region's resource-based economy.
7. Quality education, which will be available and accessible to all residents of the region.
8. An efficient, multi-modal, cost-effective and accessible transportation system which will move people and goods, and focus upon providing access to growth centers.
9. Affordable and elderly housing opportunities for those in need. These will be located in areas with access to jobs and services by means other than the private automobile.
10. Energy conservation, and increased, sustainable use of renewable energy resources and related technologies which will increase energy self-sufficiency, availability, and affordability.
11. New development that respects and reinforces traditional, established patterns of land use and development, which will contribute to the region's unique character and identity.

This regional plan provides a framework for future planning and growth, and strives to help in the continuation of the region's success. The plan considers this vision statement and presents long-range policies which will guide the region into the next century.

Museums & Historic Sites

The Northwest Region offers a range of educational and historical activities for residents and visitors. The region hosts ten museums, Enosburgh Historical Society, in Enosburg Falls; Georgia Historical Society Museum in Georgia; Hyde Log Cabin in Grand Isle; Isle La Motte Historical Society in Isle La Motte; St. Anne's Shrine in Isle La Motte; Montgomery Historical Society Museum in Montgomery; President Chester A. Arthur Historic Site in Fairfield; the St. Albans Historical Museum in St. Albans; South Hero Bicentennial Museum in South Hero; and the Bakersfield Historic Society in Bakersfield. The region's many historical societies work to document the history of the region or its communities.

Scenic & Aesthetic Resources

The Northwest Vermont region is an extremely rich visual mosaic of diverse landscapes, from the sweeping agricultural viewsheds of the Lake Champlain islands, to the heavily wooded Western slopes of the Green Mountains. It is the visual language of place which instrumentally shapes our perceptions and recollections. These cognitive maps are translated into the verbal language of the region's communities, and are integrated into the vernacular of nearly every aspect of daily life. Descriptions like "a mile past the Bay Bridge;" "over the other side of St. Albans hill;" "take a left just before the big island" are usually met with nods of recognition by those whose experience of place has taught them to speak the language.

"Visually Sensitive" Areas

Despite the importance of these resources to the definition of regional character and sense of place, scenic and aesthetic concerns are often difficult to quantify, and can be challenging to incorporate into comprehensive planning endeavors. However, efforts have been made which attempt to categorize scenic resources for more effective protection and appropriate use.

A committee formed by the Vermont Agency of Natural Resources defined six types of "sensitive landscapes" as viewed from public vantage points, which deserve special consideration in planning, design and project review. These landscape types, shown in the example of Table 3.3, were published by the Agency in Vermont's Scenic Landscapes: A Guide for Growth and Protection (VANR 1991).

Table 3.3 PLANNING FOR VISUALLY SENSITIVE AREAS	
Challenge	Prescriptions for minimizing visual impact
Open fields and meadows	- cluster buildings at the edge of open fields
Ridgelines, hilltops, and peaks	- locate new development down-slope - provide screening to prevent visual dominance of the landscape
Shorelines	- set new development back from water bodies- prevent visual obstruction between existing vantage points and new structures to water bodies- provide visual screening of structures from water viewpoints
Foregrounds of distant views	- proper siting to avoid "blocking the view"- screen development to help blend with existing landscape
Steep slopes	- avoid development on steep slopes, where visibility is high and conditions for development are poor
Historic settlements / gateways	- design developments which harmonize with the traditional pattern and scale of development- maintain a distinct visual "edge" between developed areas and the surrounding landscape

With sensitive siting and design even the most scenic landscapes may be developed and still retain much of their intrinsic character. Aesthetic considerations are recognized as a legitimate public concern under Criterion 8 of Act 250 (See “Quechee Decision”). Failure to legitimize aesthetic values through site-sensitive development could damage the region’s sense of place as well as hamper the regional tourism economy.

Scenic Highways and Corridors

Scenic highways and corridors link natural, cultural, and scenic resources, as well as to the historical landscape of the area. The National Scenic Byways Program was created as to induce economic development, manage traffic, promote tourism, and protect natural and cultural resources through the recognition of these important resources. Locally, the Lake Champlain Byways Program seeks to balance economic development and tourism with resource stewardship around Lake Champlain by developing a collaborative vision for Lake communities in Vermont and New York. The Lake Champlain Byway includes US Route 2 in Grand Isle County.

TODAY’S CULTURE

The rich heritage of the Northwest region continues to influence its culture, as is reflected in the many traditions and community events taking place throughout the year. Rooted in the region’s agrarian past, these cultural events celebrate the region’s history and deep connection to the land.

Events like the Vermont Dairy Festival, a 50 year tradition, organized by the Enosburgh Falls Lyons Club, clearly reflect the important role that agriculture continues to play in the region. Franklin County Field Days, an event held for more than 30 years, is yet another example. On the Islands, the apple season is cause for celebration and has inspired South Hero’s annual AppleFest, held each October. In the City of St. Albans, 2006 marked the 40th anniversary of The Maple Festival, an event that draws more than 50,000 participants each year in honor of Vermont’s “liquid gold.” Cultural events throughout the region, from farmer’s markets to concerts and parades, are too numerous to name, but provide invaluable contributions to the local sense of place.

Another important community event, and perhaps one of the most symbolic events in Vermont culture, is the annual Town Meeting. Each year, on the first Tuesday in March, residents across Vermont gather to vote and make decisions that affect their communities. This event not only provides a forum for making important community decisions, but also gives an opportunity for neighbors to meet and interact, engaging in the purest form of democracy as they debate, compromise, and ultimately vote.

The town centers throughout the region serve as hubs of cultural activity. These centers provide spaces for people to come together, be it the post office or library of the smaller villages, or the restaurants and shops of St. Albans City. Many of these communities are now seeking opportunities to blend their cultural heritage with economic revitalization by encouraging the “Creative Economy.” The Creative Economy Initiative seeks to foster economic growth and development through creativity, cultural heritage, preservation and entrepreneurship. Thus, through innovation, the region seeks a form of economic development that reinforces its unique character and sense of place.

GOALS, POLICIES & OBJECTIVES

CLIMATE AND AIR QUALITY GOALS:

- 3.1 Maintain air quality in those areas enjoying clean, fresh air and improve air quality in areas where state or federal pollutant standards have been exceeded.
- 3.2 Develop a more comprehensive air quality monitoring network.

3.11 To protect endangered and threatened species and their habitats.

POLICIES:

3.27 Degradation and fragmentation of habitat for wildlife and threatened or endangered species should be discouraged.

3.28 Restoration of populations of endangered or threatened native species is encouraged.

3.29 Planting for vegetative buffer strips and screens should include species beneficial to native wildlife.

3.30 As opportunity arises, the potential to reduce the impact of hydroelectric facilities on important aquatic species should be examined and appropriate modifications and/or selected removal is encouraged.

HISTORIC RESOURCES GOALS:

3.12 To preserve important historic structures in the region.

3.13 To locate and map areas with potential archeological resources.

POLICY:

3.31 Development should seek to minimize impact on archeological sites, through avoidance if possible, then through mitigation or other methods determined by the state Historic Preservation office.

OBJECTIVE:

3.5 Work with local, state and federal agencies and private groups to preserve historic structure and historic resources in the region.

SCENIC AND AESTHETIC RESOURCES GOALS:

3.14 To preserve significant scenic and aesthetic resources of the region for the benefit of current and future generations.

3.15 To encourage land uses that enhance the image of a working, sustainably managed, natural resource based economy balanced with settled towns and wildlands.

POLICIES:

3.32 Support the use of donations or purchase of scenic easements by public or private groups.

3.33 Support local efforts to designate important scenic areas or corridors.

3.34 Encourage efforts to improve sites that have an existing structure, use or development that diminishes the scenic view.

3.35 Encourage the scale, siting, design and management of new development to be in keeping with the character of the landscape and the area's built environment.

3.36 Discourage development along prominent ridgelines and hilltops.

3.37 Encourage developments to use vegetative and landscaping screens to reduce their visual impact.

3.38 Encourage the use of incentives for preservation of scenic views and scenic corridors.

3.39 Exterior lighting should employ technologies and designs that minimize light leaving the site, particularly by down shielding lights, arranging them so that they are not directly visible from nearby roads, residences or distant vantage points, and limiting the need for additional exterior lighting.

3.40 Creative methods of arranging lighting to reduce overall foot candles, improve true color rendering and provide for even lighting which minimizes overly bright areas, or "hot spots", are encouraged.

3.41 Discourage development that will significantly increase the degree of "light pollution", which is understood to mean lighting that illuminates the night sky.

- 3.42 Discourage exterior lighting on prominent physical features and landscapes that adversely impacts the nighttime landscape.
- 3.43 Telecommunications towers and other prominent high-elevation structures should minimize their impact on scenic resources by reducing their size or location so that exterior lighting is not required, by seeking opportunities for co-location, and through choice of site, shape and color of the structure that reduces the visual impact of the development.

OBJECTIVES:

- 3.6 Work with municipalities to identify locally and regionally significant scenic resources.
- 3.7 Assist towns in researching and implementing strategies that preserve scenic resources.
- 3.8 Work with state and federal agencies regarding projects or policies that would adversely impact the region's scenic resources and develop strategies to reduce the impact.

- 4.4 Industrial development should be targeted to designated industrial areas with adequate infrastructure and which are within or adjacent to designated growth centers.
- 4.5 The NRPC supports development of a system of regional and local infrastructure that promotes the land use goals and vision statement contained in this plan and in duly adopted municipal plans.
- 4.6 Creative inter-municipal and public/private partnerships that promote cost-saving and cost-sharing in the provision of infrastructure should be encouraged.
- 4.7 Public and private investments that would overburden local or regional infrastructure and services will be discouraged.
- 4.8 Improvements to utility infrastructure should be timed to coordinate with other utility and/or road improvements planned in the same area if doing so will reduce the costs associated with the project.
- 4.9 Whenever feasible utilities should share rights-of-way and /or easements.
- 4.10 Utility rights of way and public investment should be planned so as to minimize environmental, cultural and environmental impacts, particularly seeking to minimize development pressure on agricultural and forest lands.
- 4.11 Utility lines should be buried when crossing locally or regionally designated historic, cultural and scenic areas or otherwise be strategically located to minimize adverse impacts on these resources.
- 4.12 Utility rights of way should not traverse resource and conservation lands including, but not limited to, agricultural lands.
- 4.13 Development or maintenance of utility systems or facilities that result in or create an undue adverse impact on municipal services, natural resources and/or other unique features shall be discouraged.

OBJECTIVES:

- 4.1 Provide updated materials on capital planning to municipalities as requested and be available to contract for more detailed work as needed.
- 4.2 Participate in reviews of development projects in state regulatory proceedings.
- 4.3 Develop an information system that fosters coordination and communication between organizations within the region, and between local municipalities, state and federal agencies regarding developments that affect municipal facilities, services and objectives.
- 4.4 Provide information and assistance to municipalities regarding state and federal laws affecting municipal utilities, facilities and services.
- 4.5 Encourage municipalities to share information, staff, and equipment where feasible and beneficial.
- 4.6 Inform and assist municipalities in identifying financing opportunities and grants that will enable them to address local capital needs.
- 4.7 Maintain a library of regional information accessible to member municipalities and residents.
- 4.8 Provide assistance to local planning commissions in developing municipal plans that encourage land use patterns that optimize the use of existing utilities, facilities and services and which reduce the cost of providing future utilities, facilities and services.

WATER SUPPLY GOAL:

- 4.3 To insure that water systems are not contaminated, depleted, or degraded, that drinking water sources do not contain harmful contaminants and that there is sufficient quantity of water available for existing and anticipated recreational, residential, commercial and industrial needs.

Local zoning bylaws may also permit the creation of planned unit developments (PUD). These are a grouping of mixed use or residential structures, preplanned and developed on a single parcel of land. The setback, frontage, and density requirements of the zoning district may be varied, in consultation with the town planning commission, to allow creative and energy efficient design (i.e. east-west orientation of roads to encourage southern exposure of structures, solar access protection, use of land forms or vegetation for windbreaks, and attached structures).

Subdivision regulations govern the creation of new building lots, as well as the provision of access and other services and facilities to those lots. Subdivision regulations, like the PUD, involve the town planning commission or development review board in the design process. As with the PUD, the planning commission should use the opportunity to ensure that the conservation of energy is considered in subdivision development.

Except through the Act 250 process, there is no regulation of energy use in new construction in the Northwest Region. Act 250 requires that “best available technology” for energy efficiency and recovery be used in construction. In its review of development proposals, Act 250 applies to life cycle cost test to determine the “appropriate level” of energy efficiency. The “appropriate level” requires the developer to invest in energy efficiency up to the economic break-even point for a particular structure, occupant, and usage pattern. This standard allows for flexibility in design without sacrificing the energy efficiency of specific measures.

GOALS, POLICIES & OBJECTIVES

GENERAL GOALS:

- 6.1 Encourage conservation and efficient use of energy thereby saving the Region’s financial resources and the world’s energy resources.
- 6.2 Seek to incorporate the full costs of energy use in decision making.

POLICIES:

- 6.1 In the evaluation of all energy projects, those with the least adverse environmental, aesthetic, economic, and social impacts are preferred.
- 6.2 A broad range of options that could meet energy needs should be considered when evaluating energy-related projects, including conservation, efficiency and education, and those with the least adverse environmental, aesthetic, economic, and social impacts evaluated in the short and long term should be supported.
- 6.3 Efforts that reduce the energy demanded for transportation should be supported.
- 6.4 Efforts that reduce the emission of pollutants from energy production and/or consumption, particularly greenhouse gases and contributors to ozone depletion, should be strongly supported.
- 6.5 Promote least cost planning, or life cycle costing, which considers all costs of energy production and use, including environmental and social costs, from the origination of inputs to the disposal of outputs.
- 6.6 Generation, transmission and distribution lines or corridors should avoid adverse impacts on significant wetlands, plant and animal habitat, and recognized historic, natural, or cultural resources.
- 6.7 Support building standards that promote energy-efficiency.

OBJECTIVES:

- 6.1 NRPC should work with municipalities to develop an energy element for the municipal plan, which, if implemented, will result in energy savings to the community.
- 6.2 NRPC should assist in review of proposals for new energy sources or facilities to evaluate the economic, social, scenic and environmental costs.

GOALS, POLICIES & OBJECTIVES

GENERAL GOALS:

- 7.1 To promote a positive, open accessible dialogue within and between towns on regional land use issues.
- 7.2 To sustain and support the region's working landscape of farmland and forest land.
- 7.3 Maintain and preserve the scenic resources of the region for the benefit of current and future generations.
- 7.4 To seek a balance between private property rights and the public good that recognizes the substantial investment property owners have in their land while protecting public interests in commonly valued resources that span property lines including wildlife corridors, scenic resources and waterways.

GENERAL POLICIES:

- 7.1 Development should respect the physical limitations of the site.
- 7.2 Encourage development that works with the natural and cultural features of the landscape.
- 7.3 Support and utilize private and public land trusts as a method for the conservation of areas with significant aesthetic, environmental or agronomic value.
- 7.4 Public investments in infrastructure should encourage growth in designated growth centers and should not encourage the development and/or fragmentation of farmlands or other resource areas.
- 7.5 Encourage the use of transfer of development rights, purchase of development rights and similar strategies to:
 - 1. encourage higher density development in growth centers;
 - 2. to protect agricultural and forest resource lands in outlying areas;
 - 3. to mitigate the secondary impacts of growth both within towns and between towns in the region; and
 - 4. to mitigate the secondary impacts of growth in the region where the initial development is outside of the region.
- 7.6 Clustered developments should be designed to work with the landscape in terms of energy efficiency, protection of ecologically sensitive areas, conservation of farmland.
- 7.7 Clustered developments should be designed to encourage a sense of community.
- 7.8 Commercial strip development is discouraged in favor of development in growth centers and villages.
- 7.9 Construct corridors for new energy transmission facilities only when there is a demonstrated need, and then these should be built adjacent to and parallel to existing operational energy transmission corridors. Visual impact of these facilities should be minimized and should avoid sensitive natural features and historic resources.
- 7.10 Cumulative impacts of development and the scale and context of existing development will be considered when reviewing project proposals.
- 7.11 The use of vegetative screens and landscaping to reduce impacts of development is encouraged.
- 7.12 When buffer strips are designed they should serve multiple purposes where possible.
- 7.13 Development in wellhead protection areas should be discouraged.

GENERAL OBJECTIVES:

- 7.1 Continue to work with municipalities to assist them in developing or refining land use plans and by-laws.
- 7.2 Work with municipalities to promote understanding of the land use implications and potentials of their plans and by-laws.

Rutland Regional Plan

Adopted June 17, 2014

foundation of the Region's planning and development program. They are intended to be applied throughout the Region along with the *Plan's* goals for housing, economic development—in several forms, transportation, public facilities, natural and cultural resources, and energy, among others .

FUTURE USE OF LAND GOALS

The following broad goals for the future use of land in the Rutland Region are presented with the intent that they be read and considered together, as whole, and not as a series of individual statements:

- To maintain and improve the accessibility, livability and viability of existing built-up areas.
- To protect the character of rural areas and resource areas by discouraging scattered development and incompatible land uses.
- To promote competitive and sustainable agricultural, forestry, mineral extraction, and other practices that make use of the Region's natural resources.
- To encourage and facilitate development in existing and future growth centers appropriate to the scale of the centers.
- To promote intensive land uses and development only in areas where adequate public services, facilities, and employment centers are available.
- To protect the natural environment and its economic, ecological, sociological, psychological and aesthetic benefits

RUTLAND RPC ACTIONS

In addition to supporting activities and developments that contribute to individual communities and the Region, and which help meet the needs identified

in this Plan, the Rutland Regional Planning Commission shall:

- Work with communities to develop municipal plans and regulations that promote compact development, mixed use villages and town centers, and productive working landscapes.
- Work with towns to implement their plans through regulatory and non-regulatory controls
- Provide towns with GIS data so when development proposals are presented, towns have the most up-to-date information to make informed decisions.
- Work with communities to retain vibrant village centers.
- Work with interested communities to successfully tie commercial and industrial uses into existing land use patterns.
- Provide ongoing education to local officials and boards on best practices for the review of development proposals.
- Participate in Act 250/Section 248 hearings for projects having Significant Regional Impacts.



FOOD FOR THOUGHT

"Density is an emotional thing masquerading as a scientific ratio.

"We always hear from people that they want a cafe, a bakery, and a bookstore. But all these businesses depend on a certain amount of street traffic. They're a function of density.... you need a certain amount of density at a certain household income within a certain radius to support a grocery store."

— architect Alex Seidel



FAST FACT

Between 1997 and 2002, the Rutland Region lost 7,000 acres of agricultural land (roughly half the size of Sudbury or Wells) to development.

— US Census of Agriculture



RRPC Staff

Villages such as East Poultney are important features of the Region's landscape.

Coolidge, Aiken, West Rutland, the Lower Clarendon Gorge State Forests represent over 20,000 acres of land in the County open to undeveloped recreation. The Lower Clarendon Gorge State Forest provides day use access to an important natural water feature and scenic area. These forests also host hiking trails and some link together other important conserved lands. Coolidge Forest connects the north and south sections of the Green Mountain National Forest.

Rutland County has four state parks. On the western side of the County, three parks provide camping and water access to Lakes Bomoseen and St. Catherine as well as Half Moon Pond. In the Green Mountains, Gifford Woods State Park provides camping and picnicking opportunities adjacent to one of Vermont's best known old growth hardwood stands. The Appalachian Trail runs through the park and joins the Long Trail in the vicinity. Many State Parks have large acreage open to undeveloped recreation as well.

Municipal Forests

Most Municipal Forests were created in the early 1900's through legislation authorizing the establishment of "endowment forests." Seventeen towns in the region have at least one, ranging in size from 15 to over 1,000 acres. Municipal forests account for close to 10,000 total acres in Rutland county.

In a 1931 report from the Vermont Commission on Country Life, the value of these resources was described as, "a source of public education. Schools as well as the general public can here secure first hand information that often is obtainable in no other way. Such a forest area may well be the recreational center for the community, and when properly managed and administered, should become a source for revenue."

In Rutland, municipal forests were historically managed for timber revenue. While this is still the case in many

instances, there has also been a shift to management of these forests for recreational and educational uses as well. Many town's maintain signed hiking trails and wildlife viewing areas as well as other recreation opportunities, and encourage use of the forests by residents and school groups.

Currently, many towns are recognizing the public benefit municipal forests can provide, and are working with Rutland County's Forester (an employee of the Vermont Department of Forests, Parks and Recreation), to create management plans that identifies the variety of values and uses for the forest as identified by town residents.

Wildlife Management Areas

Plymbsbury, Shrewsbury/Plymouth, Otter Creek, Whipple Hollow and Buzkeck Wildlife Management Areas are also open to the public for nature watching and hunting and represent additional acreage appropriate for recreational use in the County.



Access to recreation facilities is a transportation issue for residents dependent on public transportation to reach recreational opportunities. The condition of highways and trails to reach recreation areas affects their accessibility as well.



Lucas Somers

The Rutland Region Fieldhouse, opened in 2004, offers a playing surface for hockey, indoor soccer, and other events years round.

Trail Networks

The Department of the Interior, through the National Park Service, along with The Appalachian Trail Conservancy, a volunteer-based, private nonprofit organization dedicated to the conservation of the trail, manage the 2,175-mile Appalachian National Scenic Trail, a 250,000-acre greenway extending from Maine to Georgia. The trail enters Rutland County in Mt. Tabor, and makes its way north through the Town of Killington. There are many access points to the trail within the County.

The Long Trail is known as Vermont's "footpath in the wilderness." Built by the Green Mountain Club between 1910 and 1930, the Long Trail is the oldest long-distance trail in the United States. The Long Trail follows the main ridge of the Green Mountains from the Massachusetts-Vermont line to the Canadian border as it crosses Vermont's highest peaks. It was the inspiration for the Appalachian Trail, which coincides with it for one hundred miles in the southern third of the state. The Appalachian and Long Trails are one and the same from the southern border of the county until they cross Rte. 4 in Killington where they split off from one another.

Open to the public in the winter, the 300-mile Catamount Trail is North America's longest cross-country ski trail. Starting in Readsboro on the Massachusetts border, this winter-use only trail winds its way for 300 miles through the heart of the Green Mountains to North Troy on the Canadian border. The trail runs through Rutland County, generally following along the spine of the Green Mountains. Cross country ski trails are also maintained by private businesses, and can be found on the Green Mountain National Forest and the Coolidge State Forest.

The Vermont Association of Snow Travelers responsible for the maintenance and grooming of an extensive snowmobile network across the state. One of the oldest snowmobiling organizations in the

U.S., VAST is a non-profit, private group that includes over 140 clubs statewide, with over 45,000 members combined. Eighty percent of VAST's trail system is on private land and permitted by agreement with each landowner. Nearly every town in Rutland County has VAST maintained snowmobile trails.

Many local hiking trail networks are used extensively for day hikes and wildlife viewing and can be found in many Municipal Forests and some State Forests and Parks. The D&H Rail Trail is ~20 miles long and connects Granville NY to Castleton through the town of Poultney. This trail is used by pedestrians, bicyclists and snowmobilers during the winter.

Trail Networks specifically designed for mountain biking existing in Pine Hill Park in Rutland City as well as at Killington Peak.



FOOD FOR THOUGHT

Recreation opportunities best provided and planned for at a regional level: inter municipal sports leagues, hiking, biking and ATV/Snowmobile trail networks, state and county wide bike routes, rail trail projects, water resources—rivers and lakes...

UNMET NEEDS

Recreational planning capacity and resources

Low or non-existent recreation budgets in most towns limit the ability of localities



Lucas Somers

Providing a range of recreation opportunities, like those in Wallingford, is important for people of all ages and interests to use facilities.



The quality of many outdoor recreational experiences is dependent upon the health of the natural environment, continuance of open space, provision of aesthetically pleasing landscapes and the degree to which the environment has been altered by human activity.

Land development patterns affect recreation. The fragmentation of large open tracts of land into smaller, often residential, lots decreases hunting opportunities in the county. Stormwater runoff, clearing of riparian vegetation and other affects of development affect fish populations.

to adequately plan and provide recreation options. Only half the towns in the Region have a recreation commission, recreation department or recreation director.

The capacity of many groups to identify recreational needs, organize sports leagues, conduct feasibility studies for proposed recreation facilities and plan for facility maintenance and enhancement, on top of seeking out new recreational opportunities, is often insufficient. Towns with no recreation director or commission are at an even greater disadvantage and often depend on neighboring town's recreation facilities and programs.

Facility Needs

Many municipalities have cited vandalism, high maintenance costs of historic and public facilities, over use of recreational facilities and loss of scenic views and open areas to development as potential threats to the Region's recreational resources. Often, needs for increased staff training, better informational signs, and more extensive budgeting activities are necessary for current facilities to adequately meet users needs.

Even while municipalities are having trouble maintaining the facilities they have, there is a recognized need for additional basic facilities such as ball fields and trail networks to meet recreational needs at the local level.

New recreation programs

While children's recreation programs and sports opportunities are available to almost every child in the Region, there are few facilities and programs meeting the needs of adult, elderly and disabled users. The need for greater recreational opportunities for youth not interested in traditional sports leagues has also been identified.

Access to recreation opportunities

Udeveloped recreation areas—sledding hills, swimming holes, hunting lands, etc.—serve important recreational needs in almost every town in the Region. Loss of access to private lands is increasing due to liability concerns and the reluctance of landowners to keep their land open to unknown users. Loss of these private lands threaten to eliminate many of the recreational opportunities available across the Region, especially in smaller towns that do not have the resources to provide municipal recreational facilities. Part of the issue is the lack of homeowners' knowledge on the various forms of liability protection available to them.

Loss of access to water resources is also a concern, and towns with important water resources recognize the need to maintain public access points to these resources for those not owning shoreline property.

Conflicts between types of recreation and the desired characteristics of the experience can also affect the enjoyment of recreation in the region. Recreation takes many forms in the region, ranging from motorized ATV and snowmobile touring to activities requiring greater solitude, such as wildlife viewing and backcountry hiking and camping.

Limited transportation to recreation facilities

The distribution of recreation areas and facilities is concentrated in larger population centers, making access difficult to residents of the Region without transportation. Because of the nature of recreation, trailheads, lake access points and other opportunities are often outside of the Region's public transportation system and generally inaccessible to residents who do not have their own transportation.

Automobile dependence could be decreased by better access to facilities by



FOOD FOR THOUGHT

Farm and forest lands have a number of benefits:

- Production of local food products significantly reduces transportation costs and consumption of fuel;
- As a land use, agriculture has a positive fiscal impact on the community's tax base (ie. demands less services than it contributes in taxes);
- Farming of certain crops is a positive use of floodplain areas;
- Open fields, forests and meadows are an important areas for groundwater recharge ;
- Locally-owned and operated businesses such as farms and wood manufacturers circulate local money in the local economy;
- Corn fields and other farmlands provide habitat for wild animals including deer, turkey and woodcock;
- Forests provide habitat to a wide range of animals and birds, including large animals such as moose, bear and large cats;
- Active farmlands provide open space and scenic views as well as a land use tradition characteristic of rural Vermont; and
- Forests provide a variety of outdoor recreation opportunities as well as a varied and scenic backdrop throughout the year.

in the coming years. Financial incentives to seasonal employees may be an enticement. Elsewhere there are programs designed to recruit a pool of workers interested in seasonal agriculture jobs.

RRPC ACTIONS

In addition to supporting activities and developments that contribute to individual communities and the Region, and which help meet the needs identified in this Plan, the Rutland Regional Planning Commission shall:

- Work with interested communities to better support the retention and viability of agricultural and forest lands through their land use plans and regulations and remove language that may unintentionally inhibit farm and forestry enterprises.
- Work with area farmers and the Rutland Area Farm and Food Link to identify gaps in infrastructure needed to increase supply of agricultural products produced in the Region.
- Work with local towns and land trusts to examine the effects of land conservation

techniques.

- Partner with other organizations to create a farm incubator in the Rutland Region to help new farmers get started in this Region.
- Support partnerships with Natural Resource Agencies to plan for sustainable farming and forestry.
- Where housing or other development on lands suitable for agriculture and forestry is proposed, help shape land use regulations and development review to encourage cluster housing to allow for the continuation of large tracts.
- Work with the Rutland Workforce Investment Board to address employment needs of farm and forestry sectors.
- Promote density-based or sliding-scale zoning in land use bylaws to allow for the retention of large parcels, while allowing for small house sites.
- Map significant agricultural and forest lands in municipal plans and identify for protection.
- Do not support Act 250 applications that permanently destroy significant amounts of farm and forest lands.

ADDITIONAL RESOURCES

One of the objectives of this Plan is to provide communities with the tools, and the framework, for developing effective local plans and policies. This Plan should be used as a resource for communities preparing plan updates. In addition to the plan, however, a number of other resources are available:

- US Census – (www.census.gov). This site contains the most commonly used housing and demographic data across the country
- 2002 US Census on Agriculture (www.census.gov).
- Vermont Agency of Agriculture website (www.vermontagriculture.com)
- Cornell Community Food and Agriculture Program website (www.cfp.org)
- Food Routes website (www.foodroutes.org)
- Vermont Fresh Network (www.vermontfresh.net)
- Rutland Area Farm and Food Link website (www.rutlandfarmandfood.org)
- Poultnery-Mettowee Natural Resource Conservation District (www.vacd.org/pmnrcd)
- Rutland Natural Resource Conservation District (www.vacd.org/rutland/)
- Vermont Forest Parks and Recreation Maple website (<http://www.mapleinfo.org/>)
- Vermont Division of Forestry website (<http://www.vtfpr.org/htm/forestry.cfm>)



FAST FACT

The VT Water Resources Panel has a classification system for surface water that establishes management goals and practical uses.

- Class A(1) waters are ecological waters which are managed to maintain waters in a natural condition. All waters above 2,500 feet in elevation are classified A(1).
- Class A(2) waters are managed as public supplies and therefore allow moderate water level fluctuation.
- Class B waters are designated as being either Water Management Type 1, 2, or 3 depending upon their protection and management. Most waters in the Rutland Region are Class B, targeted for achieving and maintaining water quality levels suitable for swimming, boating, and drinking with treatment as well as for irrigation and livestock watering.

guide to project implementation. It has provided local volunteers and officials, as well as state agencies, a framework for tackling broad water quality issues at the local and multi-municipal level. A plan for the Otter Creek is under development.

Surface Water

The Rutland Region's surface water resources consist of over 7,100 miles of rivers and streams and 57,000 acres of lakes and major ponds, not including Lake Champlain.

These rivers, streams, lakes, ponds, and the lands adjacent to them provide a variety of important riparian habitats for several plant and animal communities. These communities depend on the water resource for shelter and food for their survival during several life cycles. Not only are these riparian communities important to the quality of life, ecological balance and biological diversity of the Region, but also provide economic and human health assets as well.

The Poultney River, notably, has been designated an outstanding water resource because of its exceptional natural, scenic and cultural values.

The Vermont Department of Environmental Conservation's Water

Quality Division maintains a river and lake assessment database on 71 lakes and ponds in the Region. The assessment, available online, includes scores for several water quality indicators for the water body.

The Department also maintains a listing of impaired waters in need of restoration, management plans, and individual water quality-based effluent limitations. The 2006 report lists 14 impaired water body segments in the Rutland Region. Impairments may be based on elevated levels of pollutants which endanger wildlife or humans.

Floodplains

Floodplains play a critical role in the storage and conveyance of flood waters and maintenance of ecological water systems. Historic development and the associated fill placed in some of the Region's floodplains have obstruct flood flows and reduced their ability to store water. In some cases, these obstructions have subsequently caused floodwaters to rise to higher levels on upstream and adjacent properties affecting water quality and causing property damage.

All but two of the Region's municipalities have regulations in place to address flood hazards at a basic level. The majority of these town are also participants in the National Floodplain Insurance Program (NFIP), which makes Federally backed flood insurance available to homeowners, renters, and business owners in these communities.

A handful of towns have begun to take the next step with their regulations, applying local knowledge and historical perspective to craft approaches that can work for their particular municipality.

Wetlands

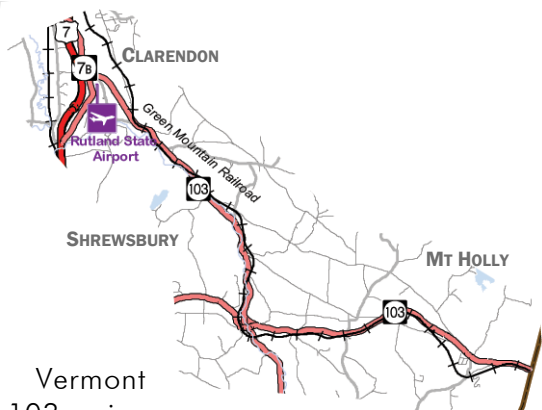
Wetlands in the Rutland Region include many ponds, vernal pools, bogs, fens, marshes, wet meadows, shrub swamps, and wooded swamps. They serve a series of important ecological functions,



RRPC Staff

Direct discharges of stormwater, such as this one in Rutland, transmit pollutants from human activity directly into streams and ponds.

Vermont Route 103/ Green Mountain Railroad



Vermont 103 is a principal arterial connecting the center of the Rutland Region (Clarendon, south of Rutland) with southeastern Vermont and points beyond. It shares its corridor with the Green Mountain Railroad. An undivided two-lane highway, Vermont 103 travels for roughly ten miles through mostly rural countryside, except for the village of Cuttingsville. Though used as an alternative east-west corridor by some travelers wishing to avoid delays on eastern portions of US 4 (including an increasing number of trucks), the volume of traffic is relatively light for a highway of its functional class.

Green Mountain Railroad, extending from Rutland to Bellows Falls, where it connects to the New England Central Railroad, operates on right-of-way owned by the State. Limited overhead clearances at the tunnel in Bellows Falls constrain its potential for freight operations.

For the Future:

Plans include a project to realign the curve in the roadway near the Green Mountain Railroad overpass. Rail improvements include upgrades at the crossings, most of which are unsignalized and structural repairs and upgrades as necessary to achieve desired operating speeds.

Vermont Route 30

Located near the western border of Vermont, VT 30 lies in a valley between ranges of the Taconic Mountains. It traverses three counties in western Vermont, extending from Manchester in Bennington County to Middlebury in Addison County.

In the Rutland Region it is a two-lane rural highway traveling north-south for more than 40 miles from Pawlet to Sudbury. Land use patterns along the route are rural and recreational, reflecting its location in the southwestern Vermont's lakes region, and built up villages in Poultney and Castleton.

Prevailing traffic patterns reflect these land uses. A mixture of land uses generates a comparable mix of vehicles, with travel types ranging from tourism-related to commercial and industrial. A rail-trail is located parallel to Route 30 in Poultney but otherwise the corridor is solely defined by this rural major arterial/collector. Individual bicyclists and bike tour groups frequent this scenic roadway corridor, which lacks wide shoulders.

For the Future:

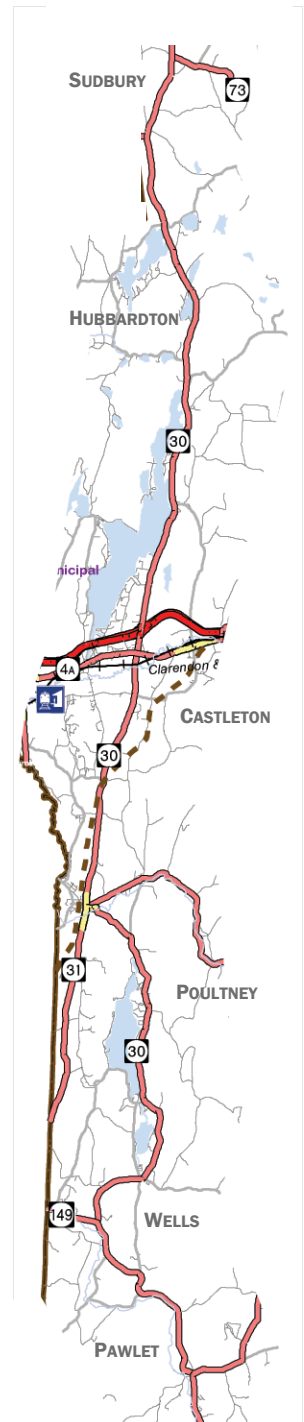
Physical improvements include maintaining the roadway and safety improvements such as pull-offs at scenic locations, sound access management practices, and widening shoulders for bike and pedestrian travel.

Vermont Route 133

Vermont 133, rural major collector, connects the center of the Rutland Region (Business Route 4) with the southwest corner (Route 30 in the center of Pawlet) and northwest Bennington County. The corridor is comprised of the roadway and its limited shoulders for bicyclists and pedestrians. Within the village area of Pawlet and West Rutland, there are sidewalks.

At the request of local officials, it was added to the state highway system in the late 1980's. Use of the two-lane rural

VT ROUTE 30



- good access management practices along major travel and freight routes.
- **Seek scenic designations for highways in interested communities.**
- Prepare Corridor Management Studies to comprehensively address land use and transportation.
- Annually develop a prioritized list of transportation projects and seek funding for implementation
- Assist communities with preparation of municipal plans that contain transportation elements that are comprehensive and consistent with the *Regional Transportation Plan*.
- Identify intelligent transportation system applications for the Rutland Region, including traffic management, traveler information and safety-related projects.
- Continue to provide staff support to the Rutland Region Transportation Council (RRTC).
- Work with the RRTC to identify and prioritize transportation projects.
- Further the mindset of designing cities around people not automobiles.
- Include policies and recommendations about multi-modal corridors in the development of municipal plans.
- During Act 250 review, ensure all projects are consistent with municipal and regional plans.

ADDITIONAL RESOURCES

In addition to the *Plan*, the Transportation Plan Technical Report and the following resources are available:

- US Census – (www.census.gov). This site contains the most commonly used demographic and transportation data across the country. The 2000 US Census on Transportation (www.fhwa.dot.gov/ctpp/census.gov) contains the most widely used basic transportation planning data
- Vermont Agency of Transportation website (www.aot.state.vt.us). This includes:
 - Links to traffic data and other highway research publications-<http://www.aot.state.vt.us/techservices/Documents/HighResearch/Publications/pub.htm>
 - Links to Vermont Policy Plans and Studies—<http://www.aot.state.vt.us/planning/studies.htm>
- Vermont Center for Geographic Information—<http://www.vcgi.org/>
- Upgrades to US Route 4 and 7 in Rutland City and Rutland Town. McFarland– Johnson, Inc. For VTrans. January 2002.
- Planning Magazine of American Planning Association. This magazine annually prepares a special issue on transportation.
- Marble Valley Regional Transit District– www.thebus.com and <http://www.aot.state.vt.us/planning/studies.htm>
- Short Range Public Transportation Plan for Marble Valley Regional Transit District. KFH Group for VTrans. April 2003.
- US DOT Design Guide, "Accommodating Bicycle and Pedestrian Travel", www.fhwa.dot.gov/environment/bikeped/design.htm.
- McCann, Barbara, "Complete the Streets." Planning Magazine. May 2005.
- Rutland Area Physical Activity Coalition– <http://www.rapac.info>
 - Links to Bike Rutland-<http://www.walkrutland.com/BikeRutland/index.html>
 - Links to Walk Rutland- <http://www.walkrutland.com/>
- Albany-Bennington-Rutland- Burlington ABRB Project. Clough, Harbour and Associates LLP. October 2004.
- Rutland State Airport- <http://www.vermontairports.com/rutland.html>
- Intelligent Transportation Systems– ITS Deployment and Integration in Rural Vermont– Sadek and Mark for VTrans. July 2003

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11. To develop a transportation system that balances the needs of safety, convenience, cost, energy efficiency, environmental protection, economic growth, and recreation.
12. To further the Vermont Planning Goals found in (24 V.S.A. §4302).

REGIONAL POLICIES

1. All inhabitants and wildlife should be provided with a healthy living environment through improvement and maintenance of the air, water, and soil quality.
2. Natural resource use that ensures the protection of sufficient renewable resources for future generations and provides for reasonable economic return should be supported.
3. Irreplaceable natural and fragile areas, outstanding water resources, rare and endangered species and their habitats, and significant scenic features should be protected and preserved.
4. Regionally significant natural, cultural, and archeological features, and historic sites and buildings should be protected and preserved.
5. Cooperation and coordination among member towns is encouraged in planning for growth and development, to enable an evaluation of the potential for regional and interjurisdictional impacts.
6. All appropriate agencies should cooperate in the development and maintenance of a safe and efficient regional transportation system that meets the vehicular and pedestrian needs of all residents with minimum impact to the Region's environmental and aesthetic qualities.
7. Environmentally benign or beneficial economic development that will provide desirable jobs for regional residents, reduce unemployment, improve per capita income, and maintain the character of the Region should be promoted.
8. Energy efficiency and conservation, the development of renewable resources, and the use of alternative energy sources are encouraged.
9. The manufacturing and marketing of local value-added agricultural and/or forest products is encouraged.
10. The provision and enhancement of recreational opportunities for all residents, and promotion of tourism-related economic development that furthers the goals of this Plan should be encouraged.
11. The protection of significant agricultural and forested land, through incentives and measures which discourage the subdivision or fragmentation of large parcels of such land is encouraged.

set of criteria. Towns may also include review of historic impacts under conditional use and site plan approval guidelines in their zoning bylaws.

Act 250 - Some development may be subject to review of potential impact on historic resources under criteria 8 and 10 of Act 250. Under criterion 8, applicants must show that a project will “not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas”. Under Criterion 10, a project must be shown to be in conformance with “any duly adopted local or regional plan or capital program”.

Section 106 of the National Historic Preservation Act of 1966 – The Vermont Division for Historic Preservation reviews projects when a federal agency/funding is involved with a project.

Vermont Historic Preservation Act – In accordance with 22 V.S.A. §742 the Vermont Division for Historic Preservation reviews projects when a state agency/funding is involved with the project, on behalf of the Vermont Advisory Council on Historic Preservation.

The most important tools for historic preservation in any town are a sense of pride and a strong stewardship ethic in its residents. Education and cooperation between local planning and development bodies, historical societies, residents, visitors, the business community, and property owners should be fostered throughout the Region. The cultural and historic resources of southern Windsor County may represent its most distinct and outstanding feature. Recognizing and protecting their value can foster civic pride; stimulate improvements in education; encourage environmental protection and sound land use planning; help attract businesses and expand tourism; and support the agricultural and forestry economies through the preservation of farms and maintenance of historical settlement patterns.

C. Aesthetics: Scenic Lands and Open Space

The harmonious mix of open space, villages, farms, country roads, mountainous terrain, historic architecture, and surface waters in the Region provides for scenic vistas and an attractive landscape. This landscape is also an economic asset, and has a tangible economic value to the Region. The rural lifestyle and scenic landscapes attract many tourists. Tourism is a significant industry in the Region. The preservation of these aesthetic and scenic resources has become increasingly difficult due to economic and development pressures. Over the past several decades, highway strip development has emerged between town village centers and the countryside thus threatening the Region's traditional land use pattern. Agricultural fields and working forestlands juxtaposed to dense villages combine to create the traditional Vermont landscape that residents and tourists cherish. Development can occur in ways that do not adversely impact this traditional landscape, such as innovative site plans, clustering around already established villages and town centers. Future development needs to be cognizant of the landscape's heritage and work towards mitigating any adverse impacts to the land's historic legacy.

Efforts to alleviate these pressures or to mitigate any negative effects of development are necessary to protect, preserve, and improve the significant aesthetic resources within the Region. Such efforts should include a continued emphasis and restructuring of municipal planning and zoning administration, which protects and preserves the landscape heritage in the Region.

The Region has prominent ridgelines and mountain tops that are inherently and especially sensitive, e.g. the Alps and Little Ascutney Mountain. Development in these areas is strongly discouraged. Such proposed development should work towards design plans that retain the prominent natural appearance by locating in less visible areas and away from highly visible ridgelines, blending and or hiding structures within existing wooded hillsides, and where possible, avoid excessive use of reflective glass. Aesthetic resources are protected by Criterion 8 of Vermont's Act 250, which does not relegate scenic beauty to pristine areas alone, but to settled areas and farmlands as well.

Natural beauty, visual harmony, and peace and quiet have all been addressed by the Environmental Board as aesthetic values. In its Quechee Analysis, "Undue Adverse Effects" are clarified by the following factors:

Would the project have any "adverse" aesthetic impact?

- a. What is the surrounding area like?
- b. Is the project compatible with its surrounding area?
- c. Have suitable colors and materials been selected?
- d. How visible is the project?
- e. How does the project affect open space in the area?
- f. Is the project proposed for a visually sensitive type of land?

If there is an adverse effect, is it "undue"?

- a. Would the project violate any clearly written community standard?
- b. Would the average person find the project shocking or offensive?
- c. Has the applicant failed to take reasonable steps to lessen any adverse effects?

The Board has characterized the Vermont settlement pattern as open, rural areas punctuated by village centers and strives to protect that pattern. Though the term "aesthetics" is broadly construed, towns can use these factors when considering policies to guide the protection of aesthetic resources.

1. Light Pollution

One of the most valued resources of a rural region is a night sky unimpaired by "sky glow" from the misdirected light of urbanized areas and recreational resorts. Many outdoor lights are poorly designed or improperly aimed, allowing light to project above the horizon and wash out the view of the stars. Poorly designed exterior lighting also creates annoying glare, light trespass on neighboring property, and energy waste. There are now options for outdoor lighting, which are better designed to direct light downward where it belongs. Future consideration of this technology would help reduce cumulative negative effects on aesthetic resources.

2. Scenic Roads and Byways

Vermont has been involved with scenery preservation issues as early as 1937. In 1966, the State established the Scenery Preservation Council. Key milestones for the Council were the passage of the “outdoor Advertising Law, i.e., the billboard ban in 1968; numerous studies on Vermont’s scenic qualities; and the publication of the “Vermont Backroads Handbook”. The Scenic Roads Law was passed in 1977, initiating the state Scenic Roads Program. The purpose of the Scenic Roads Program was to protect the physical character and condition of the roadway right-of-way.

The passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 initiated the National Scenic Byways Program. In 1992, Vermont received ISTEA funding to develop the Vermont Byway Program which focused scenic byway designation through corridor planning at the local and regional level. The Vermont Byways Program expanded upon the strict approach of the former program to one that gives equal recognition to property rights, land use, and resource planning issues. The Vermont Byways program reflects a multifaceted approach to encourage communities, preservationists, business owners, and property owners to work together to protect Vermont’s rural and scenic character. The purpose of the Byway program is to foster cooperative ventures or public-private partnerships, and to protect, enhance, and/or promote the natural, cultural, historic, archeological, recreational, and scenic qualities of the National Scenic Byways Program. Beginning in 1993 with the reactivation of the Scenery Preservation Council, the Scenic Roads Program was renamed the Vermont Byways Program.

The Scenery Preservation Council primarily focuses on the following:

1. Consultation with municipalities, regional planning commissions, and the Transportation Board for local, state, and federal designation of roads and highways.
2. Encourage and assist fostering awareness on scenery preservation and aesthetic issues related to roads, highways, and related areas.
3. Review applications to the National Scenic Byways Program and make recommendations to the Secretary of the Agency of Transportation.

A state-designated scenic byway may be nominated to be part of the National Scenic Byway program as long as it meets certain criteria and possesses one of six intrinsic qualities. The criteria for state designation to the National Scenic Byway Program are as follows: 1) must have a completed corridor management plan, 2) must accommodate bicycle and pedestrian traffic where feasible, 3) must accommodate two-wheel drive passenger vehicles with standard clearances. “All-American Roads” must meet the National Scenic Byway criteria listed above, and must possess at least two of six intrinsic qualities. The intrinsic qualities for which National Scenic Byways and All-American Roads are recognized are features that are considered representative, unique, or irreplaceable. These features fall under six broad categories: scenic, cultural, historic, archeological, recreational, and natural.

The National Scenic Byways program was established under the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 in order to “identify, designate and promote

scenic byways and to protect and enhance the recreational, scenic, historic and cultural qualities of the areas through which these byways pass.” Scenic Byways are eligible for federal funding for tourism or resource conservation activities along designated corridors (Vermont’s Highway System Policy Plan, VTrans, 2004).

On September 22, 2005, the Federal Highway Administration awarded national designation to the Connecticut River Byway making it officially a National Scenic Byway. It is a two-state byway, spanning the west and east shores of the Connecticut River in Vermont and New Hampshire. The segment of the Byway in this Region includes the US Route 5 corridor through Windsor, Weathersfield and Springfield. The two spurs including VT Route 44 to Brownsville and VT Route 11 to downtown Springfield, continue to be part of the originally designated Connecticut River Scenic Byway.

State scenic roads may be established by recommendation of the Scenery Preservation Council per 19 V.S.A. §2501. Any construction or maintenance work on designated state scenic roads must be consistent with the standards established by VTrans pursuant to 10 V.S.A. §425. The segment of VT Route 131 in Cavendish is the only designated Scenic Highway in this Region.

Towns in Vermont are enabled to designate municipally-maintained roads as “scenic roads,” as established by 19 V.S.A. §2502. Town scenic roads are also subject to the standards established by the State Transportation Board. Those standards for scenic roads address appropriate minimum roadway widths, alignment, landscaping and traffic control methods, pursuant to 10 VSA §425. There are no scenic roads in this Region at this time.

3. Scenic Resource Inventories

As part of the Connecticut River Scenic Byway Study, regional planning commissions developed systems to inventory and evaluate scenic resources. Because evaluation of these resources is subjective, such systems can be highly variable. Areas of scenic significance, including ridgelines, are determined through a process that involves public input by local planning boards, Conservation Commissions, and interested local residents. In addition to determining whether roadways are suitable for scenic byway programs, an inventory of scenic resources contributes to local open space, conservation, and telecommunications tower planning efforts. Currently, only the towns of Reading, Weathersfield and West Windsor have active Conservation Commissions.

The following landscape types are areas that towns may wish to consider when determining areas of scenic significance:

- shorelands adjacent to public lakes, rivers, or ponds;
- prominent ridgelines, mountain tops, or excessively steep slopes that can be viewed
- from public roadways;
- exceptional agricultural and historic areas, recognized as outstanding resources;
- areas within or immediately adjacent to wetlands and natural areas designated by towns or the state; or

- areas of high scenic quality such as ridgelines which are publicly recognized as exceptionally unique or are noted examples of the dominant characteristics of an area in the Region.

In addition, the diversity of landscape types; the size, scale, and architectural continuity of the manmade landscape; the focal dominance; and the intactness of the landscape are likely to contribute to the scenic qualities of an area.

4. Planning for Open Space

“Open space” may be defined as land which is not developed and is of some benefit to the public for many of the reasons described throughout this chapter and the Natural Resources chapter. Open space that is publicly owned or permanently protected through the sale or donation of development rights may ensure the long-term productive capacity of forest or agricultural land; preserve wildlife habitat; protect groundwater resources; provide recreation land; and preserve important historic, scenic and cultural resources.

Open space may be land that is conserved either through fee simple acquisition by local, state, or federal government or through the sale or donation of development rights to local government or a nonprofit conservation organization, often using a conservation easement which limits development on land while keeping it available for farming, forestry, and recreational enjoyment.

The Upper Valley Land Trust (UVLT) is located in Hanover, New Hampshire, and provides conservation leadership, tools and expertise to permanently protect the working farms, forested ridges, wildlife habitat, water resources, trails and scenic landscapes that surround residential areas and commercial centers. UVLT focuses its mission in 44 Vermont and New Hampshire towns (including Springfield, Weathersfield, Windsor, West Windsor and Reading) in the upper Connecticut River valley. UVLT is a sponsor member of the [Land Trust Alliance](#), an organization that promotes land conservation by providing advocacy and professional resources to over 1600 land trusts nationwide.

In addition, the Vermont Land Trust (VLT) is one of the most effective land trusts in the country. Its primary focus is on permanently conserving productive, recreational, and scenic lands vital to Vermont’s and rural economy and environment. VLT has helped landowners in communicates throughout Vermont, to permanently protect more than 483,000 acres – 8% of Vermont’s privately-owned land. **Table 7.3** below lists conserved lands in the Region.

Open space may also be privately owned agricultural or forestland, which offers economic benefits through productive use and may contribute to the scenic nature of the landscape or be accessible for recreation. Owners of such land may be encouraged to maintain its productive capacity through programs such as Local Tax Stabilization agreements for farmland, forest land, or open space; or through the state’s Use Value Appraisal Program, commonly referred to as “Current Use”, which requires towns to assess enrolled farmland or forest land at use value rather than fair market value. Fear of liability often causes landowners to prohibit public access for recreational uses; however, legislation enacted in

3. Efforts of community, regional, state, and federal organizations which sponsor or provide financial or technical assistance for cultural and historic preservation and education in the Region should be supported.
4. Reuse of historically significant buildings and sites that maintains and preserves their architectural and historic character is encouraged.
5. Regionally significant historic buildings and sites should be preserved. Necessary renovations should reflect the historic character of the resource. In the case of private homes, owners are encouraged to consider the site's historic, cultural, and economic value to themselves and the community when deciding how best to maintain and manage them.
6. Encourage towns, through their Planning Commissions and on-site visits, to educate the public and promote awareness of significant cultural/aesthetic resources, such as cellar holes and stonework, etc.

CULTURAL/HISTORIC RESOURCE RECOMMENDATIONS

1. Work cooperatively with local communities to inventory and map significant cultural and historic resources to ensure their protection.
2. Work with communities to develop criteria for evaluating the impacts that projects may have on designated historic sites or districts.
3. Continue to support cooperative efforts to designate National Historic Register Sites and Districts and evaluate federally funded projects in the Region that impact designated properties and resources.
4. Support the development of programs focusing on local, regional, and state history and culture in the Region's schools.
5. Provide support for towns wishing to include design control districts or local historic districts in their zoning bylaws under 24 V.S.A. §4407.

SCENIC LANDS AND OPEN SPACE GOALS

1. Achieve a balance between scenic or open land uses and other land uses in the best interest of the environment and the Region's residents.
2. Maintain or enhance the diversity of ecosystems throughout the Region and promote connectivity between conserved lands wherever possible.
3. **Protect the environmental character and integrity of significant natural and scenic resources as identified by member towns.**

SCENIC LANDS AND OPEN SPACE POLICIES (*see also Natural Resources Chapter*)

1. Local, state or federal programs and legislative efforts which protect and enhance the economic, cultural, environmental, and aesthetic values of forested and scenic resources should be supported.
2. Local Tax Stabilization (Current Use) programs that provide incentives for landowners to conserve farmland, forestland, and open space should be supported.
3. Towns should be encouraged to develop policies that promote clustering or other development patterns that will maximize forested areas and open space.
4. Conservation of open and scenic lands through the use of public/private funds for the purchase of development rights, fee simple purchase, and other such measures should be supported.
5. The preservation of historic and archeological resources that enhance the significant scenic resources of the Region should be supported.
6. Development projects which complement or enhance significant scenic resources should be supported.
7. The following sites are inherently and especially sensitive, and as such, development in these areas is discouraged:
 - Hawks Mountain in Cavendish, Baltimore, and Weathersfield
 - The Alps region of Cavendish and Reading
 - Little Ascutey Mountain in Weathersfield and West Windsor
 - Terrible Mountain in Andover and Ludlow
 - The Pinnacle in Ludlow
8. Towns should be encouraged to develop policies for the protection of regional scenic viewsheds.
9. Structures and exterior areas should be illuminated only at levels necessary to ensure safety and security of persons and property.
10. Encourage exterior lighting that is designed so that light projects downward and is shielded from public roads, adjacent residences, and distant vantage points.
11. Encourage additional scenic byway designation where appropriate.

SCENIC LANDS AND OPEN SPACE RECOMMENDATIONS

1. Work with local communities to identify and develop a comprehensive inventory of forested lands, open space, and significant scenic resources throughout the Region.

and analyze the results. Assist communities in developing conservation strategies for locally and regionally significant scenic resources.

2. Work with member towns and appropriate agencies to secure donations or acquisitions of scenic easements, greenways segments, forested land or other land and water areas that will enhance the significant scenic resources of the Region.
3. Continue to work with, and assist in the development of, local Conservation Commissions.
4. When the opportunity arises, work with local organizations, neighboring regional planning commissions, and state entities to evaluate certain roadways and corridors for Vermont Byway designation suitability.
5. Assist member towns to update town plants and implementation measures which protect and preserve the landscape heritage in the Region.

While solar is one of the cleanest forms of alternative energy, comparatively, it is the most expensive since costs are front-loaded. These costs, however, should decline with the increase in technology which presently is in its infancy. In addition to initial investment costs, capacity to utilize solar energy can also be affected by siting and the lack of technical knowledge. Despite these constraints, its positive attributes make it an energy source that policies should encourage. Information regarding solar energy in Vermont can be found at http://publicservice.vermont.gov/energy-efficiency/ee_vtsolarguide.html.

3. Micro-hydro

Micro-hydro systems are those hydro-electric generating systems with a rated capacity of approximately 300 kW which is the maximum size for most stand alone hydro systems not connected to the grid, and suitable for "run-of-the-river" installations. "Run-of-the-river" refers to a type of hydroelectric generation where the natural flow and elevation drop of a river are used to generate electricity. This generation has a minimal environmental impact on the local ecosystem since the water runs straight through the generator and back into the stream.

Advantages to micro-hydro include:

- small amount of flow or a drop as low as two feet to generate electricity to a site up to a mile away;
- continuous supply of electrical supply compared to other renewable energies;
- cost run from \$1,000 - \$20,000 depending on site requirements and location;
- low maintenance fees; and
- ability to supplement with intake from existing power grid or other alternative systems if needed.

Disadvantages to micro-hydro include:

- suitable site characteristics (flow rate, output and drop);
- low power in summer months; and
- ecological impact (while small, still needs to be considered).

4. Vermont Incentives for Renewables and Efficiency

Vermont has many incentives for utilizing renewables and becoming energy efficient. Such incentives include sales tax exemptions, the solar and small wind state rebate program, corporate tax credits for solar, and several loan and grant programs. More information on state incentives can be found at the Database of State Incentives for Renewables & Efficiency's website <http://www.dsireusa.org>.

5. Alternative Energy Facilities

While the RPC supports and encourages the development of alternative energy facilities in the Region, it also believes that they should not come at a cost to the Region's natural resources. In that respect, the following guidelines shall be observed:

- (a) developers should first define the character of the proposed site to determine how well the proposed facility will conform to the existing landscape including

scenic quality (focal points, viewer sensitivity, topographic diversity, prominence/dominance, order of landscapes and patterns of development);

(b) proposed projects should meet the aesthetic test set forth under Criterion 8 of Act 250;

(c) site selection should also consider access, site clearing, onsite power lines, substations, lighting and off-site power lines. Minimal disturbance of the site shall be a planning objective;

(d) reasonable measures shall be taken to mitigate possible destruction or impairment of habitats existing in a project area; and

(e) facilities deemed to be abandoned or unused should be removed by the owner/operator(s) within a reasonable time from cessation of operations, as well as restoring and/or enhancing the site back to its natural state.

F. Planning Implications

While energy decisions can seem like an uphill battle, every resident can make a difference. Small changes add up and sound regional and local planning can play a positive and effective role in guiding energy decisions. By promoting appropriate land use patterns, participating in energy development decisions, facilitating alternative transportation options, and encouraging energy conservation strategies; municipalities can provide leadership toward a position of sustainable energy use which will not only help to maintain a healthy environment, but will also build a foundation for economic health and stability.

Local planning and zoning bylaws also play an important role in promoting energy efficient development. Planning efforts should be cognizant of settlement patterns less dependent on single occupant vehicle transportation models, land uses and policies that encourage energy conservation and efficient uses of energy resources. In addition, when implementing town plans, municipalities should consider zoning bylaws and subdivision regulations in the development of alternative energy structures/systems where feasible. Furthermore, there needs to be some flexibility in zoning bylaws to allow for an increase in the use of emerging technological advancements in energy resources such as solar and wind.

ENERGY GOALS

1. To improve conservation and efficiency in the use of existing energy resources, and to facilitate the transition to cleaner energy resources in order to protect the environment.
2. To reduce demand for fossil fuels by promoting public transportation, ride-share programs and other programs that lessens the dependence on single occupancy vehicles.
3. To encourage land use patterns and development in the Region that use energy more efficiently.

Appendix D
Town and Regional Plan Excerpts:
Orderly Development

Town of Alburgh

Town Plan

Adopted July 26, 2011

minimum state standards for wastewater disposal are met.

Objectives:

- N 3.** Develop Town owned lakeshore in Alburgh Center.
- N-4** Improve and develop additional bicycle-friendly facilities and address the need for safer bicycle routes through town

Land Use

Goals:

Maintain economically and environmentally sound farms in Alburgh.

To preserve and protect scenic resources, including significant scenic roads, waterways and views, and important landscape features of the town.

To ensure that development in Alburgh is compatible with existing land uses.

To ensure that development occurs in areas where it will not impact water quality.

To ensure that development occurs only in those areas where soils are capable of supporting it with adequate depth to bedrock, stability and which do not have high water tables.

Policies:

- L-A.** Discourage the subdivision of land into “spaghetti” lots, parcels of land that are exceptionally long and narrow.
- L-B.** Support the conservation of agricultural lands and natural resources with a variety of strategies including purchase of development rights and local policies that encourage conservation.
- L-C.** Protect water quality by limiting development in Wellhead Protection Areas, wetlands and along streambanks.
- L-D.** Protect Lake Champlain water quality by discouraging development along the lakeshore closer than 50 feet from the high water mark of 99 feet above sea level.

In contrast to the open lands of the interior, Alburgh has a distinct pattern of built-up areas. Alburgh Village is the largest cluster of mixed use buildings in town, consisting of a variety of residential, retail and commercial uses. Immediately adjacent to the Village is the Alburgh Business Park.

The Village is not the only high density area in town. Reflecting past history, Alburgh contains a number of high density clusters around the town, notably in East Alburgh, Alburgh Springs, and Alburgh Center. Alburgh's more recent history as a vacation destination has led to extremely high density development along much of Alburgh's shoreline. Structures along the shore tend to be built on very small lots and reducing the impact of this development on Lake Champlain's water quality is a challenge.

There is also an extensive amount of conserved land in town. Alburgh Dunes State Park occupies a 608 acre piece of land at the southernmost section of the town. The Vermont Land Trust and other conservation groups have also purchased conservation easements on an assortment of agricultural lands in town. These conserved lands can be seen on the *Proposed Land Use* map.

Proposed Land Use



Future land use in Alburgh was based on a combination of existing land uses, desired growth areas, conserved lands and underlying natural resource characteristics. Using these criteria, proposed future land use was divided into eight general land use categories. The land use categories are described below and the general boundaries are illustrated on the map titled *Proposed Land Use*.

1) Village and High Density Residential – This land use category includes most of the existing Village area, as well as other existing high density areas in the town. Intended uses of these areas include high density residential development and commercial uses compatible with residential development. Commercial uses should be of a scale and

character compatible with residential development. Existing land uses in these areas are grandfathered. Minimum lot width is 100 feet.

2) Shoreland – This land use category includes all land within 300' of mean high water that is not either in the Village/High Density category or either Conservation Land A or B. The intended land uses in this category are residential, recreation, conservation uses. Protection of Lake Champlain water quality is a high priority and development should seek to minimize impact on the lake. Existing land uses in these areas are grandfathered.

To protect lake water quality a 50 foot undeveloped and vegetated buffer strip is required for new development, measured from the high water mark of 99 feet above sea level. The minimum lot width is 100 feet.

3) Commercial Area – This land use category covers the areas designated for commercial development. Commercial development includes land uses such as small gas stations, gift shops, retail stores, farmer's markets and Park & Ride facilities. Currently, the Commercial Area is situated at the "Four Corners" located at the intersection of Rt. 78 and Rt. 2. The boundaries of the area are 350 feet from the road centerline in all directions, forming a diamond pattern extending 350 feet from the intersection.

4) Industrial Area – This land use category follows the lines of the existing Industrial Park in Alburgh Village.

Land uses included in this district include light and heavy industry, manufacturing and commercial uses. All uses must be compatible with the residential and commercial nature of the adjoining Village area.

5) Agriculture and Low Density Residential Area – This land use category extends 300 feet on either side of all town and state-owned roads. It does not include land that is in either the Village/High Density areas, the Commercial area, the Industrial area or Conservation Lands A and B.

Intended land uses in these areas include low density residential development and agriculture. The minimum lot width in this area is 250 feet.

6) Conservation Lands A – This land use category includes lands that are unsuitable for residential, commercial or industrial development because of natural resource limitations, primarily wetlands.¹ No further residential, commercial or industrial development should

¹ Wetlands were determined based on the U.S. Fish & Wildlife Service National Wetland Inventory (NWI) maps. These maps were developed from color infrared aerial photos flown between 1975 and 1978, U.S. Geological Service topographic maps and other mapped and text data. The data was digitized by the Vermont Center for Geographic Information and released in 1996. Wetlands less than 3 acres in size were not included in this dataset. This information was the best computerized data available that could be accessed by the Planning Commission at the time this Plan was developed. These wetland maps were developed for planning purposes only. Questions regarding official wetland boundary determinations should contact the Vermont Agency of Natural Resources, Water Quality Division, Wetlands section, (802) 244-6951

occur in these areas. Primary land use is wildlife habitat and recreational uses compatible with the sensitive environment of this area. Such uses include hunting, bird-watching and hiking.

7) Conservation Lands B - This land use category includes lands that have been conserved by federal, state or private non-profit groups. These lands include prime agricultural soils, important wildlife habitat, and shore land areas.

Development on these lands should be minimal, limited by the conservation restrictions and/or management plans that place conservation of either agricultural soils, wildlife habitat, water quality or low impact recreation as their primary aim.

8) Agriculture and Open Space – This land use category includes all lands not included in other categories. The majority of these lands are in agricultural use and should remain available for agriculture. Lands in this category are distant from existing roads and development could entail increased costs to the town if municipal services are extended into these areas.

Primary use of these lands should be agriculture and recreational open space. Residential development in this district should be clustered to avoid impacting agricultural operations. Conservation of these lands is strongly encouraged.

Chapter 9. Energy

Energy production is essential to human society and, at the same time, threatens the environment that sustains us. Most energy sources have negative environmental impacts and the challenge for the future will be to reduce energy consumption in general, and to shift demand from the more harmful energy sources toward those that are renewable and have an overall low environmental impact. Energy conservation is an important step in developing a comprehensive energy plan for the future of Alburgh.

Land use and energy are closely related. Land resources are used in the production, transport, and disposal of energy products. Land use patterns exert a strong influence on major end uses of energy, including transportation, heating and cooling of buildings, and the energy used in developing infrastructure. Furthermore, land is used for the disposal of waste products resulting from our energy consumption.

Vermont's energy use is divided into three main sectors: residential, commercial, and industrial. However, because the amount of energy that is used in transportation is significant, it is sometimes analyzed as a separate sector. In 2006, for the Northwest Region of Vermont, transportation consumed just over 57 percent of the total delivered energy while the residential sector consumed nearly 34 percent, the commercial sector along with the industrial sector consumed a combined amount of 8.5 percent (NRPC Regional Plan, 2006).

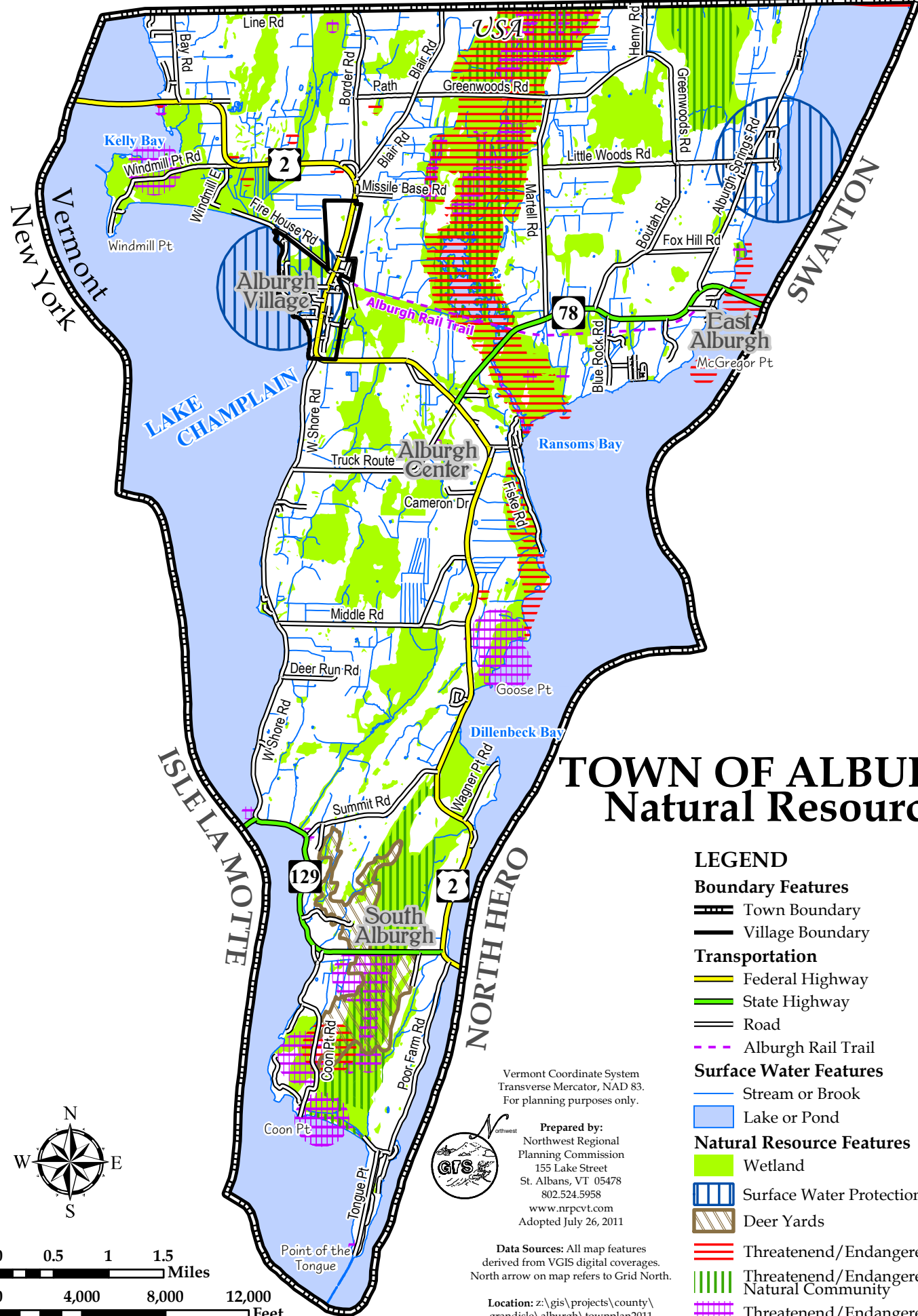
Local Energy Consumption

Table 1. Housing Units by Heat Source, 2009

	Alburgh	Grand Isle County	Vermont
Utility gas	18	36	35,478
Bottled, tank, or LP gas	150	873	37,569
Electricity	30	104	10,321
Fuel oil, kerosene, etc.	548	1830	134,100
Coal or coke	0	0	434
Wood	79	270	29,603
Solar energy	0	0	102
Other Fuel	0	15	1,744
That Are not Heated	0	0	1,024

Source: 2005-2009 American Community Survey

CANADA



TOWN OF ALBURGH Natural Resources

LEGEND

Boundary Features

- Town Boundary
- Village Boundary

Transportation

- Federal Highway
- State Highway
- Road
- Alburgh Rail Trail

Surface Water Features

- Stream or Brook
- Lake or Pond

Natural Resource Features

- Wetland
- Surface Water Protection Area
- Deer Yards
- Threatened/Endangered - Animal
- Threatened/Endangered - Natural Community
- Threatened/Endangered - Plant

Vermont Coordinate System
Transverse Mercator, NAD 83.
For planning purposes only.



Prepared by:
Northwest Regional
Planning Commission
155 Lake Street
St. Albans, VT 05478
802.524.5958
www.nrpcvt.com
Adopted July 26, 2011

Data Sources: All map features
derived from VGIS digital coverages.
North arrow on map refers to Grid North.

Location: z:\gis\projects\county\
grandisle\alburgh\townplan2011

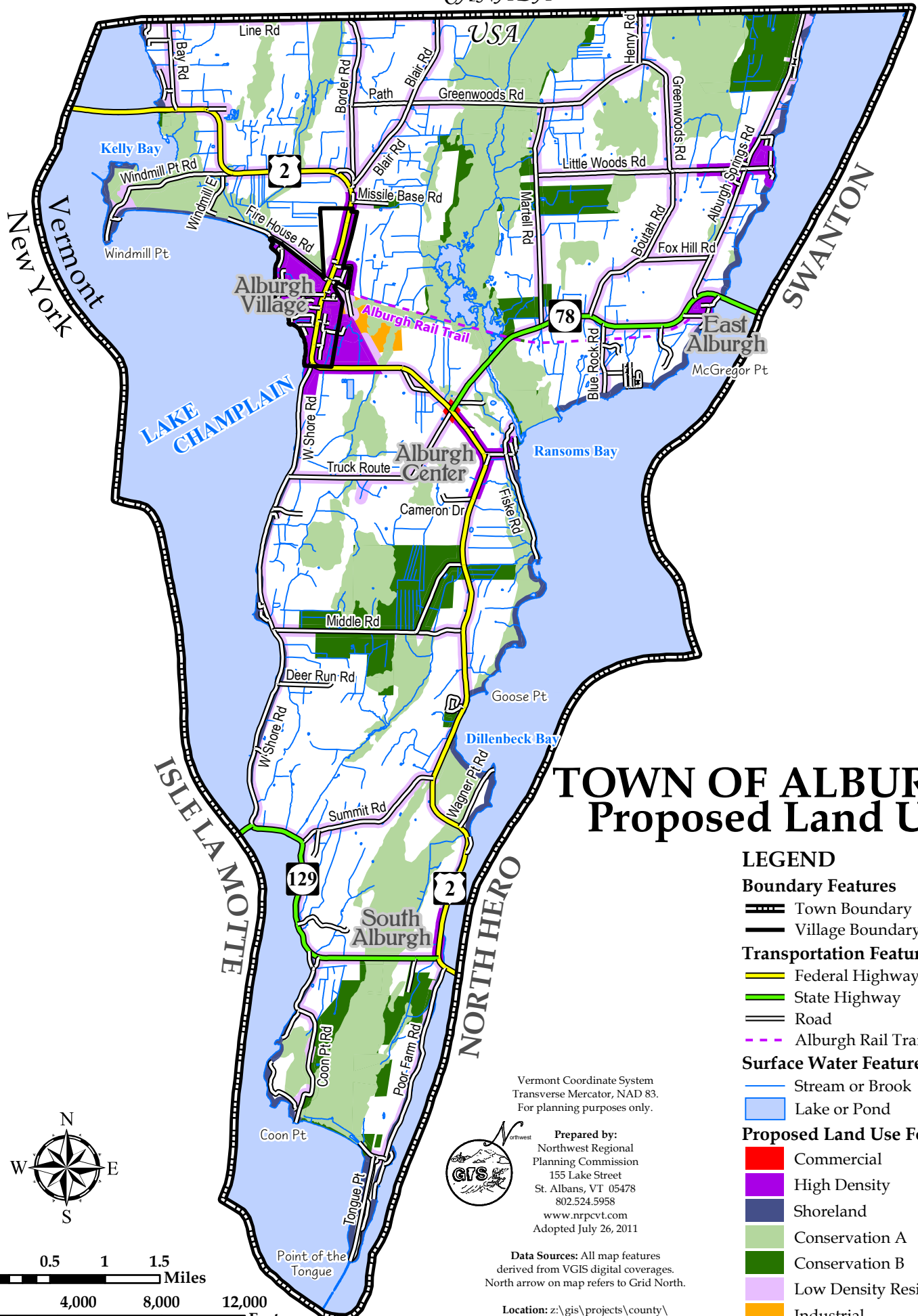


0 0.5 1 1.5
Miles

0 4,000 8,000 12,000
Feet

CANADA

USA



TOWN OF ALBURGH Proposed Land Use

LEGEND

Boundary Features

- Town Boundary
- Village Boundary

Transportation Features

- Federal Highway
- State Highway
- Road
- Alburgh Rail Trail

Surface Water Features

- Stream or Brook
- Lake or Pond

Proposed Land Use Features

- Commercial
- High Density
- Shoreland
- Conservation A
- Conservation B
- Low Density Residential
- Industrial

Vermont Coordinate System
Transverse Mercator, NAD 83.
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0 0.5 1 1.5
Miles

0 4,000 8,000 12,000
Feet

Town of Benson Comprehensive Town Plan

Adopted April 1, 2013

Households and Household Size

Table 4: Number of Households			
	1990	2000	2010
Benson	312	391	420
Rutland Region	23,525	25,678	25,984
% Change	1980-90	1990-00	2000-2010
Benson	40.54%	25.32%	7.4%
Rutland Region	15.01%	9.15%	1.2%
<i>Source: U.S. Census Bureau</i>			

Table 5: Average Household Size				
	1990	2000	2010	<i>2020 Projection</i>
Benson	2.71	2.57	2.46	2.35
Rutland Region	2.71	2.39	2.28	2.17
<i>Source: U.S. Census Bureau</i>				

Average household size in Benson was 2.46 in 2010, slightly above the regional average. Household size is expected to continue to decline over the next 10 years. This, in combination with continued population growth, will result in an increasing number of households and housing units. The population of Benson is projected to increase minimally over the next 10 years, but the number of households is projected to rise by a greater percentage.

Goals of the Town of Benson

Given this history and current trends, the future will require careful planning. To further the needs of the community identified by the Commission, the Plan has been drafted to.

- Preserve the Town's rural character.
- Protect and promote traditional and diversified agricultural uses and activities.
- **Protect the Town's natural resources and environment.**
- Protect and improve water quality.
- **Protect the Town from sprawl.**
- Protect the Town from development that puts undue burden on the capacity of Town roads, water, sewer and other infrastructure and the capacity of the environment to support these developments.
- Promote only development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- **Encourage the wise use of energy resources.**
- Promote a healthy economy.
- Promote safe and decent housing for current and future residents.
- Sustain the Town's heritage.

ENERGY

The electricity provided to Benson comes from a combination of nuclear, hydropower, and a small percentage of fossil fuels.

Heat is primarily provided by wood, oil and propane. It is important to consider and encourage other forms of energy, where cost effective. It is also important to ensure that energy use and development does not produce any negative impact to the Town, the environment, and natural resources in Benson.

The Town recognizes the relationship between energy, transportation and land use and that transportation is a significant user of energy in Town. However, Benson is a rural community with minimal services, no public transportation and minimal employment opportunities. There is no pattern of land use appropriate for the Town that would have a significant impact on transportation energy use.

Electrical Utility Service

Green Mountain Power provides electrical service to the Town.

Wind Power

Many areas of Benson are suitable for erecting wind turbines to produce electricity. The zoning and subdivision bylaw requires conditional approval for small wind towers. Of particular concern is the fact that the guy wires that support the tower are a great hazard to birds that fly at night. With little extra effort, towers can be constructed such that these wires are unnecessary, or greatly reduced in number.

In addition, the concern of the visual appearance of industrial scale wind towers should be addressed so as not to destroy the natural beauty of the Town. This means limiting the erection of towers on ridges and in areas of historic or environmental significance. Wind towers tied to the grid require a state permit and those off the grid are regulated through zoning. Wind towers should fit into the natural landscape as much as possible.

Solar

Solar power is under utilized in Benson. Solar gain is used effectively in this climate in the winter to heat homes and to provide hot water, both with fossil fuel back up. In addition, most of the year, it is feasible to utilize solar electric panels to generate electricity. The power produced by solar panels will meet a greater part of the home electricity needs if energy efficiency measures are taken first. Unlike wind and hydro, the collection of solar radiation does not pose environmental concerns. The Town encourages the use of solar energy and encourages energy efficient appliances, as well as insulation and weather stripping.

Hydro

There are many sites in Benson that could be considered for generating electricity from running water using a micro hydro turbine. There is, however, an environmental concern. Construction in streams requires state permits and a conditional use permit under the zoning and subdivision bylaw.

Other

Fossil fuels are provided by competitive suppliers; and alternative fuels, such as wood, are widely available locally. Benson currently does not have other utilities such as natural gas. A net metering program exists in Vermont for residential and farm properties. Further information is available from the Public Service Board.

Methane Digestion

Farmers have the potential to develop farm energy systems that utilize the anaerobic digestion of agricultural products, byproducts or wastes to produce electricity or produce electricity from other renewable sources. The use of such technologies not only provides a source for renewable electricity, it also helps to improve environmental quality through better waste utilization while promoting local economic activity that helps to diversify farm operations.

Energy Efficiency

There are cost-effective ways to reduce energy use in homes and businesses. Energy efficiency investments will pay off now and in the future, by reducing energy costs and protecting our environment. Energy efficiency programs and services are available from Efficiency Vermont, the statewide certified energy efficiency utility. Bennington Rutland Opportunity Council (BROC) and Neighborworks of West Rutland have programs to assist residents of Benson with energy conservation and weatherization measures to reduce energy costs.

Energy Goals, Policies and Programs

- Encourage individual, non-profit, and governmental efforts to conserve energy supplies such as by the use of energy efficient appliances, and insulation and weatherization of residential, commercial and Town buildings.
- Encourage the development and use of renewable energy (including but not limited to wind, solar, micro-hydro, and methane generation) where such installations will not adversely affect the environment or scenic beauty in Benson.
- Provide information to residents about programs and means to reduce energy consumption.
- The Town should investigate funding opportunities for cost effective energy efficiency, alternative energy and renewable energy programs.

EDUCATION

To meet growing demands for elementary education, and to resolve building code and accreditation issues, the Town opened its new Village School on School Street in 1993. High school students from Benson attend Fair Haven Union High School (FHUHS) in Fair Haven. The Town provides transportation to and from FHUHS. Residents from Benson have access to Stafford Technical Center in Rutland as well.

Benson Village School is an approximately 10,000 square foot wood-frame building. A bond of \$600,000.00 will be paid off in 2013. The school building currently contains 10 classrooms for

NATURAL RESOURCES

(see Natural Resources Map)

The Town of Benson has a wealth of naturally occurring resources that enrich our lives. These natural resources include a broad spectrum of everything around us, such as, water, soil, trees, wildlife and the beauty of the area. It is our responsibility to identify these resources and maintain and create an environment that doesn't interrupt the balance of their existence.

In the past, there was a unique woodland in Benson as well as in other Towns in the Champlain Valley. The remnants of this natural community have been called Clayplain Forest. This forest is identified by its history of having once been an ancient lake bed, its soils, the local climate, the types of vegetation and the animal populations supported.

The fertile clay soil and the warmth of the Champlain Valley allow this area to support several tree and shrub species which exist at the northern extent of their range. Four different oak species, as well as hickory, beech, maples, and a host of other trees and shrubs make this the most diverse woodland in the Northern Hardwood Forest. This was a very productive forest that supported a large population of animals.

Since this area of Vermont has fertile, clay-based soil, it was and is prized for agriculture. Forest clearing was completed in the 1850s, and today we have no examples of old growth forest in the Champlain Valley. What remains today are rare examples of natural regeneration in a highly altered and fragmented landscape. The majority of the fragments of this forest type are limited to areas that are less than 100 acres. This fragmentation limits the long standing viability of this forest.

Within Benson, restoration efforts are taking place to bring this forest back. The Southern Lake Champlain Valley Program of The Nature Conservancy and the Poultney-Mettowee Watershed Partnership have been working together to supply native plants grown from local seed sources for local ecological restoration and vegetative buffer plantings. Several landowners in Benson have signed up for federal cost-share programs to address natural resource concerns by restoring riparian areas to the natural vegetative condition. These federally funded stream bank protection programs include the Partners For Fish and Wildlife and Conservation Reserve Program.

The goal of this restoration project is to mitigate the adverse impacts of adjacent land uses on fish and wildlife habitat, which also results in improved water quality. At the same time, we have the opportunity to work at restoring clay plain forests in some of the areas where it once existed. The restoration effort will also expand the wooded corridor along our local rivers, stabilize the riverbanks, help decrease erosion, and help reduce sedimentation that is adversely impacting our water quality. Game and non-game animal species will benefit from these efforts, sustaining and increasing their populations.

The Nature Conservancy and the State have identified several significant natural and fragile areas in Benson. The Nature Conservancy has conserved several parcels and the State either owns or has participated in conservation efforts. The Town for the most part relies on The Nature Conservancy and the State to identify those areas that meet significant criteria and should be conserved. In addition, Benson has been identified as an important corridor for wildlife between the Green Mountains and the Adirondacks. While our plan does not specifically protect specific areas, our policy of supporting The Nature Conservancy, Land Trust and State conservation efforts, our 20 acre density requirement to preserve open lands and forest and our publicizing the importance of maintaining wildlife corridors has this effect.

Some of the significant areas protected include Shaw Mountain, parts of Mill Pond shoreline and marsh, Pond Woods Wildlife Recreation Area, and Benson lands in Bomoseen State Park. Efforts are underway with Town support to conserve additional significant lands along the Lake Champlain shoreline and Sunset Lake shoreline.

Climate, Topography, & Geology

Benson has a favorable growing season (according to the State of Vermont, Fish and Wildlife Department's Nongame and Natural Heritage Program), though it gets very cold in winter due to air drainage from the surrounding higher areas. Benson has slightly less rainfall than much of the state, and is well suited to agriculture. Maps are attached depicting agricultural soil and wetlands. Benson has great biodiversity, both diversity of species, as well as genetic diversity of individuals within species, due to the unique climate and soil types that exist here. For these reasons, conservation is very important to this area.

Agriculture, Forestry and Mineral Resources

Benson's forestland is vital to the Town in many ways. Commercial timber production has been operating for many years. This timberland has also served as a source of habitat for wildlife, recreation, aesthetics and watershed protection. The wealth of wild game that has supported hunting in this area is due largely to this forestland. . There are several operating sawmills in Town.

There are several active gravel pits and areas where shale is mined on the surface as well as other mineral deposits. They have been very important in supplying material for Town roadwork as well as for private driveways.

The soil on which our farming industry is based has been mapped and areas that are classified as prime agricultural land have been identified. Relatively recently Benson has transformed from a community of many small dairy farms to only seven (7) operating dairy farms. Some remaining open lands are utilized by active farms, but we have seen the loss of agricultural land to primary and secondary residences on subdivided lots, which was land that historically was farmed.

We are now seeing diversified agricultural use of our land. There are beef raising enterprises, horse farms, vegetable farms, sheep operations, hay growing enterprises, farm food stands, honey production enterprises, and maple syrup production operations. The economic value of the forest products and agricultural products produced in Town are a major portion of our economic base. The emphasis of our land use regulations and Town Plan in maintaining the Benson landscape is our primary method of ensuring a continuing agricultural and forestry industry in Benson.

Water Resources

Lakes, ponds, streams and wetlands have been placed on topographic maps and there has been renewed interest in their importance since they support a great diversity of plants and wildlife and provide recreation and other opportunities. The various waterway flood plains are critical areas that also need attention. These are locations along streams and rivers that, due to low elevation, can flood easily which have also been mapped (see maps).

Open Space and Scenic Resources

Protecting Benson's open spaces and scenic resources for the enjoyment of present and future generations is a priority where consistent with efficient highway maintenance and safety considerations. Benson's diverse landscape includes rich agricultural lands, scenic ridges and wooded hills, unique wildlife habitats, streams and lakes, historic areas, and tree lined roads. A prime goal is to preserve and enhance Benson's uniqueness.

The Town has chosen not to specifically identify specific scenic roads, waterways and views but rather to consider the totality of the Town as such. These sites are far too numerous in Benson. Rather the Town has chosen to protect these sites by the 20 acres density requirement in the Land Use Regulations, the policy of no new roads and the restrictions on any major development. In addition, infrastructure limitations also protect these resources. Benson is a Town with tight clay soils and the cost of community water and waste facilities is prohibitive which discourages development

The Use Value Program was established by the legislature "to encourage and assist in the maintenance of Vermont's productive agricultural and forest land." Other stated anticipated outcomes include conservation, preservation, and protection of land and prevention of accelerated conversion to more intensive use.

The Vermont Land Trust has conserved many farms in Benson. Similarly, The Nature Conservancy has purchased land in Benson, and bought the conservation easements on land in Benson. The Poultney Mettowee Natural Resources Conservation District is protecting and replanting the clayplain forest in Benson. The Town should continue to support such efforts, especially when they protect water quality, watersheds, wetlands, and ecosystems.

Conservation Commission

State statute enables Towns to establish Conservation Commissions of 3-9 members. Conservation Commissions are advisory not regulatory in nature. The Town of Benson has opted not to establish a Conservation Commission.

Natural Resources Goals, Policies and Programs

1. Agriculture and Forestry

- Support small and family farms and encourage development of additional small and family farms.
- Encourage farming that provides a local food source to Town residents.
- Support the conservation of land for agricultural usage.
- Support clayplain forest restoration.
- Encourage landowners to preserve trees and other vegetation in existing clay plain forest fragments.
- Encourage the expansion of a "wooded corridor" that connects clayplain forest fragments along the edges of streams and rivers.

2. Water Resources

- Encourage the protection of the quality of ground water and water of our lakes, natural ponds, streams and rivers to protect drinking water, swimming, recreation, wildlife habitat, and fish consumption.
- Support the Partners For Fish and Wildlife project to protect stream and river banks.
- Encourage landowners to create buffer zones between waterways and agricultural and silvicultural land.
- Limit development along waterways, lakes and ponds.
- Discourage the use of pesticides and herbicides that contaminate water (both ground and surface waters).
- Protect wetlands from degradation.

3. Flood Hazard Areas

- Control development within the flood plain zones and enforce Town Flood Hazard Regulations.

4. Fragile, Unique Habitats and Open Space and Scenic Resources

- Preserve and enhance Benson's uniqueness.
- Encourage the identification and protection of ecosystems for rare, threatened and endangered species, environmentally fragile areas, critical wildlife habitats, wildlife corridors and unique natural areas in Benson, with the cooperation of landowners.
- Support efforts for ecological restoration.

5. Additional Goals

- Promote proper habitat for wild game and maintenance of naturally occurring plants and animals.
- Promote the preservation of lands and resources for recreational purposes.
- Support State efforts for compliance with State and Federal air quality regulations.

Unemployment Rate

Year	Unemployment Rate		
	<i>Benson</i>	<i>Rutland County</i>	<i>Vermont</i>
2000	2.6%	3.0%	2.7%
2001	2.8%	3.5%	3.3%
2002	3.8%	4.1%	4.0%
2003	3.5%	4.9%	4.5%
2004	2.8%	4.1%	3.7%
2005	2.4%	3.7%	3.5%
2006	2.6%	4.0%	3.7%
2007	2.4%	4.3%	3.9%
2008	3.2%	5.3%	4.5%
2009	6.8%	8.3%	6.9%
2010	6.6%	7.4%	6.4%
2011	5.9%	6.7%	5.6%
Source: VT Department of Labor			

According to the 2010 American Community Survey 5-Year Estimates, of the approximately 821 residents in Benson over 16 years of age, 535 were in the labor force. Forty were unemployed, which represented 4.9% of the civilian labor force. There were 286 people in Benson over the age of 16 who were not in the labor force.

Economic Development Goals, Policies and Programs

Tourism and agriculture are of importance to Benson's economy. Tourism brings customers to many of the Town's businesses; and for this reason, the Town's rural and scenic character and the well preserved ambiance of its village should be a consideration in land use decisions. There are 22 farms according to the most recent Listers' data and 14 woodland properties in the Town of Benson.

While Benson is a farming community, the Town also supports a range of other businesses and pursuits. There are 16 commercial properties and one commercial apartment in the Town of Benson according to the most recent Listers' data. The number of commercial properties has increased by 60% during the last 10 years. Business growth over the last decade has been steady, and additional businesses may move to the Town in the future. The most promising and undeveloped aspect of the local economy relates to tourism and recreation. The Town recognizes that tourism and agriculture are closely linked; and that the number of tourists will not increase if Benson's open and beautiful scenery is not maintained. The Town's economic goals are consistent with maintaining Benson's current landscape and maintaining environmental standards.

To improve Benson's economic base:

- Encourage the development of home occupations and cottage industries.
- Encourage the expansion of local businesses.
- Maintain the village core, the character of the Town, and the landscape and natural resources.

- Conditionally permit future small commercial and light industrial developments that are consistent with the Town's rural character and complementary to its agricultural heritage.
- Discourage future large commercial and heavy industrial developments that are inconsistent with the Town's rural and agricultural character.
- Protect, preserve and conserve available agricultural lands and forests, encouraging land conservation efforts by Vermont Land Trust and The Nature Conservancy.
- Permit additional agricultural and forestry land uses and activities within the Town.

Green Mountain Council Exemption from Taxation

In 1967 the Vermont Legislature exempted property owned by the Boy Scouts of America from local property taxes. Green Mountain Council owns 193.8 acres of waterfront property in Benson. This exemption has resulted in a loss of property tax revenues to Benson in excess of \$500,000 between 1967 and 2007. Benson believes it is inequitable for the State to require a few Towns to carry the burden of this tax exemption for the entire state. The Selectboard supports the possibility of amending the PILOT program during the appropriation process to compensate the few impacted Vermont Towns.

LAND USE AND GROWTH

In order to incorporate the goals, objectives and recommendations set forth within this Plan, attached to this Plan are a collection of land use maps which identify current agricultural areas, public investments (including Town highways and Public Facilities), residential, recreational, forest, and commercial land uses. These maps also indicate flood plains, soils, topography, wetlands, critical wildlife habitat, conservation areas, designated village center, sewer district, and a future land use map. The future land use map shows the intended land uses, which are consistent with the designated zoning districts.

The Plan anticipates the use of the above maps as aids to guide the development of land within Benson. Consistent with the Plan, land uses are encouraged that will conform with the goals set forth below.

Existing Conditions

The Town consists of rural agricultural land and natural areas. The Village area is a mix of closely spaced commercial and residential uses. There are clusters of closely spaced residential structures in several other areas of Benson, including around Sunset Lake, and Perch Pond, as well as along areas of Route 144, Howard Hill Road, and at Benson Landing.

Benson has adopted a zoning and subdivision bylaw, last amended November 21, 2011. In addition, there are ordinances pertaining to driveway installations, road standards, placement of junk motor vehicles, floodplain regulations, traffic, and mobile home and trailer coach parks. Additional State land use regulations exist, though the Town does not have the authority to enforce these laws; the Town has opted to be a 1-acre Town for the purpose of commercial development under Act 250.

Table 6: 2012 Grand List

	1990	2002	1990-2002 % Change	2012	2002-2012% Change
Residential parcels* under 6 acres	89	115	29.2%	140	21.7%
Residential parcels on 6 acres or more	58	132	127.6%	160	21.2%
Mobile Homes without land	31	40	29.0%	18	-55%
Mobile Homes with land	24	58	141.6%	71	12.24%
Vacation Parcels under 6 acres	111	84	-24.3%	67	-20.24%
Vacation Parcels on 6 acres or more	35	28	-20.0%	28	0.0%
Commercial Properties	8	10	25.0%	16	60%
Commercial Apartments	0	3	N/A	1	-66.7%
Farms**	46	20	-56.5%	22	10.0%
Woodland	11	15	36.4%	14	-6.67%
Miscellaneous***	126	131	4.0%	97	-26.68%

Conserved Land

There are conserved agricultural land and natural areas in Benson. For information on conserved land and trusts that conserve land, contact the Vermont Housing and Conservation Board. These trusts hold development rights of agricultural land, forest land and other land, and sometimes ownership of ecologically sensitive areas. The natural resources map indicates the land with restrictions, specifically conserved land and its ownership, State owned land and the Boy Scout camp in Benson.

The State's Current Use Program is used in Benson. In the 2012 Grand List, 44 of the 623 parcels, representing 8,813 acres of the approximately 29,000 acres in Benson, are enrolled in this program for a total of \$5,436,00 (the total Grand List has a value of \$107,000,00).

Future Direction of Benson Land Uses

The Planning Commission will periodically review and update the existing land use regulations and ordinances as appropriate to accomplish the goals of this Plan. It is hoped that this effort will protect water quality, limit the loss of agricultural land, protect natural areas, protect forests and forestry, and encourage development in a way that preserves the Town's rural character and natural beauty. For this reason, five land use districts have been established, with differing objectives in each. It is not the goal to prevent development, but to direct development such that the unique social, environmental and historical characteristics of Benson are preserved.

It is the goal of the Planning Commission that there will be expanded opportunities for employment in Benson. Entrepreneurship is encouraged along with home businesses and cottage industries. It is not intended to specifically exclude any types of development from any district except as detailed under the district description below or in the zoning and subdivision bylaw.

Land Use Districts

- **Agricultural and Rural Residential District (ARR District)**

To preserve the community's rural character and to provide a mechanism for viable agricultural, residential and commercial uses with minimal adverse impact.

ARR is intended to provide land area for low-density residential development, farming, forestry, recreation, commercial and other rural land uses. Any such growth should be consistent with the rural character of the area and site conditions.

Conservation of a working landscape of open space and natural resources should be a high priority to maintain Benson's rural atmosphere. The Town encourages traditional and diversified agricultural uses and activities in this district and supports the right to farm for family farms. The Town should promote activities that preserve scenic and agricultural lands. The goal of this district is an attractive functional countryside.

- **Village District**

To provide for mixed residential, commercial and public uses in the area generally served by the municipal waste treatment facility.

The purpose of the Village District is to allow residential housing and commercial enterprises of a scale that will blend well with existing residences and complement the "village" atmosphere preferred by Benson's residents. All development in this district is to have adequate parking, suitable landscaping, screening, lighting, and signage and be designed to minimize traffic impacts in order to protect the character of the neighborhood. Low traffic flow businesses are to be encouraged. It is important to preserve and promote the historic nature of the village district.

- **Lake Shore District**

To conserve and protect those lands adjacent to the ten lakes and ponds as indicated on the Lake Shore District on the proposed land use map, excluding Lake Champlain.

The purpose of this district is to protect water quality, public access, and natural ecosystems. The land in this district is within 500 feet of the mean water level of lakes in the sections indicated on the land use map. The purpose of this district is to protect water quality, while balancing the desire for development with the need for protecting public access, the shoreline and wildlife habitat. The names of the lakes and ponds in this district are: Lake Sunrise, Sunset Lake, Perch Pond, Doughty Pond, Parsons Mill Pond, Glen Lake, Mud Pond, Bullhead Pond, Beaver Meadow, and Root Pond (including the two unnamed lakes nearby).

- **Lake Champlain Shoreline District**

This district should promote similar goals as the Lake Shore District except it must recognize the special circumstances and opportunities presented by Lake Champlain.

•Flood Hazard Area Overlay District

To promote the public health, safety and general welfare, to prevent increases in flooding caused by the uncontrolled development of lands in areas of special flood hazard, and to minimize losses due to flooding. Benson has existing regulations that regulate flood hazard areas.

Land Use and Growth Goals, Policies and Programs

- Encourage compact development in the Village district.
- Encourage improved professional, educational and medical services in Benson.
- Encourage traditional and diversified agricultural and forestry land uses.
- Encourage commercial, residential and industrial developments that are consistent with Benson's rural and village character.
- Encourage the efficient use of the Town's wastewater treatment facility by encouraging such things as more compact development in the village area than elsewhere in the Town, and water savings devices in homes and businesses.
- Discourage development that would create excessive traffic through the village, or overwhelm the municipal wastewater system and other services.
- Establish standards for developments along Town streams, rivers, ponds, and lakes.
- Encourage development that is integrated into the rest of the community.

Through the administration of this Plan, the Town desires to continue orderly growth and development which protects community resources and provides for the appropriate use of all lands while preserving open spaces, forest, conservation areas and agricultural lands within the Town. In short, this Plan recommends that Benson take steps to preserve its rural character and permit such growth and development as would benefit the general good of the Town.

MUNICIPAL AND REGIONAL COORDINATION




The Planning Commission has attempted to coordinate the elements contained within this Plan with the plans of surrounding Towns and with the Rutland Regional Plan. Benson has goals similar to those neighboring Towns for the continuance of a working landscape in the Lake Champlain basin.

The Towns most impacted by development in Benson are the Towns of West Haven and Orwell. These Towns have landscapes similar to Benson and lengthy borders of rural developed property with the Town of Benson. There is minimal interaction with the Towns of Fair Haven, Castleton, Hubbardton and Sudbury. The Sudbury-Benson border length is minimal and the borders with the other three Towns are forested areas. We do coordinate and cooperate with the surrounding Towns. The Route 22A Corridor Study was a cooperative effort of the Towns of Orwell, Benson, West Haven and Fair Haven. Orwell and Benson share road equipment and assist each other with










Natural Resources

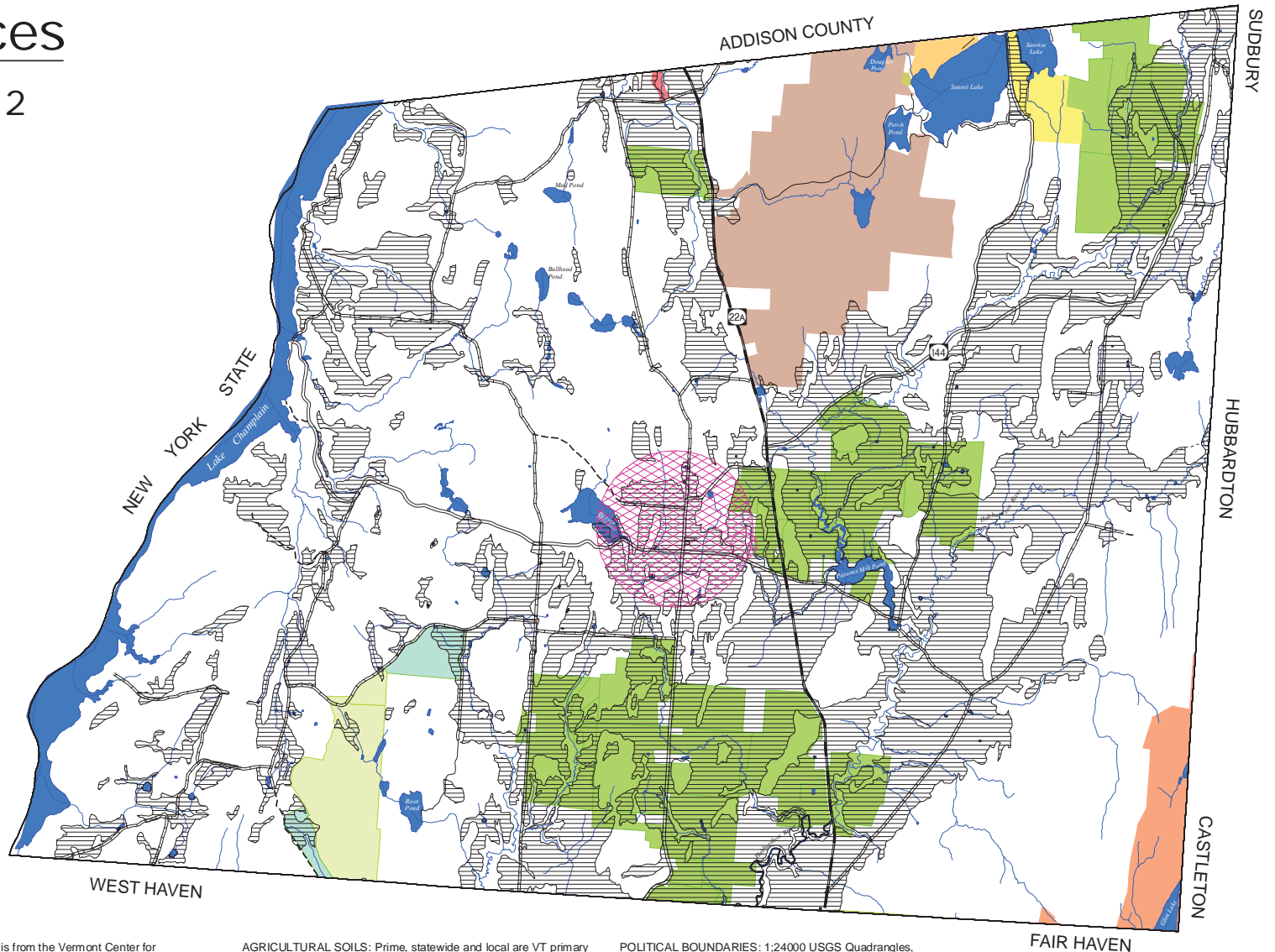
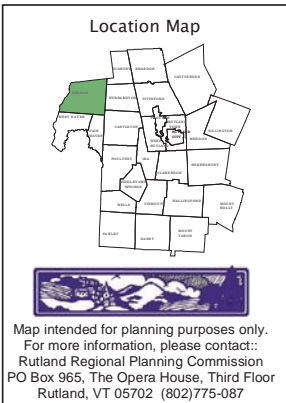
Benson Map 2 of 2

Legend

-  Streams & Rivers
-  Lakes & Ponds
-  Prime and Statewide Agricultural Soils
-  Well Head Protection Areas

Public and Conserved Lands

-  CAMP SUNRISE - BOY SCOUT CAMP
-  SUNSET LAKE- BOY SCOUT CAMP
-  THE NATURE CONSERVANCY
-  THE NATURE CONSERVANCY EASEMENT
-  VERMONT LAND TRUST EASEMENT
-  BOMOSEEN STATE PARK
-  EAST CREEK WILDLIFE MANAGEMENT AREA
-  POND WOODS WILDLIFE MANAGEMENT AREA
-  SUNSET LAKE ACCESS AREA



SURFACE WATER: Data is from the Vermont Center for Geographic Information, Inc. Vermont Hydrography Data set. The VHD data is a subset of the National Hydrography Data set.

ROADS: VT Center for Geographic Information

WELLHEAD PROTECTION AREAS: SPA's for groundwater sources (wells, springs), 1:24,000 USGS QUADRANGLES, VANR- DEC- Water Supply Division and VT Department of Health, 1998.

AGRICULTURAL SOILS: Prime, statewide and local are VT primary agricultural soils for Town and Act 250 planning. Natural Resources Conservation Service. Soil data are accurate to a resolution of three acres, unmapped "inclusions" up to three acres may exist in some areas. This information is generalized. It should not be used for the evaluation of individual sites. Soils shown are based on national USDA-NRCS criteria and have good potential for sand and gravel deposits.

PRIVATE LANDS: VCGI

POLITICAL BOUNDARIES: 1:24000 USGS Quadrangles, VCGI, 1991.

PUBLIC LANDS: VCGI PRIVATE CONSERVED LANDS - land in full or partial ownership by 501(c)(3) conservation organizations (VLT, TNC, GMC, and others)











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This map (D:\RRPC\BENSON\Benson Natres2.mxd)
was produced 3/4/08 updated 1/30/09

Benson, VT

Future Land Use

Legend

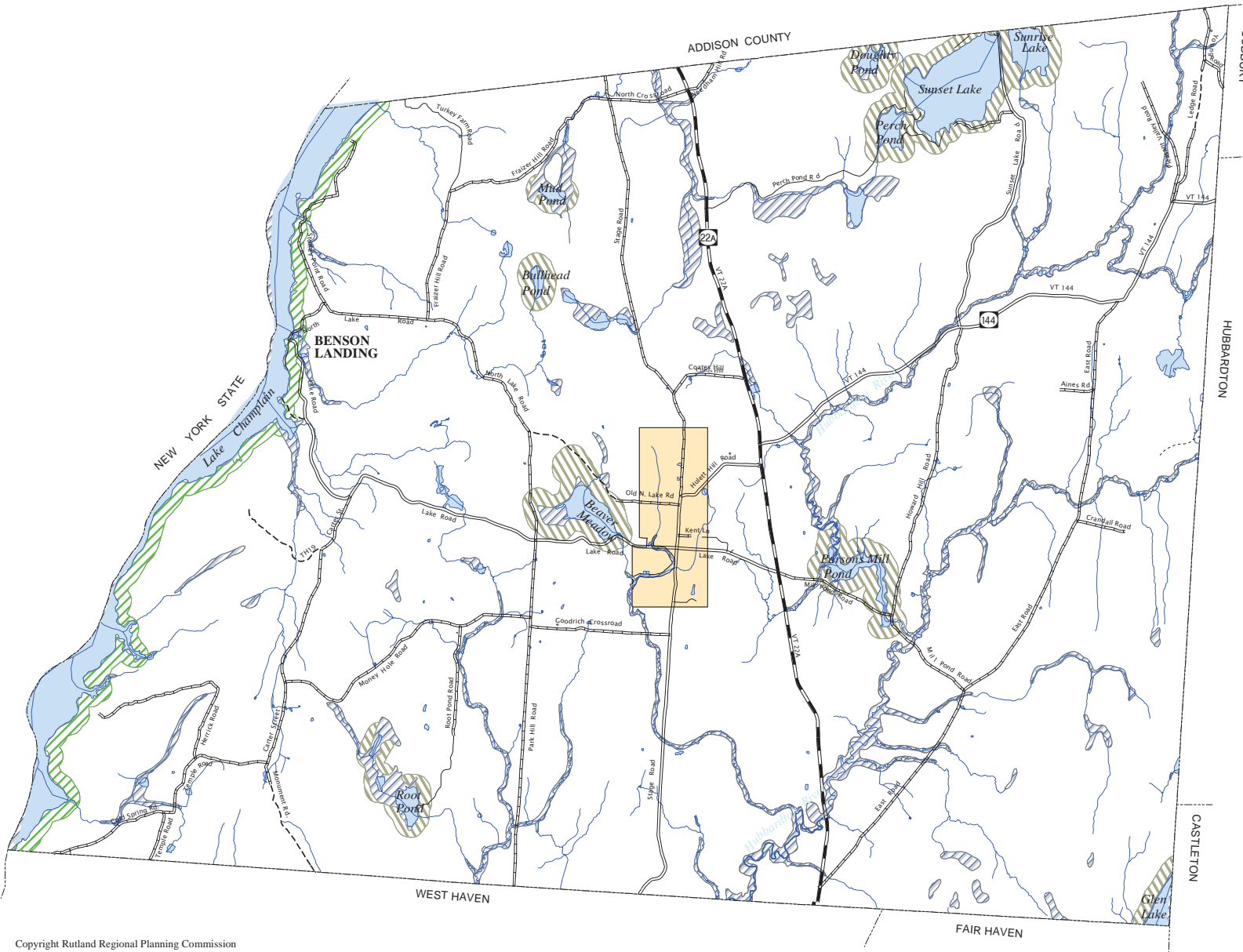
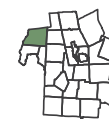
-  State Highway
-  Class 2 Town Road
-  Class 3 Town Road
-  Class 4 Town Road
-  Other Road
-  Private Road
-  Surface Water
-  Lakes & Ponds

DISTRICT

-  Agricultural Rural Residential
-  Flood Hazard Overlay District
-  Lake Champlain Lake Shore
-  Lake Shore
-  Village

The Rutland Regional Planning Commission (RRPC) makes no warranty as to the merchantability or accuracy of this data. This data is believed to be an accurate representation of the information upon which it was derived, but errors and omissions may exist. Site investigations and visits should be conducted prior to making any decisions based on the data portrayed. In no event is the RRPC, its agents or assigns, liable for any losses which may occur as a result of using this data. This information is intended for general planning purposes only, it is not a legal document.

This is the most current Data available at time of map production. Please refer to Data Source for most up to date information.



Town of West Haven

Town Plan

2009

3.0 Overall Goals and Objectives

3.1 Introduction

The Goals and Objectives of this Plan establish the overall direction for public and private actions that affect land use in the Town of West Haven. They are intended to guide the future growth and development of land and public services and facilities. They are also intended to guide the protection of the environment and the preservation of rare and irreplaceable natural areas, scenic and historic features, and special resources. Insofar as they address energy, they are the Town's statement of policy on the conservation of energy.

3.2 Overall Goals

It is the goal of the Town of West Haven to:

Land Use Goals

Maintain the historic settlement pattern of more densely settled villages and neighborhoods surrounded by working farm and forest land.

Protect and encourage the maintenance of agricultural lands for the production of food and other agricultural products. Conserve all working farmlands, particularly in the three primary farmland sections of town.

Encourage the types, locations and intensities of land use that are compatible with the long-term environmental and economic capability of the community.

Economic Goals

Nurture a strong and diverse economy that provides satisfying and rewarding job opportunities for residents and maintains high environmental and community standards.

Strengthen and protect the town's agricultural economy, including farming, forestry, and related activities.

Transportation Goals

Create a transportation system that promotes the other goals and policies of this plan and makes it easier - not harder - to direct efficient land use patterns and economic development.

Provide and maintain a transportation system that is safe and efficient.

Provide and maintain a transportation system that meets the needs of all segments of West Haven's population

Provide a level of public benefits from each component of the transportation system sufficient to outweigh the social, environmental, economic and energy costs.

Minimize transportation energy consumption and trips.

Water Quality

Improve or maintain water quality.

Establish public access, including visual access, to water and shoreline.

Maintain high quality groundwater and sufficient yields to adequately serve current and future residents of West Haven.

Wetlands Goals

Retain the present amount (no net loss) of significant (Class One and Class Two) wetlands and the values and functions that they serve.

Protect and enhance the ability of wetlands to provide values and functions of significance to the nation and state or of importance to the town.

Wildlife Habitat and Natural Areas Goals

Maintain and improve wildlife habitat and natural areas in the town and region to the fullest extent possible.

Cultural and Historic Resources Goals

Protect and preserve significant historic structures, sites, or districts; known prehistoric archeological sites; and areas where prehistoric sites are likely to be found.

Preserve the historic traditions and values that give West Haven its rural character and make it a special place to live.

Energy Goals

Conserve renewable and nonrenewable energy resources.

Reduce reliance on nonrenewable energy sources such as oil and gas, and increase use of renewable energy sources such as wood, methane, solar and wind.

Public Facilities, Utilities, and Services Goals

Provide educational opportunities that enable every child to become a competent, self-assured, caring, productive, responsible individual and citizen who is committed to continued learning throughout life and prepared for a world of rapid change and unforeseen demands.

Maintain a safe, secure learning environment where quality educational opportunities are provided to all students.

Provide an environmentally sound, and energy and cost efficient system of public facilities and services to meet present and future demands for fire protection, public safety, emergency medical services, water supply, sewage treatment, solid waste management and disposal, and other essential needs.

Provide the desired levels of public facilities and services, including Wireless and land-based telecommunications infrastructure to meet the needs of residents and businesses.

Encourage maximum flexibility for parents to have access to quality child care providers.

Recreation Goals

Maintain and enhance outdoor recreational opportunities and public access to them.

Establish and maintain a community based system of trails and greenways linking village centers, concentrated residential settlements, centers of employment and commerce, public places (eg. schools, parks, churches), and important recreation sites (eg. lakes, ponds, streams, vistas, woodland areas).

Protect and enhance the natural beauty and scenic characteristics of significance to local landscapes, including focal points and characteristics such as:

landscape diversity,
order and harmony of landscape elements,
unique combinations of natural +/- or cultural features,
distinctive distant views,
foregrounds in harmony with distinctive distant views,
skylines,

shorelines,
steep slopes,
agricultural and forest land,
traditional villages and streetscapes,
historic buildings and cultural features,
significant scenic roads and pathways.

Housing Goals

3.3 Overall Objectives

It is the objective of the Town of West Haven to:

Land Use Objectives

Work actively with landowners and land developers to achieve the goals, policies and objectives of this plan.

Approve subdivisions or developments only if they are consistent with the broad goals of the plan.

Conserve undeveloped lands surrounding existing built-up areas.

Discourage strip development along roads.

Base development densities for different areas of town on existing and desired settlement patterns, distance to and availability of town services, physical capability of the land for development, the presence of important natural resources, the size of parcels, the need for affordable housing, and consistency with goals and policies of the town plan.

Conserve the town's primary agricultural soils for agricultural uses.

Economic Objectives

Cooperate with other towns to maintain a balance between jobs created and natural growth in the region's workforce.

Provide housing that meets the needs of a diversity of social and income groups, particularly households of low and moderate income.

Provide safe, sanitary housing that is conveniently located to public facilities and services, and employment and commercial centers.

Participate in Act 250 reviews of business proposals that could accelerate development pressures in West Haven.

Support the creation of job opportunities that enable employees to use fully and develop their skills and abilities.

Support development of local businesses that create markets for locally produced goods and services or which themselves create value added products from locally produced goods.

Encourage manufacturing and marketing of value added agricultural and forest products.

Encourage use of locally grown agricultural and forest products.

Transportation Objectives

Manage roads to meet community level demand and maintain a rural character.

Analyze and compare a reasonable range of alternatives before supporting any new transportation projects, policies or improvements.

Examine alternatives in terms of environmental costs, energy use or

6.9 Energy

The majority (53%) of West Haven households used fuel oil for home heating in 2000, according to the US Census Bureau. Bottled or tank gas and wood were the other primary sources, accounting for 26% and 19% respectively. Household electricity is provided by Central Vermont Public Service. Energy facilities in the town include a hydroelectric dam at Carver's Falls and a transmission line strung parallel to Route 22A.

The Town of West Haven is committed to encouraging energy efficiency and the use of renewable energy resources throughout the community. The Town recognizes the link between promoting a reduction in resources and efficient patterns of land use development.

6.10 Communications

Communications exist in several forms in West Haven. Traditional land-based telephone access is provided by Verizon through a network of strung lines. Dial-up Internet access is available from a variety of providers. Wireless telecommunication is possible in select areas throughout the community based on reception, though no towers or repeaters are currently located in the town.

Obtaining high-speed Internet access and improved wireless communications are priorities for the Town of West Haven. In that light, the town has recently adopted regulations to encourage wireless telecommunications facilities to be constructed in a manner that is unobtrusive and consistent with the goals of this plan.

6.11 Recreation

Recreation is important to Vermont and Vermonters. Recreational opportunities available to the residents of the Town are found inside and outside of West Haven. Developed recreation opportunities are available at the Steven Pettis Memorial Recreation Field next to the old elementary school, while undeveloped facilities include Bald Mountain and the Poultney River corridor. Managed by a volunteer Recreation Committee, this field has places to play baseball, soccer, and basketball.

West Haven's location and geography provide the town with unique opportunities to promote outdoor recreation. Preserves maintained by The Nature Conservancy couple with the Poultney River and the southern end of Lake Champlain to provide varied undeveloped areas for hiking, cycling, cross-country skiing, and other activities.

Designing and implementing a plan to promote year-round recreation in West Haven is a priority.

Specific recommendations for the Agricultural District include the following:

- subdivisions should be designed to preserve "Farmable" lots;
- roads should be maintained to permit easy transportation of agricultural commodities,
- natural areas should be avoided by development
- water supplies should be protected through careful design and siting of septic facilities and through the use of best management practices.

Development in the Agricultural District should, to the greatest extent possible, maintain the low-intensity, active use character of the land. The Town encourages the continued development of agricultural and forestry enterprises in this district. While residential development is encouraged to take place in the Settlement District, very low intensity construction can take place in a manner that is consistent with this Plan.

10.4 Conservation District

The Conservation District contains West Haven's most important habitat and natural resource lands.

The District, which takes up approximately 40% of the town, is predominately characterized by tall hills, steep slopes, wetlands, and stream corridors

Specific natural features in the district include Bald Mountain, East Bay and its associated marshes, numerous deeryards, and several significant wildlife habitats and communities. These areas are home to exceptional natural habitats.

Future Development

There has been little development in the Conservation district in recent years. Much of the land, including most of the lower peninsula, has been placed under permanent conservation easements.

Lands included in the district are generally unsuitable for development because of the poor soils, steep slopes, poor access, and the presence of many natural habitats of importance to the town.

Furthermore, access to much of the district is extremely limited.

Specific recommendations for the district include the following:

- all forms of development should be directed to other areas of the town whenever possible;
- development that does take place in the conservation district must avoid important natural areas;
- public access to important resource areas should be retained as much as possible.

Development in the Conservation District should be limited to very low impact uses. The Town, as well as The Nature Conservancy and other major stewards within the district, are committed to preserving and making public use of the unique natural environments in an unobtrusive manner. Year-round residences should be prohibited; development density of allowed uses should occur at 25 acres per lot.

10.5 Land Use Implementation Strategies

The following strategies suggest ways that West Haven's land use goals and objectives should be implemented. The Town should:

Develop a program to ensure that agriculture remains a viable land use.

Stabilize property taxes for farmers and forest land owners enrolled in the Vermont Use Value Appraisal programs.

Create and implement zoning, subdivision and other bylaws that promote the land use and other goals of this plan.

Develop provisions in both the zoning and subdivision regulations that provide for greater flexibility and creativity in site planning.



Establish a Land Conservation Fund for the purpose of acquiring easements and/or title to significant agricultural, historic, or natural lands in West Haven. Money for the Fund may be provided by voluntary contributions, or by town appropriations, as decided by the town voters.

Create property tax incentives to conserve farmlands, river access points, critical trails, scenic areas, and key historic areas. If possible, couple incentives with right-of-first refusal held by the town.

Assemble a booklet and supplemental information on how to site and design development that promote the goals of the town and the landowner. Include a listing of voluntary conservation measures and resource people.

WEST HAVEN, VERMONT CONCEPTUAL FUTURE LAND USE MAP

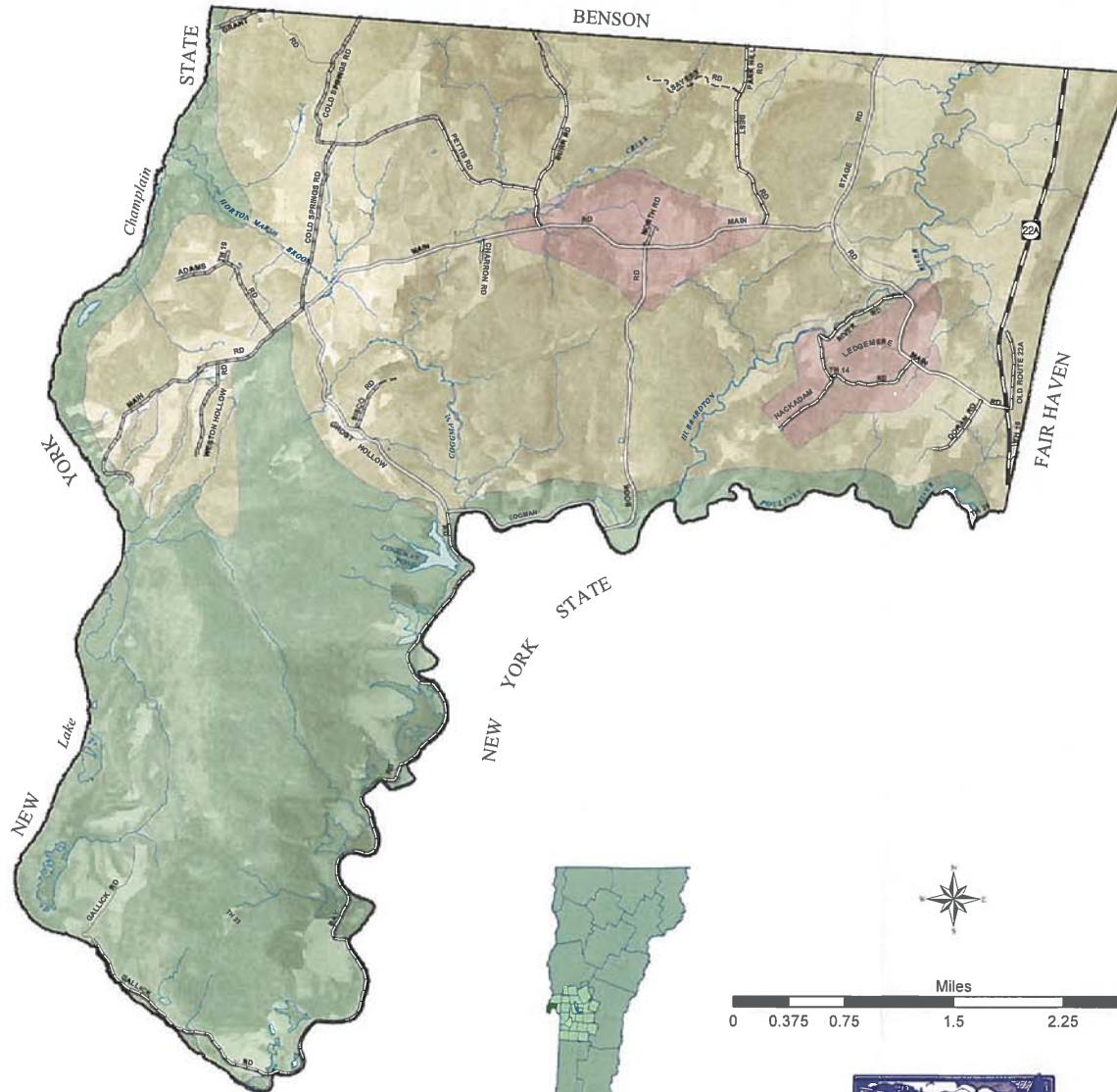
LEGEND

-  State Highway
-  Class 2 Town Road
-  Class 3 Town Road
-  Rivers and Streams
-  Lakes and Ponds
-  Conservation District
-  Settlement District
-  Agriculture District

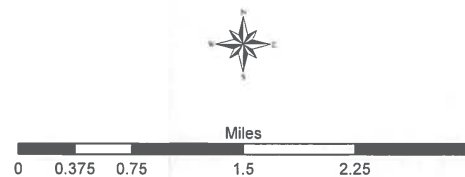
SOURCES

Vermont Center for Geographic Information,
West Haven Planning commission, 2003.
Vermont Mapping Program Orthophotos 2006.

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This map (D:\RRPC\WESTHAVEN\MAPS & PROJECTS\1
Future Land Use.08.mxd) was produced on 2/7/2008



Location Map



West Haven

The map displays the state of Vermont with various land ownership and conservation designations. Key areas labeled include 'THE NARROWS WILDLIFE MANAGEMENT AREA' in the northwest, 'VERMONT LAND TRUST' in the central-north region, 'VERMONT LAND RELAY' in the central-east region, and 'THE NATURE CONSERVANCY' in several locations, including the north, east, and south. 'WALLS MARSH WILDLIFE MANAGEMENT AREA' is located in the south. The legend indicates that thick black lines represent State Highways, thin black lines represent Town Roads, blue wavy lines represent Rivers & Streams, solid blue areas represent Lakes & Streams, hatched areas represent Agricultural Soils, light blue areas represent Conserved Lands, and green areas represent Public Lands.



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



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WHNR2_08.mxd) was produced on 3/5/2008

Town of Fair Haven

Town Plan

Adopted September 24, 2003 – Re-adopted 2008

High quality schools are essential to the well being of Fair Haven's citizens. Fair Haven shall provide opportunities for a quality education to each of its citizens. Quality educational facilities are cornerstones for a healthy community and should be supported by all citizens including those without school-aged children.

LAND USE

Fair Haven is a friendly typical small town with some remarkable assets, not the least of which is the "town green". A spacious park in the center of our village, one of the few remaining "wheel" or "spoked" parks, was donated to the town shortly after the Revolutionary War by Matthew Lyon, the most famous and prosperous of Fair Haven's early settlers.

Fair Haven has balanced the needs of its residents by encouraging a variety of activities which include commercial, industrial, residential, agriculture and recreational uses. We begin the twenty-first century with the intent and hope to preserve that same balance. Our motto might be "Prosperity with Pride".

The purpose of the Land Use Section is to document present land uses and establish a guide to future land use for residential, agricultural, commercial, industrial, recreation, conservation, open-space or other public uses.

Inventory and Trends

Fair Haven is located approximately 20 miles west of Rutland City in the western corner of Rutland County and borders Washington County, New York. A major east-west transportation corridor including the divided limited access US Route 4 and the Central Vermont Railway bisect the town which serves as a major crossroads for federal and state highways.

While the east-west US Route 4 is the primary gateway for visitors to Vermont from the New York State Thruway, the north-south Vermont Route 22A has become a major highway carrying goods and visitors not only to Vergennes, and Burlington but is also used as a connector to Canada. Fair Haven is slightly more than 11,000 acres (17.2 square miles) in size. The residential and commercial "village" is about 900 acres or 8% of total area. The rural and open lands account for approximately 4,770 acres or 43% of total, with the remaining 49% consisting of forests, rocky hilly wetland, waterways, town watershed and lands of the State of Vermont.

Much of the remaining productive agricultural land is located in the flood-plain of our two most significant natural features, the Castleton and Poultney Rivers. A National Wetlands Inventory map, on file in the Town Clerks office shows many small patches of wetlands, some even in the residential portion of town.

Topographically, the town runs from a high point of 947 feet above sea level at the summit of "Coon's Den" in the "North Woods" to a low of about 285 feet above sea level at the point the

the need for further infrastructure, the potential for municipal marketing and the demand for such parcels.

Resource Protection

The purpose of this area is to protect property and people from flooding associated with two major rivers, the Poultney and Castleton Rivers, and to protect and manage valuable natural resources and environmental processes.

This area consists of the 100-year flood plain and a buffer area adjacent to other significant surface waters including Inman Pond, Glen Lake, Mud Brook, Castleton River and Poultney River.

The natural use of a flood plain is to retain flood waters safely until such time as high water recedes back into its normal channel. This temporary water storage area also functions to protect life and lower water levels downstream. Flood plains also provide for riparian habitat that supports a variety of plant and animal life not found in upland habitats. Buffers maintain the integrity of stream channels and shorelines; reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and other chemicals; and supply food, cover, and thermal protection to fish and other wildlife.

The resource protection area will accommodate the natural uses and benefits of the flood plain and other riparian corridors while restricting development, filling, and other incompatible uses. Regulation of riparian buffers will apply to future development only. Certain resources, such as aquifers, ridge lines, steep slopes, natural areas, significant wildlife habitat, prime agricultural soils and overlay districts may protect wetlands.

Medium Density Rural

The Medium Density Rural Area accommodates moderate density residential development in areas accessible to village centers where municipal services are available. Development within this area should be carefully sited and clustered in a manner that will allow preservation of significant open space parcels including neighborhood recreational areas, smaller farms, and important natural amenities.

Low Density Rural

The Low Density Rural Area encompasses the majority of the land area of the Town and includes all areas not covered by the other land use areas. Uses in this area will include agriculture, forestry, recreation, and open space protection, as well as low density rural residential housing and home occupations that are compatible with the preservation of the rural character of the Town. New residential housing will be primarily single family, detached dwellings, and planned residential development (PRD) provisions will be considered for all subdivisions. PRDs will allow for a greater number of smaller, clustered lots in exchange for permanent protection of open space elsewhere on the site. Community wastewater disposal systems may be appropriate in order to achieve this goal.

CONCLUSIONS AND OBJECTIVES

Land use can be defined as the framework for integrating the uses and values mentioned in

(Chapter 5. NATURAL RESOURCE)

runoff from hard surfaces such as roads and parking areas. In addition, groundwater resources may be depleted where over-development increases impervious cover and decreases filtration.

Development of open land may reduce outdoor recreation alternatives.

It's becoming more expensive to purchase and maintain open land.

Fair Haven does not have a plan to protect its ridgelines from development.

Scenic views are extremely important to town residents, but they are increasingly threatened by factors ranging from increasing residential development pressures to the potential construction of wireless communications towers. The next generation of wireless communications maybe satellite and the need for sun-setting of existing tower sights is something that Fair Haven may need to consider.

Fair Haven contributes to air pollution through car emissions, wood and trash burning and other activities.

OBJECTIVES

Encourage the conservation of land for forestry, farming, natural resource functions, and recreation.

Promote a viable agricultural sector as a way to maintain open spaces and natural resources on private lands.

Educate residents as to the effect of human activities on Fair Haven's natural environment and human health.

Focus development in suitable areas and promote rates of development and methods that minimize impacts on Fair Haven's natural resources.

Research current and evolving strategies for the protection of natural resources. Maintain high air quality standards for current and future residential, commercial and industrial development.

Ensure that air quality standards are fairly and equitably applied to existing residential, commercial and industrial development, and not just to new residential, commercial and industrial development.

Wetlands and waterways should be protected against unreasonable incursions, in hopes that they may be enjoyed by future generations in much the same state.

The Town should keep apprised of the State's plans for lands and should request the right of first refusal if the State ever decides to sell land within the Town of Fair Haven.

Every effort should be made to preserve the Timber Rattler denning area, as the snakes have

never been known to do much damage, even though they are the source of much local legend.

Fair Haven should pursue all available avenues, both public and private, to preserve the Timber Rattle Snakes.

Relate development to potential pollution of off-site public and private water supplies. Investigate a mechanism and funding source for possible municipal acquisition of land either for public use or for species protection.

Encourage the use of the falls on the Castleton River for hydro power.

Residential, commercial, and industrial expansion should be compatible with the above long range goal that will enhance our quality of life, encourage local employment and improve our tax base.

IMPLEMENTATION

A Conservation Committee should be considered by the Planning Commission to help in determining the current and potential status of land use, identify threats to Fair Haven's natural resources, and develop plans for the preservation of these resources. This process must seek extensive public involvement in the creation of inventory maps to identify natural resources and potential sites of development and the development of an open space plan.

The Conservation Committee, Selectboard, Town Manager and Zoning Administrator will collaborate with local conservation and state agencies, and Fair Haven property owners on the promotion, enforcement and adherence to environmental regulations that protect water quality, wildlife and other natural resources and to conserve agricultural and natural areas. Efforts should be made to obtain funding and support for these purposes, including a Conservation Fund, if approved by voters, to provide seed money for conservation efforts.

The Fair Haven Economic Development Committee, Planning Commission and Conservation Committee should work with farmers, conservation groups, state agencies, legislators, and local businesses to develop marketing strategies and support sustainable agriculture, green industries and enterprises

The Planning Commission will design zoning and subdivision regulations in accordance with state and federal laws to protect croplands, water resources, scenic sites, wildlife habitat and other natural resources. The process of reviewing and modifying these regulations will include extensive public input. The Recreation Path Committee and Conservation Committee will sponsor educational programs to foster appreciation of Fair Haven's natural resources.

The Selectboard shall support regional, state and national policies that promote the goals of the town plan.

The Planning Commission will develop specific regulations to require appropriate riparian buffers of natural vegetation to minimize the environmental impacts of future development. The Conservation Committee, Town Manager and Road Foreman will demonstrate best

(Chapter 8. ENERGY)

A further cost saving might be released by the efficient use of the rail system that cuts through the center of Fair Haven. This could eliminate the reliance upon trucks that drive to the port of Albany or Newark to transport liquid fuel products to this area. An inter-modal transport sight that offered storage facilities for liquid fuels might be able to serve a large area. This would required further capital investment on the part of fuel distributors and rail transporters. The local consumer would not see any saving until the market had been penetrated to a point of saturation by the rail delivery system.

Transportation Energy

The oil embargoes of 1974 and 1980, and the price spike in 2000-02 gave U.S. citizens a clearer picture of the in-securities associated with reliance on this source. Yet we as a society, New England in particular, continue to rely on this energy supplied by foreign sources.

There is further reliance on transportation of liquid fuels to this area by motor transport from the Port of Albany and even Newark. This reliance could be alleviated thru rail transport of liquid fuels to a local inter-modal transport sight that would result in some saving in terms of the road miles traveled thereby reducing cost. These costs might not be seen by the consumer until such time as significant market share had been obtained by a rail shipping facility in term of distributorship and distributors.

Petroleum is the largest transportation energy source, and transportation is currently the largest demand of energy for most parts of the Region. Biking and walking provide energy-efficient means of transportation. Given good roads and safe conditions, biking can alleviate some of the traffic load. Given mixed land use and work facilities near shopping, walking can also eliminate some of the need for automobile travel, especially within the village. To this end the town's existing sidewalk network can be improved and expanded, pedestrian trails can be expanded, and a coordinated trail system is being examined to link sidewalks, trails and destination points.

CONCLUSIONS

Inefficient energy consumption is costly and threatens Fair Haven's environment. The failure to conserve energy results in excessive use of energy resources.

Scattered development encourages excessive use of energy.

The failure to use renewable energy resources, some of which are in abundant supply locally, results in excessive use of non-renewable resources and exports dollars that otherwise could support local energy suppliers.

Excessive reliance on the automobile for transportation is costly and threatens Fair Haven's ability to maintain a village center surrounded by a working rural countryside.

The continued development pattern that currently exists in Fair Haven will lead to development patterns that will continue to be energy efficient and conscious. Further growth in other areas of town in an unrestricted manner would not lead to the continuation of such patterns in terms of energy consumption.

Fair Haven has the transportation facilities that could facilitate state wide collection at an economical rate due to the economy of scale. The reprocessed regrind could be shipped world wide.

OBJECTIVES

Actively encourage efficient energy consumption.

Maximize energy conservation.

Utilize land use planning to influence development patterns and site design in an energy efficient manner.

Encourage the use of community renewable energy resources.

Actively consider energy efficiency in all future transportation planning.

Further development of the hydroelectric plant in Fair Haven is to be considered as a potential renewable energy profit center.

IMPLEMENTATION

Encourage the use of energy efficient techniques for new residential construction by having the zoning administrator provide all applicants with any available information on energy efficiency from the State.

Encourage the use of energy efficient space and water heating techniques through Planning Commission proposed revisions to Town bylaws and ordinances.

Promote development patterns that concentrate growth in central areas and locate residential growth near work and shopping areas through Planning Commission proposed revisions to Town codes and ordinances.

Encourage building with southern solar access to utilize passive solar heating, and to retain the opportunity for future solar development, through sighting recommendations by the Zoning Administrator.

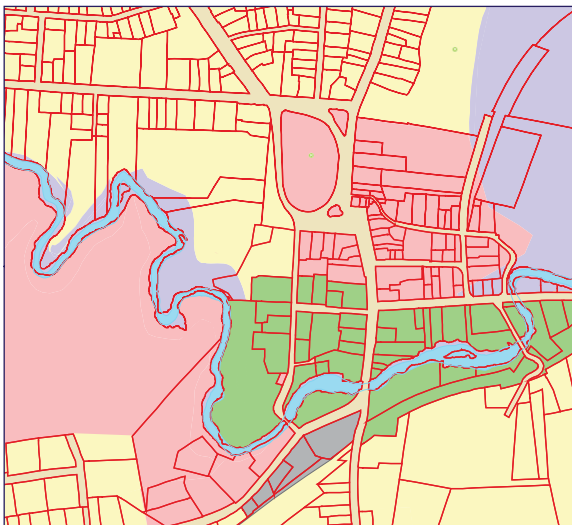
Encourage the use of shelterbelts (tree rows) to act as wind buffers in the winter, and for shading during the summer through sighting recommendations by the Zoning Administrator.

The Town should promote the use of locally produced wood as an energy source by maintaining a list of local wood suppliers.

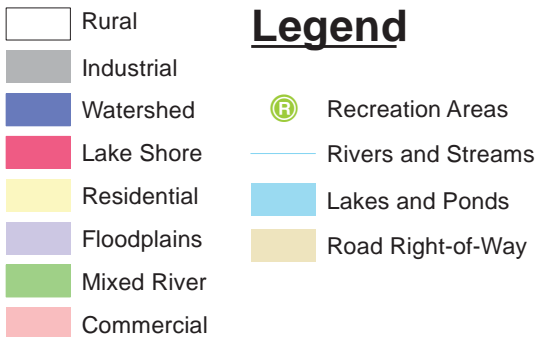
The Town should support carpooling, vanpooling, and ride sharing by making available, through the Town Managers Office, brochures promoting these efforts.

Town of Fair Haven Zoning Districts

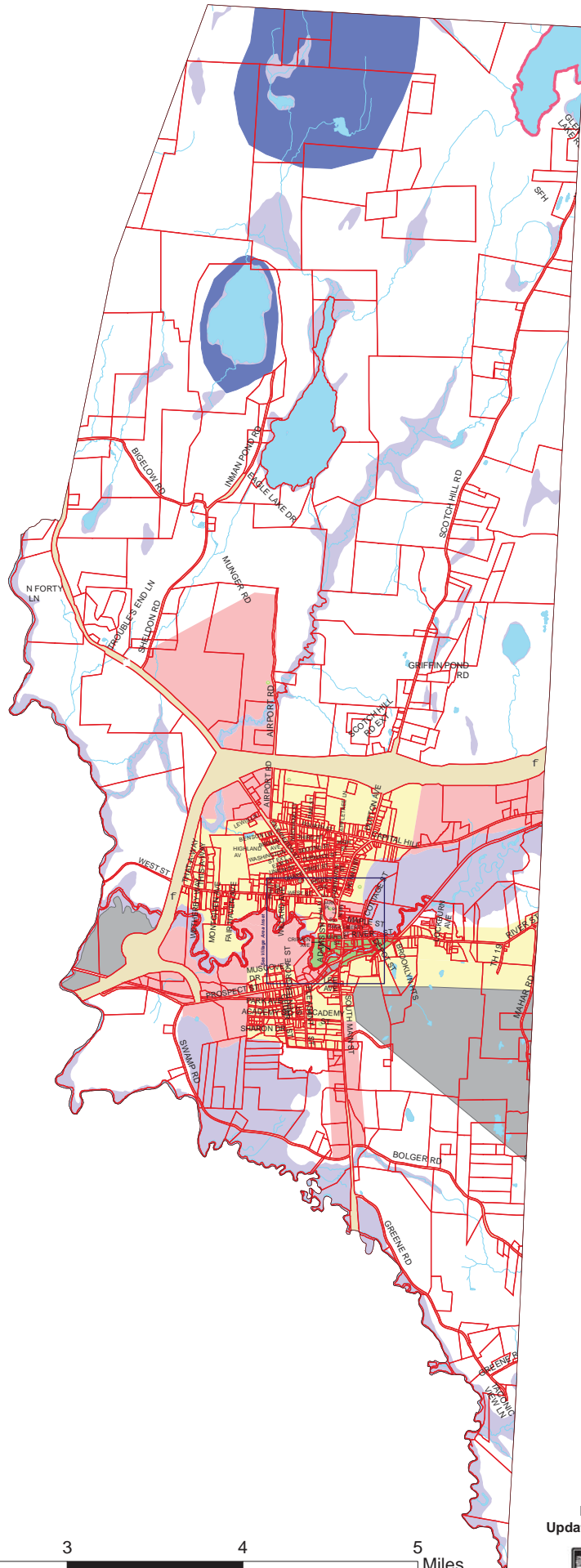
Fair Haven Village Area



0 0.1 0.2 0.3 0.4 0.5 Miles



0 0.5 1 2 3 4 5 Miles



December 3, 2008
Updated December 15, 2009



RUTLAND REGIONAL PLANNING COMMISSION
e:\rpl\fairhaven\zoning\04.mxd

Town of Castleton

2010 Castleton Town Plan

Effective August 23, 2010

ENERGY

The plan shall encourage energy efficiency, recycling, innovative house siting where applicable, and encourage renewable and alternate power and fuel sources within the Town of Castleton and in cooperation with other organizations.

Residential Heating

Heating and other related household activities account of 31% of all energy use in the State. Most home energy use in Castleton is provided by heating oil, propane, wood and electricity.

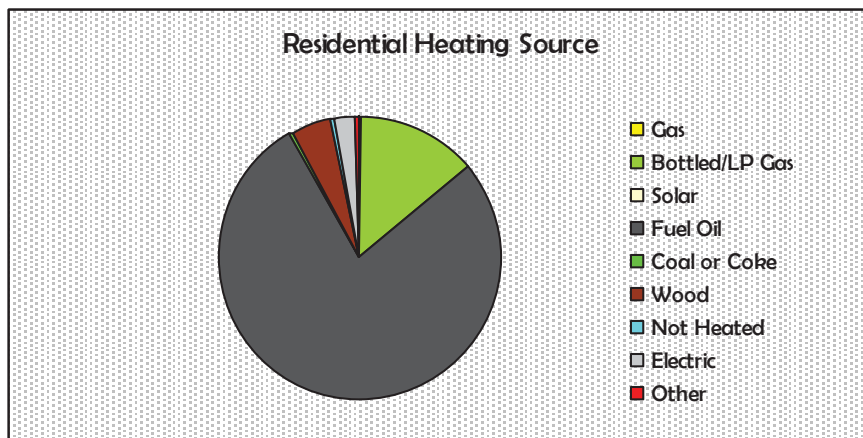


Figure 11:
Residential Heating
Source

Source:
2000 US Census

Electricity

According to the Vermont Department of Public Service, nearly 40% of the energy consumed in Vermont comes from electricity. CVPS's power is purchased mainly through long term contracts with Vermont Yankee Nuclear Power Station (54.2% of its power) and with Hydro-Quebec (38.2%). While both of these energy sources are reliable and stable, there is some uncertainty about the long-term viability of these sources due to the approaching expiration of their contracts. The *Regional Plan* also predicts that energy use is likely to increase throughout the region at a slow pace, with high demand during the summer months. A small amount of power is also derived from wood (3.4%), oil (1.5%), CVPS Cow Power (0.1%), and other sources.

Central Vermont Public Service Corporation (CVPS) serves the electricity needs of the town through its district office in Poultney. There are two substations in the community, one in Castleton and the other in Hydeville. The town is served by a 12.5 KV distribution system, which has sufficient capacity for additional customers, both residential and commercial.

Transportation

Transportation is a significant source of energy use in the Rutland Region and Vermont as a whole. According to the Vermont Department of Public Service, transportation accounts for 31% of all energy consumed in 2000 in Vermont. Private automobile use is the primary source. 33% of Castleton residents work outside of the town. The average commute time is 22 minutes.

Alternative Energy Sources and Conservation Measures

Castleton supports incentives to encourage the exploration of alternative energy sources such as wind, water, micro-hydro, biomass and solar power, provided they fit with the natural environment and surroundings. The *Rutland Regional Plan* also notes the potential for local energy production in the form of methane captured from dairy farms or landfills, reestablishment of hydroelectric dams, solar generation, wind power, geothermal and biomass/biodiesel. These alternative energy sources are being installed in schools and farms, as well as in individual homes around the state and the region. Several homes in Castleton get all their domestic energy from solar and wind.

Although municipalities have little control over the fluctuations in the global energy market, there are many steps they can take at a local level to help their citizens and government offices function cost-effectively and with the smallest possible impact on the environment:

- **Efficient building design** - low-flow toilets and shower heads; energy efficient appliances and lighting; using local materials during construction; passive heating and cooling, through building orientation, proper fenestration and landscaping; solar hot water; super insulation and renewable heating sources such as geo-thermal heat pumps.

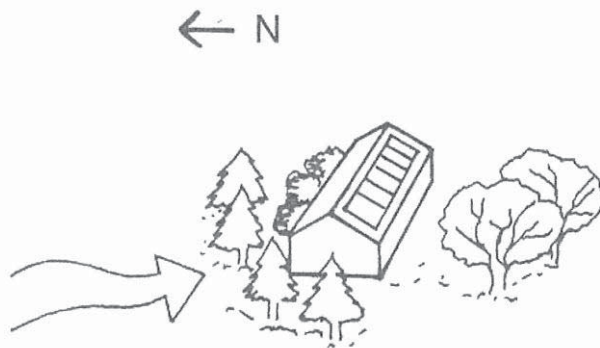


Illustration shows basic building orientation and landscaping that maximizes passive heating and cooling.

- **Development Patterns** - Land use patterns are a significant factor in determining energy demand and transportation is the leading source of energy use in the Region and State. Compact development and mixed use village/town center development helps reduce demand for transportation by locating many goods and services in the same place and facilitates pedestrian and bicycle modes of travel. Supporting compact development surrounded by more rural open areas also maintains the traditional land use pattern that residents and visitors associate with the history and character of the region.

ENERGY GOALS, POLICIES AND PROGRAMS

Goal

Reduce energy consumption where possible.

Policy 1

Improve energy efficiency of town operations as well as public, commercial and residential buildings.

Programs

- ❖ Encourage all new public and commercial construction to meet advanced energy standards.
- ❖ Encourage residents to take advantage of NeighborWorks of Western Vermont for energy efficient testing and loans for insulation, windows, etc.
- ❖ Encourage residents and businesses to utilize the resources of energy efficient programs such as “Efficiency Vermont” and CVPS’s economic development incentives to help improve home and commercial energy efficiency.
- ❖ Conduct an energy audit of public buildings to evaluate potential energy savings and encourage local businesses to do the same.
- ❖ Encourage installation of outdoor lighting in accordance with the guidelines in the *Outdoor Lighting Manual for Vermont Municipalities*.
- ❖ Encourage the use of renewable sources of energy such as wind, solar, wood and methane.

Policy 2

Promote more energy efficient methods of land use and transportation.

Programs

- ❖ Encourage siting of buildings so as to reduce energy costs, such as solar orientation, use of natural windbreaks and shade trees, and development in previously existing growth centers.
- ❖ Allow flexibility in the siting of solar energy systems in the Castleton zoning regulations.
- ❖ Encourage the use of carpools, vanpools, and public transit for commuters and others.

Policy 3

Educate and encourage citizen participation in statewide and local energy conservation programs.

Programs

- ❖ Form a Castleton Energy Committee.
- ❖ Use Town Meeting Day to increase energy awareness.
- ❖ Promote energy conservation programs such as Button-Up VT, Way-To-Go commuter challenge and Vermont Community Energy Mobilization Project.

NATURAL RESOURCES

The natural environment has played an important role in shaping Castleton’s image, appearance and attractiveness to town residents, seasonal homeowners, and tourists alike. Lake Bomoseen is one of the most actively used water bodies in Vermont and clearly of great importance to Castleton’s

NATURAL RESOURCES GOALS, POLICIES, AND PROGRAMS

Agriculture and Forestry

Goal

Protect Castleton's farm and forest resources for future generations to enjoy.

Rationale

Clean air and water, as well as intact forests and working farms are essential to the health and quality of life of all living things that inhabit a community. Castleton is blessed with abundant natural amenities that remain largely unscathed by the polluting forces of the industrial world. 79.6 percent of respondents to the 2001 Castleton Community Survey stated that they believed Castleton should explore all measures available to protect farmland, open space, and forested areas within the town. This figure indicates that protection of natural resources is important to Castleton residents and vital to the continued welfare of the town.

Policy 1

Maintain and improve the quality of important soils, such as agriculture and forestry soils, when considering the future development of the town.

Programs

- ❖ Discourage development in areas of important agricultural and forest soils.
- ❖ Preserve farm and forest lands and maintain the working landscape through conservation, agricultural easements, and land acquisition.
- ❖ Encourage landowners to collaborate with the Cooperative Extension Service in the use of Best Management Practices to assist them in learning more about how to employ these practices for soil quality protection.
- ❖ Promote the use of acceptable soil erosion control measures in development of slopes in excess of 8%.

Water Resources

Goal

Protect and retain the quality of Castleton's surface water, groundwater and wetlands resources and enhance opportunities for access, recreation, education and natural beauty in these areas.

Policy 1

Prohibit any development that will degrade water quality in Castleton.

Programs

- ❖ Establish and enforce setback and vegetative buffer requirements in Castleton zoning regulations for development along lakes, rivers, streams and wetlands.
- ❖ Enforce all provisions of Castleton's shoreland zoning requirements.
- ❖ Reduce erosion and siltation of shorelines and stream banks by requiring proper stabilizing measures for new construction under Castleton's site plan review.
- ❖ Require on site storm water management measures be implemented on all new construction

- ❖ Inventory culvert systems in the area of the town wells.

Policy 6

Ensure adequacy of groundwater supplies.

Programs

- ❖ Enact regulations in accordance with the recommendations of the fire districts and public comment.
- ❖ Encourage the development of guidelines to determine the capacity of town wells.

Policy 7

Control water distribution costs.

Programs

- ❖ Conduct a feasibility study to evaluate consolidating all existing fire districts into a single entity.

Flood Hazard Areas

Goal

Control development within areas subject to periodic flooding

Policy 1

Continue to review development in Flood Hazard Areas for compliance to the Castleton Flood Hazard Area Regulations.

Fragile, Unique Habitats and Open Space and Scenic Resources

Goal

Protect fragile, unique habitats and open space and scenic resources from the adverse affects and encroachments of development.

Policy 1

Ensure that all proposed developments that might affect these resources are referred to the appropriate state agency for comment and thorough visual assessments are provided prior to construction.

Programs

- ❖ Require applicants proposing projects that may have broad visual impact on Castleton residents (e.g. telecommunications and radio towers, wind turbines, etc.) to provide detailed view-shed analysis prior to construction.

Policy 2

Support education of the public as to the importance and sensitivity of these resources and measures

that can be taken to reduce human impact upon them.

Policy 3

Support the conservation of large tracks of forest areas and open space so as to maintain critical wildlife habitat, ample corridors to accommodate seasonal migration patterns, and a scenic balance between the built and natural landscape.

Air Quality

Policy 1

Improve public awareness of air quality issues and steps that can be taken to reduce pollutants.

Programs

- ❖ Encourage the use of public transit and ride share programs.
- ❖ Strictly enforce prohibitions against the burning of trash.
- ❖ Promote awareness of alternative, less polluting, wood-burning technologies.
- ❖ Protect forest resources and review proposed development for impact upon air quality.

Town of Ira

Town Plan

Adopted December 7, 2009

Goal 3

Identify and protect all wetlands which provide significant functions and values in such a manner as to achieve no net loss of such wetlands and their functions.

Objective

Significant wetlands and other critical natural communities should be protected from development by encouraging the maintenance of an undisturbed buffer strip of naturally vegetated upland at least 50 feet in width around the edge and by preventing runoff and direct discharge into wetlands.

Objective

Encourage areas with rare, threatened, and endangered species to be protected to the greatest extent possible.

Objective

Encourage landowners to develop their property in a manner that retains the greatest possible amount of prime agricultural land for traditional uses.

Objective

Maintain agriculture and forestry as viable industries in Ira.

UTILITIES AND ENERGY

Water Supply

There are three methods or systems by which residents in the Town of Ira obtain potable water. The source most commonly found is the surface or groundwater well. These wells are penetrated to the water table by drill or other mechanical means and are then incased in metal or concrete for containment. This type of water system is less expensive than an artesian well, but can prove unreliable at times. In dry seasons, when the local water table lowers, these wells fail to provide water in sufficient quantity for normal residential uses. In wetter seasons, these wells can be subject to contamination from foreign matter introduced to the well through runoff.

Artesian wells are deep wells, drilled into the subterranean aquifer and are the most reliable, and often the most preferred, sources of water. In Ira, the artesian well is second to the surface well in popularity of use. This type of system is the most expensive to construct and in Ira is more so, because of a greater average depth to the aquifer than in neighboring communities. Artesian wells in the southern half of Ira range in depth from under 100 feet to over 1,000 feet. There have been attempts on certain properties, mostly in the southern half of Town, to obtain useable delivery rates of water through artesian wells, without success.

When accessible and of good quality, ground springs are used by Town residents as the third water system of choice. Springs generally are regarded as a high quality water source, in many cases are, but they can be subject to the same problems as are experienced with surface wells.

All or nearly all residences in Ira are supplied with water by use of electric pumps. Generally, a submersible pump is used when the source is an artesian well or surface well, and self-priming above-ground pumping systems are used with surface wells and ground springs. Some older homes with surface water wells or ground springs use gravity flow to transport the water, and to provide a head of pressure, which would otherwise be generated by an electric pump.

Ira has limited watershed. In contrast to some neighboring communities, there are no lakes, and there are very few ponds or other bodies of standing water such as marshes or bogs. Ira Brook, which flows north through the southern half of Town, and the Castleton River located in North Ira, are the two rivers in Town and account for the majority of wetlands indicated on the Town's land use map. The Town of West Rutland has a municipal forest of several hundred acres located in a remote area off Clark Hill Road, which tract serves as the primary watershed for that community's municipal water system. The topography in Ira is such that the mountainous and mostly wooded areas in the outlying areas of Town serve to channel precipitation, in the form of runoff, to the lower lying and settled regions in Town which are dependant upon such water for residential uses.

Sewage Disposal

The Town adopted an on-site sewage ordinance that was substantially revised on June 14, 1990, incorporating State standards for acceptable on-site septic disposal. Because of recent changes to the Environmental Protection Rules for Wastewater System and Potable Water Supply Rules (adopted by the State, Agency of Natural Resources, Department of Environmental Conservation) construction of new disposal systems and repairs or changes to existing ones will require a State permit, so the Town no longer needs to regulate wastewater systems.

Solid Waste Disposal

The Town is a member of the Rutland County Solid Waste District, which is the primary regional entity administering and addressing solid waste disposal problems on a regional level on behalf of its constituent municipalities. The District operates a transfer station located on Gleason Road in Rutland, which is available to Ira residents who pay an annual fee for use of the facility. The facility currently accepts household wastes, including glass, paper and metal. Continued use of the existing center and any other centers as may become available in the future, should be encouraged.

Based upon the Town's sparse settlement patterns and population, it is anticipated that the future needs for disposal of solid waste will be met through continuation of the existing voluntary recycling and private contract haulage methods.

Electric Service

The Town of Ira is located entirely within the service territory of Central Vermont Public Service Corporation (CVPS), which provides electric service to all currently settled areas in the Town. Along the U.S. Route 4A corridor in North Ira, there are two high-tension transmission lines which serve to carry electricity through the Town for eventual use or distribution at destinations outside Ira. One line is a 46 kv line owned and maintained by CVPS, and the other is a 115 kv line owned and maintained by Vermont Electric Power Company. A third transmission line is owned and maintained by Vermont Marble Power Division of OMYA, Inc. in the northeast

section of Ira. Like the transmission lines located in North Ira, this 46 kv line does not serve local needs in Ira.

The extension of existing distribution lines to new locations in Town is addressed on a case-by-case basis by CVPS, and the costs of line extensions as may be required are borne by the new customer or customers in accordance with the company's applicable tariffs. The existing distribution lines are located either within Town highway rights of way, or on private property with land owner permission and/or easements. The responsibility for maintenance of transmission and distribution lines rests with the utility, and not with the Town.

With respect to line extensions and any new distribution lines, decision making on location, construction and maintenance will likely remain with the involved land owner(s) and the utility.

Energy Efficiency Programs

In the interest of limiting the overall demand for electricity and lowering individual bills, CVPS and other utilities in Vermont have created energy efficiency programs. The largest statewide initiative operates as Efficiency Vermont.

Efficiency Vermont is the State's energy efficiency utility—the first of its kind in the United States. Efficiency Vermont represents an innovative approach to helping Vermonters save energy and protect the environment.

The Vermont Public Service Board (Board) ordered the creation of the energy efficiency program in response to a request from the Department of Public Service (the Department is the state's Public Advocate), all of the state's twenty-two electric utilities, and a dozen consumer and environmental groups. Through Efficiency Vermont, Vermont consumers, businesses, manufacturers, and farmers across the State can participate in the same seven energy- and money-saving programs.

Efficiency Vermont offers money-saving programs to homebuilders and buyers, low-income Vermonters, farmers, and residential, commercial and industrial customers. The programs help consumers capture energy-saving opportunities available through the installation and use of efficient construction designs, products and equipment. For example, low-income Vermonters can receive assistance to convert from costly electric heat and hot-water systems to lower cost alternatives. Electric consumers can receive instant coupons or mail-in rebates for discounts on energy efficient lighting products and appliances.

Renewable Energy

Renewable energy as an alternative to energy generation with fossil fuel can provide for electricity needs while protecting the environment.

Solar energy is an important renewable energy resource. The solar resource available to much of Vermont may not be enough to provide the total energy needs of a household, but can contribute significantly as a substitute to electric heat and hot water. Solar energy can be harvested through solar panels in the form of electric current, to power appliances, or as a passive energy used to heat a home. Passive solar design uses the sun's energy in heating a structure, so that the need for supplemental heat is greatly reduced.

Wood is also a renewable resource when managed sustainably, and is often used for home heating fuel. When a forest is managed so that for every tree cut there is a tree planted, a no-net carbon gain occurs. In this scenario, the use of wood as fuel wood is both renewable and environmentally benign.

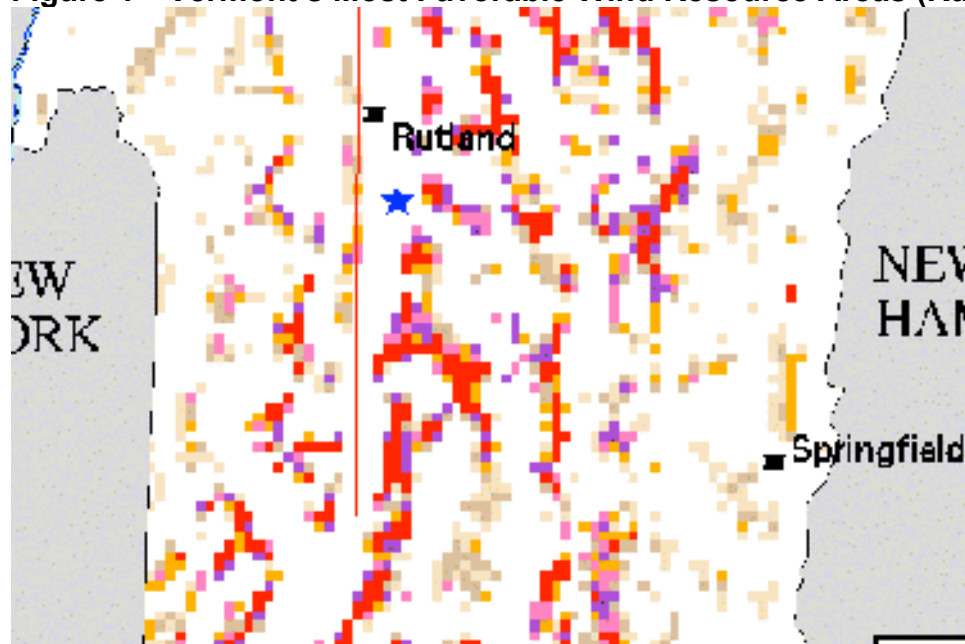
The high ridgelines of the Taconic Mountains in Ira may have wind resources sufficient to power industrial-scale wind turbines. See Figure 1 below. However, construction of large wind towers and related infrastructure such as roads, power lines and staging areas in the Highland Conservation District (shown on the Future Land Use map that is part of this Plan) would wholly undermine the specific goals and policies established for the Highland Conservation District, and should be strictly avoided







Commercial or industrial-scale wind energy development also involves high potential for negative visual impacts and noise, which would directly conflict with provisions of the Ira Town Plan related to scenic resources.

The character of the Town of Ira and surrounding communities is defined by the rural mountain setting, and the pattern of undeveloped highlands. Commercial or industrial-scale wind development in the Highland Conservation District would threaten the orderly development of the region because the effects upon the values sought to be protected in the Highland Conservation District in Ira, and those in adjacent communities necessarily affected by such development, would be profound.

Small scale wind turbines (not required to have strobe lights), appropriately sited and scaled for use by the residence or business located at the turbine, should be allowed in the Rural Residential District.

Figure 1—Vermont's Most Favorable Wind Resource Areas (Rutland Region)



Wind Power Classification				
Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m ²	Wind Speed ^a at 50 m m/s	Wind Speed ^a at 50 m mph
 2	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
 3	Moderate	300 - 400	6.4 - 7.0	14.3 - 15.7
 4	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
 5	Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
 6		600 - 800	8.0 - 8.8	17.9 - 19.7
 7		800 - 2000	8.8 - 11.8	19.7 - 26.6

^a Wind speeds are based on a Weibull k value of 2.0 typical for Vermont.

Source "Wind Resource Mapping of the State of Vermont," (1999). Authored by Ron Nierenberg, Dennis Elliot & Marc Schwartz for the Vermont Department of Public Service, Green Mountain Power Corporation, NRG Systems, and Vermont Environmental Research Associates, Inc.

Telephone Service

Fair Point Communications (formerly Verizon) and Vermont Telephone Co. provide local calling service. Long distance calling plans are provided by a variety of regionally and nationally based companies. Existing lines are located within Town highway rights-of-way, or on private property, with landowner permission and/or easements. The responsibility for maintenance of lines rests with the utility, and not with the Town. There is one cell tower in Ira, located near the peak of Herrick Mountain.

Gas

There is no gas pipeline in Ira. Many homes rely upon bottled or LP gas, on a private contract basis, for heating, cooking and similar uses.

Cable Television

Cable television service is available in some parts of Ira.

Goals and Objectives

Goal

Encourage the efficient use of utilities and energy sources in Ira.

Objective

Prohibit local land filling or disposal of solid waste.

Objective

Support continued use by residents of private solid waste haulers, and encourage recycling.

Objective

Maintain membership in Rutland County Solid Waste District.

Objective

Establish a strong and visible commitment to energy efficiency and increased use of renewable fuels in all buildings, especially new ones.

Objective

Work to create opportunities for walking, cycling, and other energy efficient, alternatives to the single occupant vehicle.

Objective

Encourage residents to utilize the resources of energy efficient programs such as “Efficiency Vermont”.

Objective

Encourage the use of renewable sources of energy such as wind, solar, and wood.

Objective

Promote more energy efficient methods of land use and transportation.

Transportation

Introduction

The Transportation Plan is based upon the information and analyses contained in the Transportation Technical appendix.

Present Facilities and Services

Transportation facilities and services in or available to residents of the Town include highways, rail, bus and paratransit, air, and trails for biking and walking.

Primary access to the Town is via Vermont Route 133, an arterial stretching from West Rutland to Pawlet. Not surprisingly, highways are the single most important component of the transportation system. They provide access for automobile and emergency vehicle to all parts of the Town. They also provide for the movement of goods and services, for public transportation, and for recreational activities such as bicycling and walking.

There are 7.25 miles of state highways (VT Routes 4, 4A and 133) and 7.62 miles of Town highways in Ira. The Town's highways are further divided into two classes: Class 3 and Class 4. Ira has no Class 1 or 2 Town highways. The 4.24 miles of Class 3 Town highway are those that are most critical for the Town, in terms of their control. They are routes designed primarily for year-round, local use. They are characterized by lower design speeds and more open access for driveways and multi-use trails. All other routes, private and public, are Class 4 highways. Private roads and trails are maintained by the landowner(s).

FUTURE LAND USE PLAN

Introduction

The Future Land Use Section is shaped by the findings and recommendations made in all other elements of the Plan, as well as by analyses contained in the Technical Appendices. It translates and synthesizes ideas on a wide range of topics into a coherent policy on future development. The Future Land Use Section is where the Town "puts together all of the pieces" of the planning "puzzle."

While goals and objectives and maps help define the Town's vision for the future, the Future Land Use Plan serves as a guide for the creation or amendment of programs (including adoption and amendment of bylaws) that implement the Town's vision. Local land use controls, for example, translate the desired development concept into a clear, attainable, and enforceable land use program.

As required by state law, the Future Land Use Plan contains both text and a Future Land Use Map. The Future Land Use Map displays the desired future development patterns recommended by the Plan, while the future land use text explains the basis or logic for the pattern and the desired sequence of land development. The Map is intended to delineate those areas that are appropriate for specific land uses. The Map defines three districts in Town to serve as guidelines for future development. The Map is based upon information on the physical environment, such as soil depth, seasonal high water tables, slopes and overall capability to support potential development, as well as cultural information that recognizes Ira's historical land use trends, as well as existing land uses.

The Future Land Use Map in this plan is conceptual in nature. The lines showing the edge of districts are not intended to be definite, making it consistent with the generalized nature of the data and analysis used in preparing this plan.

The Future Land Use Plan for Ira contains three land use districts. The physical characteristics of the land in these three districts suggest different planning needs, issues, and community objectives. The districts shown on the future land use map are intended to establish basic guidelines for future land use and intensity. The districts were established in the Ira Town Plan adopted in 1988, and remain unchanged (except for slight changes to the flood plain mapping). The districts are shown on the Future Land Use map that is attached as part of this Plan.

Floodplains and Wetlands District

This district encompasses flood plains and wetlands. In 1988, the Town adopted Flood Hazard Area Regulations that restrict and regulate development within the areas designated on the Town's Flood Hazard Area Map. Those regulations were replaced with updated ones in 2008. The land use map reflects those flood hazard areas, and also includes other areas designated as wetlands, development on which would likely trigger federal or state review. Further reference may be made to the flood plain maps prepared by FEMA.

This District encompasses agricultural soils, as well as deer wintering habitat and sand and gravel resources.

Specific recommendations for the Floodplains and Wetlands District include the following:

- Development should be minimized due to the erosion potential along Ira Brook.
- Setbacks from the brook are encouraged for any development.
- Riparian landowners should be encouraged to pursue bank stabilization projects.

Highland Conservation District

This District serves several purposes. First, it is to protect high elevations and steep slopes that have shallow soils and fragile vegetation, and that provide significant recharge to the ground and surface water supplies of the Town and neighboring communities. Second, the District encompasses much of the land area in Town, which, in light of the physical criteria described above, is unsuitable for development. Third, the District encompasses areas that historically have supported activities or practices such as forestry, limited agriculture (e.g., maple sugaring or maintenance of apple orchards), and recreation including hiking, skiing, hunting, fishing and camping. The district also includes the ridgelines that frame the Town. The fourth purpose is to protect the natural resource value of lands that are undeveloped, lack direct access to arterial and collector roads, are important for wildlife and wildlife habitat (including deer yards), have high potential for forestry use, and include limited or significant natural, recreational or scenic resources. Within the Highland Conservation District lie the sites of five rare, threatened or endangered plants or animals. These important species are dependent on the continued health of their habitats and ecological communities.

Future Development

Historically, residential uses have not fallen within the Highland Conservation District, and there are currently no residences located within this District. Because of the fragile resources and limitations to development, no community facilities or services are anticipated to be developed in the Highland Conservation District. Limited, compatible land uses, such as outdoor recreational activities that do not involve structures, and forestry that does not create erosion problems or harm unique and fragile areas, should be permitted in this District. There are no roads in the Highland Conservation District other than Class 4 roads or trails. These will not be upgraded by the Town for the term of this Plan.

Specific recommendations for the Highland Conservation District include the following:

- All forms of development should be directed to other areas of the Town whenever possible;
- Development that does take place in the Highland Conservation District must avoid important natural areas;
- Public access to important resource areas should be retained as much as possible.

Development in the Highland Conservation District should be limited to very low impact uses. The Town and other major stewards within the district are committed to preserving and making public use of the unique natural environments of the Town in an unobtrusive manner.

Rural Residential District

The remaining portion of the Town falls in the Rural Residential District, which encompasses all existing residential properties, and all lands currently used for agricultural purposes. Historically, these uses have been compatible, and it is anticipated that continued residential, agricultural and commercial uses should take place in the Rural Residential District.

Future Development in this District, low-density residential development that utilizes existing facilities and that can adequately accommodate sewage disposal in compliance with the State law, and that is compatible with the District purposes and guidelines, should be permitted. Further development of new roads in the Rural Residential District is not planned.

The current transportation network of the Town lies entirely within this district. Further development of roads in the Rural Residential District is not planned. Land uses in this District that do not remove the potential of the land for agricultural production such as open space, conservation and certain forms of outdoor recreation, are encouraged. Development should take place in such a way that any irreplaceable, unique or scarce resources or natural areas are not harmed.

The Rural Residential District encompasses some lands designated as unsuitable for development based upon considerations of slope, depth to bedrock and seasonal high water table. Development of such lands is not prohibited, but should be avoided. Development in the Rural Residential District is also likely to be limited by the availability of adequate on-site water supplies.

Specific recommendations for the Rural Residential District include the following:

- Future growth in Ira should be targeted for this district;
- A mix of housing types and affordability levels is encouraged;
- Lot layout and building design should enhance the area's character and help maintain the balance of agriculture, forest and residential uses;
- Water supplies should be protected through careful siting and design of septic facilities.

Development should occur at a density that reflects existing conditions in the district. Wherever possible, the Town encourages developments to use the least amount of land possible for private residential uses in order to help retain land for agriculture and open space.

Compatibility with Adjacent Towns

The Ira Town Plan is compatible with the plans of adjacent communities and with the regional plan. At the heart of any town's plan is its land use plan. A town's statements of values associated with land use including the designation of districts within the town, the enumeration of interests to be protected, encouraged or balanced, and the listing of goals and objectives provide additional insight into the specific land use plan.

A review of neighboring communities' plans reveals that their land use plans are in harmony with that in Ira. In no instance does a district in Ira abut a district in an adjacent town and

contain conflicting values and objectives. Each adjacent community has through its town plan set forth a land use plan including districts, maps, policies and objectives compatible with the land use plan in Ira. Most land along Ira's boundaries with neighboring towns is located in the Highland Conservation District, and abuts lands located in similar districts in adjacent towns. Generally, each town acknowledges that areas characterized by higher elevations or steep slopes involve threats to water supplies and aquifers, wildlife habitat, scenic resources and aesthetics. Land in Ira located near municipal boundaries is generally characterized by steep slopes and high elevations, similar to the land lying over the boundary lines in neighboring towns.

Large scale development in the Highland Conservation District in Ira near municipal boundaries would have a negative impact upon adjacent communities, given the fundamental nature of such lands. They are characterized by steep slopes, so that development impacts including soil erosion and water runoff will result downhill from the developed areas, regardless of where municipal boundaries lie. They are also characterized by high elevations, such that visual and aesthetic impacts will likewise affect areas outside Ira. Large scale development in the Highland Conservation District in Ira near municipal boundaries would conflict and interfere with the goals and objectives stated in the plans of the affected towns, and thus interfere with the orderly development of the region where the towns are located.

Goals and Objectives

Goals

Protect fragile areas and resources including the ridgelines and peaks in the Highland Conservation District.

Preserve agricultural land and open spaces.

Accommodate continued patterns of existing land use.

Support or encourage land uses that historically have been compatible with one another and are suited for particular areas.

Channel growth into areas where it can be accommodated without undue adverse impact on the environment, and municipal costs.

Avoid unplanned growth.

Objectives

Continue to enforce existing on-site sewer ordinance and flood hazard area regulations.

Within a given district, regulate to ensure compatibility of all permitted land uses.

Establish zones based on the land use map, and prescribe uses which are or are not permitted within such zones.

Within a given zone, regulate to ensure compatibility of all permitted land uses.

Establish zoning and /or subdivision regulations to permit and control compatible land uses and limit incompatibility of uses.

Encourage participation in the State Current Use Value program.

Encourage landowners and private land trusts to develop conservation easements and other methods to preserve lands.

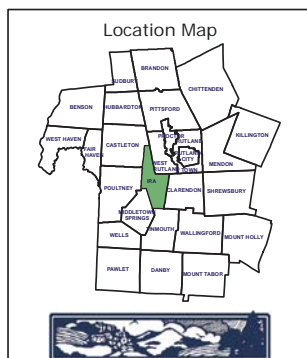
Natural Resources

Ira

Map 2 of 2

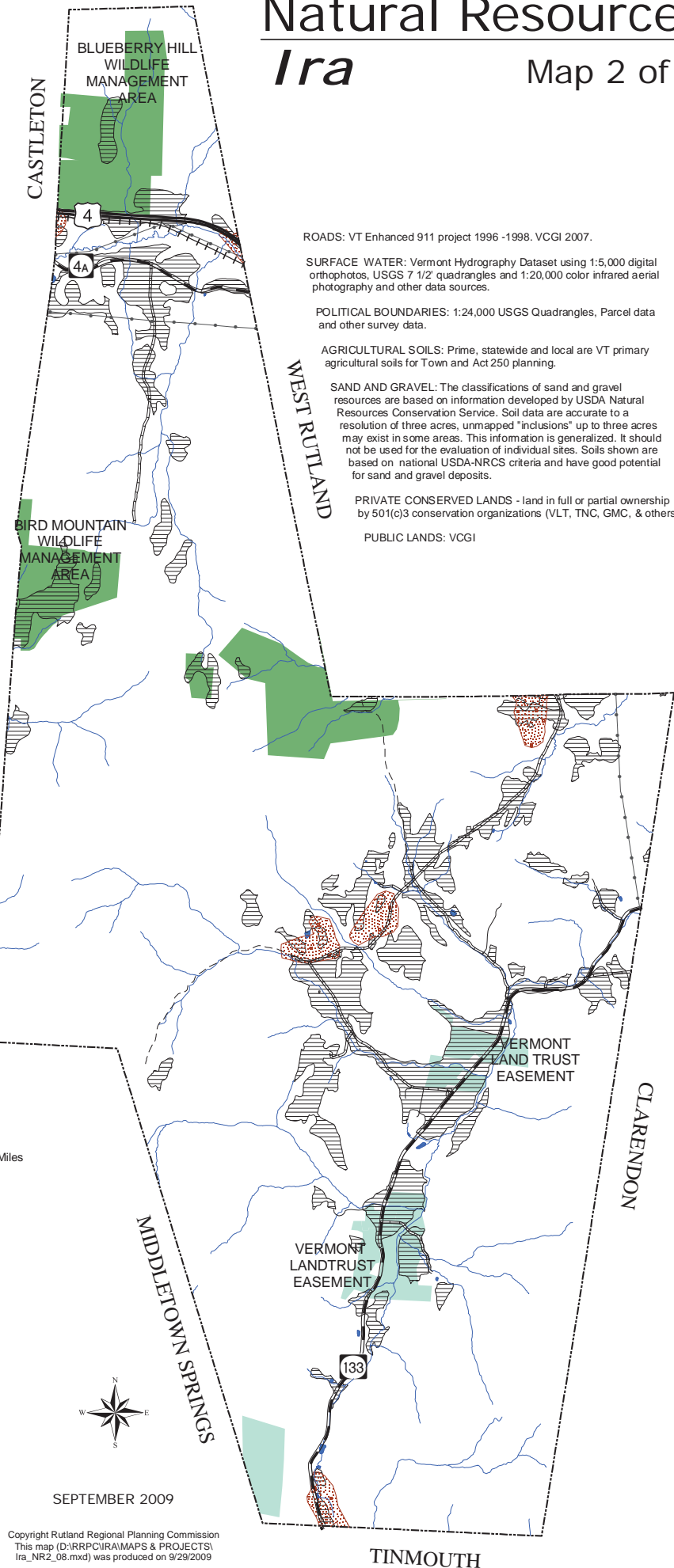
- State Highway
- Class 2 Town Road
- Class 3 Town Road
- Class 4 Town Road
- State Forest Road
- Private Road
- Other Road
- Electric Line
- Rivers & Streams
- Lakes & Ponds
- Prime Agricultural Soils
- Potential Sand Deposits
- Potential Sand & Gravel Deposits
- Public Lands
- Private Conserved Lands

0 0.25 0.5 1 1.5 Miles



Map intended for planning purposes only.
For more information, please contact:
Rutland Regional Planning Commission
The Opera House, Third Floor, PO Box 965
Rutland, VT 05702 (802) 775-0871

SEPTEMBER 2009



ROADS: VT Enhanced 911 project 1996 -1998. VCGI 2007.

SURFACE WATER: Vermont Hydrography Dataset using 1:5,000 digital orthophotos, USGS 7 1/2 quadrangles and 1:20,000 color infrared aerial photography and other data sources.

POLITICAL BOUNDARIES: 1:24,000 USGS Quadrangles, Parcel data and other survey data.

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

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

PRIVATE CONSERVED LANDS - land in full or partial ownership by 501(c)3 conservation organizations (VLT, TNC, GMC, & others)

PUBLIC LANDS: VCGI

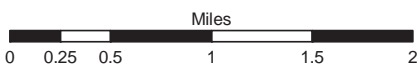
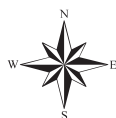
Copyright Rutland Regional Planning Commission
This map (D:\RRPC\IRA\MAPS & PROJECTS\ Ira_NR2_08.mxd) was produced on 9/29/2009

Ira, Vermont Future Land Use

Legend

- Highland Conservation
- Floodplain/Wetland
- Rural Residential

Sources:
1:5000 Vermont orthophotographs, 1994.
1:24,000 USGS topographic maps, pre-1990
Town of Ira

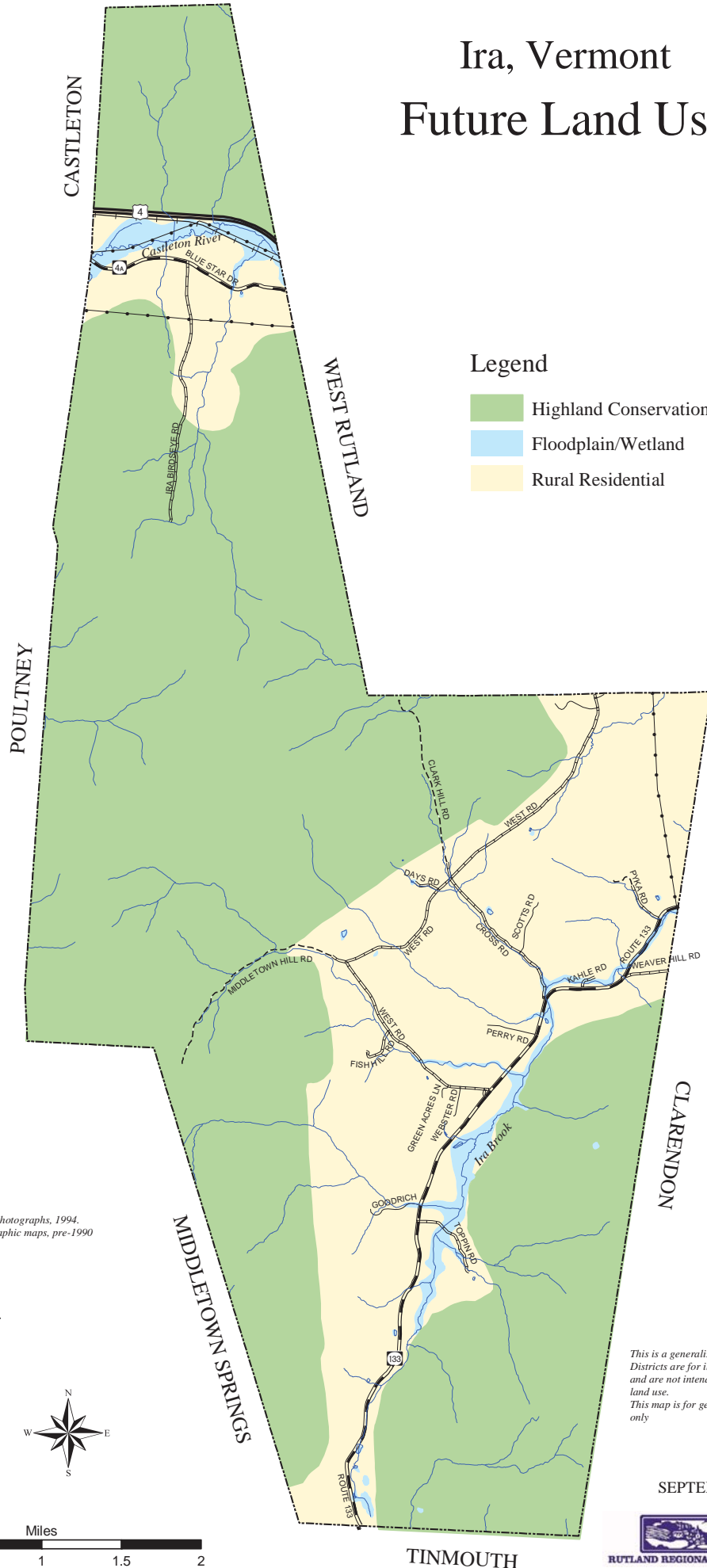


*This is a generalized land use map.
Districts are for illustrative purposes
and are not intended to regulate actual
land use.
This map is for general planning purposes
only*

SEPTEMBER 2009



RUTLAND REGIONAL PLANNING COMMISSION



TINMOUTH

Town of West Rutland

Town Plan

Adopted November 13, 2012

STATEMENT OF PURPOSE AND OBJECTIVES

The West Rutland 2012 Town Plan update is intended to guide the growth and development of the town. In addition to protecting the public health, safety and welfare of the residents, the policies and goals stated within this comprehensive plan were developed to preserve and protect the town's assets while providing a future vision for all citizens, businesses, and officials living and working within the town.

This plan is readopted on a five-year basis, according to State of Vermont statutes, and its purpose is to set long-range goals and policies for the citizens of West Rutland. At the same time, planning for the future is a continuing activity and should reflect new data, laws, technologies, planning concepts, and the changing needs and desires of the community.

The West Rutland Town Plan was prepared in conformance with the requirements in the Vermont Municipal and Regional Planning and Development Act (*Chapter 117 Section 4382. The plan for a municipality.*) As well, the West Rutland Town Plan is consistent with the Rutland Regional Plan, readopted in April 15, 2008, and is also compatible with approved plans from surrounding communities. Under the authority of the Selectboard, the West Rutland Planning Commission prepared this Town Plan and will submit it for formal approval to the Rutland Regional Planning Commission.

The 2012 West Rutland Town Plan will be implemented through (1) changing and adopting zoning and subdivision regulations and other land use controls, (2) inclusion in the capital improvements budget as part of the town's financial planning process, (3) cooperation with other government agencies, and (4) further studies. An implementation program should be developed in conjunction with the West Rutland Town Plan.

The Plan should be used in a variety of ways. First and foremost the Plan should be a basis for community programs and decision making. For example, it should influence the Town's budget and capital expenditures, community development efforts and natural resource protection initiatives. As required by law, it should also serve as a foundation of local land use controls, such as zoning, subdivision and health regulations.

Furthermore, the Plan should be given full affect in all appropriate regulatory proceedings, including, but not limited to ACT 250 and 30 VSA 248. (Powers and duties of the Department of Public Service and the Public Service Board as to companies other than railroads and aircrafts.)

OBJECTIVES

1. Provide a framework within which detailed planning and regulatory land use controls can be developed.
2. Establish consensus concerning long-term growth potential, objectives, and priorities so that the town can undertake development within a coordinated local and regional context.
3. Improve, diversify, and stabilize the town economic base.
4. Provide adequate public service and facilities, recreational opportunities, housing, and transportation systems to meet existing and future needs.
5. Protect special areas and natural resources from encroaching development.

Civic Involvement

There are many active community groups in West Rutland including the Friends of Town Hall, the West Rutland Historical Society, the West Rutland American Legion, Hiram Lodge #101, the Knights of Columbus, the West Rutland Rotary, Sports Booster Club, and the West Rutland Education Network among others.

Voter turnout in West Rutland, or the percentage of registered voters who cast ballots in the general elections, indicates an active community with a high level of participation and community involvement. In the 1998 general election, 58% of registered voters went to the polls and 71% in 1996.

The changing demographic makeup of the Town of West Rutland, while similar to that of the region and the state will undoubtedly affect municipal priorities. The relatively slow growth, increase in the number of school aged children, and smaller households all influence decisions related to public services such as education, recreation, and health.

NATURAL RESOURCES: *Consistent with the restrictive regulations found in the West Rutland Land Use Plan, our goals are as follows:*

Goal 1

Identify, protect, and preserve the valuable natural areas within West Rutland.

Goal 2

Protect and retain the present amount (no net loss) of significant wetlands, waterways and groundwater resources in West Rutland and enhance the recreation and educational opportunities as well as the natural beauty in these areas.

Goal 3

Maintain high quality groundwater and sufficient yields to adequately serve current and future residents of West Rutland and protect groundwater recharge areas.

Goal 4

Encourage manmade structures to blend into the natural landscape within the entire Town of West Rutland, but not to include ridgelines which are especially sensitive and shall be restricted from any and all development or manmade structure.

Goal 5

Avoid any further fragmentation of large woodland areas and other significant natural resources, and also maintain functioning wildlife corridors between major habitats by minimizing the creation of artificial barriers between natural areas.

Agricultural and Forest Land

Agriculture and silviculture are not only important economic activities in Vermont, but also are the foundation of a highly valued rural lifestyle and a significant factor in the shaping of the landscape. Land capable of supporting agricultural uses requires prime agricultural soils as well as moderate slope, adequate parcel size, and access. Like agriculture, forestry is an important activity in the state and region. Lands capable of supporting forests are critical to the support of silviculture as well as providing wildlife habitat and places for recreation.

Forestlands dominate the north-south ridgelines on either side of West Rutland while agricultural lands are in the outlying valleys along the Clarendon and Castleton Rivers.

Town Pump Station	1058 Main Street	.01
West Rutland Fire Station	217 Marble Street	.22
Water Dept. Water Tank	700 Old Town Farm Road	1.40
Water Dept. Watershed	1899 Clark Hill Road	322.00
West Rutland School	713 Main Street	14.10
Old School Lot	Whipple Hollow and Pleasant Street	.50
West Rutland Library Association	595 Main Street	.25
West Rutland Cemetery.	1604 Main Street	90
West Rutland Cemetery	Pleasant Street	
Whipple Hollow Road Cemetery	Bristol's Road	
Old Town Farm Cemetery	North Lane	

TOTAL: 645.38 acres

ENERGY: *Consistent with the restrictive regulations found in the West Rutland Land Use Plan, our goals are as follows:*

The plan shall encourage energy efficiency, recycling, innovative house siting where applicable, and encourage renewable and alternate power and fuel sources within the Town of West Rutland in cooperation with other organizations.

Goal 1

Conserve renewable and nonrenewable energy resources.

Goal 2

Lower the cost of purchased energy by creating fuel purchasing coops for fuel oil, propane, electricity (after deregulation), and firewood.

Goal 3

Investigate possibility of alternative sources of energy and encourage energy efficiency through innovative solutions by both businesses and residences, providing they do not conflict with other aspects of the Town Plan.

Goal 4

Create settlement patterns that reduce travel requirements for work, services, shopping and recreation

The residents of the Town of West Rutland use a variety of energy sources. According to the 1990 Census, the majority of the housing units in West Rutland use fuel oil as the major heating source. Fuel oil, kerosene, and other similar fuels are used in 75.2 % of the units in West Rutland. Bottle, tank or LP gas is used by 10 % of the housing units and is the second largest source of heat. Electric energy is the third major source, which is used by 3.4% of the units in West Rutland. Solar energy and wind power are not utilized to any significant extent.

ELECTRICITY

Green Mountain Power (GMP), a Canadian company privately owned by GazMetro, serves the Town. There are also electrical facilities in Town owned by Vermont Electric Power Company (VELCO). A substation on Barnes Street supplies the electrical distribution system in West Rutland. The transmission system that supplies the area consists of two 46,000 volt lines; one from the Rutland area and one from the Poultney area. In emergency situations the Green Mountain Power system can be supplied from Proctor transmission lines. There are two major transmission corridors and a transmission substation owned by VELCO. The east-west corridor is a 115kV tie from New York State. The north-south corridor is a line from Vermont Yankee Nuclear Plant to the Chittenden County area. The segment from Vermont Yankee to the West Rutland substation is built and operated at 345kV, and the segment from West Rutland to Chittenden County is built and operated at 115kV. The project to extend 345kV to the New Haven, Vermont area is complete. The existing 3-phase distribution covers most of the existing urban compact that is zoned industrial and/or commercial. According to a VELCO study the region has adequate power until 2038 without any further development.

Present Vermont Tariff structures require that developers pay the cost of extending or upgrading electrical facilities to serve the developments. Subdivision regulations require that energy conservation be considered in the planning of developments. Easements must be made for the extension of private utilities such as telephone, electricity and cable television, and public utilities such as water and sewerage where available. Programs, such as Efficiency Vermont, have been developed to further electric conservation for residential, commercial and industrial customers.

NATURAL GAS

Currently, natural gas is not available in West Rutland. There have been many proposals over the years for a natural gas pipeline in Vermont. The town might support natural gas as an alternative energy source/option for both residents and commercial users, but none of the current proposals have any benefits for the citizens of West Rutland.

ALTERNATIVE ENERGY RESOURCES

Utility scale wind or solar, also referred to in this Plan as industrial/commercial wind or solar, is defined as any project that would fall under 30 VSA § 248 and residential wind or solar projects are those which would fall under 24 VSA § 4412, as well as under any of the restrictions within this Town Plan.

Wind, Solar and Water

Solar energy is commonly used for water and space heating. Some use passive solar design to reduce home heating costs by up to 10%. Any alternative energy source should be properly sited, appropriately scaled and implemented in a way as to not conflict with any other portion of the Town Plan. Any industrial/commercial-scaled project should also utilize the input of the citizens of West Rutland and adjacent towns. Industrial/Commercial wind projects are prohibited.

In order to maintain the scenic vistas and aesthetics so important to the character of the community, alternative energy sources, such as wind and solar, should be limited to residential and small agricultural usage. Commercial/Industrial wind development is counter to the aesthetics of the community and is prohibited.

The potential for waterpower exists and should be explored and encouraged if found to be economically feasible.

Recommendations:

1. Make public buildings models of energy efficiency.
2. Publicize information available from Rutland West Neighborhood Housing Services for energy efficiency testing and loans to use toward insulation, windows, etc.
3. Support opportunities for walking, cycling and other energy efficient, non-motorized alternatives to the automobile. (Endorse the proposal for the West Rutland Bicycle Pedestrian Path -March 2, 2000).
4. Support alternative energy sources such as residential-scale wind, water, and solar power or methane gas, provided that they do not conflict with any restrictions in this Town Plan.

RECREATIONAL, CULTURAL, AND HISTORICAL RESOURCES: *Consistent with the restrictive regulations found in the West Rutland Land Use Plan, our goals are as follows:*

West Rutland's historical legacy, especially the marble industry, has allowed for unique nexus of historical, cultural, economic, and recreational opportunities. The remains of the once booming quarries have fostered the growth of an arts community focused on marble carving and sculpture. An integration of the recreational facilities in West Rutland, such as bikeways and pedestrian paths, with the historic and cultural resources in town will likely contribute to economic vitality.

Recreation Goals:**Goal 1**

Provide a range of recreational activities for town residents.

Goal 2

Improve and expand existing recreational facilities and programs.

Goal 3

Support the construction of a community center with recreational facilities for the public.

Cultural Resources Goals:**Goal 1**

Support the growth of arts, historic, and other cultural organizations in West Rutland. Form a cultural committee to actively promote the cultural resources and local arts community.

Goal 2

Promote the ethnic traditions and values that give West Rutland its character and make it a special place to live.

Goal 3

Recognize the town's cultural resources and historic settlement pattern as a significant, nonrenewable resource that creates a sense of place and community well being.

Historic Resources Goals:**Goal 1**

Protect and preserve significant historic structures, sites, or districts as well as prehistoric archaeological sites within West Rutland.

Goal 2

Continue to restore the historic Marble Street District. Create a special zoning overlay to incorporate architectural and historic preservation requirements into the zoning regulations.

Town Tax	1.1149	.6787
Common Level of Appraisal	66%	100%

Non-Residential

Tax	July 2007	July 2008
School Tax	2.0448	1.2874
Town Tax	1.1149	.6787
Common Level of Appraisal	66%	100%

Source: Town of West Rutland

Coordination:

In the past, West Rutland has had very little coordination with the adjacent municipalities. There has been some coordination with neighboring towns concerning road improvements, yet this aspect of planning has not been fully utilized. West Rutland realizes the importance of working with the adjacent municipalities. In order to utilize this facet of intertown planning, West Rutland has established goals for intertown coordination.

Cooperation is a two way street; the cooperation of the neighboring towns is needed in order to reach these following goals.

1. Remain an active member of the Rutland Regional Planning Commission.
2. Control strip development along Business Route 4.
3. Show sensitivity to land use patterns along the town borders.
4. Study the possibility of sharing educational facilities with neighboring towns.
5. Discuss proposals or projects that pose significant increases to truck traffic along highways such as
6. Clarendon Avenue and Route 4A.

West Rutland Town Hall

Public Participation

The participation of West Rutland residents in the local government has been a tradition since the first town meeting in 1887 and even before then when West Rutland was considered part of Rutland City.

The local governments have seen an increase in growth that has increased the responsibilities and demands upon each town. The many committees, boards, and study groups have contributed to the development and advancement of West Rutland.

Public participation was invited from the inception of the planning process and is encouraged in future revisions of the Town Plan and Bylaws.

WEST RUTLAND LAND USE PLAN

The Land Use Districts, defined in the following paragraphs, are a guide for the growth and development of the Town of West Rutland. These land use areas provide for a variety of residential, commercial, agricultural, and recreational opportunities for the future while considering local environmental constraints as well as the existing land use patterns and the historic village center. This is not a zoning plan, although it provides guidance for zoning

changes and updates. The proposed future land use map, designating the boundaries of each district, is an integral part of the Future Land Use Plan.

Village District

The West Rutland village area is the social, civic and cultural center of the town. The pattern of densely settled, mixed use, residential and commercial structures and various municipal buildings is similar to many traditional Vermont settlements. This area also contains a very high concentration of historic structures including the Marble Street Historic District, which is listed in the National Register of Historic Places. This Land Use Plan strives to maintain the economic vitality and compatible mix of residential and commercial uses at the center of the community as well as preserve the historic integrity of the village. Therefore, the following land uses are encouraged within the confines of the village district: a variety of medium to high density residential uses; local, small-scale retail, offices, professional services, and institutions compatible with residential uses; public, cultural and civic uses (post office, town offices, churches, library, historical society, theaters, art spaces/galleries etc.). Pedestrian and bicycle facilities and well as transportation improvements would enhance the atmosphere in the village area and connect the various uses. Streets and neighborhoods that are predominately residential in the Village District should remain residential. Extensive auto related uses, and large-scale, intensive, commercial and industrial uses, which adversely impact the residential and community oriented atmosphere, are not allowed within the village district. Preservation and adaptive reuse of the existing historic structures is a priority in the village district. A historic district designation, or other overlay district, should be developed to identify standards for architecture, streetscape design, and site planning within the village to ensure that new development compliments the existing historic structures, many of which are on the State and National Registers of Historic Places. The Town of West Rutland has a "Downtown Designation" from the State of Vermont for the Marble Street Historic District. This program allows for special grants and other incentives to improve this area.

Industrial District

West Rutland has a limited amount of land suitable for industrial purposes, yet industrial development is desirable in order to expand the town's economic base. Convenient access to rail, power, and the Route 4 divided highway, makes the designated lands appropriate for industrial purposes. There are two distinct industrial districts in West Rutland:

1. The largest industrial land area is located mostly in the vicinity of the previous marble operations. This district is predominantly along the northern length of Marble Street beginning near Thrall Avenue and extending to where the name changes to True Blue Road. The remains of the marble operations, vacant buildings, machinery, and quarries make this a suitable location for industrial redevelopment.
2. Currently, there are several operations within this district including The Carving Studio and Gawet Marble & Granite. There is ongoing conversion and reuse of the remaining marble structures.
3. Extending municipal sewer to this area has been continuing to increase the development potential of the property. Limited commercial uses would be considered appropriate in the industrial district.
4. The West Rutland Industrial Park, located on Sheldon Avenue, was developed in the late 1970's to attract more light industrial operations to town. Currently, there are four companies conducting businesses within the park, but there are still a number of sites yet to be developed.
5. The Industrial Park needs adequate buffers due to its close proximity to residential neighborhoods. Emphasis in all industrial areas should be placed on minimizing adverse impacts from industrial uses (such as noise, vibration, dust, odor, among others). Appropriate buffering from adjoining properties and sitting to minimize visual impacts on the rural landscape is encouraged.

With more demands on the commercial district and lack of available commercial land, the Planning Commission has added Commercial uses to the Industrial District.

Commercial District

Business Route 4, which runs east and west through West Rutland extending into Rutland Town and Rutland City has developed as a linear commercial area, with the exception of a small pocket of rural properties remaining in the vicinity of Pleasant Street. This Plan proposes to maintain the commercial character of this area, and extend the commercial district the length of Business Route 4 between the Village and the border with Rutland Town and the

Jagazinski Farm. Extending sewer and water lines to the commercial district would also increase the development potential. This Commercial District is the appropriate location for local and regionally oriented businesses and services that require good automobile accessibility.

Development projects which enhance the cohesiveness of the Business 4 corridor, especially since it serves as a major “gateway” to West Rutland, both at the entrance/exit to the Route 4 Highway and at the border with Rutland Town, should be considered a priority. Most of the parcels along this corridor are highly visible and consideration should be given to site development and design. Access points and curb cuts should be designed to insure that Business Route 4 continues to serve as an important transportation link with neighboring communities.

Residential District I -

“Neighborhood Residential District”

The district should be served by municipal water and sewer and is suitable for medium density residential development including subdivisions, multifamily structures, condo/townhouse units and mobile home parks in addition to single family homes. Every effort should be made to provide “neighborhood amenities” such as sidewalks and “pocket parks”, among others, in this area of medium density residential development.

Residential District II -

“Farming/Agricultural and Rural Residential District”

This district is intended to provide land area for low density residential development, farming, forestry, recreation and other rural land uses. A large portion of this district is not served by municipal sewer or water and necessitates low density. Growth should be managed and consistent with the rural character of the area, the availability of municipal services, and site conditions. Conservation of open spaces and natural resources should be a high priority.

Protection and support of the remaining farms are important component of this district’s provisions, therefore, uses compatible with agricultural operations should be encouraged. For example, roads should be maintained to permit easy transportation of commodities and to accommodate farm purposes.

Conservation Districts (I and II)

Conservation areas contain lands that are very sensitive to development for a variety of reasons. They are generally characterized by significant natural resources such as dense forests, steep hills often with shallow soils, wetland areas and stream banks, among others or areas of scenic, cultural or historical significance.

These lands have been divided roughly into two conservation districts denoting the sensitivity of the land. The Town of West Rutland has designated a “Ridgeline Overlay” to protect the scenic vistas within the Town. In general, buildings shall be sited below ridgelines and below any sight lines to the ridgeline, so that they do not intrude upon the skyline and vistas. New development should blend into the natural landscape.

Conservation District I

This land serves as a buffer zone between the most restrictive of the land use areas and the other districts. Development above the 800foot contour has been designed to blend and harmonize with the landscape. Natural features such as forests, meadows and ridgelines should be conserved, and development shall be clustered in more appropriate areas.

Roads should follow natural contours, and not carve straight lines across the landscape. Shared driveways are encouraged, as they minimize the number of curb cuts along public roads and are economically and ecologically more efficient.

Conservation District II

This is the most restrictive district containing lands on which development would have a very detrimental effect. These include lands above the 1,000foot contour, lands that are very steep, and lands that are in the floodplain.

Additional areas may be included in this district if there are considered to have unusual value to the town. These areas are suitable for low impact recreational uses, such as nature and hiking trails, etc. but intensive recreational activities, such as "four wheeling", are not appropriate in conservation areas. Development above 1,000 foot contour should be extremely limited. Industrial/Commercial wind development is prohibited. Steep slopes, the availability of water, and the difficulty of onsite sewage disposal are serious issues for residential development at high elevations.

Town of Rutland

Municipal Plan

Adopted X/X/2014

LAND USE

The purpose of the land use districts in this chapter is to guide development in Rutland Town. The Land Use Districts are shown on the Land Use Map entitled Town of Rutland, Vermont Land Use Map, which is incorporated by reference as a part of this Plan.

The districts were derived from the combination of the following:

- (1) Existing land use patterns.
- (2) The goals and objectives for accommodating future growth.
- (3) The suitability of the Town for various prospective land uses.

Throughout the districts, a choice of housing, employment, shopping, educational, recreational, and cultural opportunities should be provided, with support from economical and high quality governmental and public utility facilities and services.

Information in this chapter and corresponding map shall be used to guide development, especially during the Act 250 and Section 248 review process. In absence of zoning regulations, uses and density requirements described below shall be adhered to for all new development. Any Act 250 application or Section 248 application for a Certificate of Public Good proposing a use of land not in compliance with the land use districts described below and the Land Use Map will not be supported by the town.

Land Use Districts

[Any use not stated as "permitted" is prohibited.]

R40A - Neighborhood Residential - Minimum lot size: 40,000 square feet.

Description: Areas of existing settlement within the town, selected adjacent areas, and areas suitable for modest density residential development.

Purpose: To maintain the traditional social and physical character of these areas.

Permitted uses: Single and two-family dwellings, accessory facilities, and home occupations. One housing unit and one accessory unit are permitted per lot.

Development Density: Up to one residential unit and one accessory unit per 40,000.

R40B - Planned Residential - Minimum lot size: 40,000 square feet where water and sewer service not provided; 20,000 square feet where water and sewer service provided.

Description: Lands which are suitable for higher residential intensity development because of their suitability for on-site sewage disposal and/or the presence of municipal sewer systems.

Purpose: To provide for higher density residential development in areas that are suitable for such development due to the capability of the land or the presence of public sewer facilities.

Development Density. Up to one residential unit per 10 acres.

CNS - Conservation - Minimum lot size: 25 acres.

Description: Special forest and/or open lands which are of particular ecological or aesthetic importance. Includes public watersheds as well as certain lands that are not well suited for residential or commercial development because of topography, soil composition, or wetlands.

Purpose: To preserve certain forest and open lands in a relatively undeveloped state and/or to protect public watersheds, wetlands, and water supplies.

Permitted uses: Same permitted uses as allowed in R40A District, plus recreation uses.

Development Density. Up to one residential unit per 10 acres.

C - Commercial - minimum lot size: 40,000.

Description: Land that is suitable for commercial uses.

Purpose: To house a variety of retail and other commercial services in suitable locations to meet the needs of local and regional residents. The character of the area should be protected and enhanced with the provision of landscaping and screening. The scale of development in this district should be compatible with adjacent commercial and residential structures.

Permitted uses: Commercial uses and all uses permitted in R Districts.

IC - Industrial/Commercial- Minimum lot size: 40,000 square feet with sewer service, 80,000-sq. ft. without sewer service.

Description: Existing industrial and commercial developments that are serviced by public sewer and have access to arterial highways and/or rail facilities.

Purpose: To accommodate the expanding retail and industrial sectors of the town. Provides for employment opportunities in manufacturing, warehousing, research and development, and commercial uses which specifically serve the industries or their employees in areas serviced by good transportation facilities and public utilities.

Permitted uses: Industrial and commercial uses including light manufacturing and distribution of goods and materials, and all uses permitted in R Districts.

Municipal/Government/Utility

Description: Lands currently used or planned to be used, for municipal and governmental purposes, including schools, town offices, fire stations, police headquarters, recreation facilities, landfills, salt storage facilities, highway maintenance garages, cemeteries, and fire districts. Includes developed and undeveloped land owned by electric utilities.

- Improve energy efficiency of town operations as well as public, commercial and residential buildings.
- Promote energy efficient land use development and transportation patterns
- Educate and encourage citizen participation in conservation programs.

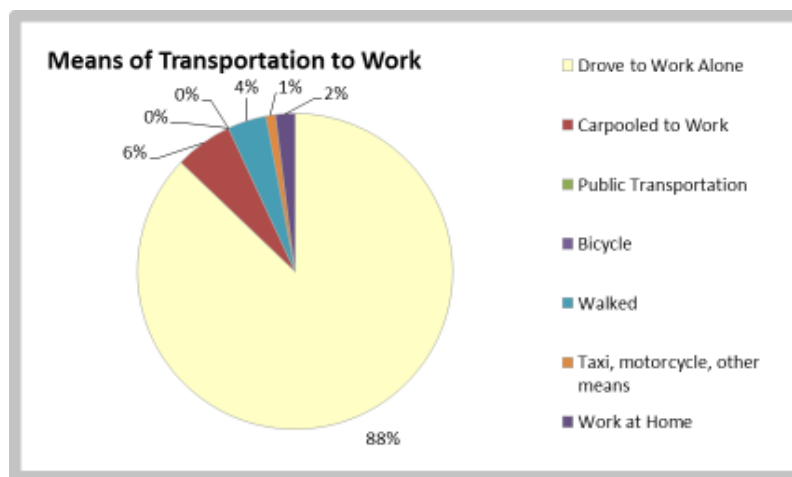
Energy Use

The three primary sources of energy use in Vermont are electricity, transportation, and residential heating and cooling.

Electricity is provided by Green Mountain Power and VELCO, which owns and operates the transmission lines. VELCO is headquartered in Rutland Town and GMP operates a major systems and operation center in the town. Several public and private organizations, such as Efficiency Vermont, operate to educate consumers about conservation and to provide technical assistance to consumers seeking to reduce their energy consumption.

Transportation is a significant consumer of energy in the Rutland Region and Vermont as a whole, due to our rural nature and mountainous terrain. The private automobile is the primary source of transportation energy consumption. According to the US Census, the mean travel time to work in Rutland Town is 15.6 minutes.

Reducing energy for transportation will mean promoting use of more efficient vehicles and the development of compact centers with support the density to encourage other means of



travel, such as bicycle and pedestrian. According to the Urban Land Institute, compact development patterns reduce vehicle miles traveled by 20%-40%.

Residential heating accounts for approximately 1/3 of the energy use in Vermont.

According to the US Census, 72% of the home heating fuel type in Rutland Town is with non-renewable sources such as fuel oil and kerosene.

Renewable Energy Production

Energy in the form of "renewable" sources can provide significant amounts of clean energy. Developing these resources is critical, as currently, the total amount of energy that can be extracted from renewable sources is significantly less than what we currently obtain from fossil fuels. To maintain quality of life, vibrant communities and prospering economies, the town will have to develop conservation strategies that use remaining non-renewable fuels wisely to transition to a society that uses more energy obtained from clean and renewable sources.

Wood: Approximately 9.1% of homes in Rutland Town used wood as their primary heating source in 2012, according to the US Census. Presently, Vermont's forests could supply many more households with wood for heating. According to statewide guidelines, each forested acre of land in the Town could probably sustain a harvest of about 1.3 cords per year if fuel wood production was the primary objective. About 0.6 cords of fuel wood per acre per year could be expected if high quality saw timber was the primary objective.

Solar: Solar energy is the most commonly used source of renewable energy, although less than 1% of Vermont homes use solar for heating. In Rutland Town, energy use from solar electric generation facilities is being provided on two scales: 1) on-site applications and small group net-metered systems for residential, commercial, government and industrial establishments to offset costs and 2) large-scale systems (some group net-metered) which feed power back into the grid but do not serve a localized area. Most small systems are exempt from local land use bylaws and larger systems are reviewed and permitted by the Public Service Board, pursuant to 30 V.S.A. §248.

The Town of Rutland has adopted Solar Facility Siting Standards, which are located at the end of this chapter. The standards shall be given full consideration during Public Service Board review and permitting of solar electric generation, and other large-scale energy generation facilities in Rutland Town.

Wind: Large and small wind energy generation is occurring more frequently in Vermont. Large scale wind energy projects have been explored or proposed in surrounding towns. As a result of the Town's physical setting, primarily in valley areas, there is greater potential for smaller-scale wind power than for large-scale projects. A recent study of wind speeds throughout the State of Vermont indicated that the eastern border of Rutland Town could have suitable wind speeds for large-scale wind generation.

Similarly to solar energy production, most small systems are exempt from local land use bylaws and larger systems are reviewed and permitted by the Public Service Board, pursuant to 30 V.S.A. §248. Standards in the Solar Facility Siting Standards apply to wind energy generation and shall be given full consideration during Public Service Board review and permitting of solar electric generation facilities in Rutland Town.

Hydro: Rutland Town is home to three hydroelectric facilities, all operated by Green Mountain Power. One is the former Vermont Marble site in Center Rutland; another is the reactivated Glen Station at the Mill Village site; and the third is at Patch Pond.

Energy Strategies

- Investigate and promote methods to reduce energy consumption by individuals, businesses and municipal operations.
- Conduct energy-saving retrofits to municipally owned facilities.
- Encourage all new residential and commercial construction to meet energy standards.
- Educate residents and builders on energy-conserving construction techniques for new buildings.
- **Encourage the development of renewable energy resources, in appropriate locations and meeting the standards set in the Solar Facility Siting Standards.**
- **Encourage small-scale solar and/or other renewable energy production methods.**

See 30 V.S.A. §248(b)(1).

The PSB must also determine whether a proposed solar facility will have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, the use of natural resources, and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) (outstanding resource waters) and the Act 250 criteria set forth in 10 V.S.A. §6086(a)(1) through (8) and 9(K).

See 30 V.S.A. §248(b)(5).

To determine whether the proposed solar energy facility would have an adverse impact on the considerations set forth as identified in:

§248(b) (5) above, PSB Rule 5.108(A) requires the PSB to conduct the so-called "Quechee analysis" to assess whether a proposed solar project would have an adverse impact by virtue of being "out of character with its surroundings," and if so, whether the adverse impact qualifies as "undue." Rule 5.108(A). The PSB therefore must consider "the nature of the project's surroundings, the compatibility of the project's design with those surroundings, the suitability of the project's colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space." Rule 5.108(A)(1).

A solar project's location, size, and visibility, together with the context of the surrounding land uses, will be relevant in the PSB's consideration of whether the proposed project would have an undue adverse impact. Among other things, the Quechee analysis requires the PSB to consider whether the proposed project would violate a "clear written community standard".

Therefore, the effective participation of the Rutland Town in the PSB's review process requires the development of specific community standards in order to ensure that local conservation and development objectives are considered and weighed by the PSB in its review of a CPG application for a solar energy facility. Toward that end, the Rutland Town Planning Commission has developed the following specific community standards for the siting and development of a solar energy facility in Rutland Town.

RUTLAND TOWN COMMUNITY STANDARDS REGARDING ENERGY FACILITIES

Purpose

The purpose of these community standards is to regulate the development of renewable energy resources and solar energy facilities in Rutland Town. These policies should also be considered in undertaking municipal solar energy projects and programs, in enacting or updating the town's bylaws to address renewable energy development and in the review of new or upgraded energy facilities and systems by the town and in Section 248 PSB proceedings.

GOALS

- 1. Promote sustainable development in Rutland Town by reinforcing traditional land use patterns and municipal development policies, maximizing energy conservation through weatherization of existing structures and appropriate siting of new development, encouraging appropriate development and use of renewable energy resources, protecting natural and cultural resources.**
- 2. Ensure the long-term availability of safe, reliable and affordable energy supplies to meet the needs of the town and neighboring communities.**
- 3. Reduce municipal energy consumption and costs, community reliance on fossil fuels and foreign oil supplies, and greenhouse gas emissions that contribute to climate change through increased**

energy and fuel efficiency, energy conservation, and active transition to alternative fuels and renewable energy sources.

4. Sustainably develop Rutland Town's renewable energy resources and local distributed energy generation capacity – including municipal and community generation and supporting smart grid technology – consistent with adopted plan policies and community energy facility and siting standards.

5. Avoid or minimize the adverse impacts of energy development on public health, safety and welfare, the town's historic and planned pattern of development, environmentally sensitive areas, and Rutland Town's most highly valued natural, cultural and scenic resources, consistent with adopted plan policies and community standards for energy development, resource protection and land conservation.

POLICIES

1. Encourage energy efficiency and conservation as primary considerations in new municipal construction projects, equipment purchases and operations. Life cycle costing shall be used by the town in evaluating capital expenditures as appropriate.

2. Encourage, to the extent practical, the use of energy efficient municipal vehicles (e.g., hybrid, bio-diesel).

3. Development should be directed toward designated growth centers and limited in the least accessible areas of the community to minimize the need for new road infrastructure and reliance on the private automobile.

4. Support land use and conservation policies that encourage ongoing forest management to maintain a local source of fuel-wood.

5. Support land use and conservation policies that encourage agricultural uses on prime agricultural soils to increase the supply of and access to locally produced food and reduce the total food transport miles required to sustain Rutland Town families.

6. Encourage small scale and appropriately sited development of renewable energy generation solar panels. Such encouragement should consider, but not be limited to the prevention of:

A. Undue adverse visual impacts on adjacent properties, scenic corridors and Rutland Town view sheds;

B. Forest fragmentation, environmental degradation, and habitat disruption;

C. Impacts to sediment transport and aquatic organisms' passage in streams;

D. Their use of land with prime agricultural soil.

7. Prohibit free-standing solar generation structures on forest land above 1000 feet elevation.

8. The town – in collaboration with the Rutland Regional Planning Commission, neighboring communities and utilities serving the town – will participate in long- range utility. Planning to ensure that adopted plan policies and community standards are identified and considered in future energy planning and development.

9. Existing and proposed municipal policies, programs and regulations will be evaluated for their effect on municipal energy use, and revised as needed to promote reduced energy consumption, increased energy efficiency, and the sustainable development and use of local renewable energy resources.

10. Energy and fuel efficiency will be primary considerations in municipal construction projects.

- Roof or building-mounted systems on a historic building shall not physically damage the structure or alter its character-defining features.
- Roof-mounted installations shall be placed below and behind existing parapet walls. Panels are to be mounted flush with and at the same existing angle as the existing sloped roof surface. On flat roofs solar panels shall be set back from the edge of the roof to minimize visibility.

NATURAL AND CULTURAL RESOURCES

Introduction

Before a community can plan for its future, it must identify natural and cultural resource assets and create clear standards for their protection. Natural and Cultural Resources are shown on Natural Resource Maps #1 and #2, which are hereby incorporated with this plan.

Goal:

- **Protect natural and cultural resources from the impacts of development, while maintaining access to and appropriate use of those resources.**

Agricultural Resources

Although agriculture has been a prominent land use in the town since its original settlement, large-scale agricultural use of land has been steadily decreasing due to the proximity to Rutland City, demand for housing, and the increasing economic pressure on farmers within Vermont. Agricultural are located primarily along Otter Creek in the west/southwest sector of town and between North Grove Street and East Pittsford Road/Blueberry Lane in the north sector. A recent upswing in smaller-scale agricultural activities has increased the number of farms in the region and is supporting a growing agricultural economy.

An analysis of settlement patterns in Rutland Town indicate that only a small number of structures are currently standing on the highest quality soils in the community. Land designated as “prime” agricultural lands comprise 22% of the town’s total and land. 17 structures (1%) of the total number of buildings in town are located on what are considered to be prime or statewide agricultural soils.

Forest Resources

Most of the forestland is located on slopes bounded by West Rutland and Proctor to the west and by Mendon to the east. There is a small amount of valuable timber, but most of the land is used as a scenic and recreational resource--hunting, hiking, bicycling, and cross-country skiing.

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

impairment to surface waters in the Rutland Town. Unlike point source pollution, such as a direct discharge or outfall pipe, non-point source pollution is more diffuse, harder to quantify and more difficult to control. Examples of these are runoff from parking lots, back roads, fertilized lawns, and runoff from agricultural fields. It has been well documented that urban and suburban non-point sources contribute more phosphorus and sediment per acre than runoff from the working landscape.

Natural and Cultural Resources Strategies

Land Resource Strategies

- Incorporate measures that provide protection for land resources during development
- The Town's primary agricultural soils should be conserved for agricultural uses if they are economically viable; development should be steered away from prime agricultural soils.
- Forested lands should be conserved to protect against erosion and to preserve their scenic and recreational qualities.
- Wildlife habitats in the Town should be conserved; the impacts of development and land use change on these habitats should be minimized through the use of conservation easements, purchase, lease, tax incentives, or other measures. prohibited
- Land development is discouraged on slopes greater than 15%.
- Sand and gravel operations should be carefully reviewed to ensure the public's safety and freedom from noise, dust, traffic and other intrusions in residential areas.
- Identify other lands to prevent flooding by maintaining vegetated buffer strips in riparian zones surrounding streams and rivers; maintaining; upland forests and watersheds for predominately forest use; and requiring new development to preserve vegetated riparian buffer zones that are consistent with state riparian buffer guidelines.

Historic Resource Strategy

- Preserve historic structures and scenic, cultural, recreational, and unique natural resources during development.

Water Resource Strategies

- Protect water resources so that water quality is maintained, access is preserved, erosion and encroachment are minimized, and public interests are advanced.
- Gravel aquifer and wellhead areas should be protected from development that would pollute or restrict the flow of water through porous soils.
- Any use or development proposed to be located within or adjacent to the watershed of a public water supply or community well system shall be carefully reviewed for potential detrimental effect to both the quality and quantity of the supply.

- No development or earth disturbance of any kind should occur within fifty (50) feet of any shoreline and no on-site septic disposal facilities should occur within one hundred and fifty (150) feet of any shoreline.

- Development in Special Flood Hazard Areas and Fluvial Erosion Zones shall be discouraged.

- Land development resulting in the loss of wetland storage capacity, or impacting negatively on water quality is discouraged.

- Work to develop more consistent, accurate and thorough identification of wetlands areas through the use of best available data and the adoption of local wetlands regulations and updated maps.

- Enhance subdivision regulations to protect wetlands and prohibit structural development or intensive land uses in Class One or Class Two wetlands unless there is an overriding public interest.

- Land development, including the construction of roads, that results in the loss of wetland storage capacity, or negatively impacts water quality is discouraged.

- Consider creating a Regional Watershed Stormwater Management group with other area jurisdictions to reduce runoff pollution into local waterbodies.

- Reduce the percentage of impervious surfaces by limiting the number of rooftops and paved areas, by using permeable surface materials, employing disconnection practices, and by implementing Low Impact Development (LID) principles and other methods to increase stormwater retention and infiltration.

RUTLAND TOWN



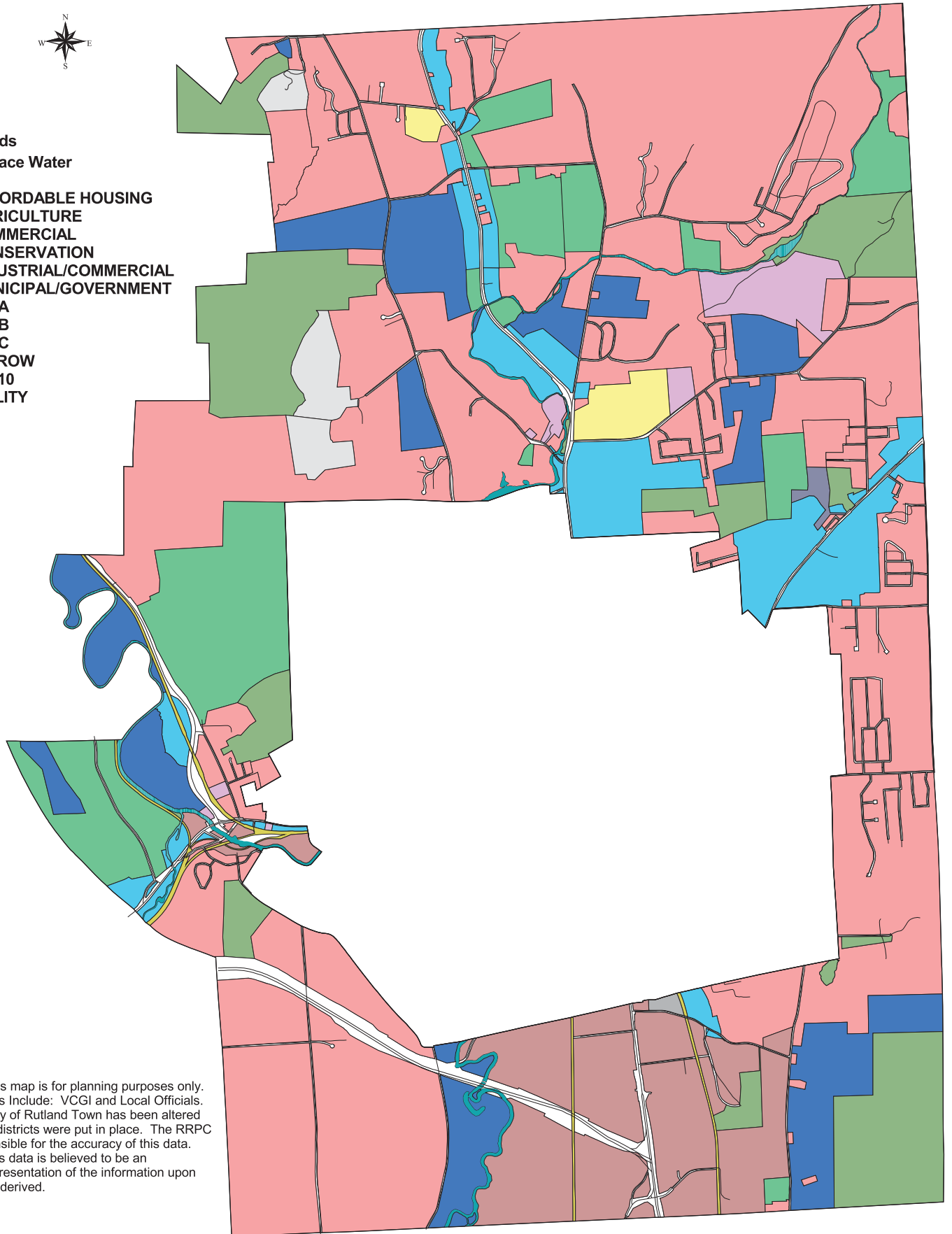
LEGEND

Roads

Surface Water

Districts

- AFFORDABLE HOUSING
- AGRICULTURE
- COMMERCIAL
- CONSERVATION
- INDUSTRIAL/COMMERCIAL
- MUNICIPAL/GOVERNMENT
- R40A
- R40B
- R40C
- RR ROW
- RR-10
- UTILITY



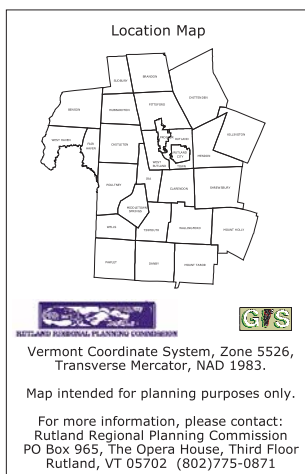
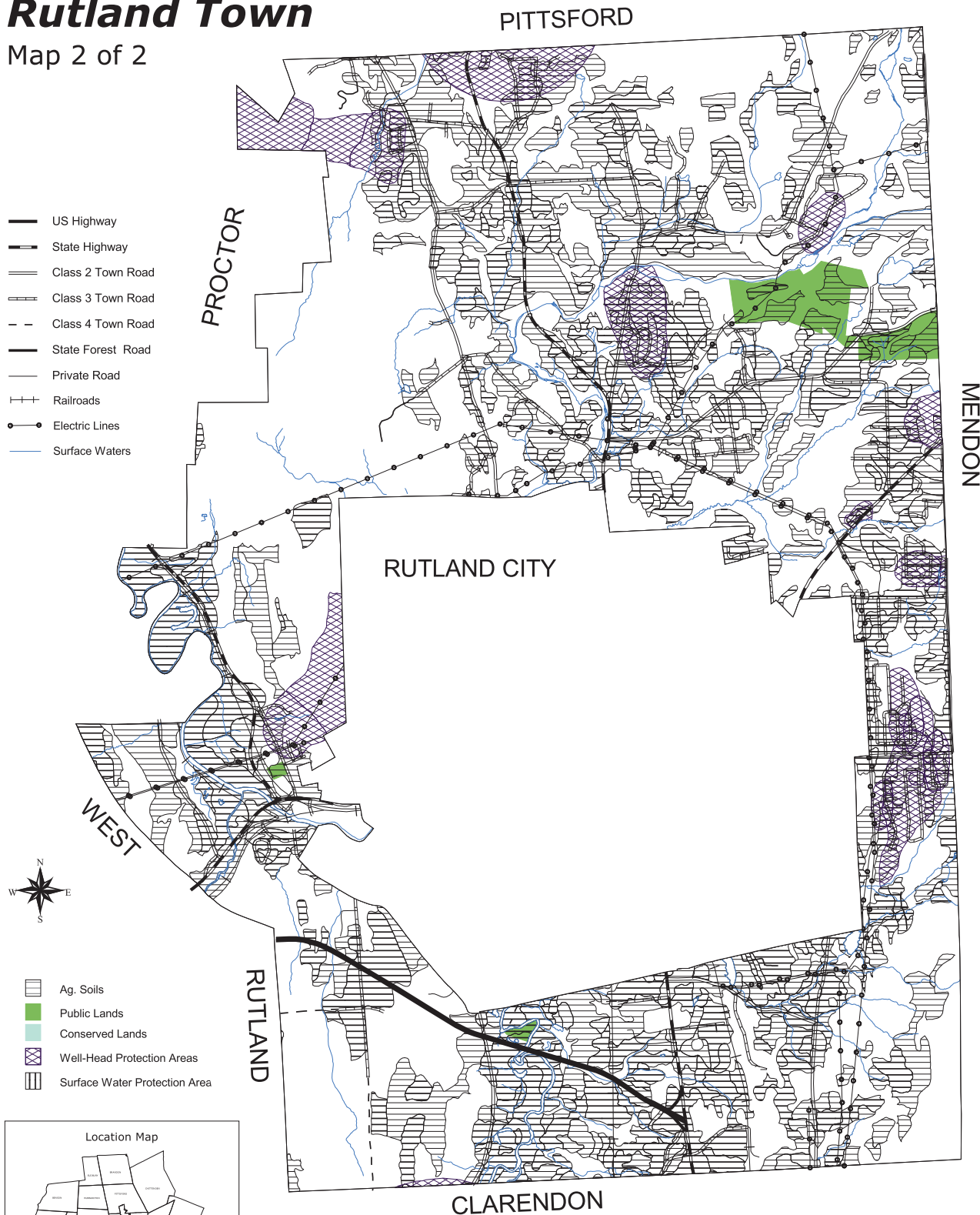
NOTES: This map is for planning purposes only.
Data Sources Include: VCGI and Local Officials.
The boundary of Rutland Town has been altered
since these districts were put in place. The RRPC
is not responsible for the accuracy of this data.
However, this data is believed to be an
accurate representation of the information upon
which it was derived.



Natural Resources

Rutland Town

Map 2 of 2



POLITICAL BOUNDARIES: 1:24,000 USGS Quadrangles, VCGI, 1991.

ROADS: VT Enhanced 911 project 1996 -1998.

SURFACE WATER: Interpreted from 1:5,000 orthophotos using USGS 7 1/2' quadrangles and 1:20,000 color infrared aerial photography as additional source material.

PUBLIC/CONSERVED LANDS: Vermont Conserved Lands Database 1:5,000 parcel data, UVM-SNR-SAL, 1999.

SOILS (Prime and Statewide Ag without Hydric): Optically scanned from 1:20,000 USDA-NRCS soil maps, 1981.

WELLHEAD PROTECTION AREAS: SPA's for groundwater sources (wells, springs), 1:24,000 USGS QUADRANGLES, VANR-DEC- Water Supply Division and VT Department of Health, 1998.

SURFACE WATER PROTECTION AREAS: SPA's for surface water sources (stream, pond, etc.) 1:24,000 USGS quadrangles, VANR-DEC-Water Supply Division and the VT Department of Health, 1998.

SOURCE PROTECTION AREAS: Surface and subsurface areas from or through which contaminants are reasonably likely to reach a public water source. GPS coordinate information 1994. Halliburton NUS Corp. original dataset: 1:24,000 USGS quadrangles, VT Department of Health. SPA's for planning purposes only. Refer to the VANR-DEC, Water Supply Division, for official SPA determinations. (802) 241-3400.

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January 2002

Town of Clarendon

Town Plan

Adopted March 22, 2010

Goals and Objectives to Guide Future Growth

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

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

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

Provide and maintain a transportation system that is safe and efficient and meets the needs of all segments of Clarendon's population.

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

Minimize energy consumption. Reduce reliance on nonrenewable energy sources. Assure that energy development is environmentally neutral and does not impact the health of residents and does not result in a negative impact on property values.

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

Policies for the Preservation of Natural and Cultural Resources

The Town will work to observe the following policies:

Agricultural and Forest Lands and Mineral Resource Areas

Encourage the continued use of agricultural lands for food production and other agricultural purposes.

Support management of forestry resources.

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

Wildlife Habitat, Fragile Areas and Geologically Significant Locations

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

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

Rivers and Streams

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

Ponds

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

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

Wetlands

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

Groundwater

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

Energy Conservation

Encourage settlement patterns that reduce travel requirements for work, services, shopping and recreation. Promote opportunities for walking, cycling and other energy efficient, non-motorized alternatives to the automobile. Encourage energy efficiency in residential and public buildings so as to reduce dependence on energy sources.

Cultural Resources

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

Cooperate with historians and archaeologists researching Clarendon's past.

FUTURE LAND USE

Land Use Plan

The growth of Clarendon is apparent; populations will increase, the use of the land will change and the demand and need for community services will increase. The principal objective of sound, rational land use planning is to accommodate this anticipated growth while minimizing the adverse impacts on the land, the environment and public and private investments.

The following districts - displayed on Map 2 - are proposed to ensure these objectives. They will also serve as the basis of zoning regulations in the Town of Clarendon.

Conservation District

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

Residential and Commercial District

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

The residential portion of this district is to allow for residential and commercial/retail uses at densities appropriate with the physical capability of the land and the availability of community facilities and services. Other uses incompatible with residential and commercial uses, such as industrial and/or manufacturing shall not be allowed for the health, safety and welfare of the community.

The village area of the town shall be supported by the ideals of this district. The village has a role in our community by being a social and economic activity center. This area will also be able to provide for residential, commercial and other compatible development that serves the needs of the community. Such development should occur at densities and uses that will maintain the traditional, social and physical character of the village and that will not exceed the capability of the lands, waters, services and facilities.

Commercial and Industrial District

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

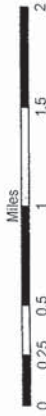
CLARENDON, VERMONT

MAP 2 - FUTURE LAND USE

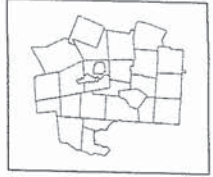
Legend

- US Highway
- State Highway
- Class 2 Town Road
- Class 3 Town Road
- Class 4 Town Road
- State Forest Road
- Private Road
- Other Road
- Surface Water

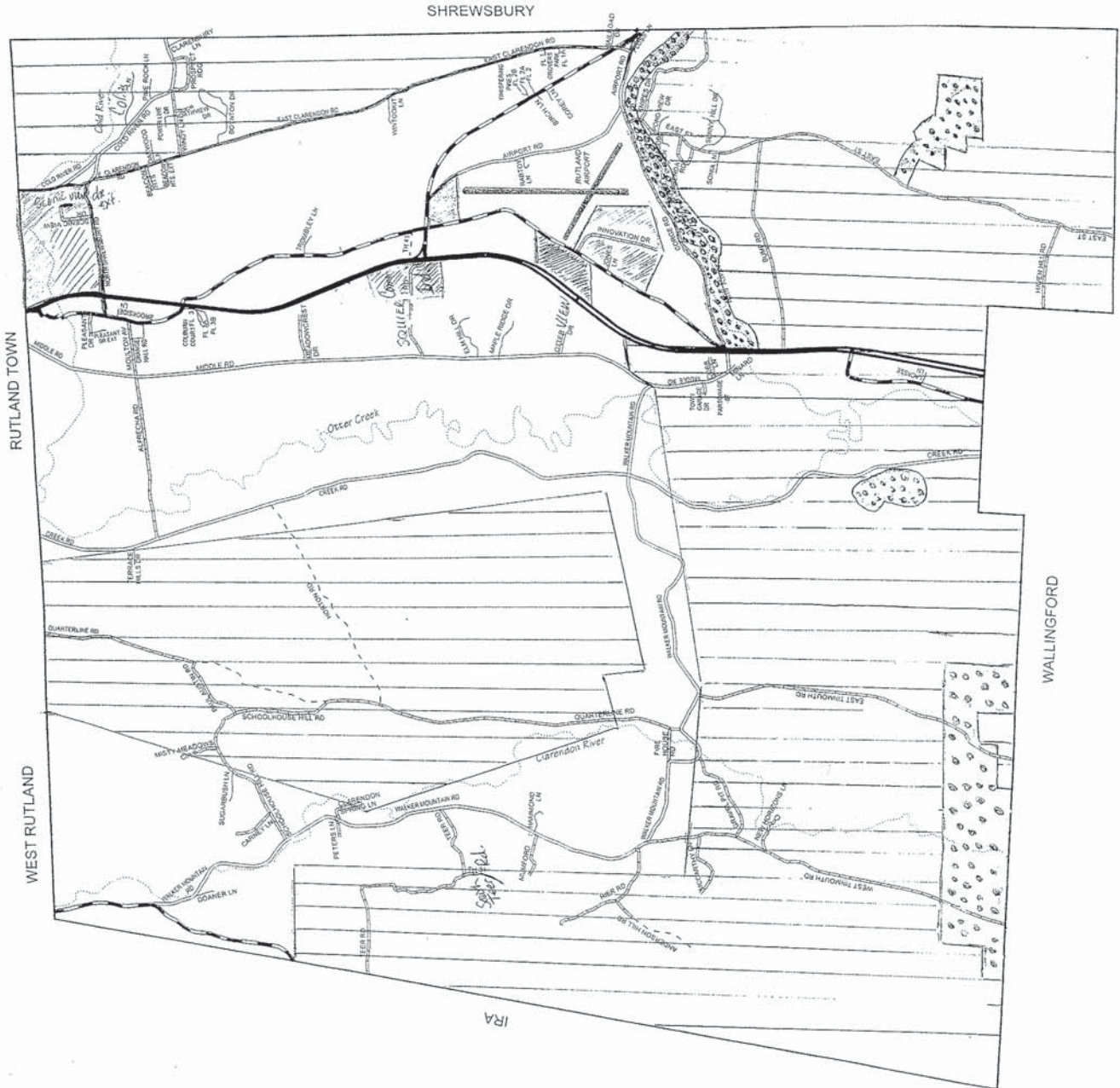
- Agricultural + Rural Residential District
- Residential + Commercial District
- Commercial + Industrial District
- Conservation District



LOCATION MAP



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This map (D:\RRPC\H Security Maps\Clarendon.mxd)
was produced on 6/30/2005



Town of Shrewsbury

Town Plan

Effective November 2013 – November 2018

Use of the town plan is not limited to regulations and adopted capital budgets. A wide range of projects, sponsored by the town itself or groups serving the town can implement the goals of the plan to ensure that Shrewsbury's plans for its future are being coordinated. Programs or initiatives that further the purposes of the plan could include such projects as the development of advisory commissions which would address issues like affordable housing and historic preservation, the development of tax stabilization contracts which would allow the town to promote the growth of specific types of businesses or the municipal purchase of development rights which could preserve undeveloped lands.

The following list of maps in the Appendix, together with those maps noted below that are on file in the Shrewsbury Town Clerk's Office, are made part of this Plan and incorporated herein by reference. It should be noted that these maps exist only as a general representation of existing conditions, to facilitate on-site analysis and the planning process.

List of Maps in Appendix:

1. Shrewsbury, VT Municipal Map
2. Future Land Use
3. Natural Resources, Shrewsbury, Map 1 of 2
4. Natural Resources, Shrewsbury, Map 2 of 2
5. Shrewsbury, VT Contours
6. Shrewsbury, VT Aerial Photograph
7. Shrewsbury, VT Watersheds
8. Flood Plan map.

Additional Maps to be on File at Town Office:

1. Flood Plan map
2. Official Highway map
3. Parcel map (available in hard copy and electronically)

3. OBJECTIVES

It is the purpose of this Plan to guide future growth and development within the Town of Shrewsbury by providing a framework of planning policies and recommendations which will assure that decisions made at the local, regional, and state levels are consistent with the following objectives:

3.1 To protect and preserve the rural nature, scenic quality and sense of community of Shrewsbury;

3.2 To protect public health and welfare and property values from air, noise, water and light pollution, and other disturbing physical influences;

3.3 To assure that basic needs of health, safety, education, housing and recreation will be met and maintained at appropriate levels in accordance with the Town Plan;

3.4 To provide for the conservation and prudent use of natural resources, the protection of fragile areas, and the preservation of agricultural land, forest land and wild lands. Wild lands are unsettled, uncultivated land left in or returning to its natural condition.

3.5 To protect and preserve scenic and historic features;

3.6 To maintain and encourage agriculture and forestry as a part of our Town;

3.7 To require that public utilities be located and maintained in such a way that they will not have an adverse effect on the scenic quality, biological and general health, and land use in the Town;

3.8 To mitigate any incompatible or uncoordinated development activity;

3.9 To allow for future growth in a way that will meet the needs but will not place an undue burden, financial or otherwise, on the Town to provide community facilities and services;

3.10 To encourage that the Town and State roads permit safe travel within and through the Town in the least disruptive manner to the land and within the limits of Town financial resources and the State Scenic Road Act;

3.11 To protect aquatic and upland ecosystems, critical animal habitats and corridors, and wild areas;

3.12 To encourage energy efficiency, energy conservation and non-polluting renewable energy production.

4. LAND USE PLAN

4.1. Natural Factors

4.1.1. Geology

Bedrock Geology of the Shrewsbury, VT Area, by Charles A. Ratte, State Geologist.

The bedrock underlying the Town of Shrewsbury is composed of ancient metamorphic rocks of Precambrian Age (600 million years and older.) The region has been mapped by William F. Brace (1953) and the results of his work have been published by the Vermont Geological Survey (see reference below).

The rock units mapped by Brace (1953) include the Wilcox Formation which is composed of a group of gray-to-black schist, buff-to-tan-colored dolomite and white-to-black gneiss about 3000 feet thick. This formation is exposed in out-croppings in the western part of the Town of Mendon and Shrewsbury and can be seen in exposure along Mendon Brook, Cold River and on Wilcox Hill. The major Precambrian rock unit mapped by Brace (1953) is known as the Mt. Holly Complex. This unit is composed of metamorphic rocks known as gneiss, quartzite, schist, and marble. Gneiss is by far the dominant rock variety. An interesting bright green Schist with chromium-bearing mica is exposed in a small saddle on the north side of Round Hill in Shrewsbury (Brace, p. 27).

4.2.3 Economic Base

Timber, agricultural land, some mineral sources, and sand/gravel deposits are still a part of Shrewsbury's economic base, but the greatest resource we have is our land and its rural and scenic nature. This special land resource contributes to the local economy and that of the Region and State where tourism and recreation are the leading industries. The Town's challenge is to keep Shrewsbury predominantly rural. Small-scale agriculture and local home or "cottage" industries offer economic opportunities for Shrewsbury residents while reinforcing the basic rural economy of the Town. In recent years there has been an increase in local vegetable and fruit production with Community Supported Agriculture (CSAs), farmer's markets, roadside markets and local food coops selling local produce. Spring Lake Ranch, one of the oldest half-way houses in the United States, is the Town's largest employer.

4.3 Prospective Land Use

4.3.1 Development Constraints

An analysis of natural factors influencing prospective land use has identified certain elements that have historically placed critical constraints on development and will continue to do so in the future. The constraints imposed by some of these elements are described below with policies for prospective land use.

4.3.1.1 Shallow Soils

Much of Shrewsbury has shallow depth to bedrock. Shallow soils present design constraints during the construction of roads, the clearing, paving and re-grading of land, as well as the location, planning and construction of homes and sewage treatment systems. Proper installation of these systems is necessary to prevent contamination of groundwater, seepage to the surface, or freezing of sewer and water lines. Once the vegetation is disturbed during construction, the soil cover is highly susceptible to erosion.

POLICY 1 - Shallow Soils

1. Septic systems shall be designed and installed in accordance with the State of Vermont Wastewater System and Potable Water Supply rules.
2. Septic regulations shall address the constraints that shallow soils present to septic system design.
3. Erosion control measures must be implemented on all sites.

4.3.1.2 Steep Slopes

Development on slopes in excess of 15 percent without proper precautions may threaten the stability of the property being developed and the quality of the surrounding property. On-site sewage disposal hazards, soil erosion due to increased rates of runoff and landslides not only jeopardize the development in question, but are also a threat to the water supplies and properties of down-slope owners. Consequently, slopes steeper than 15% present extreme difficulty in complying with the Vermont Health Regulations governing subdivisions.

POLICY 2 - Steep Slopes

1. State guidelines shall be followed for preventing soil erosion at construction sites. On lots where a substantial portion of developed area exceeds a slope of 15%, an erosion control plan shall be required.
2. Any development on slopes over 15% may be allowed only if it can be demonstrated by the owner that development and subsurface disposal of sewage will meet the appropriate state and local regulations, will not endanger any other water source, and will not cause erosion.
3. It is the policy of the Town to prohibit all development on slopes of 20% or greater.

4.3.1.3 High Water Table

Areas with a seasonal or year-round high water table close to the ground surface place very critical constraints on settlement. Use of subsurface sewage disposal in these areas can result in pollution of surface and ground water due to lack of sufficient unsaturated soil for adequate treatment of sewage. Cellars are frequently filled by excessive seepage of water.

POLICY 3 - High Water Table

1. All septic systems shall meet Agency of Natural Resources waste water and water supply rules to avoid contamination of groundwater.

4.3.1.4 Flood Plains

Flood plains pose inherent hazards to human life, health, and property. The major flood plains in Shrewsbury as designated by State and Federal mapping are along the Mill River and along the Cold River. The 100-year flood frequency is used as the standard for delineating flood hazard areas by the Federal Emergency Management Agency (FEMA).

An important function of floodplains is the storage and conveyance of flood waters. New development and the associated fill placed in a floodplain can obstruct flood flows and

reduce the ability of the floodplain to store water, which can subsequently cause floodwaters to rise to higher levels on upstream and adjacent properties.

The National Flood Disaster Protection Act of 1973 requires: (1) the Town to regulate development in designated flood hazard areas, and (2) that property owners in flood plain areas purchase flood insurance. If the community or property owners fail to meet the National Flood Insurance Program (NFIP) requirements, then any federal and federally related financial assistance for buildings in the flood plain will be unavailable to either the community or property owner.

The vast majority of flood damage suffered in Vermont is caused by fluvial erosion, not inundation. Without the expertise and tools to manage fluvial erosion hazards, towns have been helpless to break out of this cycle of repetitive and costly flood damages. On August 28, 2011, much of Vermont was dramatically affected by Tropical Storm Irene. This storm delivered upwards of 6" of rain, causing streams and rivers to overflow their banks, damaging and destroying roads, culverts, bridges, homes and businesses. The storm exceeded the 100 year flood level.

POLICY 4 - Flood Plain

1. Shrewsbury shall maintain Flood Hazard Area Regulations to mitigate flood hazards and fluvial erosion.
2. Development in the Flood Plain shall comply with the Shrewsbury Flood Hazard Regulations.
3. Shrewsbury should take steps to reduce future hazards from occurring by adopting a Fluvial Erosion Hazard Zone overlay district. The zone would be scientifically defined based on the stream geomorphic assessment (SGA) data and would reflect the area needed for the stream to behave in a natural manner, with corridor planning and management.

4.3.2 Fragile Areas and Natural Areas (See maps)

Fragile and Natural Areas are rare or irreplaceable natural resources. These areas may have significant or unique value for biological habitat, scientific research, educational, aesthetic or recreational purposes, or may simply be an area especially valued by Townspeople. Because these areas contribute to maintaining the environmental health and quality of the Town, such areas require special conservation and protective measures.

4.3.2.1 Elevations Above 2000 Feet (See Fragile Areas map)

As part of the Green Mountain Range, the land in Shrewsbury rises to relatively high elevations, with Shrewsbury Peak being one of Vermont's highest peaks at 3720 feet above sea level. On high elevations, generally above 2000 feet, precipitation is greater, air and soil temperatures are lower, soils are shallow and low in nutrients, slopes are

steep, and fewer varieties of plants exist. Such characteristics create an environment which is intolerant of intensive use or development.

Excessive erosion may result when these high-elevation areas are disturbed because the few natural species of plants at these altitudes grow quite slowly, thus reducing their ability to control erosion.

These high mountain areas play a vital role in the water cycle. The greater amounts of precipitation filter through the thin soils, eventually reaching major groundwater supplies. Uses which result in excessive soil compaction or the removal of vegetation or soil cover are especially detrimental to the natural drainage of water. Also, the natural topography of Shrewsbury is such that the high elevation peaks and ridgelines that bound Shrewsbury's watersheds on the north lie not within Shrewsbury, but in the neighboring town of Mendon. While beyond the direct control of Shrewsbury's Town Plan or Zoning Ordinance, settlement or development on these adjacent lands may directly and adversely affect the Town of Shrewsbury, the health, safety and welfare of the Town's residents and the aesthetic and scenic resources of the Town.

POLICY 5- Elevations Above 2,000 Feet

1. Elevations above 2000 feet shall be protected with respect to intensive uses and commercial recreation. The Shrewsbury zoning bylaws shall require a site review procedure for development at elevations between 2000 and 2300 feet in order to assure that any development in these zones will not adversely affect the fragile ecosystems and scenic quality of the terrain. No development of any kind shall be allowed over 2300 feet.

2. The Town of Shrewsbury should work closely with other municipalities in the region in planning and reviewing development along the Town's boundaries. This would include participation in Act 250 and Section 248 hearings, in local zoning proceedings and in regional discussions as appropriate to achieve these goals and to safeguard Shrewsbury's interests.

4.3.2.2 Wetlands (see Fragile Areas map.)

Wetlands in Shrewsbury are extensive, including but not limited to: Fletcher Swamp, Johnson & Cook's Ponds, Hebert Swamp, Elliot House Beaver Pond, and Black Swamp. These areas fulfill many important functions. Because of their high water-absorptive and holding capacity, they serve to retain runoff, thereby reducing the hazards of flooding and providing an important link in replenishing groundwater supplies. These areas are commonly known as ponds, bogs, fens, marshes, wet meadows, shrub swamps, and wooded swamps. Wetlands often occur in association with lakes, ponds, rivers, and streams, creating transitional areas between dry land and open water. Wetlands are the source of major food chains, thus providing a unique habitat for a wide range of wildlife. Many recreational and educational opportunities such as hunting, fishing, hiking, bird watching and nature study are provided by these areas. The Town's zoning regulations require that any proposal for development or agricultural use should be set back by at least 100 feet from Wetlands. The Vermont Use Value Appraisal (UVA) program now recognizes riparian areas as one of six designated Environmentally Significant

Treatment Areas which can be designated on qualifying UVA parcels, adding another level of protection to water resources in Shrewsbury.

POLICY 6-Wetlands

1. Wetlands will be protected from encroaching development, including roads and driveways, and disturbances harmful to wetland-dependent wildlife by restricting development and specific activities in wetlands and by maintaining and/or establishing undisturbed, naturally vegetated buffers around their edges. Wetlands in the State of Vermont are classified as class I, II, or III and are regulated by the State of Vermont and the Army Corps of Engineers.
2. The Town's zoning regulations shall require that any development or agricultural use be set back by an appropriate distance from the wetlands.

4.3.2.3 Water Resources, Shorelines, and Stream Banks

Shorelines and stream banks are fragile areas. Certain species of wildlife are greatly dependent upon the particular habitat of these areas. Vegetation along the water's edge acts as a stabilizing force, helping to prevent erosion and siltation and providing shade to water. All surface waters are under state jurisdiction. Building too close to shorelines negatively impacts stream ecosystems. Effluent leaching from septic systems placed too close to the water's edge can pollute ground and surface water. Moreover, development in neighboring towns could adversely affect headwater streams and aquifer recharge areas within Shrewsbury's boundaries.

POLICY 7 - Water Resources, Shorelines, and Stream Banks

1. Shorelines and stream banks shall be protected from uses that may reasonably be expected to cause erosion, increase water temperature, and reduce scenic qualities of surface waters or cause pollution. Any development endangering the natural quality of shorelines and stream banks shall be prohibited. Water Resources shall be managed as necessary to include eradication and preventative control measures against invasive plants and pests that threaten our water resources, shorelines, and stream banks. More information for landowners can be found at www.vtinvasives.com or by speaking with the USDA Natural Resource Conservation Service.
2. Water resources should be managed as necessary to control and eliminate invasive plants and pests that threaten our water resources, shorelines, and stream banks.
3. An appropriate buffer zone shall be established and maintained for protection of streams, ponds, and lakes. No work shall be done that degrades a currently vegetative buffer zone along a stream bank. The Vermont Use Value Appraisal (UVA) program now recognizes riparian areas as one of six designated Environmentally Significant Treatment Areas which can be designated on qualifying UVA parcels, adding another level of protection to water resources in Shrewsbury.

4. It is Town policy that no development, agricultural or forestry practice in Shrewsbury shall degrade or otherwise adversely affect the water resources of the Town.
5. Watersheds shall continue to function as biologic units. Habitat and forests shall be interconnected and not fragmented.
6. It is Town policy to encourage owners and residents to work with the Planning Commission to prepare specific land use and development plans for their watershed. Once the owners and residents and the Planning Commission are satisfied that the plan for their watershed meets the policies of the adopted Town Plan, the watershed plan can be reviewed and approved by the Town for inclusion in the official land use regulations and plan.

4.3.2.4 Aquifer Recharge Areas

The quantity and quality of the Town's ground water supply is directly related to the type and intensity of uses that occur in areas of high aquifer recharge. Settlement can greatly reduce these areas of recharge and also increase surface runoff, thus decreasing infiltration of surface water. Also, the quality of groundwater may be threatened through numerous subsurface sewage disposal systems. Because a potable water supply of sufficient quantity is of critical necessity to life itself, these fragile recharge areas require protection.

POLICY 8 - Aquifer Recharge Areas

1. Aquifer recharge areas shall be permanently protected from uses and development that would significantly reduce their permeability or endanger the quality and/or quantity of groundwater supplies.
2. The location of soils that allow water to penetrate into the ground to form the ground water supply for Shrewsbury should be identified and shown on maps.

4.3.2.5 Critical Wildlife Habitat

Critical wildlife habitats are those areas that are necessary for the survival of a wildlife species at any period of its existence. The wetlands areas within the Town fulfill this function for many species. Habitats such as the Black Swamp, Fletcher Swamp, Spring Lake, and the area around Johnson Pond and Cooks Pond provide excellent cover and food. The remote, heavily wooded, rugged, and unpopulated sections of Shrewsbury including the Calvin Coolidge State Forest, the Plymbsbury Wildlife Management Area, and Parker's Gore, the wildlife corridor in Mendon, also provide valuable wildlife habitat. In fact, our Town contains excellent habitats for bear, deer, bobcat, furbearers, moose, turkey, snowshoe hare and other animals, which require large contiguous tracts of land for survival. In addition, the several lands in trust, or lands on which development rights have been sold or donated, offer a future guarantee for wildlife habitat's existence. The Vermont Use Value Appraisal (UVA) program (current use) now recognizes critical wildlife habitat as one of six Environmentally Significant Treatment Areas for which landowners can designate portions of their UVA-qualifying lands.

Preservation of den trees and a good distribution of trees in various age classes over the entire area are critical to preserving a variety of wildlife species. The potential development of wild places in neighboring towns can eliminate essential habitat and corridors for many wildlife species, it is necessary that Shrewsbury protect its critical habitats if the Town wishes to enjoy the presence of a variety of wildlife, and to ensure continued biodiversity.

POLICY 9 - Critical Wildlife Habitat

1. Critical wildlife habitat and corridors (including, but not limited to, den trees and bear corridors, wetlands, deer yards, surface waters, streams) shall be protected from uses and settlement that reduce their vital biological function.

2. The Town should request that the existing Conservation Commission, in consultation with the Vermont Department of Fish and Wildlife, identify important wildlife habitat and to propose measures to improve habitat and to assure a healthy and diverse wildlife population in the Town.

3. Landowners are encouraged to include forest management practices that will benefit wildlife in their Use Value forest management plans; to work with land trusts and non-profit organizations to protect critical wildlife habitat; and, if they wish, to apply for financial assistance in enhancing wildlife habitat (such as from the USDA Natural Resource Conservation Service).

4.3.2.6 Unique Geologic Areas

Unique geologic areas are uncommon formations which illustrate the past actions of natural geologic processes. As such, they have important educational and recreational value. Shrewsbury Peak, the Clarendon Gorge, Granite Hill, the Molybdenite Prospect west of Cuttingsville, and the Round Hill Fuschsite Locality are some of these areas in Shrewsbury.

POLICY 10 - Unique Geologic Areas

1. Unique geologic areas shall be protected from any uses which would destroy or impair their scientific or non-commercial recreational value.

4.3.3 Resource Areas

4.3.3.1 Agricultural Lands

There are approximately 3,500 acres of prime, statewide important, and locally important agricultural land in Shrewsbury, of which approximately 774 acres are of prime agricultural soil. These lands represent the soils mapped by the USDA and Vermont

Agency of Agriculture for soils that are suited for growing and agricultural potential. At one time, the Town of Shrewsbury was primarily an agrarian community, producing sheep, wool, and maple, and dairy products. Only one commercial dairy farm remains, but the following have been, and will continue to be, viable:

- * commercial and personal vegetable gardening including CSA farming
- * sheep and goat-raising for wool, fleece, milk, cheese and meat
- * small/micro dairy farming for raw milk production
- * beef cattle
- * maple sugaring
- * Christmas trees, ornamental, shade and fruit stock
- * fruits, such as apples, blueberries, raspberries and strawberries
- * herbs, fresh and dried flowers, specialty crops

If maintained and encouraged, agricultural land use will continue to have a tremendous positive effect on the visual appeal and value of Shrewsbury's landscape and the productivity of our community. After 200 years of cultivation, the meadows cleared by the first settlers are reverting to forest or are being used for housing sites. Shrewsbury residents are truly interested in preserving the traditional rural character and scenic value of the Town; therefore, we commit to preserving the remaining agricultural land and to assuring that farming remains a viable economic enterprise in Shrewsbury.

Whatever we do in Shrewsbury, we do it on soil. The more the requirements of our land uses match the properties of the underlying soils, the more we are likely to have a productive, healthy, and vigorous community now and in the future.

Residential, commercial or industrial development of agricultural lands provides at best a shortsighted benefit. Loss of productive land may reduce our long-term ability to support our population. Conversion to non-agricultural use increases costs to the community and diminishes our capacity for agricultural production. Fragmentation of lands reduces their agricultural and natural heritage value.

The State of Vermont has developed Accepted Agricultural Practices which are a base level of management for all farms in Vermont. These management practices are designed to reduce non-point source pollution to surface waters from agricultural activities. Implementation of Accepted Agricultural Practices by Vermont agricultural operators creates a rebuttable presumption of compliance with Vermont Water Quality Standards and the Vermont Wetland Rules.

POLICY 11—Agricultural Lands

1. Agricultural soils are a critical resource and quality agricultural soils should be protected. The use of these soils for appropriate scale agricultural development is encouraged. Other development should be concentrated primarily on those soils low in potential agricultural value. Agricultural land shall be managed as necessary to include eradication and preventative control measures against invasive plants and pests.

2. Agricultural land should be managed as necessary to control and eliminate invasive plants and pests.

3. Agricultural uses of the Town's agricultural resource land (Prime agricultural, Statewide, and locally important soils as derived from the USDA Natural Resource Conservation Service map) will be encouraged. Lands identified as agricultural lands on the SCS soils map are those lands having important agricultural resource value regardless of whether or not these lands are now in agricultural use. These lands shall be protected so that their full potential for farming may be preserved, whether it is realized at the present time or at some future time.

4. Settlement on and/or non-agricultural development on Prime agricultural land should be discouraged. Settlement on Statewide or locally important soils should occur only in locations, patterns, and densities that will not substantially reduce the area or the productivity of these lands.

5. The Town shall consider a variety of techniques to maintain the agricultural productivity of prime, state, and locally important agricultural soils, including:

- Tax stabilization and incentives,
- Agricultural protection districts,
- Purchase/transfer-of-development-rights programs,
- Assistance programs,
- Town agricultural land revolving fund,
- Assessment of farm and forest land at its use value,
- Easements,
- Planned Unit Development (PUD): A PUD is a mixed use development (residential, commercial and/or industrial) that often uses clustering of structures to preserve open spaces and allows flexibility to encourage new communities, innovation in design and layout, and more efficient use of land, to facilitate the adequate and economical provision of streets and utilities, and to preserve the natural and scenic qualities of the open lands of this state,
- Open Space Development (OSD): Similar to Planned Unit Development (PUD), Open Space Development (OSD) recognizes the value of the open space and allows flexible lot development while protecting the open space,
- Other flexible planning strategies designed to preserve agricultural land,
- Land Trusts: A land trust is a tax-exempt, charitable organization working with landowners to facilitate land conservation and open space protection; i.e., purchase development rights, donation of development rights, land gifts, and community projects to protect public land.

6. The Town, through its Planning Commission, should develop a plan for farmland preservation and propose specific incentives to implement a farmland conservation program. As part of the program, the Conservation Commission or others should offer voluntary assistance to land owners to help them preserve farm and pasture land for continued agricultural use. Fragmentation of agricultural land shall be discouraged.

7. The Town should encourage farmers and landowners to take advantage of existing State and Federal programs assisting the development and operation of viable agricultural operations.

4.3.3.2 Woodlands

The Town's woodlands are an important resource for aquifer recharge, plant and wildlife habitat, and recreation, as well as timber production. Properly managed woodlands provide income and employment for some Town residents, as well as recreation, wildlife habitat, and aesthetic benefits to the general public. If the Town is to promote the sustained productivity of its private woodlands for the benefits they provide, it should encourage sound forest management practices and should provide incentives for improvement of these private woodlands. The Town must have both unmanaged and properly managed woodland in order to support health and biodiversity.

In cooperation with the County Forester, the Town should seek to educate eligible woodland owners about available forestry assistance programs. Through distribution and display of printed information, the Town should encourage woodland owners to take advantage of existing State and Federal programs such as the Use Value Program (tax advantages for proper forest management), the Rural Forestry Assistance Program (free forestry advice on woodland management), and Federal Cost-Share Programs (partial funding of costs of forest treatment). In cooperation with owners of well-managed woodlands, the Town could designate demonstration woodlots for educational purposes. Because the Town contains a large quantity of public forest land, Shrewsbury is directly affected by the management practices and uses on these lands. Along with other benefits, the portions of the Coolidge State Forest lying within the Town act as a critical buffer zone to protect Shrewsbury from expanding commercial recreation and residential development in adjacent towns. As development infringes upon the surrounding wild places in Mendon, Killington, Bridgewater and Plymouth, the remaining acreage of the Coolidge State Forest will become increasingly important to the region as a whole for its plant and wildlife habitat, aesthetic qualities, wild lands, and non-commercial recreation possibilities.

It is important to the Town that all public lands within its boundaries be protected and/or managed according to the highest standards of stewardship. Use of these lands should be consistent with a comprehensive long-range management plan that is adopted by the responsible State or Federal agency after reasonable opportunity for comment and input by the Planning Commission, the Select Board, and interested residents.

In cooperation with the Department of Forests, Parks, and Recreation, the Town shall seek to designate contiguous portions of the public woodlands as a Forest Preserve in order to maintain a viable expanse of public and private lands in natural, unfragmented, or unmanaged forest conditions.

Shrewsbury landowners with woodlands utilizing the Vermont Use Value Appraisal (UVA) program can now also designate portions of their qualifying parcel to manage portions of the land for six recognized Environmentally Significant Treatment Areas (ESTA's). The six recognized areas include: Natural Communities of Statewide Significance, Rare Threatened, and Endangered Species, Vernal Pools with Amphibian Breeding Habitat, Forested Wetlands, and Old Forests. These recognized ESTA's allow landowners to manage portions of their parcels with these resources without prescribing timber management, but rather resource management for the protection of the identified ESTA or resource.

Accepted Management Practices for Maintaining Water Quality on Logging Jobs in Vermont (AMPs) were developed to implement *Title 10 V.S.A. Chapter 47: Water Pollution Control*. The AMPs are intended and designed to prevent any mud, petroleum products and woody debris (logging slash) from entering the waters of the state and degrading water quality.

POLICY 12 – Woodlands

1. Development on productive forestland shall be concentrated in a pattern and density that does not substantially reduce the contiguous acreage available for sustained biodiversity and woodland productivity.

2. The Town should promote conservation and management of private woodlands by educating landowners about optimum forestry practices and available State forest management programs. The Town should request that the Conservation Commission, in consultation with the Vermont Fish and Wildlife Department; Vermont Department of Forests, Parks and Recreation; and non-profit organizations educate landowners about the opportunity to include designation of Environmentally Sensitive Treatment Areas (ESTA's) in their Use Value forest management plans.

3. The Town should request that the Conservation Commission, in consultation with the Vermont Fish and Wildlife Department; Vermont Department of Forests, Parks and Recreation; and non-profit organizations educate landowners about the opportunity to include designation of Environmentally Sensitive Treatment Areas (ESTA's) in their Use Value forest management plans.

4. The Town should consider a variety of techniques to conserve undeveloped woodland, including:

- Tax stabilization and incentives,
- Forestry protection districts,
- Purchase/transfer-of-development-rights programs,
- Assistance programs,
- Town forest land revolving fund,
- Assessment of farm and forest land at its use value,
- Easements,
- Planned Unit Development (PUD): A PUD is a mixed use development (residential, commercial and/or industrial) that often uses clustering of structures to preserve open spaces and allows flexibility to encourage new communities, innovation in design and layout, and more efficient use of land, to facilitate the adequate and economical provision of streets and utilities, and to preserve the natural and scenic qualities of the open lands of this state,
- Open Space Development (OSD): Similar to Planned Unit Development (PUD), Open Space Development (OSD) recognizes the value of the open space and allows flexible lot development while protecting the open space,
- Other flexible planning strategies designed to preserve forest land,
- Land Trusts: A land trust is a tax-exempt, charitable organization working with landowners to facilitate land conservation and open space protection; i.e., purchase development rights, donation of development rights, land gifts, and community projects to protect public land.

5. Woodlands should be managed according to sound, environmentally acceptable forestry practices, such as the preparation of formal forest management plans. Plans for clear cuts over two acres shall minimize the impact on wildlife habitat, erosion, sound buffers, lighting shields, and views from neighboring and distant properties. Woodlands should be managed as necessary to control and eliminate invasive plants and pests.

6. Use of State lands shall be consistent with a comprehensive long-range management plan prepared in cooperation with appropriate State agencies and Town officials and in compliance with the Town Plan.

7. The long-term objective for private and public forest lands in Shrewsbury should be the sustainable use of these lands, with consideration given to plant and animal wildlife, watersheds, timber and recreation. Harvest practices should be consistent with the same.

8. The Town shall seek to designate an area (or some areas) to be set aside as a Natural Forest Preserve, an unmanaged area for education, biodiversity, and sustainability.

9. State and Federal lands in the Town shall not be sold, leased, or deeded to any person or organization for any form of development without prior consultation with the Town. Where appropriate, the Town will adopt regulations to control subsequent use by the new owner or lessee.

4.3.3.3 Sky and Atmospheric Resources

The relative darkness of Shrewsbury's night sky is an increasingly unique resource which provides residents the opportunity to enjoy natural darkness and clear views of the stars above. Large population centers tend to emit a night-time glow that obliterates the visibility of stars and other heavenly bodies. This is directly due to high levels of outdoor lighting of a powerful and indiscriminate nature. In addition, residential and public lighting fixtures in Shrewsbury can create excessive and costly over-illumination and be hazardous when poorly positioned.

The following are typical problems incurred with outdoor lighting:

- a) sky glow -- light shines upward into the sky where it serves no useful purpose; sky glow also limits the visibility of the stars in the night sky;
- b) glare -- occurs when you can see light directly from the fixture, or bulb; glare creates a hazard rather than increasing safety because it hampers the vision of pedestrians, cyclists and drivers;
- c) intrusive light -- poor outdoor lighting shines off the owner's property;
- d) energy waste -- lighting which is stronger than necessary for its intended purpose and/or is poorly directed.

In addition, any expansion of the Southern Vermont Regional Airport could have a negative impact on our air space with increased aviation traffic, noise and air pollution. The development in Rutland Town along Route 7 has created an impact on the night sky in Shrewsbury. Expansion of this type of development without regard to responsible lighting policies is discouraged.

4.3.4.3 Rural Areas

The preservation of Shrewsbury's rural and agricultural nature and the maintenance of the viewsapes that give the Town its charm are threatened, both by the pressure of large-scale development, and by the gradual "parcelization" and subsequent development of the Town as a consequence of many individual and well-intended development decisions.

The charm of the New England landscape resides in the juxtaposition of clustered homes in a village setting with outlying farms and wooded areas. The danger where residential development pressure is significant, as it is in Shrewsbury, is that the important components of a working and natural landscape may be consumed by development that could be more appropriately sited in other locations. The Town seeks a rural rather than a suburban pattern of residential land use.

An approach to maintaining and promoting the Rural Residential Landscape might be found in one or more of the following techniques:

- clustering development
- transfer of development rights
- use of planned residential and unit development
- conservation easements
- incentives to promote development in villages
- incentives to keep land in production
- combined driveways
- Vermont current use program
- protection of undeveloped areas.

POLICY 18 - Rural Areas

1. The retention of the Town's scenic and rural character is a primary goal. The density and location of rural settlement shall be guided by the policies set forth in this Plan and by the provisions of the Shrewsbury zoning bylaws and subdivision ordinance.
2. To assist landowners in complying with the objectives and policies of this Plan, the Town may consider setting up a voluntary "Site Assistance Program." This program would be carried out by a committee of Townspeople with skills in engineering, architecture, forestry, agriculture, and landscaping. The committee would advise landowners on ways to carry out planned development and construction so as to preserve agricultural and forest productivity, and to protect the scenic quality of the Town.

4.3.4.4 Conservation Areas

Conservation areas consist of all land subject to settlement constraints as defined in Section 4.3.1. These areas are based on the Natural Resources maps and include land subject to one or more of the following characteristics:

- (1) Shallow soils;

- (2) Slopes 15% and greater and less than 20%;
- (3) High water table;
- (4) Flood plains;
- (5) Meadowlands;
- (6) Deer yards;
- (7) Wildlife corridor;
- (8) Bear production habitat;
- (9) High elevation (2,000' and 2,300')

POLICY 19 - Conservation Areas

- 1. In conservation areas, settlement may be permitted, but only with conditions related to the physical limitations present and with regard to the densities and locations recommended in the zoning bylaws.
- 2. Because the very criterion for Protection Areas is their uniqueness, any development will have to meet the guidelines expressed in Sections 4.3.1 and 4.3.2.

4.3.4.5 Protection Areas

Protection areas are those areas designated on the Natural Resources maps. They are identified by their locally significant or irreplaceable qualities. These areas are considered generally not suitable for development.

Protected areas include:

- (1) Ridgelines
- (2) Slopes greater than 20%
- (3) High elevation (more than 2,300 feet)
- (4) Surface waters and wetlands

POLICY 20 - Protection Areas

- 1. Because the very criterion for Protection Areas is their uniqueness, any development will have to meet the guidelines expressed in Sections 4.3.1 and 4.3.2. The designation of Protection Areas shall continue to be a provision of permanent zoning regulations.

4.3.4.6 Residential Development and Acreage Requirements

Shrewsbury has used the technique of minimum lot size requirements to ensure that the intensity of development is appropriate to the different areas of the Town. While the goal of minimum lot size designation is understandable, the limitations and drawbacks are increasingly evident:

* Lot size has nothing to do with the protection of rural and scenic qualities. In some parts of Shrewsbury, even land parceled into large lots is inappropriate for the area, while in village centers, the smallest lots now utilized may be too large to retain compact settlement.

enhance the appearance of all roadsides, such as Green-up Days and restoration of stone walls.

2. Town roadways should be managed as necessary to control and eliminate invasive plants and pests.

5.1.2.7 Surface Waters and Wetlands

Rivers, streams, ponds, lakes, and wetlands are all of high scenic, recreational and wildlife value. Activities in a watershed can affect the quality of the waters downstream.

POLICY 32 - LANDSCAPE PATTERN: Surface Waters and Wetlands

1. Surface water (streams, lakes, and ponds) and wetlands shall be protected from settlement and uses which would reduce their water quality and/or wildlife habitat, or despoil the scenic quality of their banks and shorelines.

5.1.2.8 Utility Lines and Corridors

There are a number of utility lines and corridors within the Town. These include the railway corridor, a major electric transmission line corridor owned by Vermont Electric Power Company, and a Green Mountain Power line cutting across the southwest corner of Town. The trend in construction and maintenance of distribution lines serving residential demand is to follow roadways, rather than travel cross lots as was the practice when farms represented the bulk of rural service. The Town discourages the use of herbicides in controlling the growth of vegetation in and around these utility lines and corridors.

POLICY 33 - LANDSCAPE PATTERN: Utility Lines and Corridors

1. It is the policy of the Town to discourage new electric transmission or gas line corridor or other new right-of-way nor any new transmission lines be constructed within the Town except within the aforementioned transmission corridor right-of-way that exists at the time of enactment of this Plan.

2. The existing corridors shall be maintained to minimize soil erosion, maximize wildlife habitat, and protect the scenic and aesthetic qualities of the landscape. The Town, being concerned about water quality, discourages the use of herbicides and recognizes the need to maintain vegetated buffer zone around surface waters. The Town will continue to work with the Railroad owner to minimize all the biological impacts of the maintenance on the railroad's right-of-way.

3. Before construction or reconstruction of lines or other changes in the existing corridors are permitted, the applicant shall furnish a bond sufficient to permit and require the completion of all screening and other landscaping required by the Town, Public Service Board or other Governmental body.

the complete and efficient utilization of all the Town's facilities to address various emergency situations.

POLICY 60-Emergency Management

1. Continue to develop and train an effective Emergency Management Team and volunteer program.
2. Anticipate emergency situations and pre-plan responses to them.
4. Hold training drills to effectively mitigate potential hazards.
3. Carefully assess responses to drills and actual situations and work to improve responses.
5. Identify and apply to funding sources for essential equipment—such as radios and generators.
6. Educate Shrewsbury citizens about Emergency Management and potential hazards through articles in the *Shrewsbury Times* and at local and regional workshops.
7. Keep Emergency Response plans up to date.
8. Actively participate in multi-town emergency preparedness activities while striving to be self-sufficient wherever possible.
9. Promote emergency safety among households in Shrewsbury.

10. ENERGY

The primary sources of energy in Shrewsbury currently are:

- 1) Wood, solar, oil, and propane for heating;
- 2) Green Mountain Power for electricity; and
- 3) Gasoline for transportation.

Of these, wood and solar are the only ones produced locally and sustainably. Wood is the only one whose price reflects local supply-and-demand factors. Although the other sources generally seem out of our control, there are choices we can make about where our energy comes from and how much of it we use.

10.1 Energy Production

There is a growing recognition of the importance of sustainable and environmentally sound energy production. Shrewsbury can and should do its part in the global transition from fossil fuels and nuclear power to alternatives such as clean wood burning, small-scale hydro, and solar and wind power generation compatible with the environmental

clustered to preserve the soils and allow for continued use of the land for agricultural purposes.

7. Shrewsbury encourages woodland owners to manage woodlots both environmentally and economically, and encourages forest products to be utilized in biomass production through accepted environmentally sound forestry and timber harvesting practices.

8. Removal of biomass for energy from Town woodlands and public forest land must require retention of adequate biomass residue from timber and sufficient woody debris to ensure long-term soil health and forest ecosystem sustainability.

9. Water energy conversion systems shall be sited appropriately and designed to be in full compliance with all Vermont laws and regulations. Hydro sites should also maintain and protect the environmental and biological integrity of our streams, brooks, and rivers.

10.2 Energy Transmission

Shrewsbury currently has two major electrical power transmission corridors. These have environmental and aesthetic impacts on the Town such as electromagnetic radiation, noise, wildlife corridor interruption, and the visual impact of clear-cut swaths across ridgelines and hillsides.

Utility lines inappropriately sited along our roadsides also have an aesthetic impact. The tree-trimming required to maintain them can significantly change the character of a road where branches arch overhead. The web of overhead lines in village centers limits the size of trees that can grow there. On-site energy production can potentially offset the impact of power line installation and maintenance tree trimming. The Town encourages the burying of utility lines when appropriate.

POLICY 63 - Energy Transmission

1. Utility line siting should take into consideration tree location.

2. Utility line tree maintenance shall be restricted to the minimum cutting possible.

3. Do not allow expansion of major energy (electric or gas) transmission outside of the two existing corridors, and require buffering of visual and environmental impacts of corridors.

4. The Town recommends the non-use of herbicides on all utility rights-of-way. We encourage the use of transmission corridors for pasture as an environmentally friendly way of keeping this land cleared.

5. Monitor the data on the danger of powerline transmission to populations of animals and people. Take action as required.

SHREWSBURY, VT FUTURE LAND USE MAP

Map 2

Legend

Structures

Rivers and Streams

2000 Foot Contour Line

VLT_RR_region_Mar08

LAND USE DISTRICTS

North Shrewsbury/Northam

Brown Covered Bridge Area

Cuttingsville

Shrewsbury Center

Village Residential: North Shrewsbury

High Elevation District

Limited Res. (Min. Lot Size 10 Acres)

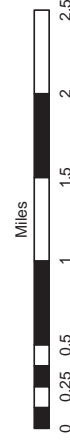
Rural Res. (Min. Lot Size 4 Acres)

Lakes, Ponds and Major Rivers

Conserved Lands; Public and Private



Shrewsbury Town Plan
Adopted November 20, 2013



Road System

Town Class One

Town Class two

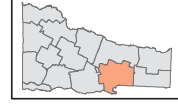
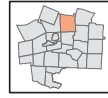
Town class Three

Town Class Four

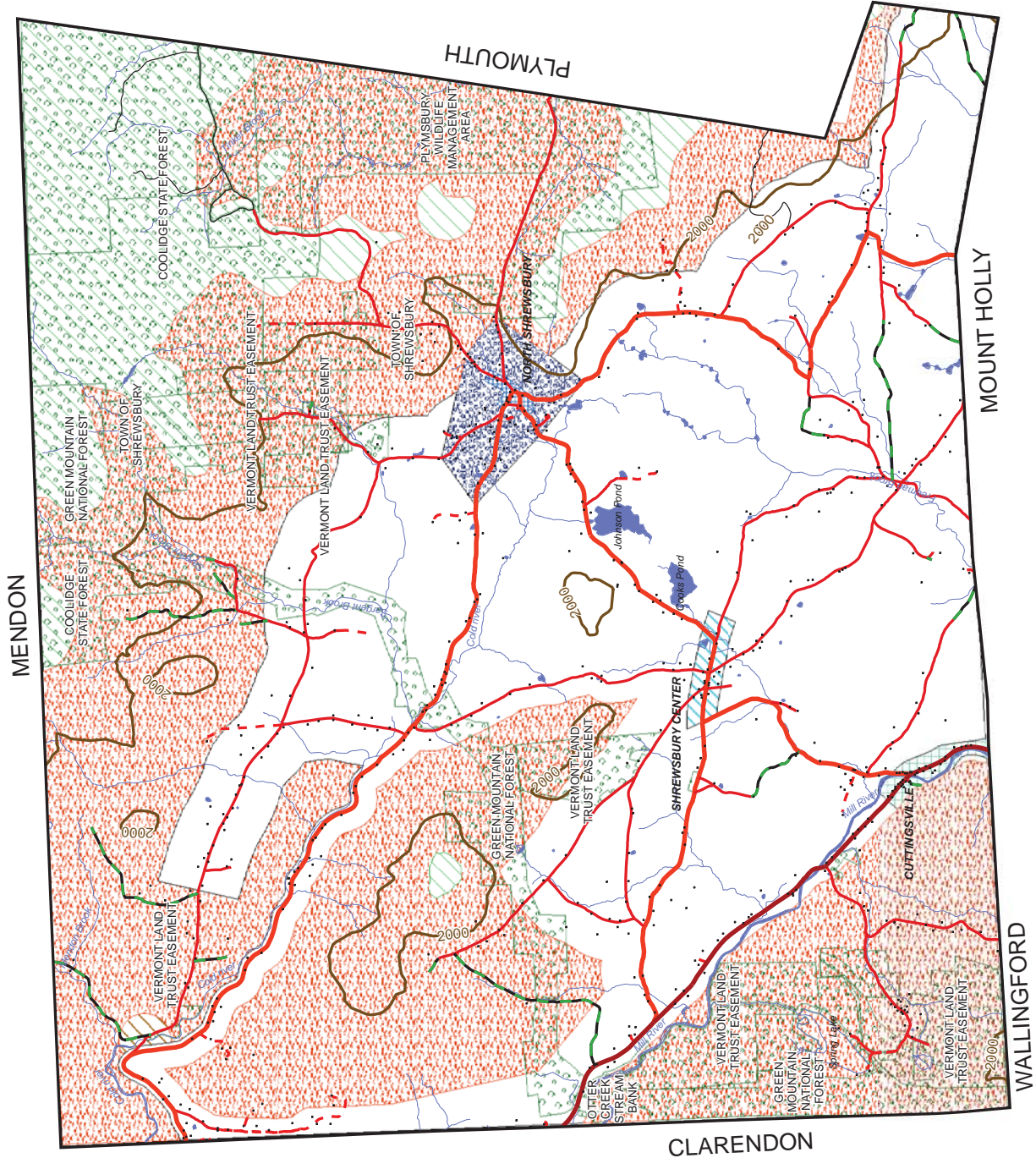
Private/ Unknown Roads

US and State Highways

Date: 2/1/2014



Document Path: E:\BRC\GIS\BRC\Map\Map 2013\TP 2008\Map 2013.mxd



SHREWSBURY, VT

Natural Resources II

Map 4

Legend

- Groundwater Protection Area
- Rare, Threatened and Endangered Natural Communities
- Black Bear Seasonal Habitat
- Black Bear Production Habitat
- Deer Wintering Areas
- Private Conserved Lands
- Public Conserved Lands
- Town of Shrewsbury Conserved Lands
- Shrewsbury Wildlife Corridor
- Plant
- Animal
- Natural Community

Shrewsbury Town Plan
Adopted November 20, 2013

BLACK BEAR HABITAT: VT Fish and Wildlife Dept. Categories are based on a map filed: "Black Bear Habitat in Vermont, 1989".

DEER WINTERING AREAS: VCGI database Ecologic-Habitat, DEERWIN, VT Fish and Wildlife Dept. (VFWD). From 2009 - 2010, the boundaries of deer winter areas were refined by VFWD district biologists using black and white leaf-off 1:5,000 scale orthophotography (1990-1999) and was cross referenced with 1:24,000 scale 2003 NAIP (color, leaf-on) imagery to better delineate fields and open wetlands.

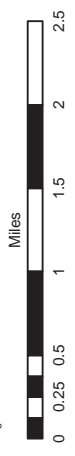
PRIVATE CONSERVED LANDS: land in full or partial ownership by 501(c)(3) conservation organizations (VLT, TNC, GMC, and others), a subset of the Vermont Conserved Lands database, 1999, 2009.

PUBLIC LANDS: VCGI database Categorical/Parablands, CONSPUB, 2009, a subset of the Vermont Conserved Lands database. It includes land owned by Municipal, State and Federal entities.

RARE PLANT/ANIMAL SITES: VCGI database EcologicOther, RTENATCOM, Rare, Threatened and Endangered Species & Significant Communities. For the Town of Shrewsbury, this includes: Palustrine and Terrestrial Natural Communities and Natural Resources and Rare Plants and Animals. For more information, refer to Vermont Nongame and Natural Heritage Program, VNR, 2015.

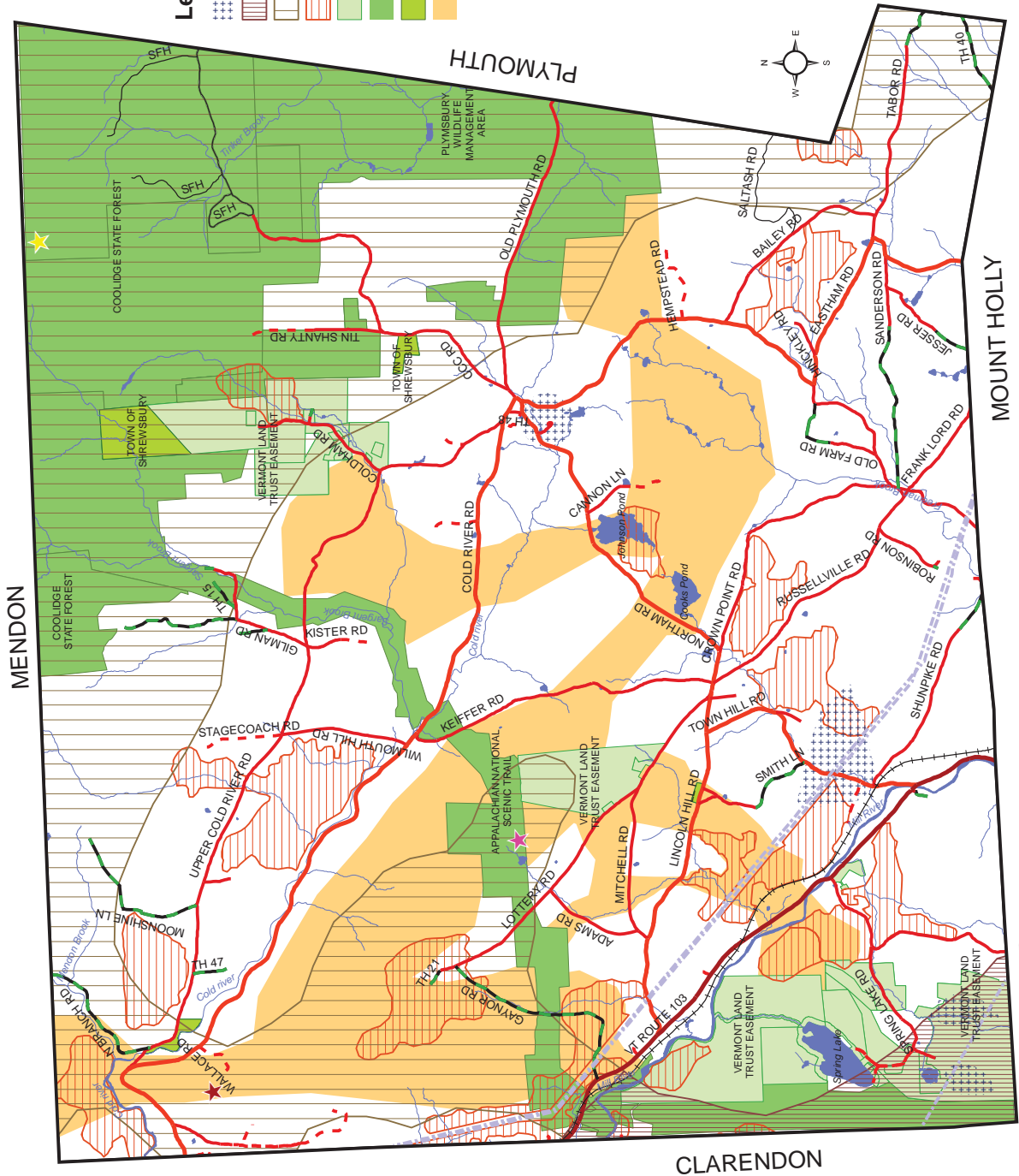
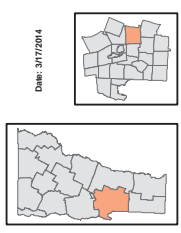
WELLHEAD PROTECTION AREAS: Source Protection Areas for groundwater sources (wells, springs), 1:24,000 USGS QUADRANGLES, VNR- DEC- Water Supply Division and VT Department of Health, 2011.

WILDLIFE CORRIDOR: VT Fish and Wildlife Dept (VFWD), VTRANS, VT Biodiversity Project, 2012. Ratings are based on predictive models developed by VFWD and further enhanced by conversations and observations with and by local residents. Areas shown on the map have a Vermont wildlife suitability analysis rating of 6 - 10.



Road System

- Town Class One
- Town Class Two
- Town Class Three
- Town Class Four
- Private Unknown Roads
- US and State Highways



WALLINGFORD

CLARENDON

MENDON

MOUNT HOLLY



Town of Wallingford

Town Plan

Adopted February 4, 2013

13.0 Goals, Objectives And Policies

13.1 Introduction

Vermont Statutes (24 VSA s. 4302) provides that “municipalities . . . shall engage in a continuing planning process that will further . . .” certain land use and development goals prescribed by the Vermont Legislature. The following Goals are intended to establish the overall direction and guidance for land uses and development in the Town of Wallingford in accordance with Section 4302. They are also intended to guide the protection of the environment and the preservation of rare and irreplaceable natural areas, scenic and historic features, and special resources.

13.2 Development Planning

The historic village centers of Wallingford, East Wallingford and South Wallingford are important economic and cultural assets, while the rural areas of the town support agricultural, forestry, recreational and low-density residential and commercial uses. The Town of Wallingford should pursue all reasonably available means of improving the utility of town centers as areas for future residential and commercial development while, at the same time, respecting the freedom of choice that our citizens have historically enjoyed to live and work in rural areas as well as village centers. The three village areas were designated as Village Centers by the Vermont Downtown Program through a process created by the legislature to recognize and encourage local efforts to revitalize Vermont’s traditional village centers. This designation is a tool to support commercial activity in the center of Vermont’s villages. Tax incentives for historic building rehabilitation and code improvements, as well as priority project consideration for Municipal Planning Grants are benefits now available to Wallingford’s designated villages.

Goals

- Plan and encourage development and settlement patterns that maintain the historic character of Wallingford, including compact villages and rural countryside, provide our citizens with healthy, diverse and desirable housing, recreational and economic opportunities, and make wise and efficient use of our public and private resources.
- Provide for higher density residential development in village centers, and plan and provide infrastructure to support such development.
- Designate appropriate areas for economic and commercial development, and plan and provide infrastructure to support such development.

Policies and Implementation Strategies

- To the fullest extent reasonably possible and consistent with other provisions and policies of this Plan, maintain and encourage the historic settlement pattern of more densely settled villages and neighborhoods surrounded by working farms and forest land and lower density rural residential development.
- Provide residents with a variety of living opportunities in different settings, including villages, rural clusters, rural large lots and farms.
- Plan and develop public infrastructure, such as municipal sewer and water systems, town highways, and educational facilities to encourage residential and commercial land uses that reinforce existing land use patterns and that represent the efficient use and development of public infrastructure; develop capital plans and programs that will implement efficient public infrastructure planning,

construct public infrastructure in advance of development impacts and pressures to minimize conflict between reasonable and predictable land use and development and demands on public infrastructure.

- Adopt and implement mitigation strategies identified in the Regional Pre-Disaster Mitigation Plan and accompanying Wallingford Annex to lessen damages to town infrastructure caused by hazardous weather and man-made events.
- Protect and encourage the maintenance of agricultural lands for the production of food and other agricultural products, develop programs that facilitate the conservation of working farmlands, particularly in the three primary farmland sections of town, while at the same time, respecting the property interests and economic aspirations of the owners of farm and forest land.
- Research and consider “Form-Based Code” to encourage revitalization, infill and orderly growth of Wallingford’s designated villages.

13.3 Economic Opportunity and Development

Viable, growing businesses and industries in Wallingford and in the Rutland Region provide satisfying, financially rewarding employment opportunities that are essential to the quality of life of our citizens, and provide the state and local financial resources that are necessary to achieve our social goals and support our public institutions. We must also recognize and accept, however, that no land uses, whether commercial, residential, agricultural or conservation, are without impacts and that the objective of land use planning and regulation to minimize undue impacts by achieving a reasonable balance between competing land uses.

In analyzing the benefits and burdens of commercial or industrial activity, attention should be paid to the correlation between a strong, viable economy and satisfying employment opportunities on the one hand, and our ability to achieve important public sector social objectives on the other.

Goals

- Nurture a strong and diverse economy that provides satisfying and rewarding job opportunities for residents, a strong and predictable economic base to support our public policies and institutions, and that maintains high environmental and community standards.
- To the extent consistent with the capabilities and the public and private resources of the Town of Wallingford, plan for, facilitate and support sustainable local economic growth and development.
- Facilitate, develop and manage an economy that provides the financial resources to enable the public sector to meet its obligations.
- Increase understanding of the correlation between strong economies and the availability of safe and affordable childcare.

Policies and Implementation Strategies

- Create a reasonable balance between conservation and preservation of existing land uses and a viable economy that provides economic opportunity for our citizens.
- Preserve and strengthen the town’s retail, tourist, manufacturing and agricultural economies and provide reasonable opportunities, areas and public infrastructure for new businesses.
- Encourage meaningful private sector participation in the planning and implementation of local economic development strategies and programs.
- Coordinate economic development planning and support at the local level with regional strategies and programs.

address, in advance, the demands upon those facilities that will result from normal and predictable rates of growth and development.

- Develop land use management plans and strategies, and Capital plans and programs, so that housing and population growth does not over-burden the school's ability to provide adequate educational programs and facilities for students or other essential programs and services to the community.

13.5 Transportation

The private automobile is the dominant and most important means of transportation in the town, and any transportation planning in Wallingford and the Rutland Region must take into account the continuing dependence of our citizens, particularly those in rural areas, on automobiles as their primary means of transportation. At the same time, we recognize that bicycling and pedestrian travel are practical transportation modes, and both bicycling and pedestrian travel can substitute for automobiles in short trip commuting and shopping.

Goals

- Provide and maintain a multi-modal transportation system that is safe, efficient, cost-effective and practical.
- Plan for and implement a transportation system that promotes the other goals and policies of this Plan to direct appropriate and efficient land use patterns and economic and residential development.
- Promote walkability and bikeability in the designated villages and outlying areas.
- Provide and maintain a transportation system that meets the needs of all segments of Wallingford's population - not just those who can afford to own and operate automobiles. Evaluate and implement transportation improvements to mitigate the impacts of Route 7 through Wallingford village.

Policies and Implementation Strategies

- Maintain or improve the current level of service on all roads in town.
- Develop, manage and maintain roads to meet community level demand and maintain a rural character.
- Consider partnership with Vermont's Safe Routes to Schools Program;
- Analyze and compare a reasonable range of alternative transportation opportunities as part of the analysis of any new or proposed transportation projects, policies or improvements.
- Develop and implement capital plans and programs for transportation facilities, so that existing transportation facilities are utilized, and future transportation facilities are developed, to anticipate and address, in advance, the demands upon those facilities that will result from normal and predictable rates of growth and development.
- Develop land use management plans and strategies, and capital plans and programs, so that housing and population growth does not overburden the ability of existing or proposed transportation facilities to provide for normal and predictable rates of growth and development.
- Develop, adopt and implement standards for construction, improvements and maintenance of town and private roads.
- Evaluate and enhance transportation improvements, including traffic calming, that mitigate the impacts of Route 7 on Wallingford and South Wallingford villages, while generally supporting a highway cross-section of 8-12-12-8 outside village areas.

13.6 Natural and Historic Features

Wallingford's natural and historic features, including its streams, forests, lakes and ponds, aesthetic qualities and recreational opportunities, historic buildings and traditional land uses are an important component of the quality of life enjoyed by our residents and visitors. Not only are our abundant natural and historic features important to our quality of life, the beauty and environmental quality of our natural environment is one of the principal components of our economy, and the preservation and protection of those resources has economic as well as social benefits. On the other hand, we must respect the fact that many of what we characterize as 'our' natural resources are located on privately owned property, and that we must take care, in our zeal to protect those resources, that we do not prevent the reasonable use of the property upon which those resources are located, or impose upon the individual property owner a burden that should be borne by the public as a whole.

Natural and Fragile Areas - Wetlands

Goals

- Encourage the preservation and conservation of Class I Class II wetlands and vernal pools, and the values and functions that they serve, as defined by the Vermont Wetland Rules.

Policies and Implementation Strategies

- Educate the public about the functions and values of wetlands.
- Prepare and publish wetland maps, and before adoption of zoning regulations with respect to wetlands, make reasonable efforts to notify all affected property owners of any wetlands identified on their property.
- Avoid municipal regulations that duplicate existing state or federal wetlands regulations, so that property owners upon whose properties wetlands are located will not be subjected to duplicative, redundant regulatory programs.
- Provide in municipal regulations that issuance of a conditional use permit under the Vermont Wetland Rules will satisfy the requirements of municipal regulations.
- Encourage the preservation of wetlands and other natural areas through regulatory provisions that create benefits for property owners that protect and preserve wetlands.

Water Resources - Lakes, Ponds and Streams

Goals

- Protect and preserve the rights and interests of the public in the use and enjoyment of water resources.
- Encourage and provide incentives for residential, industrial and commercial development in such a manner as will minimize undue adverse impact on significant water resources to the greatest extent reasonably possible.
- Provide safe, healthy conditions for boating and water based recreation.
 - Protect and enhance the amount and quality of public recreational opportunities available on and around public waters.
- Protect and enhance significant fish and wildlife habitats, feeding areas, travel corridors and the ecology of rivers and streams.

Policies and Implementation Strategies

- Encourage property owners to protect streambanks and shorelines.

- Collect, update and disseminate information on Wallingford's current and future groundwater supplies.
- Identify and protect Wallingford's groundwater recharge areas.

Air Quality

Goals

- Maintain high air quality standards for current and future residential, commercial and industrial development in Wallingford and the Rutland Region.
- Ensure that air quality standards are fairly and equitably applied to existing residential, commercial and industrial development, and not just to new residential, commercial and industrial development.

Policies and Implementation Strategies

- Require proper installation and maintenance of heating, processing, manufacturing systems, and other potential generators of air contaminants.
- Ensure that new development and land use activities do not create undue adverse impacts on air quality, as measured by applicable air quality regulations.
- Consider a "No Idling" policy for schools, recreational facilities, Main Street, and other areas frequented by the community.

Wildlife

Goals

- Encourage the conservation of significant wildlife habitats
- Encourage the establishment and conservation riparian corridors and wooded corridors.

Policies and Implementation Strategies

- Educate the public about the functions and values of wildlife habitats, including corridors and vernal pools, and the protection of rare, endangered and threatened species.
- Prepare and publish wildlife habitat maps and, before adoption of regulations with respect to wildlife habitats, notify all affected property owners of any wildlife habitats identified on their property.
- Encourage the preservation of wildlife habitats and other natural areas through regulatory provisions that create benefits for property owners that protect and preserve wildlife habitats and other natural areas.
- Ensure long term protection of significant wildlife habitats and other natural areas through conservation easements, purchase, lease, tax incentives or other measures.
- Develop and maintain a community based wildlife conservation program.
- Encourage owners of existing developments, farms and forests to consider and take reasonable steps to mitigate the effects of their activities on biologically significant areas.
- Purchase land or development rights to particularly important areas of biological significance or that possess important habitat characteristics.
- Provide local tax incentives in return for habitat management agreements secured through conservation easements.

especially in winter or on poorly graded roads. Where the burdens of development on the financial resources of the Town are demonstrated to be excessive, development of such areas may be restricted unless the developer proposes and implements a plan to adequately mitigate such impacts.

Beneficial functions of slopes

Upland slopes also perform a beneficial function in the replenishment of valley water tables. Rainwater and moisture occurring at higher elevations is filtered down through forest soils and accumulates in the basins of the watershed.

Policies and Implementation Strategies

- Settlement should be restricted in areas where slopes are in excess of 20 percent, unless and until the developer has implemented adequate site designs and/or structural elements which address the adverse effects of development on steep slopes.
- New unpaved roads should not generally exceed a finished grade of 7 percent, although reasonable sections with grades in excess of 7 percent may be permitted if appropriate safety and maintenance provisions are implemented.
- New paved roads should not exceed a finished grade of 10 percent, although reasonable sections with grades in excess of 10 percent may be permitted if appropriate safety and maintenance provisions are implemented.
- Erosion should be controlled wherever possible by following the Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites.

13.8 Energy Use

Goals

- The town encourages the responsible use of energy and the use of the least environmentally damaging sources of energy.
- The town encourages the use of renewable energy systems in both off-grid and net metering systems. The town may consider whether to create incentives for renewable energy systems.
- New buildings should be constructed so as to utilize the maximum feasible passive solar heating, use high efficiency lighting and appliances and meet appropriate standards of insulation and air infiltration to minimize energy use. The approval of larger scale residential developments should be made conditional on meeting such standards. The installation of on-peak resistance electric heat should be discouraged.
- Residents and owners of existing buildings should be encouraged to obtain a competent energy audit of the buildings with a view toward identifying and making cost-effective improvements in energy efficiency. When it is found to be practical, they should:
 - Be encouraged to retrofit those buildings to improve their insulation and efficiency.
 - Be encouraged to install highly efficient heating systems and to maintain and operate their existing heating systems to maximum efficiency possible. Wood heating systems should be designed and operated to achieve efficient and thorough combustion to minimize polluting emissions.
 - Residents and owners of existing buildings, including the town with respect to the school and the town office, should be encouraged to acquire and use high efficiency lighting equipment and appliances.

Rural Otter Creek Valley Multiple Resource Area

This area is listed on the National Register of Historic Places, and is the first Rural Resource Area designation in the state. However, there is no identification of any kind along the corridor, and no special provisions for development have been enacted locally along this corridor. The language establishing the district may offer some guidance here. For example, should an effort be made to preserve old barns by pursuing historic preservation grants? Should the Town apply for Community Development Block Grant funds to put together a Corridor Plan including signage, brochures, markers, viewpoints, etc? What appropriate things should be pursued?

Route 140 East Scenic Corridor

Route 140 is a scenic drive through varied and generally undeveloped lands. The route follows Roaring Brook, is crossed by the Appalachian Trail, provides access to recreational lands in the Green Mountain National Forest, including White Rocks National Recreation Area and to Wallingford Pond, and terminates at either end in a typical Vermont village. Designating the corridor as a scenic corridor in the Town Plan does **not** designate it as a scenic road under the state or federal scenic road program. It merely recognizes the road as a unique resource within the town, and may assist the Town in future negotiations with the state and with such entities as utility companies on the scale of highway improvements such as the width and style of bridges, the width of the 'clear zone', location of power lines, signage, eligibility for bike/pedestrian path funds, etc.

Lands above 2500 feet in elevation

All lands above 2500 feet in elevation appear to be within the GMNF. Lands that are above 2500 feet in elevation are generally steep, inaccessible and have poor soils for onsite sewage disposal due to depth to bedrock. An appropriate district for any such lands outside federal ownership would be a Conservation District with a very low density. In such a district, farm, forest and outdoor recreation uses are generally permitted uses, while any permanent structure usually requires a conditional use permit. Some towns allow single family dwellings as a permitted use. This latter depends on the road network, and the Town's position on maintenance of remote roadways.

Industrial Regions

The existing Industrial Zoning District does not distinguish between heavy and light industrial uses. The character of most of the existing industrial use, which is mineral or sand and gravel extraction, is clearly a heavy industrial use. However, manufacturing facilities such as those in the Clarendon Industrial Park at the airport are light industrial uses. The areas zoned industrial on the existing zoning map represent ownership by mineral extraction companies, except for the area between the railroad and Otter Creek in Wallingford Village and the small industrial area in East Wallingford. Separating the types of uses through the use of two districts, and thinking through how review of developments in each should be done, will provide excellent guidance for revisions to the Bylaws. Districts might be as follows:

Industrial District

This district is appropriate for manufacturing facilities which are enclosed, and which store the majority of raw materials and finished product under cover. These should be uses that do not generally emit noxious fumes, or generate high levels of noise. The industrial area in East Wallingford might appropriately be designated Light Industrial, as might the manufacturing area near the intersection of Maple Street and River Street. This designation is appropriate for most of the areas that are now zoned industrial. Clearly, the Pike operation, and the quarry in South Wallingford are heavy industrial uses.

Town of Mount Holly

Town Plan

Adopted April 8, 2008

The definition of open land includes agricultural lands. Fields for hay are maintained widely around Town, and some corn is grown as livestock feed. The last dairy farm ceased operation in 2006. Other livestock producers: beef cattle, sheep, hogs, chickens, turkeys, horses.

FOREST LANDS

Approximately 55% of the Town is currently covered by hardwood forests, primarily sugar maple, yellow birch, and beech; while 31% is in soft wood cover mainly red spruce and balsam fir. This translates into approximately 17,634 acres of hardwoods and 9,604 acres of softwood. (Map II a 7, Contiguous Forest).

LAND USE

According to the Change of Appraisal Notice published by the Listers of Mount Holly on May 24, 2003 the Town consisted of 1,272 properties. Dwellings were located on 713 properties. (See Map II a 7, Map IV 1) and other maps in this plan for the locations of “structures” – the majority of which are residences).

The property map from the 2007 Town Report is reproduced on Map II a 8 which depicts Public Lands, Conserved Lands, and properties in the Current Use program.

PUBLIC LANDS

2,331.5 acres (9.1% of the Town’s area) is owned by the Okemo State Forest under management by the Vermont Department of Forest, Parks and Recreation. The Green Mountain National Forest covers 3,100 acres, or 9.5% of Mount Holly.

The State of Vermont owns two Wildlife Management Areas managed by the Vermont Fish and Wildlife Department. The Star Lake Wildlife Management Area (Map II a 9) is a 92.3 acre parcel of land bordering northeast Star Lake. It was donated by Judson and Margaret Lyon in 1979. 48 acres of the 739 acre Tiny Pond Wildlife Management Area (Map II a 10) are located in Mount Holly. It is part of the Coolidge West Management Unit which includes Coolidge State Forest. The WMA was formed from land donated in 1996 and 2002.

CONSERVED LANDS

The Yale/Bowen Forest is a 462 acre tract adjacent to the Okemo State Forest. It was willed to Yale University School of Forestry in 1924, in perpetuity to be “kept as a forest”, by Elmer and Edward Bowen family in memory of their son Joseph Brown Bowen, a forestry graduate of Yale University, who died in service in World War I. The deed obligates the School to keep the forest forever. The land is managed by the Vermont Department of Forests, Parks and Recreation. Most of the Forest is northern hardwoods with some spruce plantations. Map II a 11 shows the location in New England of the forests operated by the Yale School of Forestry and Environmental Studies.

The Vermont Land Trust has an easement on 80%, or 273 acres, of the Forest Echo Farm

In 2003, the 77 acre Dana-Seward Farmland project on Route 155 was conserved in a joint effort by the Vermont Land Trust, the Freeman Foundation, 150 contributing residents of Mount Holly, Raymond and Clare Dana, and the Seward farming family of East Wallingford. The Vermont Land Trust received donations of conservation easements: in 2004, 46 acres opposite the Dana-Seward Farmland from John Fiske and Lisa Freeman; in 2005, a parcel of 64 acres from Lorena and Pete Doolittle.

Mt. Holly Wildlife Corridor Forest Legacy project is an effort to connect the two units of the Green Mountain National Forest – north in Shrewsbury and south in Weston - with a corridor of conserved land for wildlife, primarily for black bear. A tract of 391 acres was protected with a conservation easement

in December 2002. Forest Legacy funds in the amount of \$303,000 were paid to the Ninevah Foundation. The cost share for the project was the purchase of a 273 acre tract nearby that used no Federal funds.

The Ninevah Foundation owns 840 acres as conserved land with highly restricted development available only to its members.

CONSERVED AND PROTECTED LAND

Tract	Acres
Green Mountain Nation Forest	3,100
Okemo State Forest	2,331
Star Lake Wildlife Management Area	93
Tiny Pond Wildlife Management Area	48
Yale/Bowen Forest	462
Dana-Seward Farmland	77
Fiske and Freeman conservation easement	46
Doolittle conservation easement	64
Forest Legacy	391
Forest Echo Farm - VT Land Trust	273
FEF Corp	351
Ninevah Foundation	840
TOTAL Conserved	8,076 = 28 %
TOTAL Mount Holly	29,338 = 100 %

As of 2003, there were 46 properties (43 with dwellings) totaling 6,315 acres in Current Use including Forest Echo Farm, Ninevah Foundation, Yale/Bowen Forest and Doolittle. Excluding those properties (featured above with a total of 1,639 acres) leaves 4,676 acres in the State's Current Use program. The full name of the Current Use program is the Agricultural and Managed Forestland Value Program.

Adding conserved or protected land 8,076 acres to current use 4,676 = 12,753 or 43% or the Town's total acreage.

However, none of those acres is under Town control. This is an important fact given that the Okemo State Forest (and the two Wildlife Management Areas) and the Green Mountain National Forest are under the control of State and Federal governments respectively, with the Town accorded no rights in determining any future use of the land. (Planning Commission paper, 2004). The Okemo Ski Resort has been built, for no fee, on State forest land on the eastern side of the Ludlow Mountain (now commonly called Okemo Mountain), see Map V 2.

As the protected status of lands under the control of State and Federal governments cannot be guaranteed, the land conserved in Mount Holly assumes greater importance. "Perpetuity", depending on the definition of the term, applies to between 922 to 1,762 acres, or 3% to 6% of the Town's total acreage

NATURAL RESOURCES

comparison

MOUNT HOLLY, RUTLAND COUNTY, STATE of VERMONT

	Mt Holly	Rutland Co.	Vermont
Area of Land, Acres, 2000	31,481	597,120	5,920,640
Area of Water, Acres, 2000	243	12,500	261,200
Private & Public Conserved Acres, 1999	6,794	134,820	1,148,249
Private & Public Conserved Acres %	22%	23%	19%
Federal Conserved Acres, 1999	3,104	76,279	435,008
State Conserved Acres, 1999	3,213	29,948	378,563

enjoys the lake and has become a nuisance especially at the Belmont beach. The Vermont Department of Fish and Wildlife lists the Lake as a significant natural community.

Lake Ninevah

Lake Ninevah (formerly Patch Pond) is the largest pond in Town, approximately 270 acres in size, and currently supports a standard warm water fishery. Almost all of the land around the pond is privately owned, so that public access is limited to a small boat access ramp owned by the Vermont Department of Fish and Wildlife. There is no public beach or swimming area on the lake.

It is listed in the Natural Areas of Vermont: An Inventory of Natural Areas, 1972-73 (Inventory number 939B) by the Vermont Department of Fish and Wildlife as a moderate to good waterfowl nesting and feeding area. Nesting loons have frequently been reported on the lake in recent years.

Tiny Pond

Tiny Pond, on the boundary between Mount Holly and Ludlow, is smaller than Star Lake and totally surrounded by private land and is not accessible to the public.

Ground Water

A significant recharge area is on the summit of Hedgehog Hill marked by a seasonal pond and permanent wetland of about an acre – it provides springs on the flanks of the hill and to the springs feeding the village of Belmont

The only water system in Mount Holly is the spring-fed Mechanicsville Aquifer system that once supplied water to most of Belmont. Although no longer a business entity it still supplies a few buildings in the village. The rest of the Town relies on drilled wells or natural springs. (A map of town aquifers is being researched).

In Mount Holly the depth to bedrock or impervious soils (hardpan) is minimal – subsurface water moves more easily laterally rather than vertically – presenting a potential pollution problem.

WILDLIFE

Rare Flora and Fauna

See above Winslow Flats.

Black Bear

The western slope of Okemo mountain's upper elevations support significant beech stands, which are of major importance to bears locally. Lower elevations provide aquatic habitats with an abundance of early spring foods.

The Okemo State Forest thus provides a corridor connecting the Green Mountain National Forest to the south with conserved lands north of Route 103 and beyond that with the northern portion of the Green Mountain National Forest. Private lands on the north side of Route 103 and north side of Route 155 are critical to maintaining the land as wildlife territory. Collaborative work by the Forest Legacy program, the state of Vermont, the Nature Conservancy, and the Mount Holly Conservation Trust is in progress with the goal of making the bear corridor a continuous strip of conserved and protected land. (Map II b 4).

Deer Yards

In the winter, deer need the cover provided by conifer trees to reduce wind chill and heat loss, and to minimize energy expenditure by minimizing snow depth. The Vermont Department of Fish and

IX. ENERGY

The Town's energy consumption is affected by local efforts for conservation, energy development, and land use decisions.

In 2003, the following item was duly warned and adopted at the Mount Holly Town Meeting:

"Be it resolved that the citizens of the town of Mount Holly urgently call upon our municipal leaders, state legislators, governor, and congressional delegation to put Vermont in the forefront of a sustainable energy future. Specifically, we request immediate and ongoing action on legislative initiatives designed to promote energy efficiency in Vermont's homes, businesses, public buildings, and transportation systems, and to encourage expansion of the renewable energy industry in the state of Vermont."

The Town is crossed by two high voltage transmission lines – 115kv (serviced by a substation of 2.5 megawatts) and 345kv (*recently upgraded*)

Most homes in Town are heated with petroleum products, but a substantial number heat with wood, and the Town is blessed with good supplies of this clean, renewable fuel. A few homes use solar energy, and there are two windmills, including the one at the Mount Holly Elementary School. Although Mount Holly is not rated as a good wind area, the school gets 11% of its energy supply from its windmill.

Although some homes generate all their energy needs and are therefore "off the grid", there is little town-wide dissemination of the experience of homeowners with alternative energy sources.

No water energy sources in Town are known.

Town Garage is using waste oil in its burner.

Conservation of energy used for outdoor lighting (and reduction of night light pollution) is addressed in the publication "Outdoor Lighting Manual for Vermont Municipalities".

PART B

THE PLAN

GOALS, POLICIES, IMPLEMENTATION

The discussion presented in the previous chapters provides background information and framework for determining planning goals and policies.

What follows are the goals, policies, and also the tasks by which the plan will be implemented.

.For the purpose of the Mount Holly Town Plan we define goals, policies, and implementation tasks:

Goals express broad, long range community aspirations relative to one or more category of topics.

Policies are statements of the Town's intent, or position, with regard to specific issues or topics. In certain settings, such as during Act 250 proceedings, policy statements shall serve as the basis for determining a project's conformance with the Mount Holly Town Plan. Goals provide context for understanding policies, but it is the policies alone that serve as the final statement regarding the Town's position.

Implementation Tasks are specific actions to be taken by an identified entity to support one or more policy and to achieve the community's long term goals. (Note that Implementation Tasks, below, are not listed in any particular order).

Priorities for implementing the tasks are identified as

- ongoing,
- short term (to be completed within one year of plan adoption),
- mid-term (1-5 years of adoption) and
- long term (5+ years from adoption).

Responsibilities

The Town government officials and bodies responsible for each task are identified. Other organizations whose assistance the Town will request are identified with "x"

Too often after a town plan is adopted, it is set aside and/or ignored. There are several reasons for this, including the lack of available resources – money, people, and time – to accomplish everything called for in the plan.

A town plan should, however, be viewed as a living document that describes a direction for the community.

The following goals, objectives and, most importantly, the implementation tasks should be viewed as a work plan to assist local decision-makers in a variety of settings, and include:

- Guiding the Select Board with budgeting and capital facilities planning
- Guiding the Planning Commission and landowners with local regulatory processes
- Serving as the "blueprint" for anticipated revisions to the Town's subdivision regulations, by describing the desired location, type, and intensity of future development

LOCAL PLANNING PROCESS TASKS	RESPONSIBILITY	PRIORITY
<i>(Note: Tasks are not listed in any particular order)</i>		
1. Provide an open, accessible, and civil government to all citizens.	Select Board	on-going
2. Foster enhanced communication among all elected and appointed bodies.	Select Board	on-going
3. Review current maintenance and use of the Town web site to identify opportunities to expand its effectiveness as a means for keeping citizens informed of local government activities.	Select Board Planning Commission	on-going
4. Continue to publish meeting schedules and meeting agendas for local boards and committees.	Committee Chairs	on-going
5. Establish an annual planning forum where community members can be heard and where a policy of pro-active involvement is fostered.	Planning Commission	short-term
6. Conduct surveys to solicit public opinion regarding policy priorities of the Town and the preferred rate of community growth and development.	Planning Commission	on-going
7. Hold periodic meetings to evaluate the Town's performance in implementing the Town Plan.	Planning Comm Work Gp	on-going

II. PRESERVATION

GOAL

To preserve and enhance Mount Holly's natural resources, scenic landscape, environmental quality, and historic heritage for the benefit of current and future generations.

POLICIES

1. Support the efforts of land conservation organizations to identify and to preserve land and other important natural resources.

2. Protect water quality in streams by ensuring:

- a. adequate sewage disposal
- b. riparian buffers to protect water quality and fisheries habitat
- c. control of runoff and erosion
- d. restricted development in designated flood plains
- e. protection of groundwater supplies.

3. Protect important natural resources and fragile features including wetlands, floodplains, unique geologic features, prime agricultural soils, and slopes in excess of 25%.

4. Protect critical wildlife habitat and important ecological communities including but not limited to deer wintering areas, rare and/or endangered species habitat, local fisheries, critical bear habitat and identified travel corridors from inappropriate or destructive development and land management activities.

5. Development on steep slopes, hillsides and ridgelines shall be carefully assessed to avoid or mitigate adverse impact to scenic resources, water quality, and public safety.

6. The Town shall advocate for State Wildlife Management Areas, State Forests and Parks, and the Green Mountain National Forest to be retained in public ownership now and in the future and to be managed for the long term health and well-being of the relevant ecological resources.

7. The extraction of earth resources, including sand, gravel and stone, shall be conducted in a manner that minimizes conflicts with properties in the vicinity, avoids adverse impacts to ground and surface water quality and other fragile features, and shall include plans for the restoration of extraction sites based on the unique conditions of the area affected.

ENVIRONMENTAL QUALITY TASKS	RESPONSIBILITY	PRIORITY
1 Promote best land management practices for water resources, through subdivision performance standards for runoff, erosion, stream ecology, and aquatic life.	Planning Commission	short term
2. Develop a plan for an assessment of water quality with recommendations for the implementation of necessary measures.	Select Board Planning Commission Agency Natural Resources "x" Rut Reg Planning Comm "x"	on-going
2. Evaluate existing storm water management facilities and identify improvements that would enhance water quality.	Select Board Road Commissioner Rut Reg Planning Comm "x"	on-going
3. Conduct the second part of a critical wildlife habitat inventory (ecological survey) to assist landowners and town planners to anticipate and to avoid possible conflicts between development and/or land management activities and wildlife habitat protection goals.	Planning Commission MH Conservation Trust "x" NEGEF "x" State of VT "x"	short-term
4. Continue to review proposed subdivisions to determine the potential impact on fragile ecological communities and natural resources.	Planning Commission	on-going
5. Actively participate in the preparation of management plans for the state and national forests as well as the Yale/Bowen Forest and other public or conserved properties to ensure management strategies that are consistent with the goals of this Plan.	Planning Commission MH Conservation Trust "x"	on-going

III. GROWTH & DEVELOPMENT

GOAL

To accommodate a rate of growth and development that meets the needs of the community and, as expressed in the Town's vision, to remain a rural town with open spaces and significant undeveloped lands.

POLICIES

- 1. Growth and development trends will be monitored on an annual basis using the best available data, estimates, and projections.**
- 2. Local infrastructure and services will be planned to accommodate anticipated increases in the Town's population.**
- 3. Each new development will be evaluated for conformance with the Mount Holly Town Plan and associated policies, bylaws, and programs.**
- 4. New development shall be sited to conserve significant undeveloped land, natural resources, and conservation lands, and to prevent strip development.**
- 5. The rural landscape and rural character of most of Mount Holly's countryside, consisting of moderate to low density residential development, farming and forestry, and limited commercial enterprises such as outdoor recreation, home occupations, and cottage industries shall be maintained by:**
 - a. ensuring that land subdivision is carefully designed to avoid, to the extent practical, adverse impacts to natural or fragile features, productive farmland, and other features which help to define the Town's rural character and working landscape;**
 - b. the careful siting and landscaping of subdivisions on steep slopes, hillsides, and ridgelines;**
 - c. encouraging land use that retains as much undisturbed rural and forest land as feasible.**
- 6. Mount Holly will protect itself from untoward results of development by establishing guidelines pertaining to:**
 - Access for emergency vehicles**
 - Peace and quiet of neighborhood**
 - Trees and scenic quality of ridge lines**
 - Scenic views**
 - Air and water quality**
 - Off-street parking**
 - Wildlife habitat**
 - Exterior lights**

	MH Conservation Trust "x" VAST "x"	mid-term
3. Review and update management plans for public recreation facilities and properties.	Select Board	short-term
4 Organize and/or work with volunteer groups to maintain the School's athletic fields and gym and Star Lake beach, skating area, and swimming water quality	Select Board	short-term
5. Request Vermont Fish and Wildlife Department to expand the list of acceptable use of the Lake Ninevah access point	Planning Commission	short term

("x" = Organization to be asked for assistance with task)

VIII. TRANSPORTATION

GOAL

To provide an efficient, cost effective, multi-modal transportation network that provides for the needs of the community.

POLICIES

1 Preserve the rural, historic, scenic character of Mount Holly by:

- Retaining existing paved and unpaved roads with no widening or increase in paving unless necessary for public safety;
- Maintaining safe and passable roads throughout the year consistent with the Vermont "Safe Roads at Safe Speeds" policy;
- Requiring that all road maintenance activities focus on safety, efficiency, cost-effectiveness and prevention of deterioration, rather than on facilitation of greater traffic volume or speed;
- Maintaining roads that can accommodate multiple modes of transportation, and recreation.

2. The Town shall provide a range of transportation options, including roads, transit, bicycle, and pedestrian facilities, to accommodate the current population.

3. The Town shall explore possible transportation systems within the Town and surrounding region to meet the needs of the elderly, disabled, and others without means of transportation.

4. Class 2 roads shall be maintained, as needed, to promote the efficient movement of traffic within and through Town, without undermining historic character or pedestrian safety.

5. Class 3 roads shall be maintained, as needed, to accommodate current traffic volumes, while maintaining the unique character of the Town's residential neighborhoods and rural areas.

6. The Vermont State Standards for the Design of Transportation Construction, Reconstruction and Rehabilitation on Freeways, Roads and Streets, dated October 1997 and prepared by the Agency of Transportation, shall serve as the Town's standards for maintenance and upgrade of public roads.

7. The Mount Holly Municipal Center and Belmont Village should serve as the transportation hubs of the community.

8. Provide adequate parking to meet the parking demand generated by new development.
9. Advocate for a Route 103 Corridor Management Plan as a means to address traffic concerns in Mount Holly and access to Ludlow and elsewhere on Route 103
10. The Town shall accept new roads, only if related to the existing road system, in order to minimize the impact of new roads on areas of historic, scenic, or natural resources. The Town shall require, to the extent possible, that new roads form an interconnected network of roads, especially in proximity to higher density residential districts, and the Town will avoid roads that transect contiguous forest areas.
11. The Town shall seek, to the extent practical, regional solutions to traffic management and transportation issues through active local participation on the Rutland Regional Planning Commission's Rutland Region Transportation Council and coordination with the Vermont Agency of Transportation.
12. The Town shall protect and maintain the historic and scenic features located within the rights-of-way of scenic roads.
13. All road construction public or private shall have as little impact as possible on important natural areas, and shall preserve historic and scenic features of the landscape.
14. The Town shall retain stone walls along roads as part of the rural, scenic, and historic character of the Town.
15. The Town shall remove healthy trees from the right of way only where necessary for safety, visibility, snow removal, utilities, or drainage.

TRANSPORTATION TASKS	RESPONSIBILITY	PRIORITY
1. Through the Town's development regulations and driveway rules, continue to carefully control access to public roads in accordance with appropriate standards.	Road Commissioner Select Board	ongoing
2. Create and adopt an official map for the Town that indicates all existing and planned transportation routes, which might include: intersection improvements; traffic circulation improvements in Belmont (parking, one-way streets, traffic control, sidewalks); sidewalks; recreation paths; wetlands walkway.	Belmont Designated Village "x" Road Commissioner Planning Commission Select Board MHConservation Trust "x"	short-term
3. Through the Town's subdivision regulations, consider opportunities for proposed development roads to connect to contiguous existing or planned roads.	Planning Commission	on-going
4. Prepare and submit to the Town a Scenic Road Ordinance,		

and maintain designated scenic roads, in accordance with approved scenic road maintenance plans.

Planning Commission
Road Commissioner ongoing

5. Prepare a bicycle and pedestrian improvement plan for the Town that, at a minimum, addresses the following:

a. the creation and extension of trails along "ancient roads",

b. the feasibility of creating horse trails in conjunction with neighboring towns

Planning Commission
Road Commissioner
Select Board short-term

6. Explore with the Rutland Region Transportation Council ways to improve transportation for those without access to private transportation, including transportation during emergencies.

Planning Commission mid term

7. Keep abreast of changing regulations or funding regarding rail services and their effect on the Town.

Planning Commission
Rut Reg Trans Council Rep ongoing

8. Amend subdivision regulations to assist in the implementation of policies cited above.

Planning Commission short term

("x" = Organization to be asked for assistance with task)

IX. ENERGY

GOAL.

To encourage the efficient use of energy including the development and use of renewable energy resources.

POLICIES

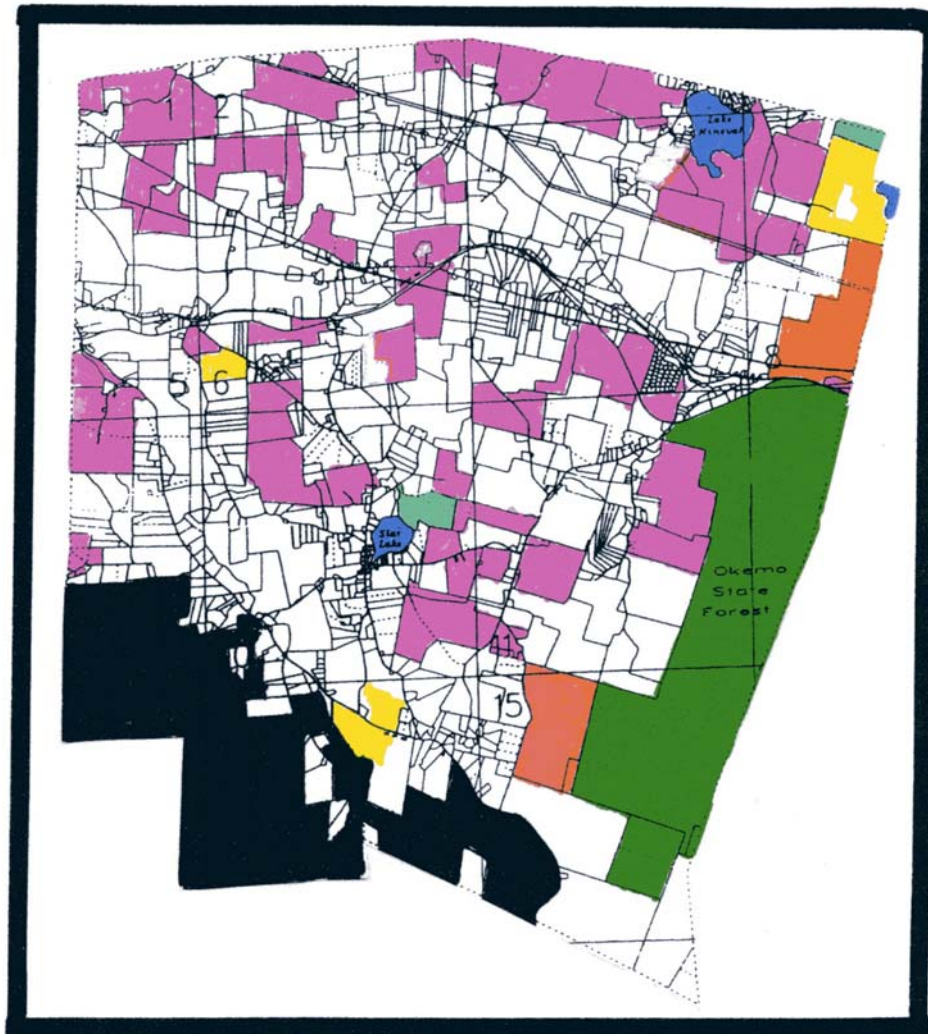
1. Town energy expenditures shall be reduced to the extent feasible through energy efficiency and conservation.

2. Energy efficiency, conservation, and renewable energy resources shall be considered in new Town construction projects, equipment purchases, and operations.

3. Energy efficient building and site design which reduce energy requirements for lighting, heating, cooling, and transportation, including but not limited to the clustering and siting of buildings and the use of landscaping and screening shall be encouraged as applicable under local regulations and ordinances.








4. Encourage energy efficiency, energy conservation, recycling, and the use of renewable and alternative power and fuel sources (including wind, water, solar) within the Town of Mount Holly.

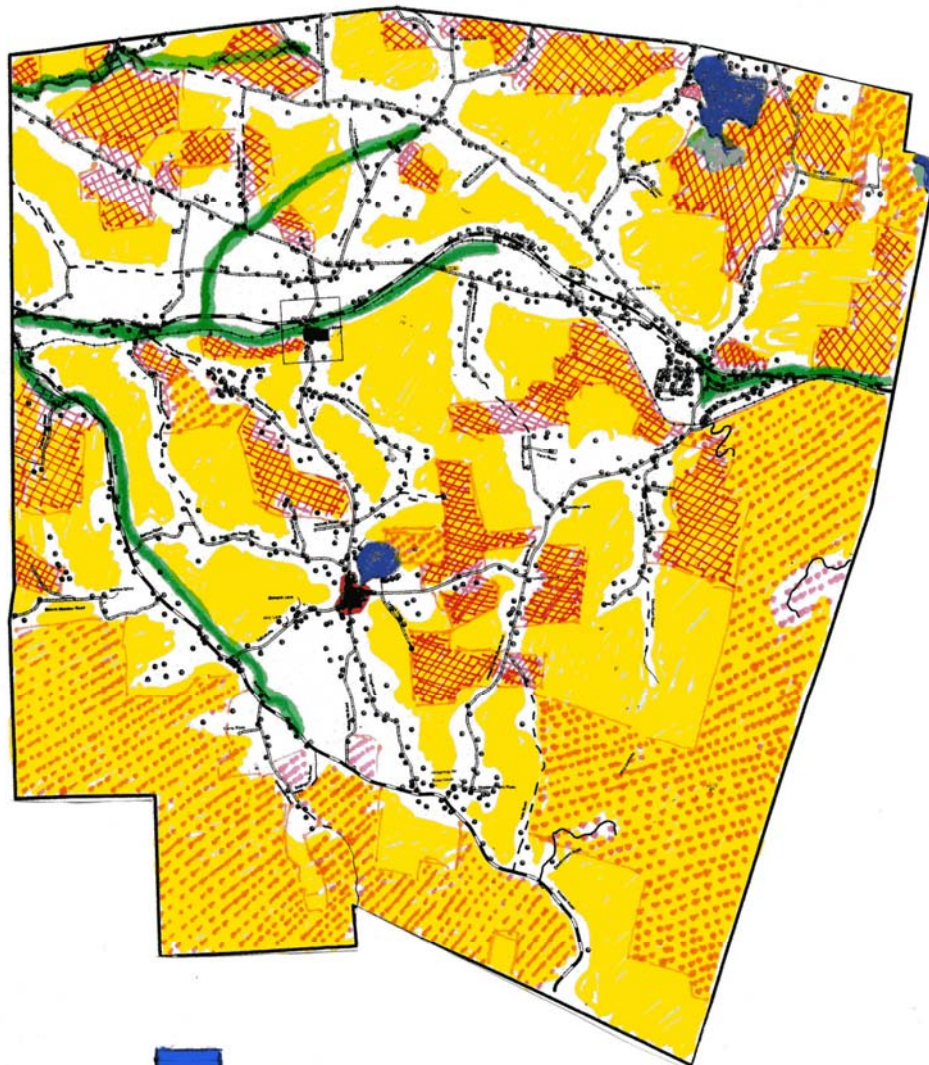
5. Ensure that development of alternative energy sources does not negatively impact the environment or the character of the community.








Map II a 8

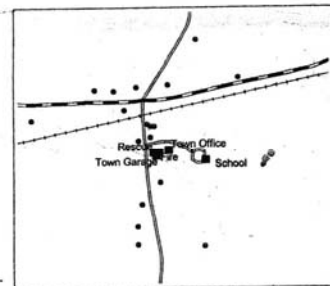
MOUNT HOLLY PUBLIC and CONSERVED LANDS

- | | | |
|--|---|--|
|  Green Mountain National Forest |  Vermont Wildlife Management Areas |  Vermont Land Trust Conservation Easement |
|  Okemo State Forest |  Bowen/Yale Forest |  Forest Legacy easement In process |
| | |  Agricultural and Managed Forest Land Value Program - Current Use |



Legend

- | | | | |
|---|-------------------------|---|--|
| • | Structures |  | Lakes |
| — | Town Class 2 |  | Floodplains |
| — | Town Class 3 |  | Public & Conserved Land |
| - - - | Town Class 4 |  | Agriculture & Managed Forest Land
Use Value Program |
| — | State Forest Road |  | Designated Village Center – Belmont |
| — | State Highway |  | Municipal Center |
| — | Private, unknown, other | | |
| — | Rail | | |
|  | Contiguous Forest | | |



MOUNT HOLLY FUTURE LAND USE

Town of Ludlow Municipal Development Plan

Adopted March 5, 2013

3. NATURAL RESOURCES



One of Ludlow's greatest assets is the abundance of natural resources and attractions including: Ludlow (Okemo) Mountain, Buttermilk Falls and the Ludlow area lakes, which are available for the use and enjoyment of residents, visitors, businesses, and industries. Ludlow's natural environment provides shelter and sustenance for wildlife and serves as the foundation for much of the municipality's economy.

The intrinsic value of the natural resources in Ludlow can be traced from the Town's early history. The early agrarian society, based on sheep and dairy farming, relied on the land to support their livestock and families. Later, Ludlow's woolen textile mills depended on the Black River to meet needs for power and water. Today, the commercial agrarian segment of the economy has been reduced to next to nothing. Earth mineral resources, including talc, gravel, and gold, have also played a role in Ludlow's development but most have also been greatly reduced in recent years.

Today, the recreational and scenic values of Ludlow's natural environment attract the travel and tourism market. The tourism industry attracts people with a desire to participate in all varieties of outdoor activities. These activities include: skiing, hiking, biking, swimming, snowmobiling, golf, hunting and fishing to name just a few.

Protection and preservation of Ludlow's important natural amenities are vital to maintaining a fundamental component of Ludlow's economic base. Economic pressures on landowners to subdivide and develop large forested areas, fallow

agricultural lands, and land areas beside beautiful streams and lakes can be overwhelming. The potential economic gains associated with tourism, development of second homes, and related businesses and industries must be balanced with efforts to preserve the natural features that created the attraction in the first place. The challenge, for all concerned, with growth and development in Ludlow lies in achieving that crucial balance.

In recent years, energy costs have increased significantly, therefore, we as a municipality need to think “outside the box” on how our natural resources can be sustainably utilized as a local energy source and benefit to our local economic future.

Forest Resources

The management and prevention of forest fragmentation is a key component in the long term health and productivity of Vermont forestland. The creation of smaller forest patches due to development of housing and associated components such as roads and power lines are detrimental to the health and economic viability of forested areas.

Forested land in Ludlow comprises a majority of the total land area and serves as a major asset. The Okemo State Forest and other state-owned lands represent 14.8 percent of the land area in Ludlow.

A majority of the forested lands in Ludlow are privately owned. Landowners are under increasing financial pressure to sell or convert those lands to land uses other than forestry. Vermont’s Use Value Appraisal (or Current Use) Program has been successful in bringing a large amount of private forestland in the Region under sound management plans. The Table 3.1 summarizes forested lands enrolled in the Current Use Program, comprising about 11.3 percent of the total land area in Ludlow.



John Garbaldi Sargent, U.S. Attorney General under Calvin Coolidge.

Born October 13, 1860 in Ludlow, Vermont, Sargent was schooled at Black River Academy, graduating in 1883, and then entered Tufts College in Boston, Massachusetts. After college, Sargent returned to Ludlow where he married Mary Lorraine Gordon in 1887. In 1908 Sargent was named Attorney General of Vermont. He campaigned vigorously for Warren G. Harding in 1920 and Calvin Coolidge in 1924.

Sargent was named Attorney General of the United States on March 17, 1925.

In 1930 Sargent returned to Vermont and again took an active role in his law firm. Sargent died at his home in Ludlow, Vermont, on March 5, 1939.

Table 3.1: Current Use Program – Ludlow

Total Acres	Forest	Non-Productive	Agriculture	Total Enrolled	% Total Acres
21,704	2,458.52	20.55	2,673.96	2,673.96	12.3

Vermont’s Forest Legacy Program is a

voluntary grant program that seeks to conserve important private forestlands. The funds can be used to acquire property (fee simple) or establish conservation easements allowing for future forestry uses, while also allowing for outdoor recreational uses and wildlife habitat.

Forest Resources – Goal

1. Preserve and protect Ludlow's forest resources to ensure continuation of their environmental, aesthetic, and economic values.

Forest Resources – Policies

1. Encourage measures that balance supporting land-based economies, protecting large blocks of forested lands, with supporting development in or near village centers.
2. Proposed roads or utilities should be sited to cause minimal negative impact to forest contiguity and aesthetics.
3. Support productive, sustainable forestry on large lots, contiguous blocks of forested lands, and forested corridors linking large tracts of forest lands, and maintain accessibility to those lands. Doing so will contribute to maintaining the ecological values and economic vitality of these forested areas.
4. Take advantage of the voluntary Vermont's Forest Legacy Program to set aside tracts of forested areas in Ludlow.

Forest Resources – Recommendations

1. Review Subdivision Regulations for protection against forest fragmentation.

Agricultural Resources

Protecting important agricultural soils, while also encouraging smart growth, is challenging. Many historic villages, including Ludlow, are located in river valleys and are surrounded by areas of prime agricultural soils and /or agricultural soils of statewide significance. (See the Agricultural Soils Map.) Agricultural soils that are rated by the Natural Resources Conservation Service as prime, statewide or locally important are regulated through Act 250 Criterion 9(b). Large blocks of prime agricultural soils are beneficial to allow for future farming. However, a balance is necessary in order to protect agricultural soils, while allowing the flexibility to facilitate new growth within or adjacent to historic villages in accordance with the State Planning Goal in 24 V.S.A. 4302(c)(1).

Though large working farms are no longer active in Ludlow, a few horticultural crops and, domestic livestock are still raised, primarily for family or specialty use. These small-

scale agricultural activities contribute to the overall scenic qualities and visual identity in Ludlow, when effectively interspersed with other compatible land uses.

Agricultural Resources provide meadows, pastures and fields that create visually appealing open land which contrasts with forested and appropriately developed lands.

Careful consideration shall be given in areas higher than 2,500 feet in elevation and with slopes greater than 25% to avoid any negative impacts new construction may have on the environment, such as degradation of water quality, erosion of topsoil, and encroachment on wildlife habitat.

Soils and Agricultural Resource – Goal

1. Promote land use development patterns that do not diminish the future viability of local agricultural activities.

Soils and Agricultural Resource - Policies

1. Conserve agricultural lands, as shown on the Agricultural Soils Map, for their current and potential value.
2. State-adopted Accepted Agricultural Practices and Acceptable Management Practices shall be used in agricultural and forestry activities, implementation of Best Management Practices (BMPs) are encouraged in such operations, and point and non-point source pollution should be minimized.
3. Seek public/private funds for the conservation of agricultural lands.
4. Development should be sited in order to avoid unstable soils that offer poor support for foundations or footings and are subject to slippage, or are poorly suited for road construction. Extensive site investigations and erosion control plans may be required to determine the development suitability of such soils.

Soils and Agricultural Resource - Recommendations

1. Review land use regulations for addressing prime agricultural soils and development on steep slopes and fragile soils.

Water Resources – Goal

1. Protect water resources for the health, safety and enjoyment of Ludlow citizens.

Water Resources – Policies

1. Ensure that development in the watershed areas of Lake Rescue and Lake Pauline does not adversely affect water quality and the scenic value of these lakes.
2. Protect shorelines and stream banks from surface runoff that could lead to excessive erosion, sedimentation, and/or other pollution of surface waters.
3. Protect the quality and capacity of groundwater consistent with state statute and zoning bylaws.
4. Encourage compatible uses of surface waters for recreation, tourism, and economic benefit where such uses will not impair water quality, or wildlife and/or aquatic habitat.
5. Development in flood hazard areas shall be in compliance with the Ludlow's Flood Hazard Regulations.
6. Destruction of Class 1 and 2 wetlands and construction in wetlands should be avoided.
7. Land uses within the Aquifer Protection District and wellhead protection areas shall not threaten the quality of groundwater supplies.
8. The storage or use of chemicals that could contaminate groundwater within Source Protection Areas shall not be allowed.
9. Encourage Low Impact Development (LID), including but not limited to rain gardens, limiting impervious surface lot coverage, and protecting existing natural vegetation, in order to maximize on-site stormwater infiltration and minimize off-site stormwater and erosion impacts.
10. Support efforts to improve the water quality of the lakes, such efforts may include preventing the spread of Eurasian water milfoil, upgrading failing septic systems along lakeshores, implementing proper stormwater management activities to prevent sediment migrating from roads and driveways.

Water Resources – Recommendations

1. Work cooperatively with the Connecticut River Joint Commissions, the Black River Watershed Association, the Lake Association and others involved in water quality issues in order to implement the following water quality protection strategies:

Four rare or uncommon plants have been documented by the State Department of Fish and Wildlife in the Ludlow area (one is classified as very rare, two as rare, and one as uncommon). The Wildlife Habitat Map of Ludlow shows the general locations of these rare plants. Efforts to protect these rare species prevent publication of their specific location.

Maintaining Wildlife Resources should be done by the encouragement of protection measures and preservation of sufficient healthy resources.



Photograph by Tom Johnson

Wildlife Resources – Goal

1. Preserve important wildlife habitat for biodiversity.

Wildlife Resources – Policies

1. Control development in environmentally sensitive areas.
2. Ensure that methods of waste disposal, construction, road paving or maintenance; or disturbance of habitat, and other human activities do not lead to pollution or destruction of wildlife habitats.
3. Establish preservation measures for areas identified as critical habitat for the survival of wildlife species.
4. Support private organizations, landowners and others who are involved in efforts to ensure the continuation or enhancement of Ludlow's wildlife population.
5. Encourage the economic community that involves or relies on fish and wildlife populations to contribute to sustaining Ludlow's wildlife resources.
6. Encourage landowners to avoid subdivision or fragmentation of land that would result in significant loss or degradation of fish and wildlife habitat areas.

Wildlife Resources - Recommendations

1. Ensure bylaws encourage appropriate use and preservation of important resources, including large tracts of forested land, fresh water resources, mineral

deposits, wildlife habitats, agricultural lands and environmentally sensitive and scenic resources.

2. Develop a mitigation policy and provide development guidelines for mitigating any negative effects on deeryards, bear travel corridors or other important habitat areas.
3. Incorporate State, Federal and local educational measures, funding or incentives to encourage land owners to protect and preserve natural resources
4. Work with local, regional, State and Federal agencies to promote appropriate use, preservation, and protection of important resources.
5. Develop an inventory of natural, environmentally sensitive and scenic resources to be used in protecting and preserving these features.

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2. Within the service area, supply municipal service to new development and to owners of existing failed or failing septic systems.
3. Encourage maintenance and upgrading of onsite systems to prevent well contamination, pollution or other problems associated with improperly installed or failed systems.
4. Continue regular updates of the Capital Budget and Program for municipal water and wastewater system needs.

Electrical Services

As discussed in the Energy Chapter, the Village of Ludlow Electric Light Department and Central Vermont Public Service (CVPS) supply electricity. The general service areas for both providers are defined in the Energy Chapter of this Plan. The Utilities and Facilities Map of Ludlow illustrates electrical transmission lines. Existing service capacity is considered sufficient to meet current and future demand.

Monthly winter energy peaks are evaluated to establish peak demand estimates. Generally, ISO New England raises costs to utility companies in response to increases in local peak demand. Ludlow Electric Light has developed Demand Side Management programs (DSMs), which are designed to maintain or lower peak demand and help avoid escalating consumer costs. Ludlow Electric's DSM efforts involve a fuel switching program that encourages customers to replace electric heating with an alternative heating source, such as propane, oil or renewable fuels, which reduces Ludlow's demand for electricity. Ludlow Electric also encourages customers to contact Efficiency Vermont for tips on reducing their consumption. Other DSM techniques include weatherizing buildings, using energy star rated appliances, energy star rated buildings, lighting upgrades (e.g. compact fluorescent (CFL) or LED lighting).

Electrical Services - Goals

1. Ensure a supply of safe, reliable electricity to meet the needs of residents, businesses, industries, and visitors at a reasonable cost.
2. Keep peak demand for electricity low and support methods to improve efficiency and energy conservation.

Electrical Services - Policies

1. Encourage electrical service suppliers to continue trying to reduce peak demand.
2. Support efficiency and demand side management strategies designed to reduce costs.

3. Continue to evaluate the placement of electric lines and facilities for health, safety, and aesthetic concerns.

Electrical Services – Recommendations

1. Locate and schedule expansion of electrical facilities and services to coincide with the need for desired development.
2. Encourage the use of existing infrastructure and services.
3. Educate building owners about energy efficiency services provided by Efficiency Vermont.

Communication Services

Telephone service is provided by Telephone Data Services (TDS). Other telecommunications services in Ludlow include cellular phone, paging, Internet access (cable, DSL or dial up) and cable television, which are provided by Comcast or TDS. A local access television channel which broadcasts meetings and hearings held by the various town and school boards and commissions is available to cable subscribers. This service has proven to be popular among many citizens who cannot attend these meetings but are nonetheless interested in local affairs. The municipality maintains a web site (www.ludlow.vt.us) that is broad in scope, helpful and informative. Public notices for up-coming public meetings, minutes of meetings of various boards and phone numbers of municipal departments are among the things posted here.

The maintenance of a modern and accessible telecommunications network is considered essential to the public welfare, access to educational opportunities and economic development efforts. Countless economic, social, and cultural benefits are available to communities, which possess free and open access to people and ideas in other parts of the world. Public safety agencies, such as emergency medical services, fire, and police departments, rely on wireless communication to provide essential services.

At the same time, the system infrastructure must be developed in an efficient, safe, and thoughtful manner. Possible impacts upon scenic and cultural resources, aesthetics, and public health should all be considered during the planning process.

Siting and construction of telecommunications towers can negatively impact scenic resources vital to a Town's and surrounding communities' economic future and cultural richness. The Town of Ludlow adopted the Telecommunication Facilities Ordinance in 2008 in order to balance the benefits of an integrated and modern telecommunications network, with minimizing negative impacts of its development.

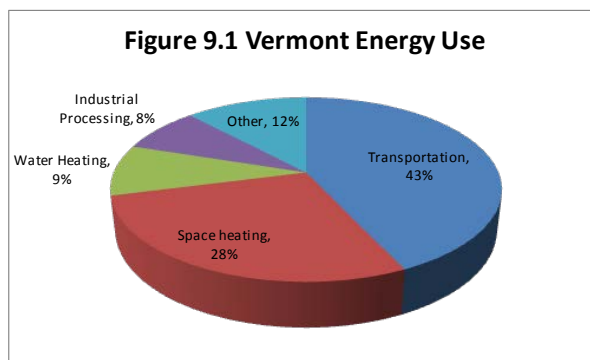
9. ENERGY



Photograph by Tom Johnson

The purpose of this Chapter is to (1) analyze local energy resources and needs, (2) identify how to reduce municipal operational costs through energy efficiency initiatives, and (3), in coordination with the Land Use Chapter, encourage land use patterns that result in energy conservation as required by 24 V.S.A. §4382.

Insulating and weatherizing improvements to existing buildings as well as using energy efficient appliances and lighting can greatly reduce energy demand. In addition, expanding the use of renewable energy resources can reduce demand on non-renewables and help to improve national energy security and self-sufficiency. According to the Vermont Renewable Energy Atlas, there are currently two net-metered renewable energy systems located in Ludlow, one solar photovoltaic and one a wind turbine.



Energy Analysis

Transportation is largest portion of energy use in the state of Vermont at 43% (see Figure 9.1). Space and water heating combine to use 37% of the statewide energy.

Hydroelectric

There are currently no hydroelectric facilities in Ludlow; however, six existing dams have the potential to produce 45 kW of power according to the Vermont Renewable Energy Atlas (see Figure 9.9). Historically, a few dams were used in Ludlow to generate the power to operate mills. Feasibility studies would help to identify the cost/benefit of the investment required to establish hydro facilities at any of these locations. Mini-hydro or run-of-the-river technologies are much smaller and have less environmental impact, but are difficult to permit as of this writing. A few municipalities are looking into such systems installed in municipal wastewater systems in order to generate power to operate the plant.

Energy – Goals

1. Continue to reduce energy consumption in Ludlow.
2. Reduce demand for fossil fuels by promoting public transportation, ride-share programs and other programs that lessens the dependence on single occupancy vehicles.
3. Promote the development of a transportation system that reduces the use of single-occupancy vehicles, and enables increased non-motorized vehicle and pedestrian traffic. This network should emphasize non-motorized links between schools, stores, work and home.
4. Promote new development to locate within or directly surrounding the Village in order to encourage walking, bicycling and public transit usage, and minimize reliance on motor vehicles for travel needs
5. Encourage land use patterns and development that use energy more efficiently.
6. Save money by reducing the overall energy consumption of municipal buildings and operations through a variety of cost-effective conservation and efficiency projects and strategies.
7. Promote the development of local renewable resources as a replacement for imported nonrenewable resources.
8. Increase public awareness of energy issues and build public support for energy efficiency and sustainable energy policies.
9. Promote workforce training for green or renewable energy related careers.

Energy - Policies

1. Conserve existing non-renewable energy resources. Support the gradual reduction in the use of fossil fuels and conversion to fuels derived from renewable energy resources.

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2. Improve management and promote the use of Ludlow's woodlots for efficient energy uses.
3. Encourage owners of forested lands to follow the Accepted Management Practices (AMPs) established for silviculture.
4. Support efforts to educate consumers about the environmental and energy benefits of the complete combustion of wood.
6. Endorse the development and use of residential-scale renewable energy systems, such as solar heating, photovoltaic, wind, geothermal and mini-hydro.
7. Advocate the use of cost effective building siting and construction techniques (e.g. passive solar building orientation, etc.) in order to gain solar energy for space heating, water heating, lighting, and electricity.
8. Require an energy impact analysis for all major development proposals, assessing the quantity and source of increased energy consumption resulting from the development.
9. Prior to the approval of new commercial power generation facilities and additional or upgraded transmission or distribution lines or facilities, utilities shall demonstrate that they have first maximized demand management and energy efficiency and conservation efforts.
10. Commercial energy production facilities shall not have undue adverse impacts on significant wetlands, plant or wildlife habitat, scenic resources or inventoried historic or cultural resources.
11. Where development and construction of commercial renewable electric power generation facilities are proposed, plans must consider placement of such facilities in locations where aesthetic and wildlife impact is minimal or reasonable measures have been employed to mitigate adverse impacts.
12. Any commercial wind energy systems under review by the Public Service Board shall meet the Wind Energy Siting Policy as described in this Chapter.

Energy - Recommendations

1. Establish an energy committee in accordance with 24 V.S.A. Chapter 117 §4433 and §4464.
2. The Energy Committee, when established, will inventory and conduct energy audits on municipal facilities, and develop a strategic plan to make energy efficiency and conservation upgrades.
3. The Municipality will construct all new public buildings according to standards of energy efficiency at least equivalent to U.S. EPA Energy Star rating or similar certification where it can be demonstrated to be cost-effective.

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4. Examine the feasibility of expanding and improving coordination with the public transit and shuttle systems to accommodate more people in Ludlow and neighboring areas.
5. Advocate programs that will improve economic support for owners of forested land through zoning and tax regulations.
6. Investigate the cost and potential benefit of increasing or converting to the use of efficient wood burning devices for space heating and hot water in municipal or school facilities. Consider combining with other renewable energy technologies for greater conservation and reduced pollution.
7. Develop criteria for evaluating site design plans for the placement and aesthetic aspects of proposed solar and wind energy devices.
8. Promote combined use of solar and/or wind energy technologies with other renewable energy resources for conservation, reduced pollution, long range cost savings and tax savings.
9. Evaluate potential public solar or wind energy sites for energy potential and cost feasibility prior to construction
10. Adopt practical energy conservation standards in land use regulations in order to maximize the energy efficiency of development through siting, design and construction.

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Gore Recreational District includes Public Use Lands consisting of 51.16 acres of open undeveloped land.

Lakes District

The purpose of this district is to preserve and enhance high quality waters, to provide for the beneficial use of public waters by the general public, to protect shore lands of waters which are suitable for development, to maintain low density of development and to maintain high standards of quality for permitted development. Future development shall avoid strip development along VT Route 100.

Aquifer Protection District

This district is designated for preservation based on unique environmental characteristics, such as the aquifer recharge area. Although dispersed, very low density residential uses may occur within the conservation area; future high-intensity development is not suitable and is strongly discouraged in this area.

Industrial

The industrial designation makes provision for uses, which are appropriate for industry. The overriding use within the industrial area will be heavy industry, including mineral extraction and manufacturing. There may be a few remaining residences and commercial uses within the industrial area; however, future residential development is to be discouraged.

Conservation

The conservation area generally includes publicly owned or publicly conserved lands within the Town and Village of Ludlow. The purpose of this area is to provide for outdoor recreational activities, as well as to conserve forests for sustainable forestry, wildlife habitat, improved water quality and the preservation of Ludlow's rural character. Since these areas are publicly owned or conserved, future development is limited to sustainable resource management, public access and outdoor recreational facilities.

Special Considerations

Wetlands

These are areas, which exhibit suitable soil characteristics and moisture levels, which are defined in the *Vermont Wetland Rules*. This designation may also encompass lakes, ponds, streams, and other areas of open water. These wetlands must be protected.

Flood Hazard Areas

Any development within the flood hazard areas as mapped by FEMA is subject to review under either the Village or Town of Ludlow Flood Hazard Regulations.

LUDLOW

Current Land Use



- Buttermilk Falls
- LUDLOW
- Town Owned Land
- Commercial
- Industrial
- Civic
- Residential
- Railroad
- Class 1 TH
- Class 2 TH
- Class 3 TH
- Class 4 TH
- State Forest Highway
- Private Road
- VT State Highway
- Conserved Public Land
- Village Boundary

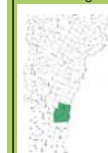
VT State Plane,
Meters, NAD 83

For planning purposes only.
Not for regulatory interpretation.

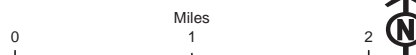


for info & data - www.vcgl.org

Southern Windsor County
Regional Planning Commission



SWCRPC
SOUTHERN WINDSOR COUNTY
REGIONAL PLANNING COMMISSION
SWCRPC
PO BOX 320
Ascutney, VT 05030
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www.swcrpc.org



LUDLOW

Future Land Use

Ludlow Mountain ▲

▲ South Mountain

▲ Terrible Mountain

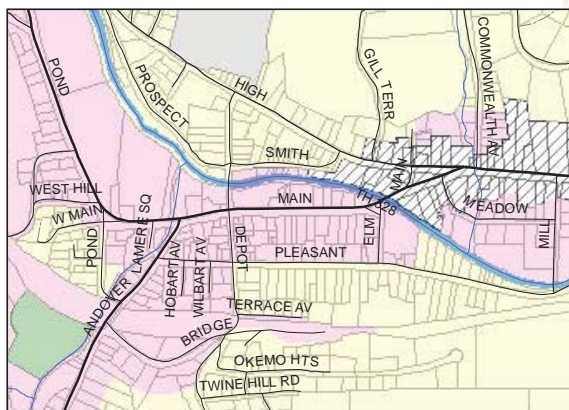
▲ North Hill

▲ The Pinnacle

▲ South Hill

▲ Bear Hill

▲ Whetstone Hill



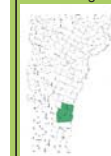
- Class 1 TH
- Class 2 TH
- Class 3 TH
- Class 4 TH
- State Forest Highway
- Private Road
- VT State Highway
- Stream
- Aquifer Protection
- Cemetery
- Conservation
- Industrial
- Jackson Gore Recreation District
- Lakes District
- Outdoor Recreation
- Preservation District
- Residential Commercial
- Rural Residential
- Village Mixed Use
- Village Residential Neighborhoods
- Town Boundary
- Pond
- 2010 Parcels

VT State Plane,
Meters, NAD 83

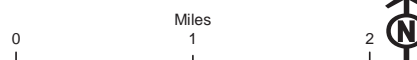
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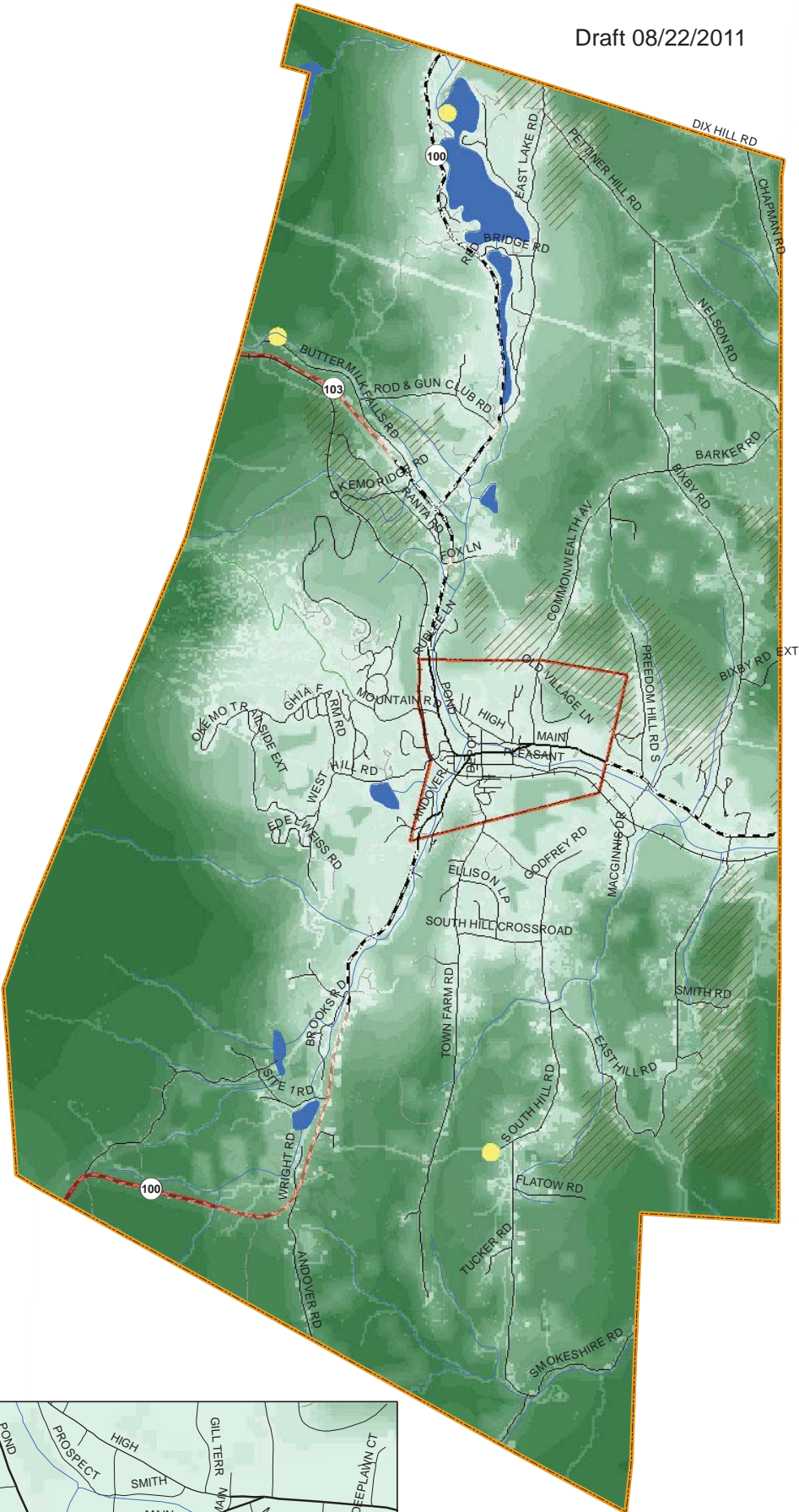


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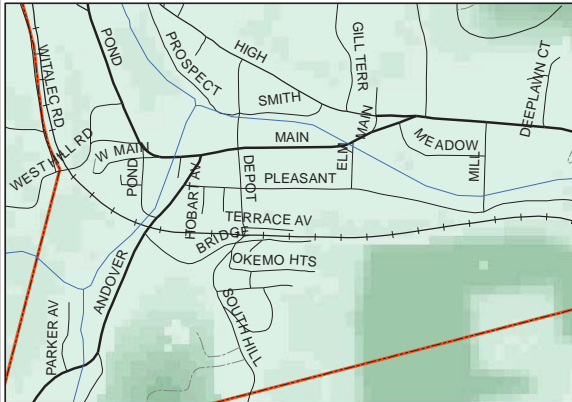


LUDLOW

Wildlife Habitat



- Class 1 TH
 - Class 2 TH
 - Class 3 TH
 - Class 4 TH
 - State Forest Highway
 - Private Road
 - VT State Highway
 - Stream
 - Pond
 - Railroad
 - Village Boundary
 - Town Boundary
 - Rare, Threatened or Endangered Species
 - Deer Wintering Area
- Wildlife Habitat Suitability Analysis**
- More Suitable
 - Less Suitable
- Potential Wildlife Crossings**
- Least Significant
 - Most Significant



VT State Plane,
Meters, NAD 83

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Not for regulatory interpretation.

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Town of Cavendish

Town Plan

Adopted August 28, 2012

3. Support community-wide cultural events and activities.
4. It is important to the town to have a community elementary school.

Goal 4: Promote and maintain a safe, convenient, economic, and energy-efficient transportation network that respects the integrity of the natural environment, as well as the historical and esthetic value of the existing roads.

Objectives:

1. Improvement or expansion of public utilities and transportation should occur in existing corridors to encourage desired development patterns.
2. Alternative forms of transportation, such as walking, bicycling and public transportation should be encouraged.
3. Promote use of esthetically compatible options for guard rails on roads such as cable, rusted rail, or pressure treated wood.
4. Maintain the tree canopies and stone walls on the existing roads.

Goal 5: To protect important natural and historic features of the Cavendish landscape, including woodland, wetlands, scenic sites, significant architecture, villages, wildlife habitats, view sheds, and agricultural land.

Objectives:

1. Identify and include additional important resource areas on Future Land Use Map and develop a conservation plan to protect and preserve those features.
2. Encourage the renovation and preservation of historic buildings and structures.
3. Develop additional policies and plans for the long-term protection of significant scenic roads and highways, waterways, and views; cultural and historic resources; and important resources and recreation lands.
4. Prevent development within floodplains that will cause damage to natural or manmade resources.
5. Inventory and update the resources.

Goal 6: To maintain and improve the quality of air, water, wildlife, and land resources.

Objectives:

1. Insure development in areas of natural, cultural, and scenic significance is not detrimental to the resources of the town.
2. Protect and improve the water quality of the Town's rivers, lakes, streams, groundwater, and drinking water supplies.
3. Establish conservation measures for critical wildlife habitat.
4. Encourage the use of transportation systems that have minimal impacts on air quality.
5. Extraction of earth minerals and resources must ensure that land and water resources are minimally impacted and restored after extraction.

Goal 7: To promote the efficient use of energy through conservation and encourage the use of renewable energy resources, such as solar, wind, hydro and biomass.

Objectives:

1. Promote use of public transportation, ridesharing, non-motorized vehicles, and

- pedestrian traffic. Emphasize connections between schools, stores, work, and home.
2. Ensure that the design, location, and maintenance of existing and future transportation systems are consistent with the land use patterns recommended in this Plan.
 3. Promote alternative and energy efficient resources with residential development.
 4. Encourage the concentration of energy-intensive facilities, housing, and other uses to avoid the expense of distributing energy over large geographic areas.
 5. Promote the location of community service structures, retail sites, public utilities, day care centers, state offices, and other frequently visited sites within walking distance of residential areas.
 6. Ensure that post offices remain in village centers.

Goal 8: To maintain and enhance recreational opportunities.

Objectives:

1. Develop and maintain recreation facilities and infrastructure to provide recreation opportunities for all residents.
2. Ensure the preservation of and access to important natural and scenic resource areas for recreational use.
3. Enact a capital plan for a local bike path.

Goal 9: To strengthen agricultural and forest industries.

Objectives:

1. Support Current Use Program for agricultural and forest lands.
2. Develop additional conservation plans to ensure that primary agricultural soils are devoted to farming or to such uses which will maintain the potential for agricultural use.
3. Forest and agricultural lands should be considered for their forest and agricultural productivity prior to any non-forest or agricultural uses.
4. Encourage businesses and industries that add value to locally produced agricultural or forestry products.

Goal 10: To plan for, finance, and provide an efficient system of public facilities and services to meet present and future needs.

Objectives:

1. Analyze current facilities and assess future needs to determine potential demands of infrastructure.
2. Enact a Capital Program and Budget Plan for public utilities and facilities.

Goal 11: To encourage availability of safe and adequate housing for anyone choosing to live in the town of Cavendish.

Objectives:

1. Housing should meet the needs of diverse social and income groups.
2. New and rehabilitated housing should be safe, sanitary, and coordinated with the provision of necessary public facilities and utilities.
3. The development of diverse and appropriate housing should be encouraged in the Town of Cavendish.

Plan Implementation

Successful implementation of the goals, policies and recommendations outlined in this Plan depends on the combined efforts of Town residents and local officials, as well as the resources of the Southern Windsor County Regional Planning Commission, and other regional, state, federal and private entities involved in land use planning activities.

At the state and federal levels, the Plan can be used to justify and prioritize the use of federal funds for community development, transportation improvements, natural resource protection and management, and other investments. In addition, Act 250 requires that developers show that projects conform to local and regional plans.

At the regional level, the Regional Planning Commission can review the Town Plan for compliance with the requirements of Act 200. Act 200 approval makes the Town eligible to apply for implementation funding from the State in the form of Municipal Planning Grants.

Interpretation of the Town Plan

The Cavendish Planning Commission recognizes that the Town Plan has regulatory effect only for projects which require an Act 250 permit (commercial or industrial projects on more than an acre, subdivisions of six or more lots, ten or more housing units, local state or municipal projects which disturb 10 or more acres of land, oil and gas drilling, and development over 2,500 feet in elevation). For purposes of Act 250 review, plan language that contains the words "shall," "must," "will," "ensure," "protect," "insure," "maintain," "improve," and "preserve" is mandatory language. The Town Plan maps are an integral part of the Town Plan.

At the local level, the Town has the following opportunities with respect to implementing the goals, objectives, and policies of the Plan:

1. Develop land use regulations that are based on the goals, policies and recommendations outlined in the Town Plan.
2. Develop specific ordinances to implement the goals, policies and recommendations outlined in the Town Plan.
3. Inform the community about opportunities to preserve Cavendish's rural character. Solicit community feedback through workshops and surveys.
4. Refer to the Town Plan when planning additions and improvements to local infrastructure such as local roads and public utilities. Such additions or improvements should be used to plan for appropriate growth and development.
5. Work with public and private entities to help them design development or resource management plans in ways that will further the goals of this Plan.
6. Work with area land trusts to develop a plan for conservation of important resource lands.
7. Work with the Department of Forests, Parks, and Recreation to update forest management plans for State forest lands in Cavendish.
8. Participate in Act 250 hearings to present evidence on the conformance or nonconformance of projects to the objectives, and policies of the specific sections of the plan.
9. Enhance and improve communication and interaction between the Planning Commission

and the community. Possible ideas are the development of a Planning Commission website and for the Planning Commission to be on the distribution listing for on-site wastewater permits, access permits and property transfers.

Relationship to Local and Regional Plans

In order for the Town of Cavendish to achieve its land use planning goals, the Town must evaluate the Town Plan in relation to plans of neighboring towns and the region. Cavendish is bordered by the towns of Ludlow, Reading, Weathersfield, Baltimore, and Chester and is located in the center of the Southern Windsor County Regional Planning Commission's 10-town region. Cavendish is served by the District 2 Environmental Commission, and is located in Vermont Agency of Transportation District 2, and shares borders with VAOT districts 3 and 4.

Neighboring Towns

Cavendish is surrounded by towns which share many similar planning concerns and are faced with varying degrees of development pressure. All of the towns surrounding Cavendish have town plans and zoning ordinances. None of these plans is in conflict with the Cavendish Town Plan.

Some neighboring towns share similar concerns to those in Cavendish with regard to development and traffic. The Town of Ludlow, for example, sees a significant increase in traffic flow during the winter months, due to the operation of major ski resorts in town and to the north. The expansion plans of Okemo Mountain Resort and Killington Resort will cause further increases in traffic through Ludlow, and likely through Chester and Cavendish as well, once they are implemented. The increase in truck traffic and truck size along Route 103 is also a shared concern amongst the towns of Ludlow, Cavendish and Chester.

According to the Southern Windsor County Regional Transportation Plan, Routes 131 and 103 identified as Regional Transportation Corridors. Route 131 has been designated as a State Scenic Highway within the town boundaries. Scenic designation of this road gives the Town a greater role in maintenance activities on the road within the town boundaries. The Town is also committed to ensuring development that requires an Act 250 permit must be compatible with and not have an adverse impact on this scenic Route 131 corridor.

The Town of Reading, to the north of Cavendish, has designated two parcels of land that border Cavendish as conservation land areas and one (around Knapp Ponds) as recreation on its Proposed Land Use map. These designations are compatible with the designations of land on the Cavendish Future Land Use map in this plan.

Southern Windsor County Region

The Southern Windsor County Regional Plan provides broad guidelines for planning, coordination and review of the natural, cultural, social and economic features of the Southern Windsor County region. The Southern Windsor County Regional Plan, Regional Transportation Plan and Regional Bicycling and Walking Plan are companion documents to the Cavendish Town Plan, providing a broader framework and context for local planning efforts. The Town Plan should support and complement the land use and development goals of these regional planning documents.

The 2003 Regional Plan identifies the villages of Proctorsville and Cavendish Village as "Town Centers," that are characterized by providing localized services, which may include shopping,

Energy Resources

Increased energy demands and the high cost to provide them are leading to efforts to conserve existing energy resources and to search for alternative solutions to energy problems.

Environmental concerns such as air pollution and acid rain are directly linked with energy consumption. Combustion of fossil fuels results in the release of “greenhouse gases,” and acid rain that has impacted many lakes and streams in the Northeast.

While the Town of Cavendish has not yet seen these direct negative impacts of energy consumption, there are some concerns that affect local residents. The costs of electricity are particularly high in Vermont. In addition, the cold climate requires additional forms of energy for heat such as fuel oil, propane, or wood. In order for residents to heat their homes more efficiently and effectively, there are a number of measures that may be considered during the planning and design stages of home development and rehabilitation. Recent state regulations require that all new homes meet certain standards of energy efficiency. These may include use of passive solar energy through home location, insulation, storm windows and fuel-efficient heating systems.

Proper land use techniques can be employed to achieve energy conservation. The siting of structures to maximize solar gain, proper slope orientation and the utilization of trees as wind barriers are all effective tools when designing for energy conservation. New development should incorporate these and other energy conservation measures.

The use of hardwoods for fuel consumption is a reasonable alternative to non-renewable sources because it is available locally and when used in a modern, clean burning stove does not pollute the atmosphere nearly as much as older technology stoves and burners. Harvesting of cordwood that is based on sound forest management plans does not degrade forests and streams. In addition, locally produced cordwood contributes to the local economy, creating jobs and keeping dollars within the community.

Other locally available renewable energy resources include biodiesel, wood pellets, wind and solar. Biodiesel can be used wherever petroleum-diesel is now used. It can be used in oil furnaces or oil fired hot water heaters. It can often be used in any vehicle or machinery that uses petroleum diesel with no modification to the engine.

Hydroelectricity is another form of energy that is produced within the Town of Cavendish. While hydroelectricity does not discharge harmful emissions into the air, dams must be constructed and operated in ways which minimize harmful effects on water supply and fish habitats in the town's rivers and streams.

Energy and Transportation

According to the 2003 Southern Windsor County Regional Plan, base forecasts for Vermont energy consumption indicate that total energy use is expected to increase 54% between 1990 and 2015. This increase is projected to be from growth in transportation, commercial and industrial energy use. In addition to promoting efficiency in home-building and heating, towns may encourage energy conservation through the design and use of transportation systems. Public transportation, ride sharing, and the development of bicycle and pedestrian facilities are all ways of reducing the number of cars on the roads and the amount of gasoline consumed. Planning that promotes commercial development in downtowns rather than along highway corridors, will encourage people to park and get out of their cars. The Town has addressed many of these issues further in the Transportation and Land Use chapters of this plan.

Policies

1. Promote the wise use and conservation of all energy resources by encouraging residents and business to take advantage of State and Federal programs designed to promote conservation and reduce energy consumption. This may include the investigation of potential solar and wind energy generation sites.
2. Support the Use Value Appraisal (Current Use) Program to stimulate cordwood production and improve forest management.
3. Encourage small scale, non-commercial alternative energy sources such as solar and wind power as long as they do not negatively impact aesthetics, ridge lines, or other natural and scenic resources.
4. Promote the development of a transportation system that encourages use of public transportation and ridesharing and enables increased non-motorized vehicle and pedestrian traffic. Emphasize links between schools, stores, work and home.
5. Encourage towns to ensure that the design, location, and maintenance of existing and future transportation systems are consistent with the land use patterns recommended in this Plan.
6. Encourage architects and builders to examine alternative energy resources in the design and construction phases of residential development.
7. Encourage the concentration of energy-intensive facilities, housing, and other uses to prevent the expense of distributing energy over large geographic areas.
8. Encourage the location of community services, retail sites, public utilities, day care centers, state offices, post offices and other frequently visited sites within walking distance of residential areas.

Recommendations

1. Provide residents with information concerning methods of reducing energy consumption in the home (such as weatherization, upgrading of energy-efficient appliances, etc.) and the use of alternative energy resources.
2. Provide information regarding new energy efficiency standards required by the Vermont Department of Public Service to home-builders and local residents.
3. Encourage the use of renewable energy resources whenever possible and explore local tax incentive programs for renewable energy power generation.

where they can function. These areas should be reserved for industrial development or resource extraction and managed to minimize traffic, environmental, and aesthetic impacts on surrounding areas.

Rural Residential

Rural Residential areas can support a number of different uses, including low density residential, forest, agricultural (including tree farms and other horticultural uses), open, and transitional (scrub/shrub). They have been designated based on their current use and accessibility from existing roads. Rural areas shall allow only compatible uses, and maintain existing, low-density settlement patterns. Sprawl and strip development shall be avoided and cluster development shall be incorporated, as long as the overall density remains low. Open space and recreational resources should be preserved wherever possible. New residential development may occur in Rural Residential areas only where accessible by existing town roads.

Recreation

Public and private indoor and outdoor recreation opportunities are a vital part of the Town's economy and quality of life. Publicly accessible recreation opportunities shall be enhanced where possible, and measures taken so opportunities are not diminished. Designated recreation areas shall retain their recreational value to the public; where development would reduce these recreational opportunities, alternatives shall be provided. Conservation areas provide recreational use and shall be valued as such.

Agriculture

Agricultural land has historically been important to the Town's economy, food supply, and cultural heritage. It contributes to the land use patterns and aesthetic qualities that make the Town a desirable place to live, work, and visit. Land in agricultural use and idle open land with agricultural potential possess these values. The potential for agricultural use and production shall not be impaired in designated agricultural areas. Cluster development shall be incorporated in these areas for the preservation of open lands.

Forest

The majority of undeveloped land in Cavendish is forested. The State owns much of this land and manages it for forestry and wildlife habitat, while allowing recreational uses. The contiguity of large areas of forestland is important for many types of wildlife, especially for large mammals such as deer, bear, and moose. The State Agency of Natural Resources has identified several large areas within the town as deer wintering areas and bear habitat. Any development which occurs in forest areas should be designed so that these important habitat areas are maintained wherever possible. Forest areas are also important for their recreational, aesthetic, and economic resource values. The ability of Forest areas to provide these benefits shall not be impaired. Development in these areas shall be undertaken in ways that protect their value and ensure the continued presence of healthy forest ecosystems in the Town. Cluster development shall be incorporated in these areas for the maximization of forest preservation.

Conservation

Conservation areas are lands that possess outstanding value or potential as wildlife habitat, recreation areas, educational resources, fragile natural areas, economic assets (generating revenue from recreation and tourism), or aesthetic resources. Conservation lands represent relatively pristine areas of the Town that residents wish to preserve in their natural state for future generations, and should receive the highest level of protection from development. Special care should be taken in any resource management or extraction plans to maintain the character and value of these areas. Conservation areas are especially beneficial when surrounded by

compatible uses such as forest and agriculture.

Special Considerations

There are several important resources that may occur within any of the land use categories above, and which merit special attention and protection. They include: Public Water Supply Source Protection Areas; floodplains, vegetated areas next to surface waters, wetlands, the Black River and corridor, Natural Heritage Inventory sites, critical deer wintering habitat and bear habitat as defined by the Vermont Agency of Natural Resources, regionally significant historic sites, and other locally defined sensitive natural areas and scenic resources. Development should avoid and minimize negative impacts to these resources. In addition, special considerations should be observed in the following areas:

High elevations and steep slopes — At high elevations (greater than 1,500 feet) the soil tends to be thinner and cooler and less able to support a wide range of plant life. If areas are disturbed the potential for severe erosion is great. Land at 1,500 feet and above as well as lands with steep slopes (greater than 25%) shall be protected from any development which will cause soil erosion.

Ridgelines — Any development which is proposed at higher elevations shall demonstrate that every measure has been taken so that the development is not visually obtrusive to surrounding neighbors or from public roadways.

While residential development may be expected in almost all land use categories, higher densities should be concentrated in and around established village areas. Residential development should be compatible with the land use and housing goals of this plan, and should not conflict with the values defined in the land use categories of this plan.

Pace of Growth

Cavendish is a rural community, and residents wish to maintain this character with the historic and well-paced pattern of growth. Sudden large increases in population and/or physical development which would place an undue burden on Town facilities and have a negative impact on the town and village character should be discouraged.

Policies

1. Any proposed development shall not place an undue burden upon Town facilities or services. If it is shown that the additional property taxes would not cover the additional burden placed on Town services, imposition of impact fees shall be considered.
2. Preserve the historical development pattern of mixed-use urban and village areas surrounded by open land, agriculture, forest, and low-density residential use.
3. Direct growth and development toward areas of the Town where it will be most effective and efficient to provide the necessary public infrastructure and services.
4. Establish land uses and land use patterns that protect and enhance the values defined in this chapter.
5. Revitalize, maintain and reuse historic structures and other existing buildings in village centers whenever possible.
6. Commercial development that occurs outside the village centers shall not contribute to strip development. Access management and innovative commercial development that maintains the characteristics of existing villages is encouraged.
7. In order to maintain the existing settlement patterns, higher density residential, commercial, and compatible industrial development shall be located in village centers.

Plan For the Northwest Region 2007 – 2012

Effective October 3, 2007

The cost of child care can be a deterrent for families seeking safe and convenient services. The Vermont Agency of Human Services has established the Child Care Subsidy Program, which bases eligibility for state subsidies on gross monthly income and family size. For example, a family with three members and a gross monthly income of \$1,157 is eligible for a 100-percent child-care subsidy. While this subsidy begins to address affordability issues for low-income families, middle-class families are not eligible for financial assistance.

In general, the State's regulations of child-care providers require that providers meet basic standards for children's health and safety. Some programs choose to achieve a higher standard of service recognized by accreditation by a national program. National accreditation exists for registered child care providers, licensed programs, and school-age programs. In addition, the State of Vermont recently introduced a rating system that goes beyond the basic standards set by the State's regulations.

Table 4.11 CAPACITY OF CHILD CARE PROGRAMS IN FRANKLIN & GRAND ISLE COUNTIES

Town	Registered Child Care Home (Capacity)	Child Care Centers (Capacity)	Total Capacity
Grand Isle County	126	95	221
Alburgh	54	34	88
Grand Isle	36	26	62
Isle La Motte	12	0	12
North Hero	6	0	6
South Hero	18	35	53
Region Total	1,074	1,222	2,296

Source: Agency of Human Services, Social and Rehabilitation Services. Last updated March 2004.

Table 4.12 ESTIMATED NEED & SUPPLY OF CHILD CARE SERVICES IN CHITTENDEN COUNTY

	Estimated Need (2000)	Estimated Supply (2004)
Franklin County	7,909	2,075
Grand Isle County	948	221
Region	8,857	2,296

GOALS, POLICIES & OBJECTIVES

GENERAL GOALS:

- 4.1 To insure that the region's infrastructure has adequate capacity to meet current needs and planned growth in a timely and cost-effective manner.
- 4.2 Develop and maintain communication and cooperation between public, private, governmental and industry representatives, in order to promote and foster appropriate infrastructure planning and development.

POLICIES:

- 4.1 Growth and development should occur in accordance with long-range community facility plans and capital budgets designed to provide needed capital improvements and infrastructure in the most efficient and effective manner possible.
- 4.2 The region will support only those development proposals that are within the existing or planned capacity of public utilities, facilities and services.
- 4.3 Growth should be targeted according to the following schedule:
 1. First to those areas within designated growth centers currently served by existing utilities, facilities and services with adequate capacity;
 2. Secondly to areas within designated growth centers adjacent to existing service areas with adequate capacity.

- 4.4 Industrial development should be targeted to designated industrial areas with adequate infrastructure and which are within or adjacent to designated growth centers.
- 4.5 The NRPC supports development of a system of regional and local infrastructure that promotes the land use goals and vision statement contained in this plan and in duly adopted municipal plans.
- 4.6 Creative inter-municipal and public/private partnerships that promote cost-saving and cost-sharing in the provision of infrastructure should be encouraged.
- 4.7 Public and private investments that would overburden local or regional infrastructure and services will be discouraged.
- 4.8 Improvements to utility infrastructure should be timed to coordinate with other utility and/or road improvements planned in the same area if doing so will reduce the costs associated with the project.
- 4.9 Whenever feasible utilities should share rights-of-way and /or easements.
- 4.10 Utility rights of way and public investment should be planned so as to minimize environmental, cultural and environmental impacts, particularly seeking to minimize development pressure on agricultural and forest lands.
- 4.11 Utility lines should be buried when crossing locally or regionally designated historic, cultural and scenic areas or otherwise be strategically located to minimize adverse impacts on these resources.
- 4.12 Utility rights of way should not traverse resource and conservation lands including, but not limited to, agricultural lands.
- 4.13 Development or maintenance of utility systems or facilities that result in or create an undue adverse impact on municipal services, natural resources and/or other unique features shall be discouraged.

OBJECTIVES:

- 4.1 Provide updated materials on capital planning to municipalities as requested and be available to contract for more detailed work as needed.
- 4.2 Participate in reviews of development projects in state regulatory proceedings.
- 4.3 Develop an information system that fosters coordination and communication between organizations within the region, and between local municipalities, state and federal agencies regarding developments that affect municipal facilities, services and objectives.
- 4.4 Provide information and assistance to municipalities regarding state and federal laws affecting municipal utilities, facilities and services.
- 4.5 Encourage municipalities to share information, staff, and equipment where feasible and beneficial.
- 4.6 Inform and assist municipalities in identifying financing opportunities and grants that will enable them to address local capital needs.
- 4.7 Maintain a library of regional information accessible to member municipalities and residents.
- 4.8 Provide assistance to local planning commissions in developing municipal plans that encourage land use patterns that optimize the use of existing utilities, facilities and services and which reduce the cost of providing future utilities, facilities and services.

WATER SUPPLY GOAL:

- 4.3 To insure that water systems are not contaminated, depleted, or degraded, that drinking water sources do not contain harmful contaminants and that there is sufficient quantity of water available for existing and anticipated recreational, residential, commercial and industrial needs.

Local zoning bylaws may also permit the creation of planned unit developments (PUD). These are a grouping of mixed use or residential structures, preplanned and developed on a single parcel of land. The setback, frontage, and density requirements of the zoning district may be varied, in consultation with the town planning commission, to allow creative and energy efficient design (i.e. east-west orientation of roads to encourage southern exposure of structures, solar access protection, use of land forms or vegetation for windbreaks, and attached structures).

Subdivision regulations govern the creation of new building lots, as well as the provision of access and other services and facilities to those lots. Subdivision regulations, like the PUD, involve the town planning commission or development review board in the design process. As with the PUD, the planning commission should use the opportunity to ensure that the conservation of energy is considered in subdivision development.

Except through the Act 250 process, there is no regulation of energy use in new construction in the Northwest Region. Act 250 requires that “best available technology” for energy efficiency and recovery be used in construction. In its review of development proposals, Act 250 applies to life cycle cost test to determine the “appropriate level” of energy efficiency. The “appropriate level” requires the developer to invest in energy efficiency up to the economic break-even point for a particular structure, occupant, and usage pattern. This standard allows for flexibility in design without sacrificing the energy efficiency of specific measures.

GOALS, POLICIES & OBJECTIVES

GENERAL GOALS:

- 6.1 Encourage conservation and efficient use of energy thereby saving the Region’s financial resources and the world’s energy resources.
- 6.2 Seek to incorporate the full costs of energy use in decision making.

POLICIES:

- 6.1 In the evaluation of all energy projects, those with the least adverse environmental, aesthetic, economic, and social impacts are preferred.
- 6.2 A broad range of options that could meet energy needs should be considered when evaluating energy-related projects, including conservation, efficiency and education, and those with the least adverse environmental, aesthetic, economic, and social impacts evaluated in the short and long term should be supported.
- 6.3 Efforts that reduce the energy demanded for transportation should be supported.
- 6.4 Efforts that reduce the emission of pollutants from energy production and/or consumption, particularly greenhouse gases and contributors to ozone depletion, should be strongly supported.
- 6.5 Promote least cost planning, or life cycle costing, which considers all costs of energy production and use, including environmental and social costs, from the origination of inputs to the disposal of outputs.
- 6.6 Generation, transmission and distribution lines or corridors should avoid adverse impacts on significant wetlands, plant and animal habitat, and recognized historic, natural, or cultural resources.
- 6.7 Support building standards that promote energy-efficiency.

OBJECTIVES:

- 6.1 NRPC should work with municipalities to develop an energy element for the municipal plan, which, if implemented, will result in energy savings to the community.
- 6.2 NRPC should assist in review of proposals for new energy sources or facilities to evaluate the economic, social, scenic and environmental costs.

- 6.3 NRPC will continue to review and/or participate as a statutory party in Public Service Board Section 248 applications for a Certificate of Public Good.

POLICIES:

- 6.8 Promote longterm ecological management and sustainable use of renewable energy resources in the Region.
- 6.9 Encourage locally produced renewable energy sources which create local jobs, stimulate investment in the Region, and have minimal environmental impact.
- 6.10 Encourage research and production of on-farm production of biomass for energy, with reasonable caution given to the introduction of invasive species and production of unmanageable wastes.
- 6.11 Support and encourage the development of energy systems that utilize locally produced biomass and gaseous by-products, such as the methane released by area landfills, industry wastes, and manure pits, for local and regional energy consumption.
- 6.12 Reduce the consumption of non-renewable energy resources.
- 6.13 Promote the redesign or retrofitting of existing hydroelectric power systems to improve efficiency and reduce environmental damage.
- 6.14 Promote hydroelectric power systems that do not disrupt riverine ecology.
- 6.15 Support and encourage communities to enable appropriately sited and scaled wind energy systems.

OBJECTIVE:

- 6.4 In the review of utility, industrial and commercial projects, NRPC should promote the incorporation of co-generation as an energy source wherever possible.

LAND USE GOALS:

- 6.3 Encourage energy efficient and energy conserving patterns of land use.
- 6.4 Increase use of energy conservation practices in site planning and development at the local and regional level.

POLICIES:

- 6.16 Growth should be clustered in areas served by existing infrastructure, with priority given to growth that occurs in designated growth centers.
- 6.17 Commercial strip development along transportation corridors should be discouraged in favor of clustered development.
- 6.18 Infill development that builds on land between existing nearby buildings should be encouraged.
- 6.19 Concentrate housing, employment and social services to reduce the demand for transportation.
- 6.20 Building should occur on south-facing slopes and be oriented toward the south to reduce heating costs.
- 6.21 Landscaping and topography should be used to minimize building heating and cooling needs.
- 6.22 Plans for generation, transmission and distribution lines should incorporate the following design principles:
1. Rights of way shall not divide land uses, particularly agricultural lands and large contiguous forest parcels.
 2. Geographic features should be used to minimize the visual impacts of corridors. Corridors, lines and towers should not be placed on prominent geographic features such as ridge lines and hilltops.
 3. Placement and maintenance of utility lines should minimize the removal of vegetation and the disruption of views from public highways, trails and waters.
- 6.23 Encourage the private sector to develop energy conservation and renewable energy technologies.

- 6.24 Support financial incentive packages for or the act of retrofitting existing or developing new housing stock with more energy efficient materials.
- 6.25 Encourage and assist municipalities to adopt land use ordinances that facilitate energy conservation and reduced energy consumption.

OBJECTIVES:

- 6.5 NRPC will review projects to promote energy efficient land use planning and construction.
- 6.6 NRPC will review Act 250 applications to ensure energy efficiency site planning.
- 6.7 NRPC will encourage municipalities to adopt standards for review which include energy efficient standards related to land use and site development.

INFRASTRUCTURE GOAL:

- 6.5 Develop a system of infrastructure that promotes energy conservation, substitution of low-impact renewable energy sources for non-renewable sources, and which provides sustainable, reliable, and affordable energy for the region.

POLICIES:

- 6.26 Projects that create and improve pedestrian and bicycle transportation are strongly encouraged.
- 6.27 Encourage projects with substantial regional impact to use energy efficient lighting and heating systems in their design.
- 6.28 Alternatives to the private automobile should be encouraged, and provided for in every plan for large-scale development, particularly those remote from other employment or residential centers.
- 6.29 Park and ride lots should be encouraged, permitted and developed at logical locations within the region.
- 6.30 Developers of commercial and industrial projects should be encouraged to use fewer and smaller parking spaces and lots and encourage the use of energy-saving alternative means of transportation such as providing reserved spots for car/van pool parking, bike racks, safe pedestrian circulation, and where warranted, transit stop locations.

OBJECTIVES:

- 6.8 Provide technical assistance and support to local municipalities seeking to promote land use patterns that encourage energy conservation, including transportation alternatives such as bike trails, sidewalks, and public transit; and which promote settlement patterns that encourage energy conservation.
- 6.9 NRPC should work with communities to establish incentives for developers to accommodate alternative transportation possibilities in their plans and with employers to encourage their employees to reduce reliance on the single occupancy vehicle.

Master Planning

Master plans are useful on a project, corridor, or district basis and outline comprehensive plans for full buildout and design of a particular area. A master plan is more focused and detailed than the municipal plan and generally should include a combination of graphic site plans, inventory and needs analyses, project costs priorities and phases, market analysis, and funding opportunities, as applicable (Growth Center Planning Manual for Vermont Communities, 76). Master planning can further smart growth principles by planning for transportation and pedestrian circulation, infrastructure, and appropriate use, size and designing of buildings, amongst other issues, prior to development of the plan area. A master plan is an important tool to effectively implement planning goals and reduce negative impacts related to development.

Municipal Water and Sewer Infrastructure Planning

Lack of municipal sewer and water is one of the main inhibiting factors to density in the regions village and hamlet centers. An adequate on-site septic design usually necessitates at least 1 acre of land, if not more, depending on soil type, limiting density even if minimum lot size does not. However, planning and financing a system commonly takes in excess of five years from concept, feasibility, design, and construction and is very costly. NRPC is available to assist municipalities with the planning process and in securing financing. In the mean time, encouraging community septic systems in and around village centers will allow for higher densities.

Text Box 7.5

MASTER PLANS MAY INCLUDE ONE OR MORE OF THE FOLLOWING ELEMENTS:

- the use of and rehabilitation of existing public buildings or spaces;
- the location of new or expanded public buildings or spaces;
- design criteria and/or building envelopes for expanded or new buildings;
- improvements to and expansions of the transportation network including roads, sidewalks, trails, greenways and parking;
- streetscape improvements and traffic calming techniques;
- or recreation facilities and public open space.

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(Growth Center Planning Manual for Vermont Communities, 76)

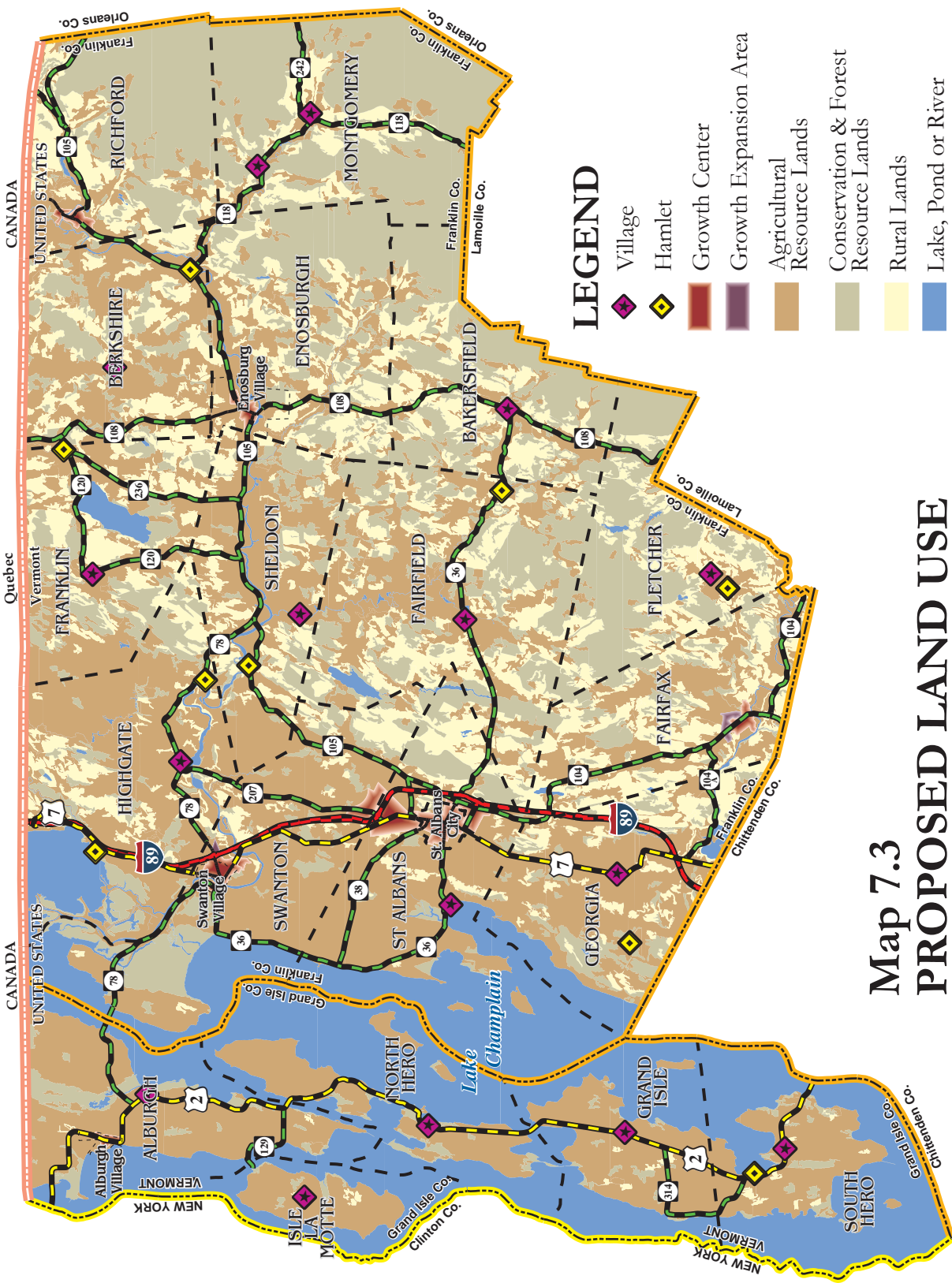
PROPOSED LAND USE

NRPC has divided the region into several proposed land use planning areas to encourage the conservation of valued resources and a development pattern that will maintain the character and quality of life important to this region. These planning areas are illustrated on the Proposed Land Use Map on the next page (Map 7.3). The categories include Agricultural Resource Lands, Forest Resource Lands, Conservation Resource Lands, Low-Density Development Areas, Growth Centers, and Sub-Regional Growth Centers. In addition, NRPC has identified villages, hamlets, and transitional growth planning areas. It is important to note that these planning areas are regional planning tools, not regulatory zoning districts. When reviewing land uses for conformance with this plan, emphasis will not be placed on whether the use is located entirely within or just outside a particular area, but on the impact that the land use will have on underlying resources and how the use will affect the intent and function of the particular land use planning area.

Land Use Planning Areas

Agricultural/Resource Lands

Agricultural Resource Lands represent the best farmland in the region and should be given the highest level of support for their continued use as agricultural lands. Nearly 39% of the region is included in this category, reflecting the significant acreage of prime agricultural soils and the large number of farms in the Northwest. Strategies that support the long-term protection of these lands from conversion to non-agricultural use (as listed earlier in this chapter in textbox 7.1, 7.2, and 7.3) should be sought out and implemented. Recognizing the importance of farming to the region's character and economy, and also recognizing that existing farms may occupy some good farming



Map 7.3
PROPOSED LAND USE

lands that would otherwise be categorized as Conservation Lands, Agricultural Resource lands were given precedence over the Conservation Lands designation. For example, if a particular area has characteristics of both Agricultural Resource Lands and Conservation and Forest Resources Lands as listed in Text Box 7.6, the area would be characterized as Agricultural Resource Lands.

Conservation and Forest Resource Lands

Conservation and Forest Resource Lands, amounting to 25% of the region, include a variety of land types generally not suitable for development and lands that are particularly well-suited for tree growth. Land in this category should usually not be developed. Development may be limited due to natural resource constraints, such as wetlands and floodplains, wildlife and scenic values in the case of uplands, or an overall low suitability towards development based on the regional development constraints analysis discussed above.

Secondly, development may be inappropriate due to the value of the forest resource value of the lands. Ridgelines and hilltops contribute significantly to the beauty of the region and development in these areas can have widespread significant negative impacts. Use of these lands should include a mix of forest and conservation uses including maple syrup production, logging, appropriate agricultural operations, wildlife habitat, and recreation. These lands should be protected from fragmentation and conversion with the tools listed earlier in this chapter in textbox 7.1, 7.2, and 7.3.

Text Box 7.6

REGIONAL PLANNING AREA CRITERIA

Agricultural Resource Lands

- Farmed Prime Soils > 20 acres
- Farmed Non-Prime Soils > 20 acres
- Unfarmed Prime Soils (negligible acreage)

Conservation Lands

- Wetlands > 5 acres
- 100 Year Floodplain
- Uplands (> 1,000' elevation)
- Public Lands
- Shore land (< 500' from waterline)
- Everything from "moderate to severe" on suitability map
- Prime Forest Soils with Forest Cover >20 acres

Rural Lands

- All lands not otherwise designated

Growth Centers

Sub-Regional Growth Centers

Villages

Hamlets

Transitional Growth Areas

Rural Lands

A relatively small amount of the region's growth is anticipated in the Rural Lands, occupying 16% of the region. Cluster development, such as planned unit developments and other methods that conserve open space, common land, and/or farmland useful for its intended purpose are encouraged in these areas, particularly in situations where developers plan to build numerous units. Methods of creating useful open space, common land, or farmland include but are not limited to ensuring the land is appropriate and of value for the intended use, locating it adjacent to other open spaces in similar use, or requiring a management plan. It is expected that much of the growth in rural areas will be single family homes. Areas included in this category require particularly careful planning to insure that strip development and sprawl are minimized and the goals for the other land use areas are promoted.

Regional Growth Centers and Sub-Regional Growth Centers

This Regional Plan recognizes one (1) regional growth center and five (5) sub-regional growth centers in the Northwest region (see Map 7.4). St. Albans City and areas in Albans Town by Exits 19 and 20 of Interstate 89 comprise the regional growth center. The five sub-regional growth centers include areas within the four incorporated villages (Swanton, Enosburg Falls, and Alburch), and the village areas of Richford and Fairfax. Growth centers were chosen for their capacity to accommodate greater levels of economic and social activity than other areas in the region. Only the St. Albans growth center was found to have the scale and capacity to serve the entire region. The sub-regional growth centers are expected to serve as economic and cultural hubs for surrounding towns. The six growth centers are located within municipalities that have expressed the desire for managed, high density, mixed use development.

RURAL LANDS POLICIES:

- 7.24 A relatively small portion of the region's development should be located in rural areas on sites that present only slight limitations for development.
- 7.25 Development in these areas should not diminish the viability of agricultural operations or fragment large contiguous tracts of woodland.
- 7.26 Development is encouraged to be built outside of farms and along the edges of forests, preferably with buffers between such development and agricultural uses or environmentally sensitive areas.
- 7.27 Development that diminishes the rural character of the area as defined by local and regional plans is discouraged.

AGRICULTURAL RESOURCE LAND GOALS:

- 7.7 To promote agriculture, including farming, forestry, fishing and sugarmaking, as the primary land use in the region.
- 7.8 To ensure that the loss of prime agricultural soils and active farmland will be limited to the greatest degree possible.

AGRICULTURAL RESOURCE LANDS POLICIES:

- 7.28 Agricultural activities should meet Accepted Agricultural Practices and should seek to practice Agricultural Best Management Practices as defined by the Vermont Dept. of Agriculture.
- 7.29 Agricultural activities that are within the assimilative capacities of the soil, air, and water of the region are strongly supported.
Encourage not only the viability of individual farms but also maintenance of a sufficient density of farms in an area to encourage the provision of affordable farm services.
- 7.30 Strongly discourage land uses that pose a significant risk of contaminating agricultural resources, including soil and water, that would limit the viability for farming in the future.
- 7.31 Strongly support the right to farm for agricultural operations that meet acceptable agricultural practices.
- 7.32 Strongly discourage fragmentation of agricultural lands that reduce their economic or agronomic viability for farming through subdivision or development.
- 7.33 Support the use of innovative agricultural land conservation strategies including but not limited to transfer of development rights, purchase of development rights, fee-simple purchase of agricultural lands, and use value tax assessment.
- 7.34 Encourage municipalities to incorporate agricultural land inventories into their town plans.
- 7.35 Encourage developers to conserve agricultural lands and develop land use plans that both maintain economically and agronomically viable farmlands and which also consider features that encourage farming such as access, buffer strips, and storage of farm equipment.
- 7.36 Support the use of density incentives to encourage developers to incorporate designs supportive of agriculture.
- 7.37 Local businesses that add value to agricultural products grown in Vermont should be encouraged and sited to minimize conflicts with neighboring land uses and reduce negative impacts on environmental quality.
- 7.38 Consider the impact of new infrastructure on agriculture and support those projects that enhance the agricultural economy and discourage those projects that diminish the prospects for agricultural development.
- 7.39 Review of development proposals that reduce the viability of agricultural operations should consider secondary impacts in analysis of the project, including, but not limited to secondary economic impacts including farm

- 7.40 support services and local businesses, impacts on wildlife and recreation, and the cumulative impact of growth.

AGRICULTURAL RESOURCE LANDS OBJECTIVES:

- 7.10 Assist municipalities and community groups seeking funding or technical assistance in farmland preservation efforts.
- 7.11 Develop a Land Evaluation and Site Assessment (LESA) system that can be used in the region to identify and prioritize agricultural lands.
- 7.12 Support agricultural economic development efforts .
- 7.13 Develop technical assistance materials for municipalities wishing to encourage and support agriculture in their municipal plans and zoning by-laws.

CONSERVATION AND FOREST RESOURCE LANDS GOALS:

- 7.9 Maintain a healthy, diverse, interconnected and extensive forested area in the region that preserves and expands native wildlife habitat while also supporting a sustainable and prosperous forestry and forest-products industry.
- 7.10 To conserve, maintain and improve wildlife habitat on both public and private lands.
- 7.11 To protect endangered and threatened species and their habitat.
- 7.12 To minimize development in areas designated conservation areas on the proposed land use map.
- 7.13 To minimize fragmentation of conservation lands.

CONSERVATION AND FOREST RESOURCE LANDS POLICIES:

- 7.41 Discourage liquidation of forest resources, particularly operations that encourage conversion of forest land to other uses or which do not adequately plan for the regeneration of the forest within a reasonable time frame.
- 7.42 Encourage forest harvesting operations that follow guidelines for Accepted Forestry Practices developed by state agencies.
- 7.43 Discourage extension of permanent roads, energy transmission facilities, and utilities into Forest Resource Lands.
- 7.44 Encourage value-added forest-product industries to locate in the region.
- 7.45 Wildlife corridors should be protected from fragmentation and uses that reduce their viability for movement of wildlife, particularly where they join large contiguous tracts of land.
- 7.46 Development on wetlands, steep slopes, and ridge lines should be avoided.
- 7.47 Encroachment of development on wetlands is discouraged.
- 7.48 Development in areas with poor soils for septic treatment should be avoided unless connections to an existing wastewater treatment facility are provided.
- 7.49 Development along lakeshores and watercourses should occur only if it is demonstrated that runoff, erosion, and wastewater can be managed so as to avoid contamination of the water.
- 7.50 Development closer than 100' from the mean high water mark is strongly discouraged.
- 7.51 Development that occurs between 100' and 500' from the mean high water mark should demonstrate that it will not have an adverse effect on water quality or wildlife corridors.
- 7.52 Development further than 1,000' from road centerlines is generally discouraged unless doing so furthers the conservation goals above.

Lands, Conservation and Forest Resource Lands and Rural Lands. The Town of Georgia in Franklin County abuts this area and has a relatively concentrated existing settled area in this vicinity. The CCRPC's definition of an Enterprise Planning Area states that they "provide places for a single major employer or a concentration of employers that are likely to attract workers from the County and multi-county region. Development in these Planning Areas is to be locally planned and managed to minimize adverse impacts on surrounding planning areas. The Enterprise Planning Area has a potential for hosting land uses that may result in negative impacts on valuable farmland and burden utilities and facilities in Georgia and adjoining towns. If this happens it will be in opposition to the NRPC's policies supporting the protection of farmland and its objective of assisting towns, and particularly the Town of Georgia, in establishing growth centers and preventing sprawl. NRPC will continue to work with the CCRPC, the Town of Milton and the state to resolve these growth issues.

Lands further to the east in Milton and Westford have been designated by CCRPC as Rural. Development is limited in this area, which is compatible with the NRPC's designation of Conservation Lands interspersed with Agricultural Resource Lands along the Lamoille River.

The **Lamoille County Regional Planning Commission (LCPC)** adjoins the southeastern corner of the Northwest Region, along the town borders of Fairfax, Fletcher, Bakersfield and Montgomery, with Cambridge, Waterville and Belvidere in Lamoille County. While the LCPC's 2002 regional plan does not specifically designate growth centers, it contains a land use map showing "future potential growth areas that may have a potential regional impact." The largest of these is along the Rt. 104 corridor leading into Fairfax. If this area were to sprawl and grow along Rt. 104, the impact on Fairfax and Fletcher could be substantial. The LCPC's land use policy statements supporting the conservation of farmland and forest lands, along with their policy against strip development along transportation corridors suggests that they will act to prevent sprawl in this area. The NRPC will continue to work with LCPC to coordinate planning for this area.

The **Northeastern Vermont Development Association (NVDA)** adopted its current regional plan in 2006. The NVDA region adjoins the northeastern border of the NRPC. The NRPC towns of Richford and Montgomery abut the NVDA member towns of Jay, Westfield and Lowell. NVDA identifies development areas on their Future Land Use Map. Village Centers are identified within Westfield and Lowell, while a Service Center is identified in Jay. None of these three development areas are less than 10 miles from the Franklin County border. The NVDA plan encourages growth to concentrate in these areas, a strategy consistent with this plan. NVDA also recommends little commercial or industrial development in rural agricultural and forest areas. While it does not specifically discourage residential development in forest and agricultural areas it suggests that development in these areas should be limited, and does explicitly discourage strip development. As the adjoining area between NRPC and NVDA is primarily the wooded and steep Green Mountains, residential growth is not likely to be a significant problem.

Compatibility with Title 24 V.S.A. Chapter 117

The regional plan must be consistent and compatible with the requirements outlined in the state's land use planning law. Thirteen statutory goals are outlined in §4302 and are listed below, followed by sections of the plan where corresponding goals and policies may be found. The sections listed below highlight chapters with policies addressing these goals; additional goals and policies that reinforce those listed below are likely to be found in other chapters.

1. ***To plan development so as to maintain the historic settlement patterns of compact village and urban centers separated by rural countryside.***

The chapters Regional Profile, Transportation, Land Use and Utilities and Facilities address settlement patterns by supporting regional and sub-regional growth centers, by directing infrastructure to support the historic pattern of development, and by supporting sustainable farming and forestry endeavors.

2. ***To provide for a strong and diverse economy that provides satisfying and rewarding job opportunities and***

that maintains high environmental standards, and to expand economic opportunities in areas with high unemployment or low per capita incomes.

The Regional Profile and Land Use chapters contain goals and policies supporting economic development strategies that encourage a diversity of good quality, secure jobs in the region. Sub-regional growth centers are located throughout the region and are intended to encourage employers to locate in those areas, reducing regional unemployment and raising per capita incomes. Support for agricultural development and natural resource based industries further encourages economic development in rural areas. Mapping existing and future industrial and manufacturing sites is an objective in the Land Use chapter.

Environmental standards are addressed throughout the plan, with particular emphasis in the chapters on Natural and Cultural Resources, Land Use and Energy.

3. *To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of all Vermonters.*

The Utilities and Facilities chapter contains goals and policies that encourage continued support and expansion of high quality, life-long education for all residents of the region.

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

Transportation policies that address this goal may be found in the chapter of that name. These goals and policies are reinforced in the Utilities and Facilities, Energy, Housing and Land Use chapters.

5. *To identify, protect and preserve important natural and historic features of the Vermont landscape.*

6. *To maintain and improve the quality of air, water, wildlife and land resources.*

Goals #5 and #6 are addressed in detail in the Natural and Cultural Resources chapter. Supporting goals and policies are included in the Energy, Utilities and Facilities and Land Use chapters.

7. *To encourage the efficient use of energy and the development of renewable energy resources.*

The Energy chapter contains the most extensive discussion of this goal and includes detailed goals and policies supporting energy conservation, reduced emissions from energy consumption and support for renewable energy. Other chapters with supporting goals and policies include Housing, Land Use and Utilities and Facilities.

8. *To maintain and enhance recreational opportunities for Vermont residents and visitors.*

Recreational opportunities are discussed in the chapters on Natural and Cultural Resources and Utilities and Facilities. Supporting goals and policies are included in the Transportation and Land Use chapters.

9. *To encourage and strengthen agricultural and forest industries.*

Continued support for agriculture and forestry can be found in the goals and policies of the Regional Profile, Land Use, and Natural and Cultural Resource chapters. The Energy chapter's goals supporting the development of the region's energy biomass resources further supports these sectors.

10. *To provide for the wise and efficient use of Vermont's natural resources and to facilitate the appropriate extraction of earth resources and the proper restoration and preservation of the aesthetic qualities of the area.*

The Natural and Cultural Resources chapter includes goals and policies on mineral and other earth resources, including mitigation of adverse impacts and protection of scenic values.

11. *To ensure the availability of safe and affordable housing for all Vermonters.*

Rutland Regional Plan

Adopted June 17, 2014

THE FUTURE USE OF LAND MAP

The *Regional Plan's* Future Use of Land Map is a general guide for the forthcoming growth of the Region. It is based upon analyses from throughout the *Plan* and attempts to balance competing and complementary goals into a single image.

The map is intended to be conceptual; boundaries between areas are imprecise. Specific sites and their prescribed uses are addressed locally.

The map is divided based on preferred densities of development intensity of activity. These include four generalized land use areas, a series of labels for the Region's town centers and villages. Together, these designations promote a cohesive pattern of growth and conservation that advances the intent of the *Rutland Regional Plan*.

Why the Labels and Land Use Areas Exist

The map is based on an analysis of the location, magnitude, and potential of multiple features that make different areas more or less suitable, with a goal of making efficient use of limited infrastructure and maintaining the unique qualities of the Region.

For example, business and industry rely on the presence of public water and sewer, close proximity of major transportation networks, and, in some cases, access to markets for selling their goods.

By the same token, due to physical site limitations (steep slopes and wetlands, among others) and relatively high costs incidental to land development in certain areas, much of the Region is not readily available for development. These areas are suited for less dense and intense development, in keeping with the Region's rural environment.

Additionally, deep, well drained soils, proximity to good roads, and access to markets as key elements of a successful agricultural future for the Region. The *Plan* is also intended to provide for the long-term sustainability of resources, open space and scenic lands.

Finally, the *Plan* seeks to promote housing and small business development within and adjacent to villages that is in keeping with their unique histories.

The attached map depicts both an efficient use of land and a shared vision for the future based on public input. It should be used as a guide for future development of the Region. Planned growth and development is directed to those areas most suitable for such development and away from areas in which the proposed growth would be incompatible, due to the availability of services or protection of resources.

Why the Map is Blended

Boundaries between the four land use areas are intentionally blended to underscore the regional nature of the map and to promote growth and development that is within and contiguous to existing villages, hamlets, town centers, and sub-regional centers.

Using the Map's Legend

HIGH DENSITY DEVELOPMENT AREAS



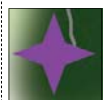
Areas shown as "high density" on the map are those most suitable for large-scale activity, within and in areas contiguous to the Region's downtowns, sub-regional centers, and industrial centers. They share a number of common features which make them attractive and suitable for these types of activities:

- Ease of access to major transportation routes
- Availability of utilities, including public water and sewer and high speed telecommunications
- Historic and current areas of concentrated population, business, and education
- Less critical natural resource and wildlife areas

These areas include the following designations within the Region:



URBAN CENTER— The Region's economic, population, education, and service focus areas. Businesses and services in this area draw their employees and clients from throughout the Region. Many of the Region's largest employers are located in area, making use of the conglomeration of people and services.



SUB-REGIONAL CENTERS—Areas where central public utilities for water and sewer are available and where there exists a central location or locations for commercial activities, schools, and civic activities for the town and surrounding towns.



INDUSTRIAL / BUSINESS PARKS — Areas designated by towns around

the Region and by the Rutland Economic Development Corporation as concentrated locations for business and industrial development. Parks have been designated in Clarendon, Brandon, Rutland City, Rutland Town, West Rutland, and Fair Haven.



RUTLAND STATE AIRPORT- The Region's principal airport offers commercial air travel and general aviation services. It is closely linked to adjacent industrial parks.

For the future:

Development in high density areas, including downtowns, sub-regional centers, and industrial / business parks should be concentrated to make efficient use of the Region's most concentrated infrastructure.

MEDIUM DENSITY DEVELOPMENT AREAS



Areas shown as "medium density" on the map include land in or adjacent to town centers, villages, and areas concentrated immediate around the Region's major lakes and ponds—Lake Bomoseen, Lake St. Catherine, Lake Horton, Chipman Lake, and Lake Sunrise. These areas serve a number of purposes and are likely to face the most change in the coming years. These areas are, as a general rule served by some but not all of the features common to "high density " areas.

These areas include the following designations within the Region:



TOWN CENTERS- Areas where central public utilities for water and sewer are generally available and where there exists a central location or locations for commercial activities, schools, and cultural and civic activities for the town.



VILLAGE CENTERS- Areas that have developed into small community centers and normally consist of mixed land uses at medium densities. They also generally have consolidated groups of structures located on or near a major highway.

For the future:

Development in medium density areas should serve to reinforce neighborhood-scale town centers and villages and make efficient use of limited infrastructure and space. Where medium density activities already exist

outside these centers, future growth and development should seek to create more efficient use of land and infrastructure.

LOW DENSITY DEVELOPMENT AREAS



Areas shown as "low density" on the map are Rutland County's working landscapes. They include areas with small, historic hamlets as well as actively farmed or logged terrain. Features they share:

- Limited public utilities
- Productive agricultural soils in lowlands
- Little concentration of population and business
- Greater critical natural resources

These areas include the following designations within the Region:



HAMLETS- Areas that contain small groupings of homes and locally supported stores and businesses. Generally, hamlets are not trade centers, nor do they contain community water supply or sewer systems.

For the future:

Agricultural and silvicultural activities should continue to dominate the Region's low density areas. Development in low density areas should be unobtrusive and maintain the rural character and scale of the locale.

DEVELOPMENT-CONSTRAINED AREAS

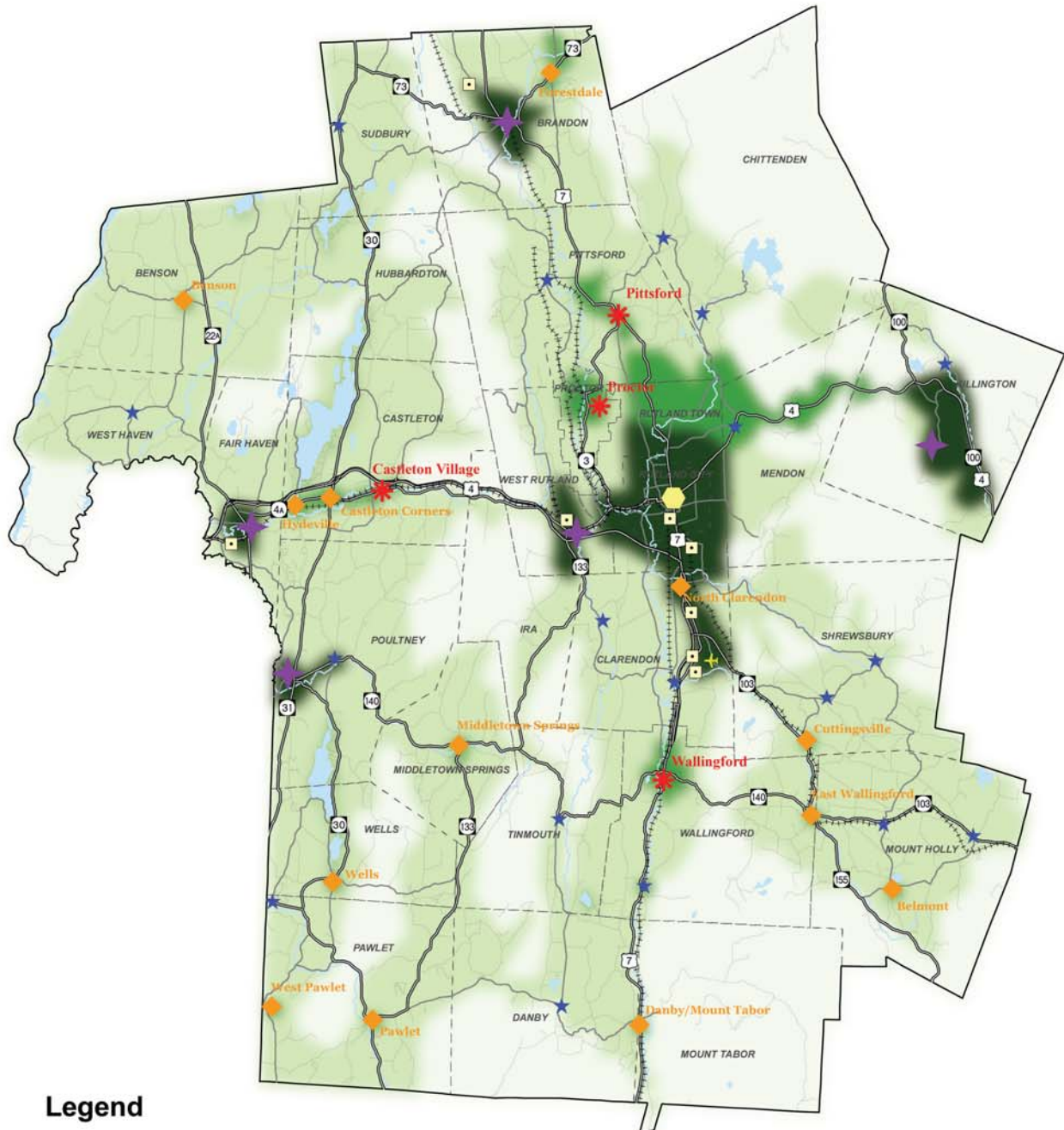


Areas shown as "development-constrained" have significant limitations upon current or future development because of conservation easements, public ownership, or severe natural limitations. These include lands owned or overseen by the National Forest Service, the State of Vermont, or land trusts, as well as large tracts of land that are on slopes over 25% grade or are wetlands.

For the future

Conservation of the natural landscape and careful management of lands is sought for these areas. Development should remain extremely limited.

Rutland Region Future Use of Land



Legend

- Development Constraint Areas
- Low Density Development
- Hamlets
- Medium Density Development
- Villages
- Town Centers
- High Density Development
- Urban Center
- Sub-Regional Centers
- Business / Industrial Parks
- Rutland State Airport

Note:

This map is a generalized land use map. It is not intended to regulate actual uses in specific geographic areas, but instead reflect potential land use patterns. This map is for planning purposes only. Determination of appropriate land uses for a specific site necessitates thorough review of the local plans and by-laws as well as the policies of the Regional Plan. For more information, please contact the RRPC at (802)775-0871 or (800)464-7900, or at www.rutlandrpc.org.



Created January 27, 2005; updated January 24, 2006
Adopted May 16, 2006



It is the community's responsibility to support the creation of housing that meets the needs and desires of residents in a manner that enhances that community's character. It is also important that communities allow a mix of housing types, forms, density, transportation options and price ranges in order to meet the varied needs of residents.

It is important to be aware that housing does not take place in a vacuum. Even the best housing development or redevelopment can be a poor fit for residents and the community if transportation, employment (including agriculture), and services are not built following the same framework.

Advocacy

Many of the factors that affect the availability of housing are not under the direct influence of local decisions. Where this is the case, individuals and organizations must advocate for change in policies at a broader level. Among those cited:

- Changes in state regulatory mechanisms to promote compact development, mixed-use and increased density in urbanized and immediately adjacent areas.
- The need for greater availability of Section 8 housing certificates and support for subsidized housing.

RUTLAND RPC GOALS

- Make efficient use of land in new housing development by maximizing density, utilizing a connected street network, and incorporating cluster development/conservation subdivision design.
- Meet housing needs of diverse socioeconomic groups by including affordable, subsidized, and below-market housing.
- Make housing accessible to

employment, services, educational, and recreational facilities by multiple forms of transportation.

- Locate new housing, including multi-family housing, in village centers, areas of mixed-use development and adjacent to existing settlement patterns. Avoid Greenfield development outside of existing settlement areas.
- Improve substandard housing to comply with State and Federal Fair Housing laws and nationally recognized building codes.
- Redevelop former industrial, commercial, brownfields and institutional buildings into housing and/or mixed-use structures.

RUTLAND RPC ACTIONS

The Rutland Regional Planning Commission shall achieve these goals through assisting communities to develop bylaws and town plans; regional approval of town plans; participating in Act 250 and Section 248 processes, training and education, information dissemination, preparing funding applications, and GIS mapping.



FOOD FOR THOUGHT

Spotlight on Child Care:

A key issue related to housing affordability is the presence (or lack thereof) of child care alternatives for residents.

Safe and affordable child care is integral to families' ability to have jobs that meet financial obligations and ongoing schooling.

In 2010, 4.6% of the County's population, or 2,832 people, were under the age of five. Rutland County is served by approximately 86 registered and 70 licensed child care providers.

Child care is a multi-faceted issue. Services must be provided in various locations (close to homes for some families, close to work for others) and with flexible schedules for those parents who work service-based or second-shift jobs and are in need of child care at non-traditional hours.

Coolidge, Aiken, West Rutland, the Lower Clarendon Gorge State Forests represent over 20,000 acres of land in the County open to undeveloped recreation. The Lower Clarendon Gorge State Forest provides day use access to an important natural water feature and scenic area. These forests also host hiking trails and some link together other important conserved lands. Coolidge Forest connects the north and south sections of the Green Mountain National Forest.

Rutland County has four state parks. On the western side of the County, three parks provide camping and water access to Lakes Bomoseen and St. Catherine as well as Half Moon Pond. In the Green Mountains, Gifford Woods State Park provides camping and picnicking opportunities adjacent to one of Vermont's best known old growth hardwood stands. The Appalachian Trail runs through the park and joins the Long Trail in the vicinity. Many State Parks have large acreage open to undeveloped recreation as well.

Municipal Forests

Most Municipal Forests were created in the early 1900's through legislation authorizing the establishment of "endowment forests." Seventeen towns in the region have at least one, ranging in size from 15 to over 1,000 acres. Municipal forests account for close to 10,000 total acres in Rutland county.

In a 1931 report from the Vermont Commission on Country Life, the value of these resources was described as, "a source of public education. Schools as well as the general public can here secure first hand information that often is obtainable in no other way. Such a forest area may well be the recreational center for the community, and when properly managed and administered, should become a source for revenue."

In Rutland, municipal forests were historically managed for timber revenue. While this is still the case in many

instances, there has also been a shift to management of these forests for recreational and educational uses as well. Many town's maintain signed hiking trails and wildlife viewing areas as well as other recreation opportunities, and encourage use of the forests by residents and school groups.

Currently, many towns are recognizing the public benefit municipal forests can provide, and are working with Rutland County's Forester (an employee of the Vermont Department of Forests, Parks and Recreation), to create management plans that identifies the variety of values and uses for the forest as identified by town residents.

Wildlife Management Areas

Plymbsbury, Shrewsbury/Plymouth, Otter Creek, Whipple Hollow and Buzkeck Wildlife Management Areas are also open to the public for nature watching and hunting and represent additional acreage appropriate for recreational use in the County.



Access to recreation facilities is a transportation issue for residents dependent on public transportation to reach recreational opportunities. The condition of highways and trails to reach recreation areas affects their accessibility as well.



Lucas Somers

The Rutland Region Fieldhouse, opened in 2004, offers a playing surface for hockey, indoor soccer, and other events years round.

Chapter 13: Agriculture and Forestry

INTRODUCTION

The natural and working landscape in Vermont and in the Rutland Region, is prized by people who live, spend their vacations here or travel through. As “natural” as they seem, the beauty and charm of these places are largely linked to the ways the land has been used by farmers.

In the 1850’s farming, particularly the raising of grazing animals, was so widespread in Vermont trees were cleared and only 20% of the land was covered by forests. Today, that trend has reversed as large tracts of land previously used as pasture have grown up into forests. In 2002, 75% of Rutland County’s land was classified as forest land. Both farmland and forests remain important elements of the Region’s economy, ecosystem, and character.

This section is focused on the link between land use, transportation, economic development, and the “working landscape”.

CURRENT CONDITIONS

Agricultural Resources

Outside of the Rutland City core, the Rutland Region remains a rural area with a wide variety of active farms and farm-related businesses. While dairy is the most visible and the most widespread farm type, there is a wide variety of foods and other farm goods produced in this Region including beef, lamb, eggs, fruits, vegetables, berries, honey, maple syrup, Christmas trees, ornamental plants, fibers, and specialty “value-added” foods such as jams, salsa, artisan cheese and herbs.

Forest Resources

The Region’s highly productive forest soils have made timber harvesting a sustainable activity that contributes to the economy and supports a number of related industries. In 2000 and 2001, Rutland County was 1st in the State in the share of hardwood being produced.

The forests contribute to the region’s economy by attracting outdoor recreation enthusiasts, hunters, and



FAST FACT

Right-to-Farm Law

Vermont has a statewide Right-to-Farm law that essentially protects existing farm operations from lawsuits by new residents and others that claim farm operations are a nuisance. This law was recently strengthened.

Rutland Region Current Use of Land



Legend

- US Highway
- State Highway
- Class 2 Town Road
- Surface Waters

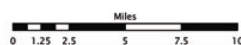
Land Use Classes

- Urban/Built Up
- Residential
- Commercial
- Transportation/Utilities
- Agricultural
- Row Crop
- Hay/Pasture
- Orchard
- Brush/Transitional

- Forests
- Deciduous Forest
- Coniferous Forest
- Mixed Forest
- Wetlands
- Barren Lands
- Industrial
- Water

Roads: Enhanced 911 Data and VCGI 2002.
Surface Waters: Digitized from 1:5000 Orthophotos
VCGI and Mount Holyoke College.

Landuse/Landcover for Vermont and the Lake Champlain Basin
derived from Landsat Thematic Mapper Imagery (early 1990s).



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This map (D:\RRPC\Regional Land Use.mxd)
was produced on 1/28/2004.

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FAST FACTS

Rutland County

Land in farms

- Decreased 5% from 132,674 acres in 1992 to 125,770 acres in 1997.
- Decreased an additional 4% to 121,203 acres in 2002.

Average size of farms

- Decreased 12% from 269 acres in 1992 to 237 acres in 1997.
- Decreased an additional 18% to 195 acres in 2002.

Market Value of Agricultural Products Sold

- Increased 4% to \$28,357,000 from 1992 to 1997.
- Decreased 16% to \$23,987,000 from 1997 to 2002.

Market value of agricultural products sold, average per farm

- Decreased 4% from \$55,470 in 1992 to \$53,504 in 1997.
- Decreased additional 28% to \$38,503 in 2002.

opportunities to buy products at a local farm stand or farmer's market, or from major grocery chains that are starting to purchase from local producers and advertise the availability of these products.

Equine Industry

A growing number of farms are being used for horses either simply to board and pasture, or as riding stables and arenas that tend to be viewed as more commercial ventures than agricultural uses. Between 1992 and 2002, the number of farms with horses as part of the operation more than doubled, from 75 to 180. While pasturing horses helps to keep the lands open, the more intensive riding uses are not always welcomed in a community. An issue local towns need to consider when drafting land use regulations is whether or not they want to allow or encourage these alternative uses of the land.

New Farmers

The median age of farmers in this region is rising. As current farmers approach retirement, new farmers need to be located. There are a number of statewide efforts to link new farmers with available mentors, business planning assistance, and land.

Farm and Forestland Protection and Land Conservation

There are a number of organizations (e.g. Vermont Land Trust and The Nature Conservancy) as well as State programs that focus attention on preserving valued farm and forest lands through donations, purchase or "conservation easements" which pay the landowners to keep the land in agricultural use versus parceling it off and selling it for development. There has been significant action in the Region through these types of models.

The conserved land establishes and maintains undeveloped land that will remain an opportunity for agriculture and forestry that would not exist if the land were developed.

Despite its obvious benefits, some potential shortcomings have been identified as this method has matured. For example, there are concerns about how the purchase of development rights will affect future generations of farmers who will not have the opportunity to parcel off some of their land when funds are tight. There is also a concern about what happens to the land if a landowner stops farming. Other concerns revolve around rising land and housing prices in close proximity to conserved lands perhaps due to the presence of these lands. These concerns have caused increased scrutiny of these programs and is spurring ongoing improvements to the ways in which conservation occurs.

MEETING CURRENT AND FUTURE NEEDS

Informed land use decisions

In order to proactively protect agricultural and forest lands, Towns might consider how these uses are treated in their local plans, zoning and subdivision regulations. Farm operations are exempt from local zoning laws, Towns can identify districts where agriculture is allowed, and whether or not other uses are also allowed. Providing a separation or attention to how surrounding parcels are developed can help avert some of the potential conflict between farm business operations and residential homes. Likewise, subdivision regulations can consider the impact a land division and development scheme would have on forestlands and agricultural parcels when making decisions in this regard.



FOOD FOR THOUGHT

Farm and forest lands have a number of benefits:

- Production of local food products significantly reduces transportation costs and consumption of fuel;
- As a land use, agriculture has a positive fiscal impact on the community's tax base (ie. demands less services than it contributes in taxes);
- Farming of certain crops is a positive use of floodplain areas;
- Open fields, forests and meadows are an important areas for groundwater recharge ;
- Locally-owned and operated businesses such as farms and wood manufacturers circulate local money in the local economy;
- Corn fields and other farmlands provide habitat for wild animals including deer, turkey and woodcock;
- Forests provide habitat to a wide range of animals and birds, including large animals such as moose, bear and large cats;
- Active farmlands provide open space and scenic views as well as a land use tradition characteristic of rural Vermont; and
- Forests provide a variety of outdoor recreation opportunities as well as a varied and scenic backdrop throughout the year.

in the coming years. Financial incentives to seasonal employees may be an enticement. Elsewhere there are programs designed to recruit a pool of workers interested in seasonal agriculture jobs.

RRPC ACTIONS

In addition to supporting activities and developments that contribute to individual communities and the Region, and which help meet the needs identified in this Plan, the Rutland Regional Planning Commission shall:

- Work with interested communities to better support the retention and viability of agricultural and forest lands through their land use plans and regulations and remove language that may unintentionally inhibit farm and forestry enterprises.
- Work with area farmers and the Rutland Area Farm and Food Link to identify gaps in infrastructure needed to increase supply of agricultural products produced in the Region.
- Work with local towns and land trusts to examine the effects of land conservation

techniques.

- Partner with other organizations to create a farm incubator in the Rutland Region to help new farmers get started in this Region.
- Support partnerships with Natural Resource Agencies to plan for sustainable farming and forestry.
- Where housing or other development on lands suitable for agriculture and forestry is proposed, help shape land use regulations and development review to encourage cluster housing to allow for the continuation of large tracts.
- Work with the Rutland Workforce Investment Board to address employment needs of farm and forestry sectors.
- Promote density-based or sliding-scale zoning in land use bylaws to allow for the retention of large parcels, while allowing for small house sites.
- Map significant agricultural and forest lands in municipal plans and identify for protection.
- Do not support Act 250 applications that permanently destroy significant amounts of farm and forest lands.

ADDITIONAL RESOURCES

One of the objectives of this Plan is to provide communities with the tools, and the framework, for developing effective local plans and policies. This Plan should be used as a resource for communities preparing plan updates. In addition to the plan, however, a number of other resources are available:

- US Census – (www.census.gov). This site contains the most commonly used housing and demographic data across the country
- 2002 US Census on Agriculture (www.census.gov).
- Vermont Agency of Agriculture website (www.vermontagriculture.com)
- Cornell Community Food and Agriculture Program website (www.cfap.org)
- Food Routes website (www.foodroutes.org)
- Vermont Fresh Network (www.vermontfresh.net)
- Rutland Area Farm and Food Link website (www.rutlandfarmandfood.org)
- Poultnery-Mettowee Natural Resource Conservation District (www.vacd.org/pmnrcd)
- Rutland Natural Resource Conservation District (www.vacd.org/rutland/)
- Vermont Forest Parks and Recreation Maple website (<http://www.mapleinfo.org/>)
- Vermont Division of Forestry website (<http://www.vtfpr.org/htm/forestry.cfm>)

Chapter 14: Wildlife and Natural Habitats

INTRODUCTION

The natural heritage of Vermont makes it undeniably beautiful, and the forests and mountains that make the open fields striking. Residents and visitors are connected to the environment, dependent upon its soils and waters for sustenance and fulfillment. In turn, the wildlife that lives here is connected to the people, their survival dependent on the way land is developed.

Results from a 2001 public opinion survey conducted by the U.S. Fish & Wildlife Service show that Vermonters appreciate wildlife more than any other state; Vermont ranked *first* in the nation as having the highest percentage of residents who actively viewed wildlife (60%). A more recent survey of Vermont residents found that protection of fish and wildlife resources, habitats and lands, as well as the opportunity to participate in wildlife-related recreation was important to 97% of all Vermonters (*source: Conserving Vermont's Natural Heritage, pp 8-9, Vermont Agency of Natural Resources, 2004*).

This chapter of the *Plan* examines wildlife habitats and corridors, their role in the Region's ecosystem, and their relationship with land use.

CURRENT CONDITIONS

Natural Habitat

As described in the Regional Profile, Rutland County is made up of four of the eight biophysical regions in Vermont, designated by several factors such as geology and habitat. These diverse habitats contribute to a high species diversity in the County.

Fisher, bobcat, coyote, fox and bear represent the carnivorous and omnivorous mammals that roam our forests and waterways. Smaller mammals including raccoons, opossums, mink, otter, ermine,

skunks, and muskrats are also present. Whitetail deer populations and wild turkeys typically serve as a backdrop to the Region's agricultural landscapes, and moose can be found in forest and marshlands. Large member of the rodent family, such as the American beaver and the porcupine can also be found in forested areas. Insectivores such as bats are also present throughout the Region.

Rutland County also hosts the most diverse populations of Odonata (Dragonflies and Damselflies) in the state. This apparent abundance can also be attributed to the diversity of habitats and the vast survey efforts undertaken in our Region.

Birding is a recreational hobby that is common in the Region, as Rutland County is on a migratory flight path to Canada. The grasslands, marshlands, farmlands and forested lands promote avian diversity throughout the Region.

Threatened and Endangered Species

Rutland County is home to several species listed as rare, threatened, or



FAST FACT

Area-sensitive species, especially carnivores and omnivores, require a large 'range' for survival. Development within these ranges causes the species' numbers to suffer.

For example, a Bobcat needs a range of 20 square miles, whereas a Black bear requires a range of 20 to 50 square miles.

Useful information can be found at www.keepingtrack.com, an organization committed to improving wildlife knowledge and understanding across the



An essential natural habitat for deer, wintering areas provide forage and shelter for this species.



FAST FACT

The Vermont Land Trust focuses on properties with reasonably stocked working forest parcels and poorly managed or liquidated working forest parcels with a history of high-grading or clear-cutting. Areas are also considered which have significant ecological resources, including riparian areas, significant plant or wildlife habitat, sites identified as important by the VT Nongame & Natural Heritage Program, and Class I and II wetlands.

endangered.

The timber rattlesnake can be found in twelve Vermont towns, half of which are in western Rutland County. West Haven is also home to the Five-Lined Skink, the only lizard native to Vermont, currently protected as endangered under state law. The eastern rat snake (or black rat snake), is also listed as threatened in the State of Vermont.

The bald eagle can be spotted over the Chittenden Reservoir during the summer months as well as in West Haven. There are currently no successful nesting pairs in Rutland County, however the habitat for these birds does exist. Rehabilitation efforts are underway by Vermont Audubon, Vermont Bald Eagle Restoration Initiative, and the Vermont Institute of Natural Science.

The peregrine falcon, whose populations have recently recovered, so much so that in 2005 this species was removed from the Federal Endangered Species list, were found nesting in the western part of the County in 2002. These mountains provide the falcon's habitat; high ledges near open areas like rivers,

lakes or fields.

The Indiana bat is listed as endangered at both the State and Federal level. Scientists from the Vermont Department of Fish and Wildlife are currently undertaking research that would pinpoint 'roost tree' locations. Because this mammal is so small and difficult to track, it is important to identify current roosting sites, so that scientists may be able to predict future roosting sites and properly implement conservation strategies here as well.

UNMET NEEDS

Loss of Habitat

Habitats and the corridors between them are essential for the survival of all species.

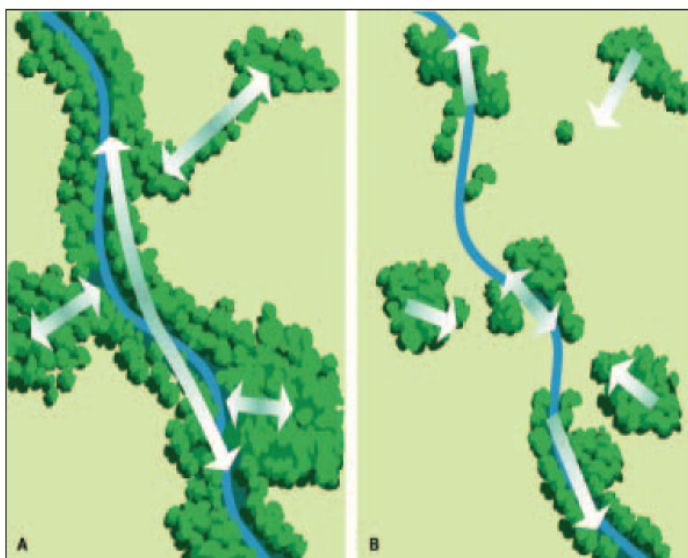
Development has claimed thousands of acres of Vermont's forestland and farmland, fragmenting habitat. Roads, buildings lawns, and parking areas have affected the ability of animal species to migrate, forage for food, and nest.

In recent years, strip development has exacerbated this problem. These human-made obstacles further fragment wildlife habitat, often causing an increase in human-wildlife conflicts, and an unhealthy decrease in species' abundance. For this reason it is important to identify and conserve established contiguous forests, or areas of forest habitat with little to no roads or other human development. All species, and notably the larger mammals such as bobcat, black bear, and wood thrush, rely on these ranges for reproduction and food sources.

Contiguous forests also encourage healthy interaction between the species and. Connected habitats allow wildlife the ability to mix with other populations of the same species in the area, creating a veritable breeding ground that would promote the transfer of genes necessary to maintain a healthy population.

Grassland bird habitat is also on the decline, due to agricultural activity

WILDLIFE HABITAT CONNECTIVITY



The above map show the physical differences between (A) high and (B) low degrees of connectivity. The patches of habitat in figure (B) are not suitable habitat for wide-ranged species and even some smaller species that rely on a combination of water and forest habitat. Source: Vermont Department of Fish and Wildlife

throughout the Region. Current mowing schedules allow for haying in mid-May, a time when grassland songbirds are nesting. Second-cut usually arrives within 35 days, which is barely enough time for these birds to re-nest before the area is mowed again. Agriculture is a necessity that should be promoted in our working landscape, however those who do not need rigorous haying schedules can delay cutting or use the land for pasture until mid-July as an alternative.

Isolated habitats are frequently unprotected from development, and shoreline encroachments have destroyed many important reproductive areas for animals of all species.

Unprotected Corridors

Wildlife corridor management is a topic that has yet to be broached by most municipalities. Patches of conserved land may have little to no benefits to the greater ecosystem without appropriate connections or corridors.

Mapping forest densities and core habitats can show where corridor protection may be necessary for wildlife protection. Where habitat and roads collide, appropriate signage should be used to warn motorists of crossing animals and minimize road kill incidents.

Where prime habitat and corridors can be conserved, this is the preferable route. Where this is not feasible it is important that efforts be taken to mitigate the impacts of development on natural communities. The ideal would be to invest in protecting prime habitat areas *before* they are considered in the real-estate market.

Information Gaps

One of the biggest detriments to species conservation in our area is a general lack of data. More information is needed on Vermont's Natural Heritage.

The Vermont Wildlife Action Plan lists insufficient data as one of the most common impediments to species conservation.

Municipalities have been reluctant to adopt regulatory tools for protecting sensitive habitat in part due to missing data and lack of resources; they may not know that the woods in their town contains sensitive habitat.

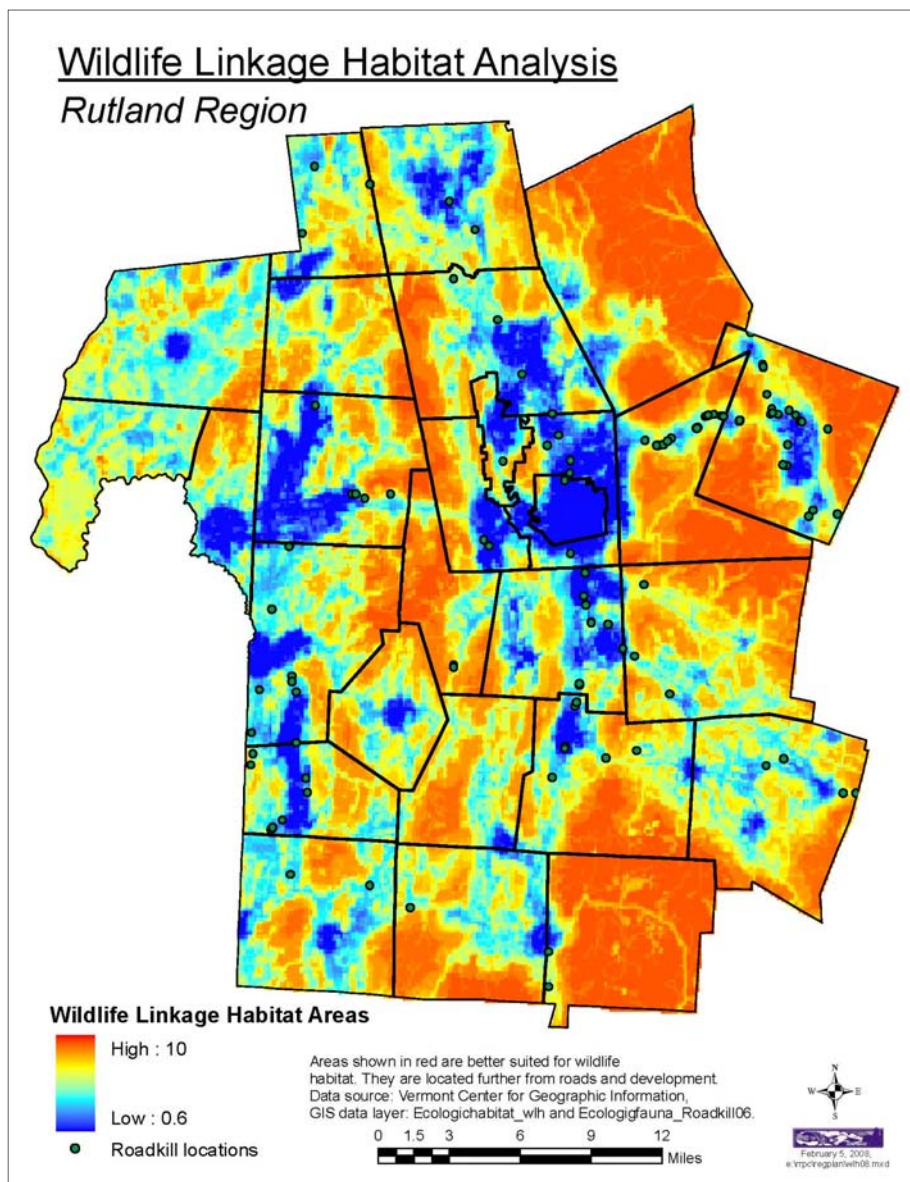
Perhaps the most difficult challenge in management of wildlife and natural habitats is the extension of policies beyond political borders – be they town, county, or state lines. Initial efforts at watershed-based planning have proven successful; the Poultney-Mettowee Watershed plan,



DEFINITIONS

INVASIVE SPECIES:

The National Invasive Species Council's Invasive Species Advisory Committee defines invasive species as "alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health"





Wildlife habitat and water quality are closely linked. Plants and animals need fresh marshes, streams, and ponds for survival and in turn serve as effective filtering systems when healthy.

Having a better understanding of predator/prey relationships in our region will allow for better decisions when managing these important mammals.

FUTURE TRENDS

- With a growing population and an increase in the number of second homes, habitat fragmentation is likely to continue. Municipalities must regulate existing prime habitat and shoreline locations in an effort to protect wildlife from this habitat destruction, and the valuable services intact ecosystems provide the community.
- Advancing technology will furnish ways for developers to construct on steeper slopes and ridgelines. It is important for municipalities to identify these isolated habitats, and through land acquisitions or transfer of developmental rights, conserve these lands from future development.
- Shoreline development, if unregulated or improperly regulated, will continue to decimate important wetland, marshland,

and riparian habitat, and an increase of water recreation could continue the promulgation of aquatic nuisance species.

Animals affected by this disruption include aquatic life, amphibians, birds, and small and large mammals and human water supply. Local District Environmental Commissions have been working with lakeshore residents to combat aquatic nuisance species, using recent technology to eradicate identified populations, and utilization of signage and education to promote awareness of this growing problem.

- Nuisance species will continue to expand their ranges as the climate shifts, causing an imbalance in the local forest ecosystem and displacing native species of plants and animals.

MEETING CURRENT AND FUTURE NEEDS

Municipal Responsibility

CASE STUDY: SUCCESS IN CONSERVATION

THE HELEN W. BUCKNER MEMORIAL PRESERVE

West Haven's Helen W. Buckner Memorial Preserve at Bald Mountain is Vermont's largest preserve to be managed by the Nature Conservancy. Over a seventeen-year period, the non-profit organization acquired 3,776 acres of land for this project.

In 1988, 1500 acres of the Galick Farm was purchased. The Nature Conservancy purchased land from eight other landowners as well.

Being a non-profit organization, approximately 50% of the funding for such a project is derived from public donations, and the other 50% is derived from private donations, such as the

Vermont Housing and Conservation Board, who give donations to many non-profit organizations for local housing projects, agricultural and forestland protection. The Nature Conservancy has a Preserve Management Staff that ensures the land is protected from misuse.

Habitat areas located within the Preserve include talus slopes and clay plain forests, two of the State's more rare resources. These areas provide habitat for many unique species, among them the Five-Lined Skink, Vermont's only lizard. Much of the clay plain forest area in the State, known for its rich soils, were lost due to clearing for agricultural uses.

Many tools are available for municipalities to take charge of conserving their own natural heritage.

Land Use Regulations: Several zoning tools are available to municipalities, including *conditional use review*, *site plan review*, *transfer of development rights*, *wildlife overlay districts*, and *planned unit development* (PUD) bylaws, which typically require a certain portion of a subdivision to be conserved as open space in exchange for the ability to deviate from set back and density requirements. Each of these tools can be incorporated into land use regulations in towns with adopted plans.

In addition, municipalities, and the State, can provide education and hand tools to residents to help reduce the spread of invasive plants and animals. Signs asking visitors to a boat access to clean off milfoil, together with a garden hose for public use, can be an effective and inexpensive management option.

Nonprofit Organizations

Non-profit organizations such as the Vermont Land Trust seek to conserve land through the purchase of developmental rights. These conservation easements protect the value of the land, while providing conditions and terms for how the land will be managed.

Management plans produced by foresters and conservation biologists have

tied long-term economical prospects into the conservation of privately owned lands, and have grown in popularity in recent years. With these practices, a landowner can protect the equity of his woodlots while maintaining the natural ecosystem of the property for nesting and migrating animals.

The Nature Conservancy is another organization that seeks to protect important lands, through donations, easements and acquisitions.

Other non-profit organizations working to protect wildlife in the Region include Vermont Audubon, Vermont Institute of Natural Science (VINS), Keeping Track, and the Vermont Non-Game and Natural Heritage Program (NNHP). These organizations undertake research on Vermont's natural heritage in order to provide data that can be used in making reasoned landuse decisions. Many of these actively promote citizen participation in this vast monitoring effort. Among them:

- Keeping Track trains citizens to track and document the behavior of wildlife in local communities.
- The Vermont Institute of Natural Science merges conservation biologists with volunteer citizens to encourage local observation and reporting of species habitats, especially bird flocks and nesting sites. Currently, there are over 15 "VerMonitors" at large in Rutland County.



FAST FACT

In a healthy ecosystem, nature will provide its own checks and balances. The latest influx of tent-caterpillars, a native defoliator of aspens and sugar maples, has been offset due to a significant rise in the population of tent-caterpillar parasites, nicknamed "the Friendly Fly." Big and clumsy, the Friendly Fly does not bite the humans that it (constantly) lands on, but rather, it lives to inject tent-caterpillar cocoons with it's own offspring, who prey on the pupae inside.

ADDITIONAL RESOURCES

- *Conserving Vermont's Natural Heritage: A Guide to Community-Based Planning for the Conservation of Vermont's Fish, Wildlife, and Biological Diversity*; Vermont Fish and Wildlife Department, Waterbury, VT, 2004. Available at your Regional Planning Commission.
- The Nature Conservancy: Conservation organization and large land owner: www.tnc.org
- Vermont Agency of Natural Resources website, www.anr.state.vt.us: contains information and contacts for all state programs related to wildlife, water quality, forests, parks, etc.
- Vermont Institute for Natural Sciences (VINS): www.vinsweb.org
- Vermont Housing and Conservation Board, www.vhcb.org: provides funds for affordable housing and land conservation
- Vermont Land Trust, www.vlt.org: primary conservation and agricultural easement non-profit in the State.



FOOD FOR THOUGHT

Canary in the Coal Mine: How Neo-Tropical Songbirds Paint a Picture of World Health

In the spring and summer months, Rutland County residents can look forward to the bright blues, reds and yellows of the tropics, just outside their windows. Many Neo-Tropical songbirds have chosen the Northeast United States as their choice breeding grounds, traveling thousands of miles to meet their mates in the Green Mountains.

If scientists observe a reduction in species abundance, it can either be assumed that the birds are going through hard times in their equatorial homes, or that they are facing difficulties finding adequate breeding grounds here in Vermont.

- “Citizen Scientists” are encouraged by Vermont Audubon and the Cornell Lab of Ornithology’s E-bird program to observe bird behavior, either in their own backyards or at popular nesting or migration sites.
- Do not support Act 250 applications that significantly impact or destroy wildlife or natural habitats.

RUTLAND RPC ACTIONS

In addition to supporting activities and developments that contribute to individual communities and the Region, and which help meet the needs identified in this Plan, the Rutland Regional Planning Commission shall:

- Through GIS Mapping assist towns identify wildlife and natural habitat areas for protection in municipal plans and land use bylaws.
- Assist municipalities in managing ‘sensitive’ habitats via land use regulations, including planned unit developments, overlay districts, and others.
- Provide information regarding conservation easements and the organizations that offer them.
- Work with the Poultney-Mettowee and Otter Creek Natural Resource Conservation Districts, River Corridor Management Program to better address issues of nuisance species, watershed protection, and riparian buffers, and to prioritize these initiatives.
- Aid towns in identifying native species for use in screening and landscaping.
- Establish a partnership with neighboring counties in New York to identify and protect shared natural assets. The Adirondack Park Invasive Plant Program (APIPP) is a great example of regional invasive species work.
- Provide information to towns on the importance of wildlife and natural habitat migration corridors. Use GIS to map and identify these areas for protection in land use bylaws and municipal plans.

Southern Windsor County
2009 Regional Plan
Volume 1 of 2

Effective July 21, 2009

I. INTRODUCTION

A. Background of the Commission

The Southern Windsor Regional Planning Commission (RPC) was established in 1966, as the Southern Windsor County Regional Planning and Development Commission, through the action of its constituent towns. The original eight member towns were not contiguous and it wasn't until 1970 that the RPC began receiving state and federal funds. Currently, the RPC's activities and programs are governed by a ten-person Board of Commissioners; each appointed by the legislative body of his or her member town, with assistance from up to three “at-large” Commissioners as appointed by the Board of Commissioners. In addition, the Board has the responsibility of hiring staff to carry out the goals and policies of the Regional Planning Commission.

The RPC also has the authority to establish advisory committees to address specific regional issues. Currently, the Commission has two such committees, the Brownfields Steering Committee and Transportation Advisory Committee (TAC). Representation on the Transportation Advisory Committee consists of one representative from each community, an ex-officio representative of the Agency of Transportation and provision for two “at-large” members. The primary mission of the Transportation Advisory Committee is to develop and evaluate transportation policy and recommendations as they relate to the Regional Transportation Plan and the Regional Plan.

The primary intent of the RPC and its advisory committees has always been to assist with and advocate for the planning and development activities of its member towns. The RPC exists primarily to provide technical assistance to its member towns; assist in mediating inter-jurisdictional planning and development issues that arise between member communities; facilitate discussion and understanding between local and state entities; develop plans, policies, strategies, and procedures for addressing issues that are regional in scope; assist communities with downtown revitalization and community development projects; annually compile, review, and prioritize regional transportation improvement projects for submission to the Agency of Transportation; and to serve as an information resource for member towns and residents.

B. Statutory Authority

The RPC is authorized pursuant to the duties and optional powers listed in the Vermont Municipal Planning and Development Act (herein referred to as “the Act”) [24 V.S.A. §4345]. The RPC is required to adopt a regional plan in accordance with the Act [24 V.S.A. §4348]. Volume 1 and 2 of the Regional Plan are adopted together as one document.

C. The Regional Plan

The purpose of the Regional Plan, in accordance with the Act [24 V.S.A. §4347], is to create a vision for coordinated growth and development in the Region in accordance with existing and future needs and resources. **The Regional Plan is advisory in nature, purpose, and**

effect. However, there are a limited number of areas where the Plan can have regulatory implications as discussed below. The Regional Plan is also used to support a host of grant applications including Community Development Block Grants and housing or farmland conservation applications to the Vermont Housing and Conservation Trust Fund.

The Regional Plan guides the RPC in evaluating public and private actions affecting the Region's communities and is the foundation for the RPC's annual work program. The Regional Plan also serves as the Region's basic planning manual and should be used as a guide by the Region's towns in the local planning process.

Because of the inherent interrelationship of all aspects of the Regional Plan, the policies in any section are not to be considered in isolation, but rather in conjunction with all other sections and chapters of the Regional Plan. Each section of the Regional Plan includes statements designed to guide the growth and development of the Region. These guiding statements are defined later in this chapter to help the reader understand the context in which they are used.

The format of the Regional Plan is intended to include all plan elements as required by law (24 VSA § 4348a). Volume 2 of the Regional Plan consists of the Regional Transportation Plan, which serves as both the statutorily required transportation element and the requirements of the RPC's Transportation Planning Initiative with the Vermont Agency of Transportation. Volume 1 includes all other required elements of the Regional Plan. Each chapter in Volume 1 focuses on particular issue areas of regional or statewide interest. Background issues, goals, policies, and recommendations are contained in each chapter. The final chapter of the Plan discusses implementation of the Regional Plan.

D. Use of the Plan in Regulatory Proceedings

The Regional Plan has a regulatory role under three state review processes:

- Act 250/District Environmental Commission Hearings (10 V.S.A., Chapter 151);
- Public Good Determination Hearings for electric generation or transmission facilities (30 V.S.A. §248, or "Section 248")
- Solid waste facility certification (10 V.S.A. §6605).

Major developments are reviewed for conformance with any duly adopted local or regional plan under Act 250 or Section 248. If, however, a conflict exists between the local and regional plans, the regional plan will be given effect over the municipal plan if a proposed development has a "substantial regional impact." See the Implementation Chapter for a definition of substantial regional impact.

The RPC works closely with its member towns in order to ensure that municipal plans are not in conflict with the regional plan. This synergistic relationship attempts to recognize potential concerns with Act 250 and Section 248 applications prior to their submission. In addition, the Land Use Panel of the Natural Resources Board that oversees the Act 250 process narrowly interprets "conflict" as only existing when one plan allows the project but

11. To develop a transportation system that balances the needs of safety, convenience, cost, energy efficiency, environmental protection, economic growth, and recreation.
12. To further the Vermont Planning Goals found in (24 V.S.A. §4302).

REGIONAL POLICIES

1. All inhabitants and wildlife should be provided with a healthy living environment through improvement and maintenance of the air, water, and soil quality.
2. Natural resource use that ensures the protection of sufficient renewable resources for future generations and provides for reasonable economic return should be supported.
3. Irreplaceable natural and fragile areas, outstanding water resources, rare and endangered species and their habitats, and significant scenic features should be protected and preserved.
4. Regionally significant natural, cultural, and archeological features, and historic sites and buildings should be protected and preserved.
5. Cooperation and coordination among member towns is encouraged in planning for growth and development, to enable an evaluation of the potential for regional and interjurisdictional impacts.
6. All appropriate agencies should cooperate in the development and maintenance of a safe and efficient regional transportation system that meets the vehicular and pedestrian needs of all residents with minimum impact to the Region's environmental and aesthetic qualities.
7. Environmentally benign or beneficial economic development that will provide desirable jobs for regional residents, reduce unemployment, improve per capita income, and maintain the character of the Region should be promoted.
8. Energy efficiency and conservation, the development of renewable resources, and the use of alternative energy sources are encouraged.
9. The manufacturing and marketing of local value-added agricultural and/or forest products is encouraged.
10. The provision and enhancement of recreational opportunities for all residents, and promotion of tourism-related economic development that furthers the goals of this Plan should be encouraged.
11. The protection of significant agricultural and forested land, through incentives and measures which discourage the subdivision or fragmentation of large parcels of such land is encouraged.

F. Energy

Back in August 2006, the Vermont Council of Rural Development held a Summit that addressed Vermont's concerns about global climate change, oil dependency, "peak oil," and perceptions of the growing challenge of national energy policies. Paralleling global and national security concerns were questions regarding Vermont's future energy supply (re-licensing the Vernon (now Vermont Yankee) Nuclear plant, future Hydro-Quebec contracts, and the high cost of gasoline and heating oil). The Summit was not organized to answer these challenges, but rather to consider ways to expand energy as an economic sector providing major opportunities in rural Vermont.

U.S. Senator Patrick Leahy opened the Summit, and called for a pro-active national policy to promote renewable energy and end America's dependence on foreign oil. At the state level, Governor Jim Douglas spoke of the importance of renewable energy to the future of the state and outlined the strong initiatives Vermont would be undertaking to address climate change, support biomass and agricultural generation, and advance efficiency and conservation. He supported Vermont's goal of producing 25% of its energy needs from renewable farm and forest resources by 2025.

It's been over two years since the Summit, and Vermont, as well as the Region, is still facing the same challenges. In addition, with recent dramatic increases in fuel and heating oil costs, Vermonters (as well as the nation) saw how such dependency on these resources affected their lives dramatically. The purpose of the energy chapter of the Regional Plan is to look at the Region's current energy consumption, conservation methods and initiatives member towns can take, and the numerous alternative energy resources that are available when considering future energy resources. There is no one solution that will solve all of the future energy challenges that we face as a region, state or a nation, however, exploring all options will hopefully provide more answers to fulfill our responsibility to the future.

G. Transportation

1. Transportation Trends

Vermont, being largely a rural state, is heavily dependent upon the automobile to meet the transportation needs of the state (see **Table 2.6**). All categories related to more motor vehicle use show significant increases between 1980 and 2000, outpacing general population growth and far outpacing increases in roadway miles. Automobile registrations increased by 53% while population grew only 19% in that twenty year period, suggesting that car ownership per person is increasing. A more than 76% increase in vehicle miles traveled, with only a 1.5% increase in miles of roads, indicates roads are experiencing much more use. The resulting wear and tear from this increased roadway traffic will be expensive to address. Preliminary reports suggest that travel in Vermont is decreasing since the price of gas reached \$4.00 a gallon in 2008.

III. LAND USE

The manner in which inhabitants occupy and use land creates a complex pattern of development that affects the social, economic, and natural resources within and beyond the immediate area. Poor planning and unregulated land use can have negative impacts on communities in terms of the natural environment, quality of life, and local economic resources. Planning for the efficient use of land resources can result in the betterment of towns and the natural environment.

All towns in the Region have written comprehensive plans. In addition, many communities have enacted implementation measures such as zoning and subdivision regulations and created Conservation Commissions in an effort to address land use issues in a more comprehensive manner. However, communities throughout the Region are faced with problems such as insufficient funding, overburdened community facilities, rising real estate costs and property taxes, loss of revenue, lack of sufficient and accurate data and/or technical expertise, and unplanned or undesirable growth.

Planning efforts should place an emphasis on those characteristics that are unique to the Region. Most towns in southern Windsor County were developed in the traditional Vermont pattern of a compact village center surrounded by rural countryside. In order to maintain this pattern, economic growth should occur first in areas such as village or urban centers where infrastructure and vacant structures already exist and can accommodate additional growth. Above all, towns should continue to set the stage for their own development by planning for growth to accommodate the needs of current and future residents in keeping with the unique character of their town.

A. Land Use Trends

1. Historic Settlement Patterns

Historic sites and structures, utilities and facilities, community services, commercial and residential development, employment, transportation, recreational opportunities, farms, and other features are all woven together with the natural environment to make up the unique fabric of the Region. The predominant pattern of village centers surrounded by working rural landscapes reflects the history of the Region, and contributes to the quality of life that residents cherish. In general, the municipal plans in the Region seek to preserve these historic land use patterns. And, these patterns continue to form the basis for the land use goals, policies, and recommendations described later in this chapter.

Towns in the Region were first established in the mid- to late-1700s. Settlers came primarily from southern New England attracted by the availability of land and an abundance of natural resources. Settlement patterns were affected by access to waterways, agricultural soils, transportation routes, and protection from New England's severe climate. Those areas with rugged terrain were sparsely settled, while villages were settled primarily along rivers and streams, with farms around the perimeter. The Black River, the Williams River, and Mill Brook provided a major source of power for the Region's mills and encouraged industry to develop along the waterways. Larger settlements occurred in towns such as Windsor in the

Benefits of designation include regulatory and financial incentives for growth centers, such as:

- Off-site mitigation of primary agricultural soils at lower mitigation ratios;
- Streamlining the Act 250 review process by allowing for a master plan permit for the growth center;
- The ability to create Tax Increment Financing (TIF) district(s) within growth centers to fund infrastructure improvements;
- Priority consideration for funding, including state public facility improvements, wastewater facility improvements, brownfields remediation, Community Development Block Grant (CDBG) program implementation grants, Downtown Transportation Fund, Transportation Enhancement improvements, and housing renovation and affordable housing construction programs.

e. Vermont Neighborhoods Program

In 2008, Act 176 was enacted creating the Vermont neighborhoods program, which seeks to stimulate new housing development in areas within and surrounding designated downtowns, village centers, new town centers and growth centers. The program is administered through the Department of Housing and Community Affairs in coordination with the Natural Resources Board. The Downtown Development Board reviews and approves Vermont neighborhood applications in accordance with 24 V.S.A. §2793d. Benefits include the relaxation of Act 250 regulations, exemptions from the land gains tax and reduced permit fees. There are no designated Vermont neighborhoods in the Region.

B. Future Land Use

1. Future Land Use Map

For the purposes of this Plan, the following future land use categories have been established. These categories are defined below and depicted on the Future Land Use map (**Appendix A - Map 3**).

- Regional Centers;
- Town Centers;

Statutory Definitions per 24 V.S.A. § 2791:

Growth Center: means an area of land that is located either in or adjacent to a designated downtown, village center or new town center as approved in a town plan; will accommodate the majority of growth anticipated over a twenty-year period; and contains a mix of uses in an urban density consistent with 24 V.S.A. § 2791(12)(B).

Noncontiguous lands might be allowed where natural or physical constraints exist as long as it is necessary to accommodate future growth and the combined growth center area functions as a single integrated area.

Vermont Neighborhood: means an area of land that is in a municipality with an approved town plan, a confirmed planning process, zoning bylaws and subdivision regulations; and is in compliance with the following:

- Located either within a designated downtown, village center, new town center or growth center, or an area outside but contiguous of the above designated districts and is not more than 100% of the total area of the downtown district, 50% of the village center district, or 75% of the new town center;
- Contiguous lands compliment the designated districts by integrating new housing and provide the infrastructure and density criteria in § 2791(15)(B).

The industrial site located along Clinton Street in Springfield immediately southeast of the Springfield Regional Recreation Center is intended for redevelopment, allowing for a mix of uses but primarily targeting future industrial uses for local jobs.

g. Rural

Most land in the Region lies outside of the areas designated for concentrated growth. Rural areas support a variety of different land uses, including low-density residential, small-scale commercial and outdoor recreation. These areas are rural in character and are generally valued for environmental and recreational uses as well as for the primary purpose as a working landscape, which includes agricultural, forestry and earth extraction uses. These working landscape activities contribute to the economy by providing jobs in the natural resource sector as well as attracting tourists who want to take advantage of the recreational opportunities. The RPC shall review Act 250 applications for earth extraction operations on a case-by-case basis for positive benefits for the Region as well as negative impacts on the environment, infrastructure and adjacent land uses. Development within rural areas is largely dependent upon local regulations and site limitations, including but not limited to the suitability of the soils, the presence of floodplains, and distance from community facilities and services.

It is in the interest of the Region that rural character shall remain the dominant feature of these rural areas. Rural character includes significant amounts of open space, compatible building styles, low-density residential settlements, lightly traveled two lane roads, and numerous agricultural and forestry operations.

Much of the recent development in the Region has occurred in rural areas even though it is encouraged in designated areas of concentrated development.

Development in rural areas should avoid sprawl and strip development land use patterns. Small-scale commercial uses are encouraged in nodes or clusters, rather than in a linear development pattern along major roadways. Residential uses are encouraged, but should be clustered or built along the periphery of important fields and other natural resources in order to minimize negative impacts. Large developments are encouraged to employ innovative site designs, such as planned unit developments (PUDs) and/or “crossroads hamlet” land use patterns, in order to cluster residential units, minimize road networks and limit site disturbances. Traditional hamlet patterns are emphasized over suburban, gated or cul-de-sac patterns.

h. Resource

Resource areas represent natural areas that require protections because of their fragile nature, irreplaceable value, and unique or important ecological functions. These areas consist of the following sub-groups:

- (1) High elevation areas over 2,500 feet in elevation;
- (2) Steep slopes in excess of 25 percent gradient;
- (3) Class 1 and 2 wetlands;
- (4) Permanently conserved lands, both public and private;

- (5) FEMA-designated floodways;
- (6) Critical wildlife habitat areas and wildlife travel corridors as mapped by the Department of Fish and Wildlife; and
- (7) Prime agricultural soils (as defined by the USDA).

Resource areas are generally more remote than rural areas. A combination of conserved lands and a working landscape that allows for outdoor recreation, hunting, forestry and agricultural activities are encouraged. As in rural areas, the RPC shall review Act 250 applications for earth extraction operations on a case-by-case basis for positive benefits for the Region as well as negative impacts on the environment, infrastructure and adjacent land uses. Residential or commercial buildings are discouraged. Very low-density residential uses shall cluster or locate at the periphery of natural resource areas in order to minimize negative impacts. All land uses, including roads and utilities should avoid fragmenting large blocks of forested lands, wildlife habitat and wildlife travel corridors. High elevation areas should remain as predominately wilderness areas, but wind energy and telecommunication facilities may be allowable if the facilities and access roads minimize impacts on natural resources and aesthetics.

C. Special Considerations in All Land Use Categories

1. Supporting Traditional Land Use Patterns

As the Region's population and economy grows and expands, each community will be affected differently. Factors such as geographic location, natural resource constraints, regulations, public policy, and public investments contribute to the direction that new growth takes in any community. The future land use categories described above are intended to support traditional land use patterns, be consistent with the state planning goals, and incorporate "Smart Growth Principles" as defined in state statute.

The future land use categories do not mean that all growth should only occur in regional centers and not in rural areas. Rather they reflect a regional policy that intensive development should occur first in those communities best able to accommodate it, and in the appropriate densities to maintain the traditional land use pattern. They also reflect a regional policy that scarce public funding for improvements in infrastructure should be directed in ways that support the current and desired scales of growth. For example, a large-scale investment in wastewater or pedestrian facilities would be more appropriately made in a regional center than in a rural area. Furthermore, these categories reflect a regional policy to prioritize the reinvestment in villages and brownfield sites over greenfield development in rural or resource areas.

2. Resource Protections and Working Landscape

The rural and resource areas were developed in order to protect specific natural resources and traditional rural economic activities. However, there are several important resources that may occur within any of the land use categories, and which merit special attention and protection. They include: Public Water Supply Source Protection Areas; FEMA-designated floodplains; slopes between twelve and twenty-five percent gradient (12 - 25 %); vegetated

areas next to surface waters; Class 3 wetlands and vernal pools); Natural Heritage Inventory sites; regionally significant historic sites; and other locally defined sensitive natural areas and scenic resources. Development should avoid or minimize negative impacts to these resources.

3. Interstate Interchanges and Major Highway Corridors

There are two Interstate 91 interchanges: Exit 7 in Springfield and Exit 8 in Ascutney; both are discussed in more detail in the Regional Transportation Plan (RTP, Volume 2 of 2). Interchanges are prime areas for development due to their generally favorable site conditions and easy access for trucks and the traveling public. These areas also serve as gateways to the Region. In many locations throughout the country, interstate interchanges have experienced unplanned strip development which negatively impacts: the capacity and safety of the highway system, aesthetic and natural resources in these areas, and the economic and cultural viability of traditional villages.

Executive Order 07-01 was signed by the Governor in 2001 to encourage land uses at Vermont interchanges to be consistent with state land use goals. In 2004, the RPC developed Interstate Exits of the Region: Study and Policies that is discussed in more detail in the RTP. The Town of Weathersfield developed the I-91 Exit 8 Interchange Master Plan in 2008, which recommends incorporating the current strip commercial development along Exit 8 into the village of Ascutney through improved local regulations, including access management, roadway and pedestrian connections, and site plan review standards. The Town of Springfield created an Exit 7 zoning district to accommodate services for the traveling public, while also protecting major highway systems and not competing with downtown businesses. Development in interchange areas should be consistent with these initiatives and local regulations.

State highway corridors and intersections form the transportation network that is essential for access to jobs, services and emergency services. Poorly planned adjacent land use developments and access management can have a detrimental effect on these highway systems. The functionality of interstate interchanges and the state highway network should be preserved to maintain or improve capacity and safety, reduce vehicular delays and to not preclude future intersection expansion needs.

4. Energy Conservation

Effective land use planning should promote energy conservation. The future land use categories are, in part, established to encourage energy conservation by concentrating development in smaller, dense village areas with a mix of uses that encourage travel by walking, bicycling and public transportation, and reduces the energy required to provide town services.

The siting, design and construction of buildings significantly influences the energy demands for heating, cooling and lighting the structure. Innovative site designs - through building orientation, construction and landscaping - are encouraged to take advantage of solar heating and passive cooling in order to reduce energy demand otherwise used for traditional heating and cooling systems. Energy efficient lighting, such as LED fixtures, is encouraged to

reduce electricity consumption. See the Energy Chapter for more discussion on energy conservation.

LAND USE GOALS

1. To preserve the historical development pattern of mixed-use urban and village areas surrounded by open land, agriculture, forest, and low-density residential use.
2. To direct growth and development toward areas of the Region where it will be most effective and efficient to provide the necessary public infrastructure and services.
3. To achieve the concentration of infrastructure development within areas determined by town plans as desirable for growth.
4. To establish land uses and land use patterns that protect and enhance the values defined in this chapter.
5. To provide a regional transportation system that encourages and complements historic land use patterns.

LAND USE POLICIES

1. Development should be consistent with the future land use categories and map.
2. Revitalization of downtown areas, including the appropriate use, maintenance and reuse of existing historic structures and other existing buildings whenever possible, should be encouraged.
2. Excessive commercial development along major transportation routes (i.e., strip development) is discouraged. Access management and innovative commercial development that maintains the characteristics of existing villages, hamlets, and towns is encouraged.
3. Towns are encouraged to adjust zoning and subdivision regulations to allow for densities that protect or enhance the existing settlement patterns and resources.
4. In order to maintain the existing settlement patterns, higher density residential, commercial, and industrial development should be located in Regional Centers, Town Centers, and areas identified as desirable for growth in municipal plans.
5. Town efforts to attract and locate viable and appropriate businesses in areas targeted by the town for growth should be supported.
6. Where towns support residential, resort, and mixed use development tailored to the tourist and ski industries, such development should be sited and designed to protect the settlement patterns and natural resources of the town and Region.

7. Priority for the use of public funding for the maintenance or improvement of infrastructure shall be for those that support concentrated development in Regional, Town and Village Centers.
8. Use of public funds for the development of affordable housing and assisted living facilities within Regional, Town and Village Centers shall be supported.
9. Use of public funds for the conservation of natural resources is encouraged.
10. Local efforts to encourage compatible development adjacent to significant natural resources (waterways, large forested areas, wildlife habitat, etc.) by requiring buffer strips, visual screening, and other mitigation devices should be supported.
11. The RPC should assist towns to eliminate or mitigate the effects of development on natural resources that extend beyond town borders or are considered regionally significant as determined by the affected towns and the Region.
12. The placement of municipal and other government buildings should be in established downtown and village centers in order to maintain and encourage the vitality of downtown areas.
13. Programs that help owners of farm and forestland bear the financial responsibility of resource protection should be supported.

LAND USE RECOMMENDATIONS

1. Help towns to evaluate proposed development projects for possible adverse effects to important natural resources, both within and beyond town borders.
2. Work with communities to develop a process for designation of growth centers.
3. Assist communities with developing effective bylaws, including zoning and subdivision regulations, that are consistent with the purpose and intent of their town plans and that consider the needs and plans of adjacent towns and the Regional Plan.
4. Support town, public, and private conservation organizations in protecting significant cultural resources, farmland, forestland, shorelines, and significant plant and animal species and their habitat.
5. Encourage state and federal agencies to contact local planning commissions and the RPC when considering the location or relocation of government buildings.

Most of the forested land in the Region is in private ownership. Vermont's Use Value Appraisal (or Current Use) Program has been successful in bringing a large amount of private forestland in the Region under sound management plans. (See **Table 6.1** summarizing enrollment in the Current Use Program.) Even if left forested, small lots in multiple ownerships can be difficult to effectively manage; recreation access and timber production can be reduced due to differing objectives of landowners.

Towns are encouraged to plan for the protection of large areas of important forested land. By developing open space plans, Forest Land Evaluation and Site Assessment (FLESA) or encouraging planned unit development that encourage higher density development while protecting valuable open space, municipalities can ensure that large tracts of forestland remain contiguous. Local planning and conservation commissions may also take advantage of state and nonprofit organizations that can assist with incorporating forest resource planning into comprehensive plans.

Table 6.1 Southern Windsor County Current Use Program						
Town	Total Acres	Forest	Non-Productive* Forest	Agricultural	Total Enrolled Acres	% of Total Acres
Andover	18,432	2,995.7	45.75	316.03	3,357.48	18.2
Baltimore	3,002	997.8	4.0	146.7	1,148.50	38.3
Cavendish	24,832	2,934.03	67.26	390.2	3,391.49	13.7
Chester	23,040	11,463.11	140.59	1,101.61	12,705.31	55.1
Ludlow	21,704	2,458.52	20.55	194.89	2,673.96	12.3
Reading	26,624	8,187.88	147.10	705.41	9,040.39	34.0
Springfield	31,557	7,270.33	148.21	2,080.09	9,498.63	30.1
Weathersfield	29,292	5,189.71	113.95	1,519.63	6,823.29	23.3
West Windsor	15,808	1,318.59	39.9	362.47	1,720.96	10.9
Windsor	12,544	1,799.02	58.7	656.46	2,514.18	20.0

* Conditions which cannot adequately support that use due to steep slopes, ledge, or wet soils.

Source: State of Vermont, Division of Property Valuation and Review, 2002

In 2007-2008, as part of a Municipal Planning Grant (MPG), the Reading Planning Commission, with assistance from the RPC and in conjunction with a statewide effort sponsored by the Vermont Natural Resource Council (VNRC) and Vermont Forum on Sprawl (now Smart Growth Vermont), developed policies and regulations that could help control the fragmentation of their important forestlands. The final report documents the process of mapping priority lands, lays out issues associated with forest fragmentation, identifies a range of policy options, and recommends specific town plan and zoning changes for Reading that will inform a larger campaign of the VNRC. In addition to developing

planning strategies for towns to address the problem of forest fragmentation, VNRC's campaign looked at workable tax relief and other landowner incentive programs to reduce forest fragmentation and promote the ability of forest landowners to hold onto their land.

2. Timber Production

Managing privately owned forestland for timber production has become a more significant part of the state and regional economies as forest cover has increased over the past 20 to 30 years, and over 80% of the forest land in the state is privately owned. When done carefully, logging is the kind of natural resource-based industry that furthers regional goals concerning open space, wildlife habitat, air and water quality, scenic resources, access to recreation, and the tourism economy. Logging operations that are based on sound management plans, follow Vermont's Acceptable Management Practices, and help conserve valuable forest, air, water, wildlife, and recreation resources should be supported, especially when they contribute to regional forest products industries. Realizing an economic return on forestland through responsible timber harvesting is a legitimate tool for maintaining the integrity of large forested tracts. Owners of private forestland should be encouraged to continue the recreational opportunities they provide and to work together to manage contiguous wood lots and recreational trails.

3. Forest Legacy Program

Vermont participates in the Forest Legacy Program (FLP), a Federal program that supports State efforts to protect environmentally sensitive forest lands. Designed to encourage the protection of privately owned forest lands, FLP is an entirely voluntary program. To maximize the public benefits it achieves, the program focuses on the acquisition of partial interests in privately owned forest lands. FLP helps States to develop and carry out their forest conservation plans. It encourages and supports acquisition of conservation easements, legally binding agreements transferring a negotiated set of property rights from one party to another, without removing the property from private ownership. Most FLP conservation easements restrict development, require sustainable forestry practices, and protect other values. In Vermont, the Vermont Department of Forest, Parks and Recreation has conserved approximately 53,000 acres in Vermont through the FLP.

4. Public Forest Lands

The Region also has a substantial amount of publicly-owned forestland (see **Table 6.2**). In addition to several town forests and land owned by the U.S. Army Corps of Engineers, a large amount of forestland is owned by the State of Vermont. The state-owned forest in the Region is managed under the concept of integrated use, a strategy of land management that considers public needs and the capabilities of the land to meet those needs. There are two State parks with camping facilities and trail networks. There are seven Wildlife Management Areas (WMAs) in the Region: Hawks Mountain, Knapp Brook, Tiny Pond, Arthur Davis, Little Ascutney, Weathersfield, and Skitchewaug. While originally purchased specifically for hunting, today WMAs emphasize conservation of wildlife and fish habitat. Unlike Vermont State Parks which focus equally on recreation and conservation, WMAs attempt to provide visitors recreation opportunities through conservation. Some state land is leased to private companies for use as alpine ski trails. Most of the state forestland in the Region is managed for multiple uses, including hiking, snowmobiling, hunting, fishing, and skiing, and much of it is managed for timber production through controlled harvests as part of long-term

2. Habitat

A diversity of habitat types is needed for the continued existence of the various fish and wildlife species that inhabit the Region. A major deterrent to their survival and proliferation is the impact of human development on the natural environment. Although most development in this Region is done on a relatively small scale, cumulative development efforts can have a major impact on wildlife habitat. As people move to the Region the development of new single-family housing outside of villages is increasing. This growth pressure in rural areas is having a detrimental effect on large, contiguous blocks of wildlife habitat, including forest land, fields and other open spaces. Scattered, small-scale development causes fragmentation of these habitat areas, potentially diminishing or eliminating the land needed to support some species. A diversity of healthy populations can only be achieved through maintaining variety in the types of habitat available. **Conservation of a diverse mix of natural areas and attention to connections between large tracts of wildlife habitat is necessary in order for a diverse and healthy wildlife population to survive and flourish.** The following sections describe some important habitat types that may be found in the Region.

Large mammals such as moose, bear, deer, bobcat, and a variety of other animals including wild turkeys and grouse, rely on large contiguous areas of forests, fields and other undeveloped lands for food, shelter, breeding grounds and migratory stop-overs. The fragmentation of such land can result in decreases in the number of species as well as the sizes of populations of many species. A variety of songbirds reside in wooded areas that are characterized by less intense human use. In the Region, species may include red-eyed vireo, scarlet tanager, rose-breasted grosbeak, warblers, thrushes, white-throated sparrows, wrens, and many others.

Through Act 250, some protection is available for wildlife habitat areas under Criterion 8(a) - Wildlife Habitat and Endangered Species, which provides a detailed system to weigh evidence for a project and determine if a permit can be allowed.

Appendix A - Map 6 shows wildlife habitat areas identified by the VFWD and depicts blocks of undeveloped land that are likely to provide habitat for a variety of wildlife. Not only is minimizing the negative impacts of development on these large blocks of habitat important, but so is protecting wildlife travel corridors that connect these blocks. The boundaries of existing deer wintering areas and bear habitat have also been mapped, but are subject to change due to fluctuations in environmental conditions. These mapped areas are based on statewide data sources, so reviewing a development proposal for a specific site may require consultation with the VFWD or other qualified wildlife scientists to determine actual critical habitat areas and identify mitigation options.

a. Deer Wintering Areas

In winter months, deer tend to congregate in certain coniferous woods on western and southern slopes where they are protected from the wind and cold temperatures, and where they are offered greater mobility when searching for food. The greatest limiting factor on the size of the deer herd in the state is the quality and availability of the winter habitat. As stated in the VFWD's publication, *White-tailed Deer Management Plan, 1997-2006*, Vermont nearly lost its white-tailed deer population in

In addition, on September 12, 2007, the U.S. District Court for the District of Vermont decided against a group of automobile manufacturers challenging Vermont's vehicle emissions standards for greenhouse gases. In August of 2005, the Vermont Air Pollution Control Division introduced an amendment to Vermont's vehicle regulations. The amendment would require the State to adopt California's proposed greenhouse gas emissions standards for motor vehicles. The standards would be gradually phased in between model-years 2009 and 2016, and by model-year 2016, would require reductions of tailpipe greenhouse gas emissions from new motor vehicles of approximately 30 percent. Vermont and 13 other states are poised to adopt the California standards.

Regional and local planning commissions should address vehicle emissions problems through the planning of transportation networks to prevent congestion and through the promotion of public transportation and bicycle and pedestrian travel. Section 108(f) of the Clean Air Act lists Transportation Control Measures to reduce mobile source emissions (see Appendix C). States whose air quality fails to meet the NAAQS are required to implement various combinations of these measures in an attempt to improve air quality. See Volume 2: Southern Windsor County Regional Transportation Plan for additional discussion.

As discussed in the Energy Chapter, Vermont's primary energy sources produce very little air pollution as protected by the U.S. EPA. The contract for electricity from HydroQuebec expires in 2012, and the operating license for Vermont Yankee expires that same year. Any other potential new and/or replacement energy plants should strive to not negatively impact air quality.

By-products from woodstove combustion may cause poor air quality in some areas, depending on topography and weather patterns. Federal law requires that new woodstoves contain clean burning combustion systems or catalytic converters; however, older stoves and outdoor-burning woodstoves (mounted on the exterior of a building) are exempt from such requirements. The state is considering rules regarding outdoor-burning woodstoves; municipalities or regions that have noticeable air quality problems related to wood burning may wish to address such issues at the local level.

For additional discussion on air quality issues and climate change, please refer to the Energy Chapter.

AGRICULTURE & FOREST RESOURCE GOALS

1. Encourage the conservation, wise use and management of the Region's agricultural and forestry resources, to maintain its environmental integrity, and to protect its unique and fragile natural features.
2. Expand the agricultural and forestry economies by coordinating planning, zoning, and economic development activities with member communities and organizations.
3. Protect the Region's rural character and working landscape.

4. Sustain agriculture and forestry in those areas of the region where they are predominant land uses, and where soils, and other conditions enable them to remain economically viable.
5. Reduce fragmentation of forest and agricultural lands.
6. Protect and preserve the character and integrity of both significant public and private forest lands.

AGRICULTURE & FOREST RESOURCE POLICIES

1. Encourage measures that balance supporting land-based economies, protecting agricultural and large blocks of forested lands, with supporting development in or near town centers.
2. Work with landowners to create vegetated buffers between farmland and surface waters in the interest of protecting water quality as well as agricultural property.
3. Agricultural land and forested land form the separations between town centers, villages, and hamlets in the traditional regional settlement pattern. Tangible efforts shall be made to preserve this patchworked balance of open and forested space, to promote compact settlements through creative regional planning, municipal planning, private initiatives, purchases, leases and transfers of development rights and efficient site designs. Contiguous forest and significant agricultural areas shall remain largely in non-intensive uses unless no reasonable alternative exists to provide essential residential, commercial and industrial activities for the region's inhabitants.
4. The construction of utilities, roads or other land development should skirt tracts of productive agricultural and forest land rather than divide them.
5. Large tracts of economically viable Primary and/or Secondary Agricultural Soils located outside of downtowns, villages and other locally designated growth areas should be protected for current and/or future agricultural use. Development in these areas shall utilize innovative site designs (e.g. clustering, planned unit developments, etc.) in order to minimize negative impacts and preserve the agricultural viability of these soils.
6. Development within downtowns, villages and other locally designated growth areas should be allowed on areas of Primary and/or Secondary Agricultural Soils, if supported in the town plan, but shall use innovative site designs to minimize negative impacts and shall be required to maintain a small tract for future small-scale agricultural use or community garden.
7. State or federal programs and legislative efforts which protect and enhance the economic, cultural, environmental, and aesthetic values of agricultural and forest lands should be supported.

8. Support productive, sustainable forestry on large lots, contiguous blocks of forested lands, and forested corridors linking large tracts of forest lands, and maintain accessibility to those lands. Doing so will contribute to maintaining the ecological values and economic vitality of these forested areas.
9. Proposed roads or utilities should be sited to cause minimal negative impact to forest contiguity and aesthetics.
10. Where important natural features, soil conditions, or special resources including, but not limited to, agricultural and forested land are identified, clustered or peripheral development is required to protect such resources and prevent fragmentation and sprawling settlement patterns.
11. Encourage appropriately sited and designed businesses promoting the local processing, sale and distribution of native raw materials and products. Planning and regulatory review at the state and local level should not unduly restrict the development of “home cottage” industries which complement farm and forestry.
12. State-adopted Accepted Agricultural Practices and Acceptable Management Practices shall be used in agricultural and forestry activities, implementation of Best Management Practices (BMPs) are encouraged in such operations, and point and non-point source pollution shall be minimized.
13. Conservation of agricultural and forested lands through the use of public/private funds for the purchase of development rights, fee simple purchase, and other such measures is encouraged.
14. The RPC recognizes that certain local land development or subdivisions may conflict with policies to minimize the loss of existing or potential agricultural or forest resources. Furthermore, the RPC acknowledges that in certain areas agricultural or forestry uses may no longer be viable due to a variety of factors including;
 - (a) The existence of or planning for roads or sewers in the immediate area which dictate that involved land should be converted to more intensive uses; and
 - (b) The presence of parcel sizes or site conditions which affirm that conservation efforts to minimize loss of the resource result in marginal public benefit.
15. It is the policy of the RPC to minimize or mitigate the loss of these resources to development. As an alternative to conventional methods, the RPC endorses use of off-site mitigation techniques to offset the loss of these resources. However, endorsement of off-site mitigation should be conditioned on finding that the project proposal is:
 - (a) Consistent with this Plan and the plans of affected municipalities; and
 - (b) Provides an equal or greater public benefit than conservation of the development site itself.

AGRICULTURE & FOREST RESOURCE RECOMMENDATIONS

1. Inventory and prioritize agricultural lands using the Land Evaluation Site Assessment (LESA) and Forest Land Evaluation and Site Assessment (FLESA).
2. Provide planning advice and support to Planning Commissions, Conservation Commissions, non-profit conservation organizations, and other groups interested in sustaining agriculture and forestry.
3. The RPC will evaluate proposed developments involving Primary Agricultural Soils and forest lands, and their related industries. Where appropriate, it will provide information to federal and state agencies, town boards and commissions, and other parties regarding the probable impacts these resources have on the welfare of the region.
4. Encourage the location of local farm and forest product industries in the Region where such industries would benefit the community and the Region.
5. Assist in mediation efforts when disputes arise concerning regionally significant agricultural or forested lands.
6. Work with various federal, state, local and non-profit agencies to disseminate information related to agricultural and forest management and develop planning policies and regulations.

WILDLIFE GOALS

1. Preserve or enhance the biodiversity and population of wildlife, including natural predators, by minimizing development impacts on large blocks of habitat and wildlife travel corridors.
2. Maintain or improve water quality necessary to sustain existing aquatic communities.
3. Support recreational activities, fishing and hunting done in an ecologically sound manner providing for the continued success of wildlife species and their habitat.
4. Combine recreation and wildlife corridor uses to develop a greenways network in the Region.
5. Encourage the use of the Region's forested land as both working landscapes along with wildlife habitat.
6. Protect rare, threatened, and endangered species and their habitats.

WILDLIFE POLICIES

1. Support local efforts to inventory and map large contiguous blocks of wildlife habitat and associated connecting lands that serve as wildlife travel corridors.

2. Development should be designed and sited in a manner to preserve contiguous areas of active or potential wildlife habitat by clustering, building to the periphery of habitat areas and/or planned unit developments. Corridors connecting habitat areas for large mammals must be incorporated in plans for management and conservation of forested areas. Fragmentation of significant and necessary wildlife habitat should not be approved.
3. Large contiguous tracts of forest should be managed to maintain the diversity of ages and species of tree cover necessary for shelter and food supply for deer, black bear, and other large mammals, and birds.
4. Critical habitat types in the region that shall be considered during development planning include, but are not limited, to the following as identified by the Agency of Natural Resources:
 - (a) Forested corridors or “greenways” used by songbirds during migration;
 - (b) Open fields;
 - (c) Cliff areas or rock outcroppings identified as habitat for peregrine falcons, bobcats or other wildlife;
 - (d) Areas over 2,500 feet in elevation; and
 - (e) Large tracts of contiguous forest land.
5. Vegetated buffer areas along stream and river banks should be encouraged in development plans in order to provide shade and mitigate the negative impacts of sedimentation and nonpoint source pollution on aquatic habitat.
6. Efforts to monitor and, where necessary, to mitigate the effects of hydroelectric facilities, dams and sewage treatment plants on important aquatic species shall be encouraged.
7. Support federal, state and local governments and conservation group acquisition of land and/or conservation easements that protect critical wildlife habitats.
8. Support federal, state, regional and local programs and initiatives that educate and encourage private and public landowners to recognize the importance of protecting and enhancing fish and wildlife habitats and ecosystems.

WILDLIFE RECOMMENDATIONS

1. Assist communities in addressing wildlife and habitat issues in town plans and implementation documents.
2. Coordinate with local communities and the Department of Fish and Wildlife, to ensure proper implementation of protective policies.
3. Develop significant wildlife habitat protection and water withdrawal policies that can be used as guidelines for communities and developers.

- areas of high scenic quality such as ridgelines which are publicly recognized as exceptionally unique or are noted examples of the dominant characteristics of an area in the Region.

In addition, the diversity of landscape types; the size, scale, and architectural continuity of the manmade landscape; the focal dominance; and the intactness of the landscape are likely to contribute to the scenic qualities of an area.

4. Planning for Open Space

“Open space” may be defined as land which is not developed and is of some benefit to the public for many of the reasons described throughout this chapter and the Natural Resources chapter. Open space that is publicly owned or permanently protected through the sale or donation of development rights may ensure the long-term productive capacity of forest or agricultural land; preserve wildlife habitat; protect groundwater resources; provide recreation land; and preserve important historic, scenic and cultural resources.

Open space may be land that is conserved either through fee simple acquisition by local, state, or federal government or through the sale or donation of development rights to local government or a nonprofit conservation organization, often using a conservation easement which limits development on land while keeping it available for farming, forestry, and recreational enjoyment.

The Upper Valley Land Trust (UVLT) is located in Hanover, New Hampshire, and provides conservation leadership, tools and expertise to permanently protect the working farms, forested ridges, wildlife habitat, water resources, trails and scenic landscapes that surround residential areas and commercial centers. UVLT focuses its mission in 44 Vermont and New Hampshire towns (including Springfield, Weathersfield, Windsor, West Windsor and Reading) in the upper Connecticut River valley. UVLT is a sponsor member of the [Land Trust Alliance](#), an organization that promotes land conservation by providing advocacy and professional resources to over 1600 land trusts nationwide.

In addition, the Vermont Land Trust (VLT) is one of the most effective land trusts in the country. Its primary focus is on permanently conserving productive, recreational, and scenic lands vital to Vermont’s and rural economy and environment. VLT has helped landowners in communicates throughout Vermont, to permanently protect more than 483,000 acres – 8% of Vermont’s privately-owned land. **Table 7.3** below lists conserved lands in the Region.

Open space may also be privately owned agricultural or forestland, which offers economic benefits through productive use and may contribute to the scenic nature of the landscape or be accessible for recreation. Owners of such land may be encouraged to maintain its productive capacity through programs such as Local Tax Stabilization agreements for farmland, forest land, or open space; or through the state’s Use Value Appraisal Program, commonly referred to as “Current Use”, which requires towns to assess enrolled farmland or forest land at use value rather than fair market value. Fear of liability often causes landowners to prohibit public access for recreational uses; however, legislation enacted in

Table 7.3 Conserved Land in Southern Windsor County

Town	Total Acres	Conserved Acres*	% of Total
Andover	18,432	1,091.20	5.9%
Baltimore	3,008	N/A	N/A
Cavendish	25,344	202.90	.8%
Chester	35,766	230.00	.64%
Ludlow	22,912	29.00	.13%
Reading	26,560	951.59	3.6%
Springfield	31,552	364.90	1.2%
Weathersfield	28,032	2,074.63	7.4%
West Windsor	15,808	741.41	4.7%
Windsor	12,544	768.04	6.1%

Source: State of Vermont Tax Department, Property Valuation and Review, August 2001

* Includes Development Rights and Fee Simple Transactions

1997 protects a landowner from such liability, 10 V.S.A. §5791-5795. This may encourage landowners to make their land available to the public for hunting, fishing and other recreational uses.

In order to ensure that open lands that provide the greatest public benefit are protected for present and future generations, towns are encouraged to develop open space plans. Open space development is gaining favor as an alternative to large-lot zoning, which swallows up land and leads to sprawl. By clustering lots of smaller sizes and leaving large areas of open land to be enjoyed by residents, these “conservation subdivisions” can actually lower infrastructure costs for developers and produce other economic incentives, while preserving open space. Open space design can help to encourage a better sense of community as well as preserve the aesthetics we value so highly in Vermont. For more on this topic see the Land Use chapter.

CULTURAL/HISTORIC RESOURCE GOALS

1. To ensure the preservation, maintenance and enhancement of significant cultural and historic resources throughout the Region.
2. To promote the historical and cultural heritage of the Region.
3. To develop a policy on significant regional viewsheds.

CULTURAL/HISTORIC RESOURCE POLICIES

1. Towns are encouraged to inventory and prioritize local resources to protect significant cultural and historic resources in their town plans and implementation documents.
2. Proposed development adjacent to or within significant historic or cultural sites should be compatible with the resources, and should enhance their historic value and appreciation where possible.

3. Efforts of community, regional, state, and federal organizations which sponsor or provide financial or technical assistance for cultural and historic preservation and education in the Region should be supported.
4. Reuse of historically significant buildings and sites that maintains and preserves their architectural and historic character is encouraged.
5. Regionally significant historic buildings and sites should be preserved. Necessary renovations should reflect the historic character of the resource. In the case of private homes, owners are encouraged to consider the site's historic, cultural, and economic value to themselves and the community when deciding how best to maintain and manage them.
6. Encourage towns, through their Planning Commissions and on-site visits, to educate the public and promote awareness of significant cultural/aesthetic resources, such as cellar holes and stonework, etc.

CULTURAL/HISTORIC RESOURCE RECOMMENDATIONS

1. Work cooperatively with local communities to inventory and map significant cultural and historic resources to ensure their protection.
2. Work with communities to develop criteria for evaluating the impacts that projects may have on designated historic sites or districts.
3. Continue to support cooperative efforts to designate National Historic Register Sites and Districts and evaluate federally funded projects in the Region that impact designated properties and resources.
4. Support the development of programs focusing on local, regional, and state history and culture in the Region's schools.
5. Provide support for towns wishing to include design control districts or local historic districts in their zoning bylaws under 24 V.S.A. §4407.

SCENIC LANDS AND OPEN SPACE GOALS

1. Achieve a balance between scenic or open land uses and other land uses in the best interest of the environment and the Region's residents.
2. Maintain or enhance the diversity of ecosystems throughout the Region and promote connectivity between conserved lands wherever possible.
3. Protect the environmental character and integrity of significant natural and scenic resources as identified by member towns.

SCENIC LANDS AND OPEN SPACE POLICIES (*see also Natural Resources Chapter*)

1. Local, state or federal programs and legislative efforts which protect and enhance the economic, cultural, environmental, and aesthetic values of forested and scenic resources should be supported.
2. Local Tax Stabilization (Current Use) programs that provide incentives for landowners to conserve farmland, forestland, and open space should be supported.
3. Towns should be encouraged to develop policies that promote clustering or other development patterns that will maximize forested areas and open space.
4. Conservation of open and scenic lands through the use of public/private funds for the purchase of development rights, fee simple purchase, and other such measures should be supported.
5. The preservation of historic and archeological resources that enhance the significant scenic resources of the Region should be supported.
6. Development projects which complement or enhance significant scenic resources should be supported.
7. The following sites are inherently and especially sensitive, and as such, development in these areas is discouraged:
 - Hawks Mountain in Cavendish, Baltimore, and Weathersfield
 - The Alps region of Cavendish and Reading
 - Little Ascutney Mountain in Weathersfield and West Windsor
 - Terrible Mountain in Andover and Ludlow
 - The Pinnacle in Ludlow
8. Towns should be encouraged to develop policies for the protection of regional scenic viewsheds.
9. Structures and exterior areas should be illuminated only at levels necessary to ensure safety and security of persons and property.
10. Encourage exterior lighting that is designed so that light projects downward and is shielded from public roads, adjacent residences, and distant vantage points.
11. Encourage additional scenic byway designation where appropriate.

SCENIC LANDS AND OPEN SPACE RECOMMENDATIONS

1. Work with local communities to identify and develop a comprehensive inventory of forested lands, open space, and significant scenic resources throughout the Region,

and analyze the results. Assist communities in developing conservation strategies for locally and regionally significant scenic resources.

2. Work with member towns and appropriate agencies to secure donations or acquisitions of scenic easements, greenways segments, forested land or other land and water areas that will enhance the significant scenic resources of the Region.
3. Continue to work with, and assist in the development of, local Conservation Commissions.
4. When the opportunity arises, work with local organizations, neighboring regional planning commissions, and state entities to evaluate certain roadways and corridors for Vermont Byway designation suitability.
5. Assist member towns to update town plants and implementation measures which protect and preserve the landscape heritage in the Region.

scenic quality (focal points, viewer sensitivity, topographic diversity, prominence/dominance, order of landscapes and patterns of development);

(b) proposed projects should meet the aesthetic test set forth under Criterion 8 of Act 250;

(c) site selection should also consider access, site clearing, onsite power lines, substations, lighting and off-site power lines. Minimal disturbance of the site shall be a planning objective;

(d) reasonable measures shall be taken to mitigate possible destruction or impairment of habitats existing in a project area; and

(e) facilities deemed to be abandoned or unused should be removed by the owner/operator(s) within a reasonable time from cessation of operations, as well as restoring and/or enhancing the site back to its natural state.

F. Planning Implications

While energy decisions can seem like an uphill battle, every resident can make a difference. Small changes add up and sound regional and local planning can play a positive and effective role in guiding energy decisions. By promoting appropriate land use patterns, participating in energy development decisions, facilitating alternative transportation options, and encouraging energy conservation strategies; municipalities can provide leadership toward a position of sustainable energy use which will not only help to maintain a healthy environment, but will also build a foundation for economic health and stability.

Local planning and zoning bylaws also play an important role in promoting energy efficient development. Planning efforts should be cognizant of settlement patterns less dependent on single occupant vehicle transportation models, land uses and policies that encourage energy conservation and efficient uses of energy resources. In addition, when implementing town plans, municipalities should consider zoning bylaws and subdivision regulations in the development of alternative energy structures/systems where feasible. Furthermore, there needs to be some flexibility in zoning bylaws to allow for an increase in the use of emerging technological advancements in energy resources such as solar and wind.

ENERGY GOALS

1. To improve conservation and efficiency in the use of existing energy resources, and to facilitate the transition to cleaner energy resources in order to protect the environment.
2. To reduce demand for fossil fuels by promoting public transportation, ride-share programs and other programs that lessens the dependence on single occupancy vehicles.
3. To encourage land use patterns and development in the Region that use energy more efficiently.

4. To increase the awareness of residents and municipalities of energy conservation practices and programs through educational programs.

ENERGY POLICIES

1. Member towns and residents are encouraged to pursue the transition from the use of fossil fuels to renewable energy sources.
2. Promote the feasibility of alternative energy options for commercial and industrial uses.
3. No new dams or major improvements to existing dams should be encouraged, or permitted, without full consideration of its social, economic, and environmental impacts, and are in conformance with local and regional plans.
 - (a) run-of-the-river projects are preferred over projects which require impoundments with low or minimum flows;
 - (b) recreation and fisheries are high priorities for river uses and should not be significantly diminished by hydropower development; and
 - (c) water quality and minimum flows to sustain aquatic life must be maintained.
4. Promote alternative transportation practices that promote energy efficiency such as: expanding existing park-n-ride commuter parking lots, bicycle paths to lessen the dependency on single occupancy travel
5. Where it is demonstrated that the costs of providing energy services and facilities clearly is outweighed by a public benefit to the areas or region and the land use settlement patterns resulting from the development or subdivisions are in conformance with this Plan and relevant local plans, such services and facilities should be permitted.
6. Prior to the construction of additional or upgraded transmission or distribution lines or related facilities, utilities should demonstrate that such public investments have maximized demand management, increase energy efficiency and promote energy conservation.
7. Where development and construction of alternative energy facilities and electric power generation facilities are proposed for public use, plans must consider placement of such facilities in locations where aesthetic and wildlife impact is minimal or reasonable measures have been employed to mitigate adverse impacts.
8. Capital investments of public utilities and services are encouraged within built-up centers to support the high intensities of use.

ENERGY RECOMMENDATIONS

1. Encourage the development of a transportation system that reduces the use of single-occupancy vehicles, and enables increased non-motorized vehicle and pedestrian traffic. Emphasize links between schools, stores, work and home, and coordinate these with the development of "greenway" segments.