Aesthetic and Orderly Development Analysis Report

Airport RD1 VT Solar Project

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1 Introduction

At the request of the Petitioner Airport RD1 VT Solar, LLC (to be referred to as "Airport Road Solar"), VHB has prepared this technical memorandum concerning the Airport Road Solar Project ("Project"), a proposed solar electric generation facility to be located off Airport Road in Fair Haven, Vermont. The Project is located on a portion of an approximate 105-acre parcel of land, comprised of two sections of arrays with the Project utilizing approximately 19.2 acres for the solar arrays and associated equipment; access roads; stormwater features; stockpiles for primary agricultural soil; and landscape planting areas. The content of this technical memorandum presents the results of an assessment of the Project as it relates to the following criteria under 30 V.S.A. § 248(b)(5) and the Act 250 criteria referenced therein:

- Aesthetics (30 V.S.A § 248(b)(5), 10 V.S.A. § 6086(a)(8))
- Orderly Development of the Region (30 V.S.A. § 248(b)(1))

The Vermont Public Utility Commission ("PUC") will apply these criteria in its review of Fair Haven Solar's request for a Section 248 Certificate of Public Good ("CPG").

1.1 Project Description

The proposed Airport Road Solar Project is further described in the pre-filed testimony of Geoff Martin. In summary, the Project is a proposed 4.975 MW (AC) solar electric generation facility and related infrastructure to occupy approximately 19.2 acres of land. The parcel is located off Airport Road, north of U.S. Route 4 in Fair Haven, Vermont (Refer to Exhibit(s) Pet-SDG-2).

The Project consists of fixed-tilt ground-mounted solar modules mounted on metal racks arranged in rows extending east to west in two distinct areas, or "sub-arrays" within existing open field areas. Both solar sub-arrays will be enclosed by perimeter fencing,[1] encompassing approximately 19 acres, 16.2 acres for the northern array and 2.8 acres for the southern array. Access to the solar arrays will be from an existing farm road connection to Airport Road.

Power generated from the sub-arrays will be delivered via a new line extension that will interconnect the Project with Green Mountain Power's (GMP) electric distribution system at a new utility pole located along Airport Road just north of the Project's new gravel access. See Exhibit Pet-SDG-2. Utility poles will be installed along the gravel access for the line extension and utility and Project equipment. The line will run overhead along the access for the first ±1095 feet. An underground line will connect the Project's northern pad-mounted transformer to this overhead power line at approximately 665' from the point of

[1] In the event a fence is not used, energized equipment rated for outdoor use will be secured by locked enclosure covers, also compliant with NEC code "Guarding of Live Parts."

interconnection. The overhead line will continue for approximately 430', before transitioning to underground conduit to connect to the Project's southern pad-mounted transformer.

The Project array and other elements have been sited to make the most use of existing cleared areas. Some additional tree clearing will be necessary to facilitate construction, provide suitable access to the site, install operational stormwater treatment practices, provide sufficient areas for the solar arrays, and minimize shading of the solar arrays. The Project will involve earth disturbance from tree stumping and grubbing, as well as limited grading for construction of certain Project elements (such as installation of access road and associated stormwater conveyance and treatment, and Project equipment pads).

2 Methodology

2.1 Criterion 8 Requirements

Under Section 248(b)(5), the PUC must find that the Project will not have an undue adverse effect on aesthetics, giving due consideration to Criterion 8 of Act 250. Act 250's Criterion 8 addresses aesthetic impacts within the parameters of the "Quechee Analysis," which was established to provide a consistent and defensible method for evaluating the aesthetic impacts of commercial projects undergoing Act 250 review. The Quechee Analysis is a two-step process, which begins with assessing the nature of the project, its context, and whether it will lead to adverse aesthetic impacts. This first step asks whether the project is in harmony with its surroundings, which is determined based upon:

1. The nature of the project's surroundings;
2. The compatibility of the project's design with those surroundings;
3. The suitability for the project's context of the colors and materials selected for the project;
4. The locations from which the project can be viewed; and
5. The potential impact of the project on open space.

If it is determined that the project "fits" its context, it will not have an adverse effect. If it is concluded that the project has an adverse effect under Criterion 8, the second step of the Quechee Analysis is triggered which requires determining whether the adverse effect is "undue." The second step asks three questions to determine if an adverse effect is undue:

6. Does the project violate any clear, written community standards intended to protect the scenic beauty of the area?
7. Does the project appear shocking or offensive to the average person?
8. Has the applicant failed to take all generally available steps which a reasonable person would take to improve the harmony of the project with its surroundings?

The Commission will conclude that an adverse effect is undue if it reaches a positive finding with respect to any one of the preceding factors. The Commission has clarified that a clear, written community standard 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*".[2]

This analysis also recognizes that the Commission weighs societal benefits when considering the aesthetic impacts of projects within its purview[3]. In order to more accurately describe visibility of the Project's components, the analyses have been divided into areas in which project components will be visible on a segment-by-segment basis. The discussion of the visual impact of these components, in accordance with the Quechee Analysis process described above, are included within the Visual Impact section.

2.2 Aesthetic Assessment

The methodology for the aesthetic assessment of this Project includes visibility analysis, field study, and document research and review. Our analysis focuses on the potential for visual and aesthetic impacts from publicly accessible vantage points from major federal, state or local roads; nearby public lands and areas of public interest; and areas with high scenic value or official designation as a cultural, open space, or scenic resource. Residences in close proximity to the proposed Project are also considered, although review of aesthetics under Section 248 using the Quechee Analysis does not specifically guarantee that views from individual private homes and properties will never change.

2.2.1 Visibility Analysis

The visibility analysis calculates the potential for a clear, unobstructed line of sight between an observer and a target. The area from which the Project will be visible is referred to as the "viewshed."

The visibility analysis was performed using the GlobalMapper software viewshed tool in conjunction with ESRI ArcGIS software for pre- and post-processing of data and map preparation. The viewshed tool utilizes Digital Elevation Models ("DEMs") of the terrain and surface and a point shapefile with structure height information to determine where visibility of the structure will occur from a specified search radius. The algorithm incorporates two DEMs, a Digital Terrain Model ("DTM"), the bare terrain, and a Digital Surface Model ("DSM"), which includes terrain and obstructions such as vegetation and buildings to incorporate the screening effects of land cover and other large objects into the terrain-based results. The DSM and DTM are derived from publicly available lidar data. The obstructed viewshed is a more realistic representation of visibility compared to a terrain-based viewshed. An observer height of 1.676 meters (~5.50 feet) is assigned to the terrain layer to assess where visibility would occur for an average person.

[2] Petition of Georgia Mountain Community Wind, LLC for a Certificate of Public Good, Docket No. 7508, PUC Order of June 11, 2010, at p. 52.

[3] In Re: Vermont Elec. Power Co., Docket No. 6792, PUC Order of July 17, 2003.

Topographic and Vegetation Viewshed mapping represents how vegetation, buildings and other obstructions in the landscape, in addition to landform, contribute to screening views of the Project. Lidar data includes specific structure and vegetation elevation information.

For this specific study, a three-mile radius was used for the study area because at three miles views from this distance would be considered "middle ground" where a viewer can perceive individual structures and trees but not in great detail. At this distance, individual landscape components begin to join together (hillsides become a range, trees become a forest).

The visibility analysis is primarily used to inform field investigation and often over-estimates Project visibility due to the resolution of the terrain and obstruction data. Additionally, the visual impact at a given vantage point depends upon not only visibility, but also factors including landscape context, distance from the Project, and viewing angle, which need to be assessed and documented through field work.

The results of the visibility analysis are presented in Appendix A which include references to the viewpoint locations depicted in Appendix B.

The visibility analysis is used as a starting point to inform field investigation where potential Project visibility may occur, as shown in Appendix B - Photographic Inventory of Existing Conditions.

2.2.2 Document Review & Resource Identification

In order to understand the local perceptions of landscape character, designated scenic, open space, or aesthetically significant resources, and goals and objectives regarding aesthetics and visual character, the following local and regional planning documents were reviewed:

- The *Fair Haven Town Plan,* Adopted June 11, 2024
- The *Rutland Regional Plan*, Adopted June 19, 2018

2.2.3 Field Investigation

VHB staff conducted field investigations on March 4, 2026. Weather conditions during the field visit were generally overcast and clear and approximate the "worst case" in terms of potential visibility to the greatest extent possible during leaf-off conditions. During these site investigations, VHB staff members drove public roads and visited public vantage points within the study area to observe the locations from which the proposed Project would be visible, partially screened, or fully screened. Viewpoint locations were captured using GPS units, and photographs were taken using a digital SLR camera utilizing a fixed focal length equal to 50mm on a 35mm camera in order to reproduce a field of view that appears natural to a human observer. Documentation of the field investigation is included within a photographic inventory of existing conditions, which includes representative photographs and panoramic views, and the viewshed map, with each viewpoint location.

Appendix A includes Visibility Maps with references to the viewpoint locations depicted in Appendix B.

Appendix B includes representative photographs and panoramic views of existing conditions of the surrounding area.

2.3 Impact Analysis

To evaluate visual changes associated with the Project, the following well-established factors in describing visual characteristics were considered[4]:

Landscape Composition: is the arrangement of objects and voids in the landscape categorized based upon spatial arrangement. Major compositional elements that define visual character include:

- ***Form****:* the mass or shape of an object or of objects that appear to be unified (e.g., mountains, large masses of vegetation, lakes, buildings, etc.)
- ***Line:*** the path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture (e.g., edge of shapes or masses in the landscape, silhouette of a mountain against the sky)
- ***Color*****:** the property of reflecting light of a particular intensity, which can vary in hue, value, and chroma.
- ***Texture*****:** the aggregation of small forms or color mixtures into a surface pattern. The perception of texture is highly dependent on distance.

Visibility Factors: are factors that impact the apparent visual characteristics from a view based upon the observer, the observed object, and various factors that affect perception.

- ***Viewer Characteristics*****:** characteristics of the viewer that affect perception of contrast and ability to discern objects in the landscape, such as whether the viewer will typically be in motion when observing the landscape.
- ***Duration of View*****:** longer duration views of a project will have a greater potential for visual impact than quick glimpses.
- ***Distance*****:** the distance of the viewer will affect both the apparent size of an object and the perceived degree of contrast. When other visibility factors are held constant, the greater the distance, the less detail is observable and the more difficult it will be for an observer to distinguish individual features. The distance zones referenced in this report are:
  - *Foreground*: 0 to approximately 0.5 miles. The viewer is able to perceive details of an object with clarity.
  - *Middle ground*: approximately 0.5 to 4.0 miles. The viewer can perceive individual structures and trees but not in great detail. In this zone, the

[4] Methodology based in part upon Chapter 2 of Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands, U.S. Department of Interior, March 2013.

individual landscape components begin to join together (hillsides become a range, trees become a forest).

- *Background*: over 4.0 miles: The viewer is only able to discern broad landforms and patterns. The background contributes to scenic quality by providing a softened backdrop for foreground and middle ground features.

- ***Viewing Geometry*:** the spatial relationship of the viewer to the viewed object, including the observer position and the bearing of the view.
- ***Background/Backdrop*:** Objects that stand out against the visual backdrop typically draw more attention. "*As contrast between an object and its background is reduced, the ability to distinguish the object from the background diminishes. When the contrast becomes too small, the object will no longer be visible as separate from its background.*"[5] For example, when transmission structures are located on a ridgeline and are silhouetted against a bright sky (skylining), the structures are more visible than they would be against a darker and more varied backdrop such as a forest.

[5] Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands, U.S. Department of Interior, March 2013.

3

First Step of the Quechee Analysis

3.1 Project surroundings

The proposed Project is centrally located in the Town of Fair Haven with the proposed solar arrays situated within the "Rural" land use district[6]. The Project is located approximately 0.93-miles north of Fair Haven Village, north of Route 4, east of Route 22A and Airport Road, and west of Scotch Hill Road, immediately adjacent to and south of Mud Brook. Immediately northwest of the Project site is a Town owned parcel that is home to the former Fair Haven Municipal Airport (1B3), and currently serves as a town park for walking, a dog park, and Remote Controlled (RC) planes. Also, immediately adjacent and northwest of the Project is a Fair Haven public works and town highway facility (former National Guard building).

The Project area is predominantly defined by rural residential development and marked by rolling hills, agricultural fields, open meadows, and dense forests. It is situated within a valley characterized by primarily flat or gently undulating terrain. The Project is proposed within existing open agricultural fields and adjacent to Mud Brook. North of the Project includes an open meadow associated with the previous airport parcel, other open agricultural fields, hedge rows and heavily forested areas, Old Marsh Pond and the associated Marsh Pond Wildlife Management Area, and a remnant tailings pile from a slate extraction operation. Also north of the Project site is a recently approved, but not yet constructed 20MW solar project by VT Real Estate Holdings 2 LLC (24-2945-PET). East of the Project is Scotch Hill Road, rolling hills, and dense forested areas. West of the Project includes a mixture of agricultural fields, wooded areas and Route 22A. Also west of the Project site is a recently approved relocation and rebuild of the Fair Haven Substation (25-0593-PET). South of the Project includes US Route 4, Fair Haven Union Memorial High School, and a mixture of commercial and rural residential development.

3.2 Private Residences

There are private residences north of the Project off Airport Road, with the closest residence being approximately 505-feet from the northern side of the arrays. There are private residences east of the Project off Scotch Hill Extension, with the closest residence being approximately 505-feet from the eastern side of the arrays. There are private residences south of the Project off Pine Street, with the closest residence being approximately 0.25-miles from the southern arrays. There are private residences west of the Project off Green

[6] Town of Fair Haven Zoning Districts Map, Updated July 16, 2020.

Mountain Mobile Manor (off Airport Road), with the closest residence being approximately 880-feet from the western side of the arrays.

3.3 Project Visibility

3.3.1 Airport Road

Airport Road is a two-lane local paved road with a posted speed limit of 30 miles per hour (mph), which transitions to a gravel road and generally runs in a north-south direction. Airport Road approaches the Project from the south as it crosses under the Route 4E and 4W travel lanes. Airport Road is approximately 167-feet west of the Project arrays at its closest point. Areas identified along Airport Road as having potential visibility on the visibility map are noted in detail below.

Potential visibility along Airport Road of the Project's southern sub-array was identified along two approximate 40-foot and 45-foot segments, approximately 885-feet west of the Project immediately after passing through the Route 4E and 4W overpass. Field investigations revealed potential visibility of the Project is limited due to distance, and dense intervening existing vegetation. Additionally, viewing geometry from this location would require both southbound and northbound travelers to look away from and perpendicular to the direction of travel. For visual references see Appendix B, Photographic Inventory, Viewpoints 4 and 5.

Visibility of the Project along a second segment of Airport Road was identified along an approximate 465-foot continuous segment, varying from approximately 170 to 475 feet west and southwest of the Project's northern sub-array. The Project's existing access road off Airport Road falls within this area. Field investigations confirmed potential intermittent glimpses of the Project would be possible during leaf-on and leaf-off conditions. Along the entire 465-foot portion of Airport Road the intermittent views would occur over a duration of approximately 10.6 seconds while traveling at 30 mph. Additionally, viewing geometry from this location would require northbound and southbound travelers to look away from the direction of travel. As seen from this general area, the Project components would be backgrounded by existing vegetation. For visual references see Appendix B, Photographic Inventory, Viewpoints 6 and 7.

Visibility of the Project along a third segment of Airport Road was identified along an approximate 370-foot continuous segment, varying from approximately 400 to 710 feet northwest of the Project's northern sub-array. A private residence located at 781 Airport Road, approximately 505-feet north is located along this identified segment. Views from this segment of Airport Road are buffered when looking southeast towards the Project, due to the existing dense vegetation, however there is a narrow natural break in the existing dense vegetation that surrounds the Project's northern border. Field investigations confirmed this natural break in the existing vegetation would allow for generally unobstructed views when looking southeast towards the Project. Along the entire 370-foot portion of Airport Road the views would occur over a duration of approximately 8.4 seconds while traveling south at 30 mph. This view would generally not be seen for travelers on Airport Road when traveling northbound, as the viewing angle would require travelers to look way and behind them. As seen from this general area, the Project components would be backgrounded by existing

vegetation. To mitigate these views for both travelers along Airport Road and the private residence, the Project proposes to install evergreen landscape screening along the northern edge of the Project site that will harmonize with the surrounding native plant material. This proposed landscaping will help provide year-around visual mitigation. Refer to the Landscape Mitigation Plan(s) in Appendix C for further details. For visual references see Appendix B, Photographic Inventory, Viewpoint 8.

3.3.2 Town Owned Parcel / Town Park – Former Fair Haven Municipal Airport

The Town owned parcel located northwest of the Project is the former Fair Haven Municipal Airport, and currently serves as a town park for walking, home to Fur Haven Dog Park, and used for RC plane events. Views from within park space are buffered when looking southeast towards the Project, due to the existing dense vegetation, however there is a narrow natural break in the existing dense vegetation that surrounds the Project's northern border. Field investigations confirmed this natural break in the existing vegetation would allow for generally unobstructed views of the Project when looking southeast towards the Project. These views would be limited and specific to a narrow field of view within the park space. To mitigate these views, the Project proposes to install evergreen landscape screening along the northern edge of the Project site that will harmonize with the surrounding native plant material. This proposed landscaping will help provide year-around visual mitigation. Refer to the Landscape Mitigation Plan in Appendix C for further details. For visual references see Appendix B, Photographic Inventory, Viewpoints 7 and 8.

3.3.3 Scotch Hill Road

Scotch Hill is a two-lane local paved road with a posted speed limit of 35mph and generally runs in a north-south direction. Scotch Hill Road is 0.40-miles east of the Project at its closest distance. There are a few private residences and privately-owned open fields, lawns, or other cleared areas which may have visibility of Project components as indicated on the visibility map. Publicly accessible areas identified along Scotch Hill Road as having potential visibility on the visibility map are noted in detail below.

Visibility of the Project was identified along an approximate 40-foot continuous stretch of Scotch Hill Road, approximately 0.63 miles northeast of the Project. A private residence located at 602 Scotch Hill Road is adjacent to this segment. Field investigations confirmed that the likelihood of visibility is not likely due to a combination of factors which include intervening residential structures, topography, existing vegetation, and viewing geometry. For visual references see Appendix B, Photographic Inventory, Viewpoint 10.

3.3.4 U.S. Route 4E & 4W

U.S. Route 4 is a divided two-lane highway with a posted speed limit of 65 mph that generally runs in an east-west direction, located approximately 250-feet south of the Project at its closest point. Views towards the Project from this area are buffered by mature and dense evergreen vegetation that parallels the Route 4E and 4W travel lanes. Field investigation of publicly accessible locations in these areas generally confirmed that the likelihood of visibility is limited due to a combination of factors which include a change in topography, intervening existing

vegetation, and viewing geometry. For visual references see Appendix B, Photographic Inventory, Viewpoints 1 and 2, and 11 and 12. Areas identified along Route 4E & 4W as having potential visibility on the visibility map are noted in detail below.

Potential visibility of the Project was identified along the Route 4W travel lanes. Visibility mapping identifies potential visibility along an approximate 430-foot segment of the Route 4W travel lanes, ranging from approximately 275 to 495-feet south and southwest of the Project's southern sub-array. Field investigations confirmed potential visibility of the Project would be possible in this segment of the Route 4W travel lanes. To mitigate visual impact, the Project proposes installing evergreen landscape screening along the southern edge of the Project. This screening will be effective in both leaf-on and leaf-off conditions. Refer to the Landscape Mitigation Plan(s) in Appendix C for further details. Additionally, viewing geometry from this location would require westbound travelers to look away from the direction of travel. Potential views of the Project from this location are also mitigated by the duration of the view, as westbound travelers on Route 4W traveling at 65 mph would observe Project components for approximately 4.5 seconds. The Project is approximately 15 feet lower in elevation than the Route 4 travel lanes. This lower elevation places the Project farther down on the horizon, resulting in less prominent views. For visual references see Appendix B, Photographic Inventory, Viewpoint 1.

Potential visibility of the Project was identified in a second location on the Route 4W travel lanes. This potential visibility was determined through field investigation only. The potential visibility occurs along an approximate 200-foot segment of the Route 4W travel lanes, approximately 265-feet south of the Project's southern sub-array. There are natural openings in the existing evergreen vegetation that will allow glimpses of the Project area. Viewing geometry from this location would require westbound travelers to look away from and perpendicular to the direction of travel. Potential views of the Project from this location are also mitigated by the duration of the view, as westbound travelers on Route 4W traveling at 65 mph would observe the Project components for approximately 2.1 seconds. The Project is approximately 15 feet lower in elevation than the Route 4 travel lanes. This lower elevation places the Project farther down on the horizon, resulting in less prominent views. Refer to the Landscape Mitigation Plan in Appendix C for further details. For visual references see Appendix B, Photographic Inventory, Viewpoint 2.

Potential visibility of the Project was identified along the Route 4E travel lanes. This potential visibility was determined through field investigation only. The potential visibility occurs along an approximate 200-foot segment of the Route 4E travel lanes, approximately 500-feet south of the Project's southern sub-array. There are natural openings in the existing evergreen vegetation that will allow glimpses of the Project area. Viewing geometry from this location would require eastbound travelers to look away from and perpendicular to the direction of travel. Potential views of the Project from this location are also mitigated by the duration of the view, as eastbound travelers on Route 4E traveling at 65 mph would observe the Project components for approximately 2.1 seconds. The Project is approximately 15 feet lower in elevation than the Route 4 travel lanes. This lower elevation places the Project farther down on the horizon, resulting in less prominent views. Refer to the Landscape Mitigation Plan in Appendix C for further details. For visual references see Appendix B, Photographic Inventory, Viewpoint 11.

Potential visibility of the Project was identified in a second location on the Route 4E travel lanes. Visibility mapping identifies potential visibility along an approximate 360-foot segment of the Route 4E travel lanes, ranging from approximately 525 to 670-feet south and southwest of the Project's southern sub-array. Field investigations confirmed potential visibility of the Project would be possible in this segment of the Route 4E travel lanes. To mitigate visual impact, the Project proposes installing evergreen landscape screening along the southern edge of the Project. This screening will be effective in both leaf-on and leaf-off conditions. Refer to the Landscape Mitigation Plan(s) in Appendix C for further details. Additionally, viewing geometry from this location would require eastbound travelers to look away from and perpendicular to the direction of travel. Potential views of the Project from this location are also mitigated by the duration of the view, as eastbound travelers on Route 4E traveling at 65 mph would observe Project components for approximately 3.8 seconds. The Project is approximately 15 feet lower in elevation than the Route 4 travel lanes. This lower elevation places the Project farther down on the horizon, resulting in less prominent views. For visual references see Appendix B, Photographic Inventory, Viewpoint 12.

3.3.5 Fair Haven Union High School

Fair Haven Union High School is located south of the Project, on the south side of the Route 4 corridor. The school's northernmost parcel boundary lies approximately 645-feet south of the Project's closest array. A limited area of potential Project visibility was identified along the westernmost portion of the high school athletic fields, about 0.20 miles south of the Project.

Field investigations determined that views of the Project from this area would be minimal due to the viewing distance, intervening topography, and substantial existing mature evergreen vegetation along the Project's southern parcel boundary, which parallels Route 4 and provides a natural visual buffer. Although there is a small natural break in the existing evergreen vegetation, to further mitigate visual impacts the Project proposes installing additional evergreen landscape screening along the southern edge of the Project site. This screening will be effective during both leaf-on and leaf-off conditions. Refer to the Landscape Mitigation Plan(s) in Appendix C for further details. See Appendix B, Photographic Inventory, Viewpoint 3.

3.3.6 Other Publicly Accessible Areas

VHB has not identified any other public or conserved lands that will have potential visibility of the Project.

3.4 Suitability of Project Colors and Materials

The Project materials and colors for the Project arrays would primarily consist of dark black photovoltaic panels, metal array frames, wooden fence posts, and metal agricultural fencing. The Project materials and colors for the Project interconnection components will consist of wooden utility poles, galvanized or green steel equipment, galvanized steel mesh fence and gates, and wooden poles. The materials proposed for this Project are consistent with materials used in similar solar generation projects throughout Vermont, these materials are not in

themselves unsuitable or incompatible in the context of a rural landscape, particularly given the presence of existing transmission lines that run adjacent to the Project site along Route 4.

3.5 Impact on Open Space

A definition for the term "Open Space" is not provided or clearly defined within Act 250 or Section 248. Similarly, the term "Open Space" is not clearly defined within the Town or Regional Plans.

In both the *History and Culture* as well as the *Natural, Scenic, Cultural, and Historic Resources* chapters of the Town Plan, an action item is established which refers generally to open space.

> *"Generate a Town open space, significant features, recreation/open space, and natural resources plan and work with the RRPC to acquire grants funds to lower the cost of creating and implementing the plan."*[7, 8]

However, the Town Plan does not clearly identify the Project Area as open space to be preserved.

Likewise, the Regional Plan refers to the importance of open space in the recreation experiences available in the region[9, 10] and calls for the creation of an open space plan[11], but does not clearly identify the Project site as open space to be conserved.

The Project is proposed to be constructed on privately owned parcels and is not within any identified conserved lands or open space identified within the Town Plan or Regional Plan and is generally not accessible to the public. Therefore, the Project will have no impact on identified or protected open space.

3.6 Summary of Potential Adverse Impacts

This review of potential aesthetic impacts under Step One of Quechee found that the potential visibility of the Project would be localized within an approximately one-mile buffer area of the Project. While potential visibility was identified in several areas, field investigation confirmed potential visibility in most areas was limited or not possible. The visibility analysis is primarily used to inform field investigation and often over-estimates Project visibility due to the resolution of the terrain and obstruction data. Refer to Appendix A - Project Maps. Potential visibility from surrounding roads and nearby residences is limited, with the exception of specific views from a segment of Route 4E and 4W, Airport Road, a private residence at 781 Airport Park Road, and the Town Park. As discussed above, many of the views are already limited by existing vegetation, topography, intervening structures, distance, viewing geometry, and duration of view. In addition, certain identified views are being mitigated with the introduction of the proposed landscape mitigation. There would be no impact to open space

[7] Fair Haven Town Plan, Adopted June 11, 2024. History and Culture, Goals and Actions, Page 11

[8] Fair Haven Town Plan, Adopted June 11, 2024. Natural, Scenic, Cultural, and Historic Resources, Goals and Actions, Page 35

[9] Rutland Regional Plan, Adopted June 19, 2018. Chapter 12: Recreation, Page 110

[10] Rutland Regional Plan, Adopted June 19, 2018. Chapter 12: Recreation, Page 105

[11] Rutland Regional Plan, Adopted June 19, 2018. Chapter 12: Recreation, Goals, Page 115

resources as identified within the town or regional plans, and the colors and materials are not incompatible with the Projects surroundings. However, the introduction of a solar generation facility of this size that is visible from Route 4E and 4W, Airport Road, a private residence at 781 Airport Road, and views from within a limited portion of the Town Park does pose a change in the landscape from existing conditions. Due to this fact and given how the Quechee Analysis has been applied in other cases, the Project would result in an "adverse" impact to the aesthetics of the area. Therefore, we have provided an analysis of the Project under the three factors of the second part of the Quechee Analysis, as follows.

4

Second Step of the Quechee Analysis

4.1 Clear Written Community Standards

The Project is located in the Town of Fair Haven, which is within the region covered by the Rutland County Regional Planning Commission ("RPC").

Local and regional planning documents were reviewed in order to determine if the there are any relevant clear written community standards pertaining to scenic resources that might apply to the Project, and if so, whether the Project complies with those standards. The following is a summary of potentially relevant provisions in those plans:

Regional Plan

Generally, the Regional Plan discusses the importance of aesthetics and scenic qualities of the region regarding future land use, development patterns, historic resources, and recreation.

> *"The Rutland Region has an abundance of highly scenic resources thanks to a landscape that is dominated by rugged mountain ranges, clear streams, and fertile valleys…Another distinguishing feature of the Region's scenery is its agricultural lands. Many of them occupy the valleys between the two mountain ranges while others cling to the Region's many hillsides."* [12]

> *Future Use of Land Goal: "To protect the character of rural areas and resource areas by discouraging scattered development and incompatible land uses."* [13]

> *Future Use of Land Goal: "To protect the natural environment and its economic, ecological, sociological, psychological and aesthetic benefits."* [14]

> *"No land development should be promoted where the effect of the proposed use unnecessarily impacts highly scenic landscapes, ecologically sensitive lands, or irreplaceable natural resources. To do so would be incompatible with land use policies contained in the Regional Plan."* [15]

[12] Rutland Regional Plan, Adopted June 19, 2018. Chapter 14: Wildlife and Natural Habitats, Page 128
[13] Rutland Regional Plan, Adopted June 19, 2018. Chapter 3: Future Use of Land, Page 27
[14] Rutland Regional Plan, Adopted June 19, 2018. Chapter 3: Future Use of Land, Page 27
[15] Rutland Regional Plan, Adopted June 19, 2018. Chapter 14: Wildlife and Natural Habitats, Page 134

As is common within Regional Plans, encouragement and support is provided for towns to identify natural resources to be preserved, scenic or otherwise; however, the Rutland County Regional Plan does not itself provide a clear written community standard under Quechee, because it does not identify the proposed Project site or its immediate surroundings as a scenic area designated for special protection.

Town Plan

In the *Natural, Scenic, Cultural, and Historic Resources* chapter, the Town Plan references preserving the scenic qualities of Fair Haven's landscape:

> *"Fair Haven seeks to preserve its rare and irreplaceable natural, scenic, cultural, and historic areas, and features, and its working lands, including but not limited to the areas mentioned in this chapter. The Plan prohibits development that has undue and adverse impacts on these areas and features."* [16]

In the Scenic Resources section of the Chapter, the Town Plan states that:

> *"Two major features dominate Fair Haven's landscape: the Taconic Mountains and the Poultney River Valley. Much of Fair Haven's rural character and appeal results from the scenic vistas that can be observed from many parts of the town and include an interplay of villages, mountains, forested hills, farms, fields, rivers, streams, ponds, and woodlands."* [17]

The Town Plan speaks only generally to the scenic quality of the landscape and does not identify specific viewsheds or vantage points to be preserved. While the Town Plan lists Mud Brook as a scenic resource in Fair Haven[18] it does not indicate which specific viewsheds or areas surrounding Mud Brook are to be preserved. Visibility to the Project site from the open waters of Mud Brook is almost non-existent given mature and dense intervening vegetation of the riparian buffer. Similarly, visibility to Mud Brook from publicly available vantage points is extremely limited due to intervening vegetation and limited road crossing of the brook. Public access to Mud Brook is very limited and the waters are not contiguous since the brook is divided by culverts of Rt-22A and Rt-4, making the brook limited in its recreational use.

The Town Plan states that it will "*oppose proposed development that adversely impacts the quantity and quality of Fair Haven's natural, cultural, historic, and scenic resources, including but not limited to the resources outlined in the [Natural, Scenic, Cultural, and Historic Resources] chapter*," but it does not clearly provide standards which constitute "adverse impacts" for the Mud Brook, and specifically, the Project site. Based on our review of Project visibility the project will not have an adverse impact on Mud Brook or scenic resources.

[16] Fair Haven Town Plan, Adopted June 11, 2024. Natural, Scenic, Cultural, and Historic Resources, Page 33

[17] Fair Haven Town Plan, Adopted June 11, 2024. Natural, Scenic, Cultural, and Historic Resources, Page 35

[18] Fair Haven Town Plan, Adopted June 11, 2024. Natural, Scenic, Cultural, and Historic Resources, Page 35

In addition to Mud Brook, the Town Plan lists Old Marsh Pond as a scenic resource, however, views to and from the scenic resource to the Project site are blocked by intervening topography. As such, the Project will have no impact on Old Marsh Pond.

The Project is consistent with the Regional and Town Plans since it has been sited to maintain the rural character of the area and avoids, minimizes, and mitigates impacts to regulated natural resources, and historic and cultural resources. Additionally, the Project's siting is sensitive to aesthetics of the region and results in limited potential visibility from public roads and public lands.

In review, the Regional and Town Plans provide encouragement to protect scenic resources and recognize their value. While the Town Plan references a scenic resource adjacent to the Project site, the Mud Brook, the Town Plan does not specifically address the Project site or provide a clear standard for Mud Brook or the Project site as a scenic resource. Thus, the Regional and Town Plans do not contain any clear, written community standards intended to protect the scenic beauty of the Project site and the Project does not violate any such standards.

4.2 Shocking or Offensive to the Average Person

This prong of the Quechee test asks whether the Project is shocking or offensive to an average person. For purposes of this analysis the average person is considered to be a neutral party viewing the project. In order to rise to this level, the Project would need to be entirely inconsistent with its surroundings or the surrounding land use, or exceptionally out of scale with its surroundings.

Our evaluation of impacts under the first step of the Quechee Analysis determined that the Project's visibility would cause an adverse impact, specifically due to the Project's visibility from a short segment of Airport Road, a private residence located at 781 Airport Road, views from a small portion of the Town Park west and northwest of the Project, and potential views from Route 4E and 4W. While the Project is considered to have an adverse impact, the Project would not be shocking or offensive. There are several mitigating factors which lessen the degree of its potential visual impact.

Views of the Project identified along the 465-foot continuous segment of Airport Road, west of the Project site are seen with the closest solar array to the road ranging from approximately 170-feet to 475-feet along this segment of Airport Road. The posted speed limit on Airport Road is 30mph, intermittent views for travelers would occur over a duration of approximately 10.6 seconds while traveling at 30 mph. As seen from this general area, the Project components would be backgrounded by existing vegetation.

The identified unobstructed views of the Project to the northwest, as seen from the Town Park and the private residence at 781 Airport Road, result from a narrow natural opening in the existing evergreen tree line in this area. To address these views, the Project proposes installing additional evergreen landscape plantings that will effectively connect the existing forested areas, helping to integrate the Project into the surrounding landscape. These evergreen plantings will provide year-round visual screening, including during both leaf-on and leaf-off conditions.

The Petitioner has taken steps to reduce the potential visibility of the Project from surrounding roads and nearby residences through site selection and design that retains existing dense vegetative buffers, takes advantage of surrounding topography, and the introduction of landscape mitigation.

These measures have resulted in a project with limited visibility. As reflected in our supporting documents and analysis, the limited potential visibility from surrounding roads, residences, and the lack of any effect on identified scenic resources, public lands, or recreation resources limits the potential impacts from the viewpoint of an average person.

Thus, we conclude that the Project will not be considered shocking or offensive to the average person.

4.3 Generally Available Mitigation Steps a Reasonable Person Would Take

This final prong of the Quechee Analysis evaluates whether the Project has taken generally available mitigation measures a reasonable person would take to improve the harmony of the project with its surroudings. We conclude the Project has done so. The Project mitigation efforts to harmonize the Project with its surroundings include the following:

1. Site selection that minimizes potential visibility where possible from surrounding roads, nearby residences, and public lands, due to existing topography, natural screening, and in some cases distance.
2. Siting the Project in close proximity to an existing transmission line, and the proposed GMP Fair Haven Substation (25-0593-PET) thereby minimizing the need for new transmission line infrastructure or additional tree clearing that would likely be associated with new transmission line infrastructure.
3. A landscape mitigation plan was prepared to reduce and soften the visual impacts of the Project from public areas identified through field investigation efforts. This mitigation plan utilizes approximately 26 proposed evergreen trees to further reduce offsite visibility of the Project as detailed below:
    a. Evergreen trees are proposed in a targeted location north of the Project's solar arrays. These proposed mitigation plantings will partially screen views from the north, particularly views from Airport Road, the private residence located at 781 Airport Road, and views from within the Town Park.
    b. Evergreen trees are proposed on the south side of the Project adjacent to Route 4. These proposed mitigation plantings will partially screen views from the Route 4E and 4W travel lanes immediately south of the Project.
4. Designing the Project to avoid, minimize, and/or mitigate potential adverse impacts to natural resources on the Project parcel.

With these measures, the Project has taken generally available mitigation steps a reasonable person would take to harmonize the Project with its surroundings.

4.4 Closing Statement

In review, the findings of this assessment conclude that the overall visual impact of the Project is limited and would not be unduly adverse for the following reasons:

- The Project does not violate any clearly written community standard intended to preserve the aesthetics or scenic beauty of the specific area at and around the Project site.

- The Project would not be considered shocking or offensive to the average person because it is not sited in a prominent location, lessening potential visual impact from surrounding areas.

- The Petitioner has taken reasonable steps to mitigate the visual impact of the Project through development of a landscape mitigation plan, and siting of Project components to take advantage of topography, and natural screening from existing mature dense vegetation on the site.

5

Orderly Development

Section 248(b)(1) of Title 30 of the Vermont Statutes Annotated requires that the PUC 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 and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. Substantial deference is given to land conservation measures and specific policies contained in a duly adopted regional or municipal plan in accordance with Section 248(b)(1)(C) if the plans have been certified as energy compliant.

The following discusses the standards and land conservation measures as detailed in the Rutland County Regional Plan (the "Regional Plan"), and the Fair Haven Town Plan (the "Town Plan").

5.1 Regional Plan

Chapter 3 – Future Use of Land: The Regional Plan speaks to the desire to maintain historical development patterns of the compact village surrounded by farmland[19] and establishes the following goals related to future land use: [20]

> *"To protect the character of rural areas and resource areas by discouraging scattered development and incompatible land uses."*
>
> *"To encourage and facilitate development in existing and future growth centers appropriate to the scale of the centers."*

The Project is located within the Regional Plan's "Low Density Development" zone, which is intended to maintain agricultural activities, the rural character, and scale of the area. [21] The Regional Plan discusses the intent to reduce scattered development and promote development in and around urban and village centers to maintain open space. The Project supports the Regional Plan's goals by preserving the site as rural land and does not conflict with any land use policies or conservation measures within the plan.

Chapter 12 – Recreation: The Regional Plan states that:

> *"Recreation is an important component of the lifestyle and livelihoods of many of the Region's residents. Much of the recreation that is available in the Region results from the geographic landscape—hiking, skiing, hunting, and snowmobiling in the Green Mountains, as well as fishing, boating, and swimming in the many lakes and*

[19] Rutland Regional Plan, Adopted June 19, 2018. Chapter 3: Future Use of Land, Page 26
[20] Rutland Regional Plan, Adopted June 19, 2018. Chapter 3: Future Use of Land, Page 27
[21] Rutland Regional Plan, Adopted June 19, 2018. Chapter 3: Future Use of Land, Page 29

> *rivers. The recreational opportunities in the Region are important to the health and welfare of both residents and visitors."* [22]
>
> *"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 effects of development affect fish populations."* [23]

The Regional Plan speaks generally to recreational facilities and natural areas and does not list the Project site as a specific recreational resource. The Project supports the Regional Plan by preserving the Project site from fragmentation and retaining the site's open, rural character. The Project has been sited to avoid, minimize, and/or mitigate impacts to natural resources, so as to mitigate impact to the area's recreational value and environmental integrity (Refer to Exhibit PET-AC-2). The Project site is not identified as a preserved open space within the Regional Plan, and the private land is generally not accessible to the public.

Chapter 13 – Agriculture and Forestry: The Regional Plan states that "*both farmland and forests remain important elements of the Region's economy, ecosystem, and character."*[24] The Regional Plan also speaks to how fragmentation of larger farm parcels can exclude future use and management of an area as a single farming operation.[25] The Project is taking steps to mitigate any potential impacts to Prime Agricultural Soils, preserving future capability for agricultural uses on the Project parcel.

Though difficult to read, the Project site appears to be located within the "Highest Priority Riparian Connectivity" zone on the Rutland Region Forest and Habitat Connectivity Map.[26] The Project supports the Regional Plan by preserving regulated riparian land adjacent to Mud Brook.

Chapter 14 – Wildlife and Natural Habitats: This chapter states the importance of preserving natural habitats for wildlife and speaks to the uniqueness of the region in terms of habitat provided for a number of rare, threatened and endangered species. Additionally, the Regional Plan speaks to the scenic quality the Region's landscape provides, in terms of its rugged, mountainous landscape and agricultural valleys.[27] The Regional Plan states that:

> *"No land development should be promoted where the effect of the proposed use unnecessarily impacts highly scenic landscapes, ecologically sensitive lands, or irreplaceable natural resources. To do so would be incompatible with land use policies contained in the Regional Plan."* [28]

[22] Rutland Regional Plan, Adopted June 19, 2018. Chapter 12: Recreation, Page 105
[23] Rutland Regional Plan, Adopted June 19, 2018. Chapter 12: Recreation, Page 110
[24] Rutland Regional Plan, Adopted June 19, 2018. Chapter 13: Agriculture and Foresty, Page 117
[25] Rutland Regional Plan, Adopted June 19, 2018. Chapter 13: Agriculture and Foresty, Page 119
[26] Rutland Regional Plan, Adopted June 19, 2018. Chapter 13: Agriculture and Foresty, Page 117
[27] Rutland Regional Plan, Adopted June 19, 2018. Chapter 14: Wildlife and Natural Habitats, Page 128
[28] Rutland Regional Plan, Adopted June 19, 2018. Chapter 14: Wildlife and Natural Habitats, Page 134

Following this, the Regional Plan indicates that all new development must:

i. *"Not impinge on wetlands, other natural resources, including habitat;*
ii. *Be of a type or nature that is appropriate for location within regional growth areas;*
iii. *Not unnecessarily fragment large tracts of forest or agricultural lands;*
iv. *Be of a design that is compatible with surrounding land uses;*
v. *Avoid floodplains or other hazardous areas."* [29]

The Project has been designed to mitigate impacts to regulated natural features. Additionally, the Project is not located within a "highly scenic landscape," as identified by the Regional Plan. The Project is located on a site which is largely pre-existing open fields and will not contribute to forest fragmentation through clearing. In addition, the Project will maintain access to agricultural lands around and adjacent to the Project, and as noted above will preserve agricultural soils for future use. Based on the descriptions and mapped information included in the Regional Plan, the Project will minimize impacts to any identified natural resources on the Project site, including habitat for Rare, Threatened, and Endangered Species (Refer to Exhibit PET-AC-2).

Regarding energy projects in particular, the Regional Plan outlines a goal where the RPC will *"Assist municipalities in identifying areas for renewable energy development so as to not adversely impact wildlife and natural habitats."* [30] On the Regional Solar Resources Map within the Energy chapter of the Regional Plan, the Project site appears to be located within "Secondary Solar" zone with portions identified as "Primary Solar" and is located within one mile of the 3-Phase line.[31] The Regional Plan does not indicate that the Project site is inappropriate for renewable energy development.

This review highlights how the Project is compatible with the orderly development of the region based on a review of the Rutland County Regional Plan. The Project site and design address many of the region's goals by maintaining the rural character of the area and avoiding and minimizing impacts to regulated natural resources, and historic and cultural resources. Additionally, the Project's siting is sensitive to aesthetics of the region and results in limited potential visibility from nearby public roads and public lands.

5.2 Regional Energy Plan

The Rutland County Regional Energy Plan discusses energy and energy planning, environmental protection, economic needs and opportunities as well as regional energy supply and demand. The Rutland Regional Energy Plan has received affirmative determination pursuant to 24 V.S.A. § 4352(a) that the RRPC's Regional Plan complies with the requirements of 24 V.S.A. § 4352 for enhanced energy planning.

[29] Rutland Regional Plan, Adopted June 19, 2018. Chapter 14: Wildlife and Natural Habitats, Page 134

[30] Rutland Regional Plan, Adopted June 19, 2018. Chapter 14: Wildlife and Natural Habitats, Page 135

[31] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 23 of Energy Plan Chapter

The Regional Energy Plan identifies the state goal to have renewable energy sources meet 90% of the state's total energy need by 2050. The Regional Energy Plan has collaborated with the Vermont Energy Investment Corporation (VEIC) to create energy models and targets that provide potential pathways to meet the state's energy goals. Like other Regional Energy Plans, the plan uses the Long-Range Energy Alternatives Planning (LEAP) modelling system and its 90x50 scenario when forecasting energy demand when establishing conservation and generation targets. [32]

The Regional Energy Plan's goals include: [33]

- *"Maintaining land use development patterns supported by other chapters of the Rutland Regional Plan and 24 V.S.A. 4302.*
- *Collaboration with Vermont Energy Investment Corporation (VEIC) to create a regional energy model that identifies targets for energy conservation and renewable energy generation.*
- *Creation of specific strategies to help the region achieve state energy goals.*
- *Creation of regional maps prioritizing locations for the development of future renewable energy generation facilities in the region.*
- *Providing energy planning guidance to Rutland Region municipalities."*

Electricity and Electrical Generation – This section discusses results from the LEAP model in regards to electrical generation required to meet projected demand for the region:

> *"The Long-Range Energy Alternatives Planning (LEAP) model provides some pathways for reaching the state and regional 90x50 goals. The targets developed by Vermont Energy Investment Corporation (VEIC) show the region meeting its generation targets primarily through the development of additional in-state solar and wind generation. Regionally, the targets call for the development of up to 174 MW of new solar generation and up to 50 MW of new wind generation, and 7 MW of new hydro generation."* [34]

The Regional Plan states that "solar generation is the preferred method of renewable generation. Solar will have to meet generation levels higher than the targets set by the LEAP model to make up for the expected lack of hydro and wind generation facilities in the region."[35] To meet the projected energy demand through renewable generation, the Rutland Regional Plan supports solar generation facilities that comply with goals, strategies, and standards contained within the plan.[36]

This Project is consistent with the goals, strategies, and standards within the Regional Plan and is a significant addition to the Region's renewable energy portfolio, thereby helping to meet the renewable generation targets set by the RPC.

[32] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 11 of Energy Plan Chapter
[33] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 1 of Energy Plan Chapter
[34] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 16 of Energy Plan Chapter
[35] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 19 of Energy Plan Chapter
[36] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 29 of Energy Plan Chapter

Additional Regional and Community Standards for Energy Facility Siting and Development – This section highlights site feasibility considerations for determining locations for varying types of transmission and generation facilities, including solar. [37]

The Project complies with the full list of siting standards for energy transmission and generation projects contained within the Regional Plan. These standards are listed below:

"All Transmission and Generation Facilities:

1. *The Rutland Regional Plan requires facilities to conform to all policies stated throughout the Plan.*
2. *All facilities shall conform to local, state and federal regulations.*
3. *Every facility above 10 kW shall specify an action plan and guaranteed funding source for decommissioning to ensure the site is safe, stable, and free of structures and hazardous materials.*
4. *Road access to the facility shall not contribute to unsafe conditions or the general public.*
5. *Light pollution is minimized to every extent possible. Non-critical outdoor lighting is activated by motion-sensors or on-site personnel. Light fixtures are shielded down to minimize light trespass and upward glare or glow. Lighting or air safety shall be radar activated.*
6. *Every facility, with the exception of wind turbines, shall be designed and constructed to meet the audible noise regulation of the municipality; if the municipality has no noise standard, the facility shall not exceed daytime levels of 40 dBA Lmax and nighttime levels of 35 dBA Lmax, as measured at the property line.*
7. *No facility shall create conditions that reduce or interfere with television, radio, radar, or other communication signals, including public safety communication systems.*
8. *Every facility of 200 kW or greater generation capacity, and every transmission substation facility, shall prominently display 24-hour emergency contact information and file site plans and emergency response plans with the fire departments serving the location.*
9. *Facility construction and renovation is consistent with historic preservation guidelines published by the Secretary of the Interior and the Vermont Division for Historic Preservation.*
10. *Any proposed facility shall comply with the plan and bylaws of the municipality where it is to be located.*

[37] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 27 of Energy Plan Chapter

11. *Any proposed facility shall consider the cumulative impact of land use aesthetics, property values, forest fragmentation and landowner compensation for multiple energy generation and transmission facilities.*
12. *Any proposed facility should avoid state-designated primary agricultural soils unless site-specific conditions are not favorable for agricultural activities.*
13. *Any proposed facility should avoid forested sites and shall not remove forest cover equaling no more than 15% of the project footprint.*

Additionally, the Regional Plan outlines siting standards unique to solar projects, listed in their entirety below:

Solar Electric Facilities:

1. *"The facility is located to make use of a developed or existing structure or brownfield site, including parcels contaminated or perceived to be contaminated that otherwise hinders redevelopment.*
2. *The facility is designed to locate inverters and support structures away from existing residences, wetlands, special flood areas, and slopes.*
3. *The facility is designed to reduce visibilities from the road and from neighbors with setbacks and screening."*

The Regional Solar Resources Areas Map appears to show the Project site within a "Secondary Solar" area that is within one mile of the 3-phase line.[38] Though the Regional Plan identifies preferred locations for solar generation facilities, including brownfields and contaminated parcels, the plan does not explicitly state that solar projects are only permitted on these types of locations, only that projects should be "prioritized" in them.[39]

The Project has been designed to minimize potential impacts to environmental features on site. Additionally, the Project has been screened from publicly accessible vantage points and nearby residences by minimizing tree clearing and providing landscape mitigation planting along RT-4E and 4W, Airport Road, and the town owned park.

Electricity Strategies – The Regional Energy Plan comments on future regional energy supply and highlights the importance renewable energy will play in that role, *"to meet its energy goals, the Rutland Region will rely much more heavily on renewable energy delivered through electricity."* [40] This section discusses the need for additional in-state renewable energy capacity to be developed in order to support the "90x50" goals by the state and the RPC. In addition, the RPC outlines action items, some of which speak to the RPC's role in helping municipalities identify preferred areas for renewable energy development.

> *"The region will need to develop at least 387,962 MWh or approximately 285 MW of new generating capacity from solar, wind, biomass and hydro sources over the next 35 years. It's extremely important that these generating facilities be sited in*

[38] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 23 of Energy Plan Chapter
[39] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 19 of Energy Plan Chapter
[40] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 32 of Energy Plan Chapter

locations with good access to the energy resources and close to load, while not adversely impacting important environmental or community resources."

This review highlights how the Project addresses compatibility with the orderly development of the region based on review of the Rutland County Regional Energy Plan and how the Project supports many of the RPC's energy goals. As previously discussed, the Regional Plan states that solar is the preferred method of renewable energy generation and that the Rutland region will need to rely more on solar to meet its 90x50 target given the anticipated lack of generation from hydro and wind sources. Since the Project is not in violation of any clear written standard contained within Town or Regional planning documents, it is therefore understood that the Project is compatible with the RPC's vision for renewable energy development, given their pledge to "[support] solar generation facilities that comply with goals, strategies, and standards contained within the plan." [41]

Key elements of the Project that are consistent with relevant aspects of the Regional Energy Plan include:

- 4.975 MW solar electric generation facility that advances the renewable electrical generation goal for the Region.
- Minimizing natural resource impacts, including wetlands, streams, river corridors, with the exception of a proposed access road to the southern subarray (requiring a state wetland permit), which will be mitigated through wetland buffer enhancement plantings as shown in Exhibit PET-AC-3.
- Site is generally well screened from surrounding public viewpoints. Where feasible, landscape mitigation planting has been proposed in locations not naturally screened from public viewpoints.
- Much of the site is currently open fields, thus reducing the area of tree clearing that will be necessary.
- Site and supporting infrastructure has been designed to locate inverters and support structures away from residences and sensitive environmental features.
- Stockpiling of prime agricultural soils for potential future reuse.

5.3 Town Plan

Facilities and Utilities Chapter, Recreation Facilities Section – Among others, the Town Plan identifies the Fair Haven Union High School fields, the Marsh Pond Wildlife Management Area (WMA), and the Former airport grounds as recreational facilities in Fair Haven. [42] The Project is not located on any of these facilities and does not prevent recreational use of the sites. Visibility from the Marsh Pond WMA is negligible, as indicated on the Viewshed Analysis.

The Town Plan states that the former airport grounds is an "Important Site" in Fair Haven and notes the hiking, dog park, and model airplane usage on site. [43] While the Project is visible from the former airport grounds, the Project does not preclude the listed recreational uses of

[41] Rutland Regional Plan, Adopted June 19, 2018. Chapter 16: Energy Plan, Page 29 of Energy Plan Chapter

[42] Fair Haven Town Plan, Adopted June 11, 2024. Public Facilities and Utilities Actions, Recreation Facilities, Page 20

[43] Fair Haven Town Plan, Adopted June 11, 2024. History and Culture, Page 9

the site. The Town Plan indicates that recreational facilities should be added at the former airport grounds but does not indicate what types of facilities should be added.[44] While the Project is visible from a limited and specific area of the former airport grounds, the Project does not preclude physical use of the site for recreational purposes, as the Project is located on private property adjacent to the former airport grounds.

The Town Plan does not identify the Project site as a specific recreational facility or site.

Natural, Scenic, Cultural, and Historic Resources Chapter – Within this chapter, the Town Plan outlines the following goals and actions relevant to the Project:

> *"Goal 1: To identify, protect, preserve, and showcase important natural, scenic, cultural, and historic features and areas of Fair Haven's landscape.*
>
> *Goal 2: To maintain and improve the quality of air, water, wildlife, and forests.*
>
> *Action 1: Generate a Town open space, significant features, recreation/open space, and natural resources plan and work with the RRPC to acquire grants funds to lower the cost of creating and implementing the plan.*
>
> *Action 2: Support work by relevant entities that protect the Eastern Timber Rattlesnake and the snake's habitat.*
>
> *Action 5: Oppose proposed development that adversely impacts the quantity and quality of Fair Haven's natural, cultural, historic, and scenic resources, including but not limited to the resources outlined in the chapter."*

As stated previously, while the Town Plan lists Mud Brook as a scenic resource in Fair Haven[45] it does not indicate which specific viewsheds or areas surrounding Mud Brook are to be preserved. Visibility to the Project site from the open waters of Mud Brook is very limited given intervening vegetation of the riparian buffer. Similarly, visibility to Mud Brook from publicly accessible vantage points is limited, as is recreational access to the brook itself. The Town Plan states that it will "oppose proposed development that adversely impacts the quantity and quality of Fair Haven's natural, cultural, historic, and scenic resources, including but not limited to the resources outlined in the [*Natural, Scenic, Cultural, and Historic Resources*] chapter," but it does not clearly provide standards which constitute "adverse impacts" for the Mud Brook, and specifically, the Project site. Therefore, the Project will not have a significant impact on Mud Brook or scenic resources.

The Project site is not located on a recreation/open space site or conserved natural resources site as identified by the Town. The Town Plan indicates that such planning may be a future effort of the Town (Action 1, above).

The Project has been designed to mitigate impacts to regulated natural features and habitat for protected species, including where necessary using management measures developed in coordination with the Vermont Fish and Wildlife Department, as indicated in Exhibit PET-AC-2. The Project has taken steps to provide a landscape mitigation plan to provide visual

[44] Fair Haven Town Plan, Adopted June 11, 2024. Public Facilities and Utilities Actions, Goals and Actions, Page 21

[45] Fair Haven Town Plan, Adopted June 11, 2024. Natural, Scenic, Cultural, and Historic Resources, Page 35

mitigation of the Project during leaf-on and leaf-off conditions that responds to the character of the surrounding landscape and Project site.

Energy Chapter – The Town Plan outlines one goal for energy use and production within Fair Haven: "*to make efficient use of energy, reduce emissions of greenhouse gases, and find a balance between the use of fossil fuels and renewable resources*."[46] As a future planning initiative, the Town Plan states that it will "*determine suitable places and citing criteria for renewable energy generation resources*" in service of its energy goal. No suitable energy project locations or citing criteria have been created to date.

Additionally, the Town Plan creates Action item #6 in connection with its energy goal:

> *"Seek public opinion on an Enhanced Energy Plan (EEP) that would allow the Town Plan to have substantial deference in the Section 248 regulatory proceeding. If the town decides to pursue this, work with the RRPC to ensure the EEP meets state requirements."*

The Town Plan states that, "the *most important criteria to consider is input from the residents of Fair Haven*" [47] and that the Town will "*support alternative energy sources that do not conflict with any restrictions in the Plan."* However, the Town of Fair Haven has not yet developed an enhanced energy plan or received an affirmative determination of energy compliance under 24 V.S.A. § 4352, 30 V.S.A. § 248(b)(1). As a result, due consideration be given to the land conservation measures contained in the Fair Haven Town Plan with respect to the orderly development of the region. Nevertheless, as described above, the Project complies with related provisions of the Town Plan.

Land Use Chapter – The proposed Project is centrally located in the Town of Fair Haven with the proposed solar arrays situated within the "Rural" land use district,[48] and the proposed substation situated within the "Commercial" land use district.[49] The Town Plan states that the purpose of the "Rural" land use district is to "maintain a balance between ongoing agricultural practices, slate quarrying, low-density residential settlement, commercial use, and light industrial uses in the town."[50]

The Town Plan outlines one goal regarding Land Use: "*To plan development to maintain the historic settlement pattern of compact villages separated by rural countryside*," and provides action items to achieve this goal: [51]

> *"Action #1: "Implement current zoning regulations to promote orderly development.*
>
> *Action #2: "Support or oppose development proposals based on meeting the land uses' purpose as defined in the Town's zoning and the Town's land use goal."*

[46] Fair Haven Town Plan, Adopted June 11, 2024. Energy, Page 38

[47] Fair Haven Town Plan, Adopted June 11, 2024. Energy, Page 38

[48] Town of Fair Haven Zoning Districts Map, Updated July 16, 2020.

[49] Town of Fair Haven Zoning Districts Map, Updated July 16, 2020.

[50] Fair Haven Town Plan, Adopted June 11, 2024. Land Use, Page 44

[51] Fair Haven Town Plan, Adopted June 11, 2024. Land Use, Goals and Actions, Page 44

The Project is consistent with the zoning district and serves the Town's Land Use goal by preserving land within the rural countryside, thereby promoting development within the compact village centers.

5.4 Conclusion:

In conclusion, the Project will not unduly interfere with orderly development of the region, after consideration of any specific provisions of the town and regional plans that would apply to a section 248 renewable energy solar project. There are no specific local or regional land conservation measures that would apply to the Project, and the Project will not interfere with any specific local or regional recommendations regarding the proposed land use for this site. The plans also include statements supporting the use of renewable energy.

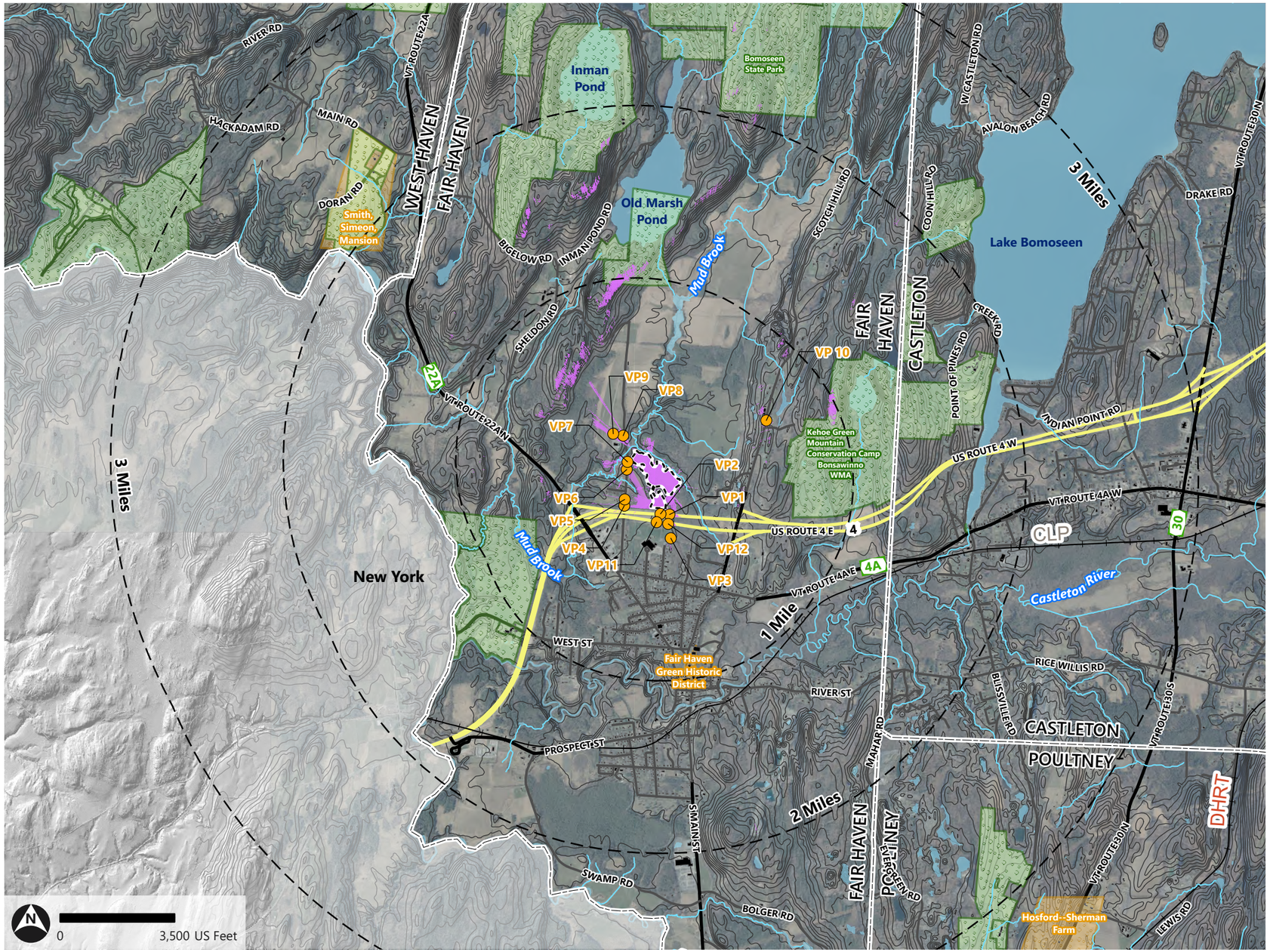
Appendix A

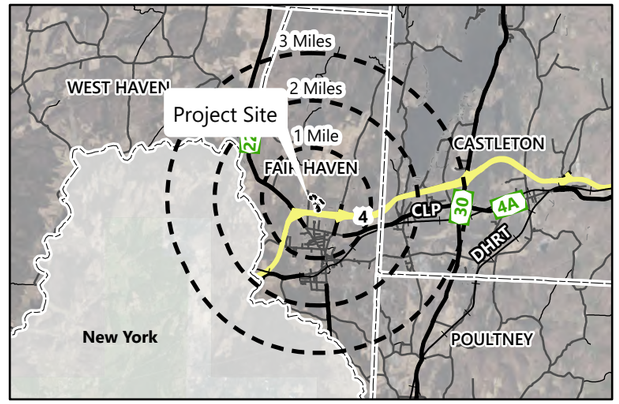
Project Maps

Solar Array Visibility Map

Airport Road Solar | Fair Haven, VT

March 16, 2026





Legend

- Visibility Point (VHB)
- Limit of Work (VHB)
- Project Buffer - 1, 2, 3 - Mile (VHB)
- Solar Array Viewshed (VHB)
- Building Footprints (VCGI)
- Vermont Protected Lands (VCGI)
- National Register Historic Sites (VT) (NPS, 2014)
- Streams (VCGI)
- Waterbody (VCGI)
- Town Boundary (VCGI)
- 20 ft. Contours (VCGI)
- Railroad Lines (VTrans)

Roads (VTrans)

- US Highway
- State Highway
- Local Road

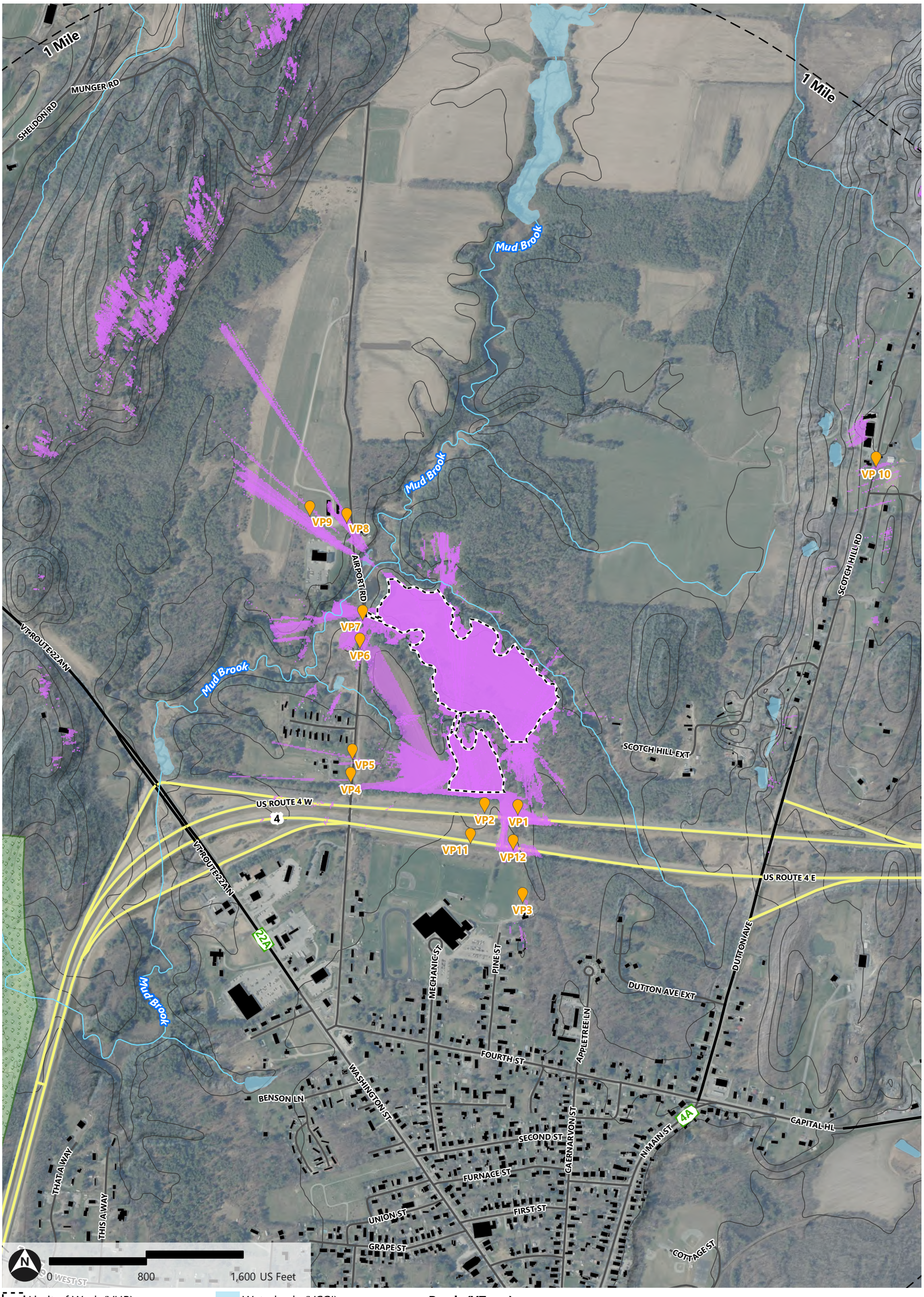
Source: Background imagery (collected in 2024) and hillshade elevation (collected in 2023) by VCGI; NPS - National Park Service; VCGI - Vermont Center for Geographic Information (hosted feature services); VTrans - Vermont Agency of Transportation (hosted feature services); VHB - 2026

Path: \\vhb\gis\proj\SBurlington\59030.00 Airport Road Solar\Project\Viewshed.aprx (Date: 3/16/2026)

Visibility Map - Focus Map

Airport Road Solar | Fair Haven, VT

March 16, 2026



Limit of Work (VHB)
Project Buffer - 1, 2, 3 - Mile (VHB)
Visibility Point (VHB)
Solar Array Viewshed (VHB)
Streams (VCGI)
Waterbody (VCGI)
Building Footprints (VCGI)
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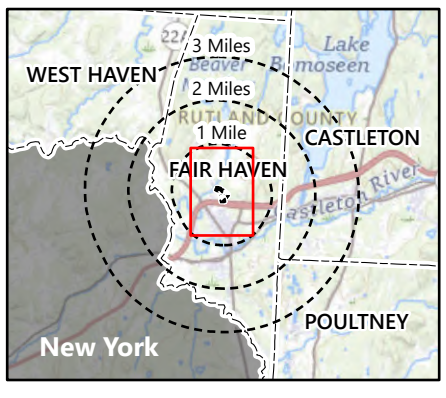
20 ft. Contours (VCGI)
Town Boundary (VCGI)

Roads (VTrans)
US Highway
State Highway
Local Road



Source: Background imagery (collected in 2024) and hillshade elevation (collected in 2023) by VCGI; VCGI - Vermont Center for Geographic Information (hosted feature services); VTrans - Vermont Agency of Transportation (hosted feature services); VHB - 2026

Path: \\vhb\gis\proj\SBurlington\59030.00 Airport Road Solar\Project\Viewshed.aprx (User: AColpin, Date: 3/16/2026)

Appendix B

Photographic Inventory of Existing Conditions

Viewpoint 1

Panorama view from Route 4W in the town of Fair Haven, panning from west to east. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 1

View from Route 4W approximately 310-feet south, looking north towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 2

Panorama view from Route 4W in the town of Fair Haven, panning from west to east. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 2

View from Route 4W approximately 260-feet south, looking north towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 3

Panorama view from Fair Haven Union High School (athletic fields) in the town of Fair Haven, panning from west to east. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 3

View from Fair Haven Union High School (athletic fields) approximately 0.20-miles south, looking north towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 4

Panorama view from Airport Road in the town of Fair Haven, panning from north to south. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 4

View from Airport Road approximately 885-feet west, looking east towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 5

Panorama view from Airport Road in the town of Fair Haven, panning from north to south. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 5

View from Airport Road approximately 888-feet west, looking east towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 6

Panorama view from Airport Road in the town of Fair Haven, panning from north to south. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 6

View from Airport Road approximately 434-feet southwest, looking northeast towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 7

Panorama view from Airport Road in the town of Fair Haven, panning from north to south. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 7

View from Airport Road approximately 310-feet west, looking east towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 8

Panorama view from Airport Road in the town of Fair Haven, panning from east to west. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 8

View from Airport Road approximately 652-feet northwest, looking southeast towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 9

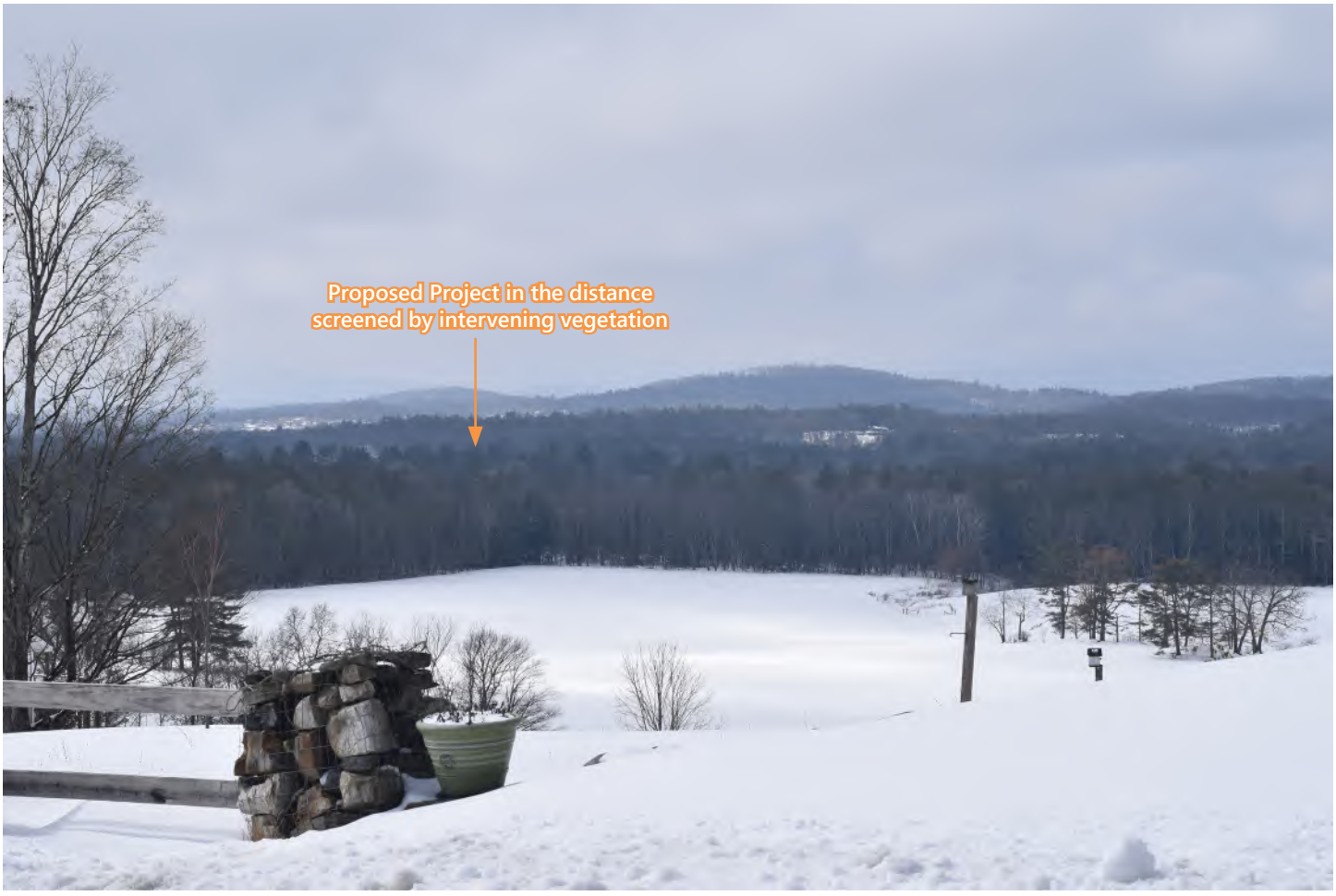
Panorama view from Town owned land (former Airport) in the town of Fair Haven, panning from east to west. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 9

View from Town owned land (former Airport), approximately 900-feet northwest looking southeast towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 10

Panorama view from Scotch Hill Road in the town of Fair Haven, panning from southeast to northwest. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.



Viewpoint 10

View from Scotch Hill Road, approximately 0.63-miles northeast looking southwest towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 11

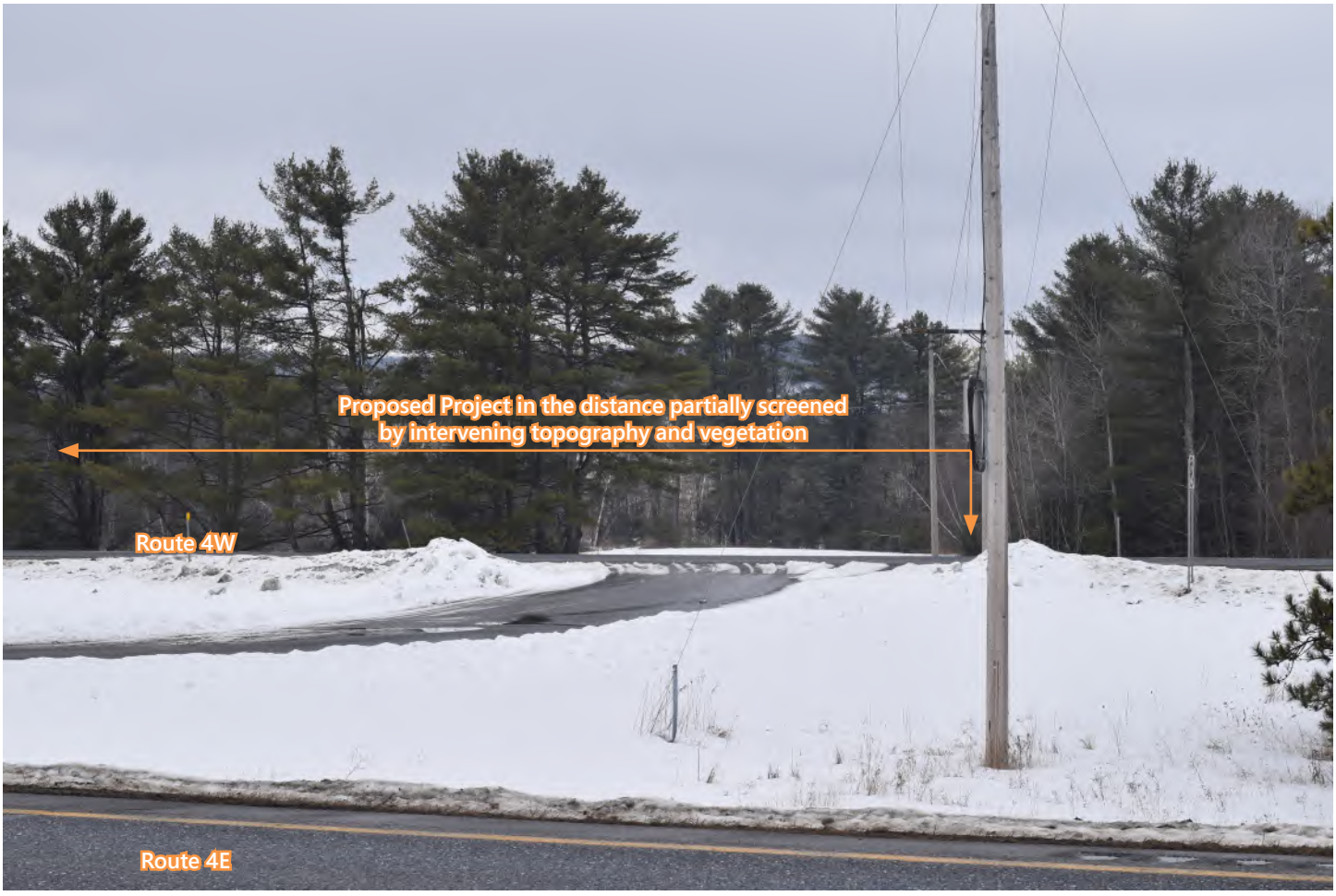
Panorama view from Route 4E in the town of Fair Haven, panning from west to east. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.

Viewpoint 11

View from Route 4E, approximately 512-feet south looking north towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Viewpoint 12

Panorama view from Route 4E in the town of Fair Haven, panning from west to east. The orange frame represents the extent of the 50mm (35mm equivalent) photograph below.



Viewpoint 12

View from Route 4E, approximately 565-feet south looking north towards the proposed Project. (50mm equivalent focal length). Captured March 4, 2026.

Appendix C

Landscape Mitigation Plans

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www.vhb.com
20 Winooski Falls Way
Suite 400B
Winooski, VT 05404
802.497.6100

0 50 100 200 Feet

Airport Road RD1 VT Solar, LLC

Airport Road
Fair Haven, VT

No.	Revision	Date	Approved

Designed by: mkw
Checked by: mkw

Issued for
Permit Review

Date
04/10/2026

Drawing Title
Overall Landscape Mitigation Plan

Drawing Number
LA-100

Sheet

Project Number
59030.00

Saved Friday, April 10, 2026 6:25:56 PM MWILLARD Plotted Tuesday, April 14, 2026 11:52:46 AM Michael Willard

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
EVERGREEN TREES				
JF	19	Juniperus chinensis 'Fairview'	Fairview Juniper	5 - 6` HT./ B&B
PG3	3	Picea glauca	White Spruce	6 - 8` HT./ B&B
PG2	4	Picea glauca	White Spruce	8 - 10` HT., B&B

PLANT SYMBOLS

EVERGREEN TREES

'PG3' and 'PG2' Picea glauca
White Spruce

'JF' Juniperus chinensis 'Fairview'
Fairview Juniper

Existing trees to remain

2 JF

3 JF

4 PG2

3 PG3

595'

Proposed perimeter fence

Proposed solar arrays

pp 10 6

0 10 20 40 Feet

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Suite 400B
Winooski, VT 05404
802.497.6100

Airport Road RD1 VT Solar, LLC

Airport Road
Fair Haven, VT

No.	Revision	Date	Approved

Designed by mkw
Checked by mkw

Issued for
Permit Review
Date
04/10/2026

Drawing Title
Landscape Mitigation Plan

Drawing Number
LA-101

Sheet

Project Number
59030.00

Saved Friday, April 10, 2026 6:23:56 PM MWILLARD Plotted Tuesday, April 14, 2026 11:53:20 AM Michael Willard

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
EVERGREEN TREES				
JF	19	Juniperus chinensis 'Fairview'	Fairview Juniper	5 - 6` HT./ B&B
PG3	3	Picea glauca	White Spruce	6 - 8` HT./ B&B
PG2	4	Picea glauca	White Spruce	8 - 10` HT., B&B

PLANT SYMBOLS

EVERGREEN TREES

'PG3' and 'PG2' Picea glauca
White Spruce

'JF' Juniperus chinensis 'Fairview'
Fairview Juniper

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Suite 400B
Winooski, VT 05404
802.497.6100

0 10 20 40 Feet

Airport Road RD1 VT Solar, LLC

Airport Road
Fair Haven, VT

No.	Revision	Date	Approved

Designed by: mkw
Checked by: mkw

Issued for
Permit Review
Date
04/10/2026

Drawing Title
Landscape Mitigation Plan

Drawing Number
LA-102

Sheet

Project Number
59030.00

Saved Friday, April 10, 2026 6:25:56 PM MWILLARD Plotted Tuesday, April 14, 2026 11:55:27 AM Michael Willard

Appendix D

Regional and Town Plan Excerpts

Rutland Regional Plan

Adopted June 19, 2018

Re-Adopted June 19, 2018

COMMISSIONERS OF THE RUTLAND REGIONAL PLANNING COMMISSION

RRPC Staff

Green Mountain College in Poultney

COVER DESIGNS

Regional & *Transportation Plan* Cover Design: Jorden Blucher, Salt Lake City, UT.

Regional Plan Cover Photo: Barbara Noyes Pulling, Staff

Regional Transportation Plan Cover art work: Rutland Historical Society, "Rutland Train Station, circa 1905." From a watercolor by E.E. Deane of the proposed north end wing of the station prepared for New York architects Reed and Stern, designers.

TOWN	COMMISSIONER
Benson	Craig Zalis
Brandon	Ann Scheck
Castleton	Valerie Waldron
Chittenden	Donnaleen Farwell
Clarendon	Carol Geery (Chair)
Danby	Annette Smith
Fair Haven	Lauritz Rasmussen
Hubbardton	Robert Gibbs
Ira	Tim Martin
Killington	Jim Haff
Middletown Springs	Thomas Hurcomb
Mendon	Larry Courcelle (Vice Chair)
Mount Holly	Dan Richardson
Mount Tabor	
Pawlet	Eric Mach
Pittsford	Patricia Lewis
Poultney	Tracy Carris
Proctor	Vincent Gatti
Rutland City	David Allaire
Rutland Town	Sherman Hunter
Shrewsbury	Mark Goodwin
Sudbury	Karen Sommerlad
Tinmouth	Robert Lloyd
Wallingford	Bruce Dobbins
Wells	Rebecca Dittmeir
West Haven	Christopher Hoyt (Secretary/Treasurer)
West Rutland	Denis Lincoln

AREA WIDE CITIZEN INTERESTS

Agriculture	Tara Kelly
Education	Chris Ettori
Regional Libraries	Abby Noland

EX-OFFICIO MEMBERS

REDC	Jamie Stewart
RRCC	Thomas Donahue
WIB	Nancy Burzon
RRTC	

Re-Adopted June 19, 2018

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Chapter 2: Regional Profile

INTRODUCTION

The Rutland Region's landscape is dominated by mountain ranges, lakes, rivers, mineral deposits, and historic settlement areas. Among the Region's key features are its numerous valley farms, forested hills, slate and marble quarries, hamlets, villages, and its urban center, Rutland. Development has generally occurred in the valleys between mountain ranges, along road, rail, and water transportation routes. The Rutland Region's identity is intricately tied to early settlement patterns and industry. In the 1800's, logging increased the amount of agricultural pastureland available, allowing for population growth. Then, near the end of the 19th century, marble, slate, forestry, and the railroad enabled the population of the Rutland Region to spread out into rural towns.

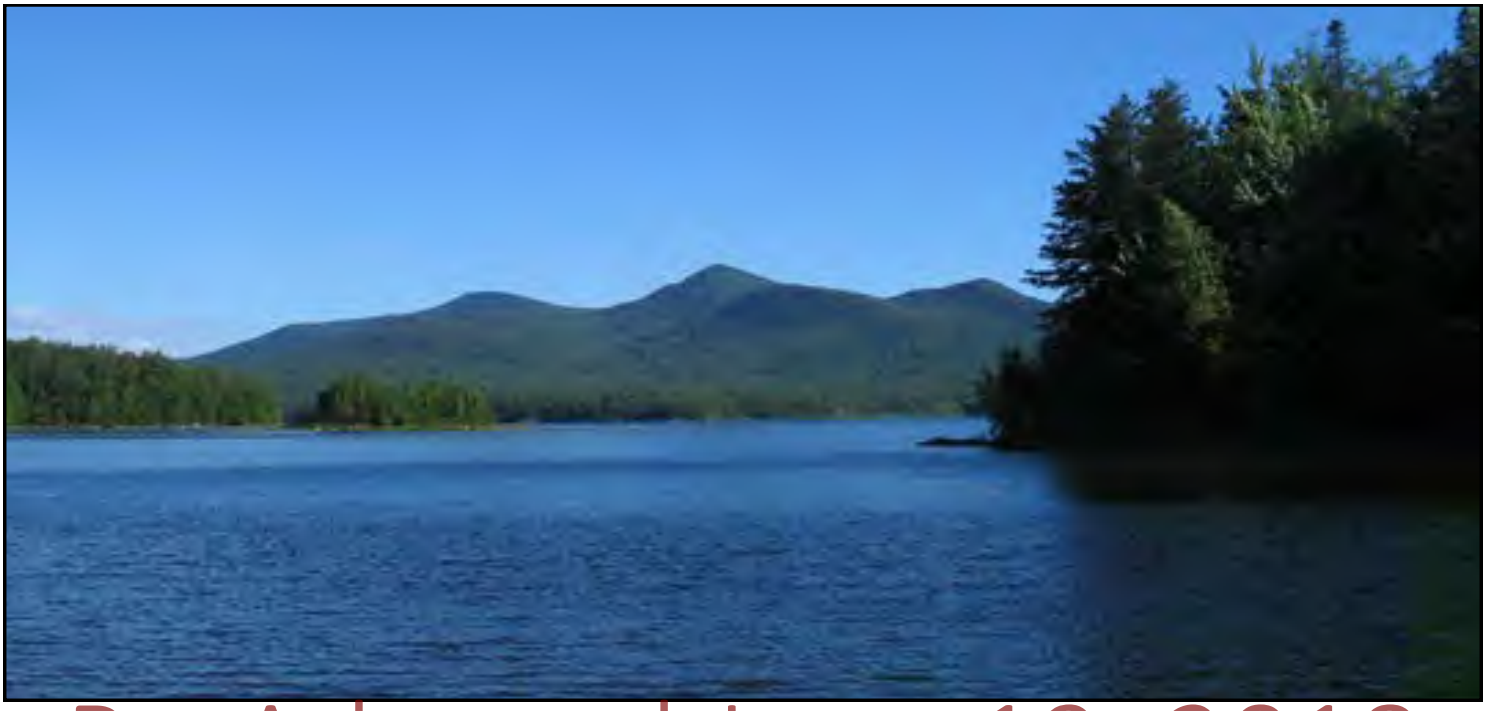
After the rapid population and industrial growth of the late 19th century, the Region saw an overall decline in industrial activity between 1910 and 1940, as many once thriving industrial sites were abandoned or downsized. Most of the industrial villages (with the exception of Rutland City) saw a sharp decline in population, some as great as 30%. With this decline in industry and population, many historic downtowns once supported by these activities fell into disrepair.

Renewed growth over the past half-century, including a boom in seasonal home production, increased use of motorized travel, and improvements in technology has begun to alter communities, as housing spreads outside traditional boundaries into agricultural and forest land. The transportation and industry related constraints that existed in the 19th and early 20th centuries are no longer insurmountable. Today, communities are not integrally tied to the use of available natural resources and waterways; commercial and industrial activities are not necessarily tied to a village location. Residents are not forced to live in densely populated centers; automobiles, buses, and highway networks allow for increasingly lengthy commutes.

Major transportation thoroughfares, including US Route 4 (the primary east-west route across southern Vermont), and US Route 7 (the primary north-south route along the western side of Vermont), as well

DEFINITIONS

Rutland Region and Rutland County: Rutland County is made up of 28 towns in southwestern Vermont. The Rutland Regional Planning Commission (RRPC) has responsibility for 27 of these towns—a jurisdiction referred to as the Rutland Region. Pittsfield, the 28th town, is a member of the Two Rivers-Ottaquechee Regional Planning Commission.



RRPC Staff

Chittenden Reservoir, a power-generation impoundment, serves mainly as a popular recreation site.

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others continue to act as centers of local activity.

According to the 2012 Census of Agriculture, the Region lost 22,083 acres of farmland to development from 2007 to 2012. This type of "green field" development outside village and urban centers threatens to undercut a significant element of the Region's identity. It should be noted, however, that recent trends indicate a resurgence in the number of active farms, many of which are small in scale. There are 246 small farms between 1 and 49 acres in size within the Rutland Region, making up more than a quarter of the farms in the Region.

The Region's many lakes and mountains have attracted significant development over the years. The shores of Lake Bomoseen and Lake Saint Catherine in the western part of the Region have been attractive sites for second homes since the late 1800s. In fact, all of the Region has seen an increase in second home growth outside of village centers since the 1980s. Killington, a very popular location for seasonal homes, has promoted service-based businesses and housing in surrounding towns.

POPULATION

Population Growth and Distribution

Founded in 1781, Rutland County's year-round population has grown in two significant bursts over the past 150 years. The first, between 1840 and 1890, coincided with the construction of the railroad and the emergence of marble and granite works and took the population from approximately 30,000 people in 1840 to 45,000 in 1890. The second, resulting in a population increase of 15,000, took place between 1960 and 1990, and was closely related to the overall growth of the state and the country in the post World War II era. Since 1990, population growth for the Region as a whole has been minimal, increasing by less than 2%, the second-lowest rate in the state. Growth rates and current populations, however, vary dramatically on a town-by-town basis.

Rutland City's population has been steadily declining for the past 30 years, while the population of our rural towns continues to increase steadily. Given the overall slow growth in the Region, this essentially equates to a shift in the population from the central city to the outer, more rural towns. Since 1970, virtually all of the population growth in the Region has taken place outside of Rutland City.

FAST FACT

Rutland County was home to 5787 seasonal homes in 2012, accounting for 17% of the total housing stock

Source: US Census Bureau, 2010

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BIOPHYSICAL REGIONS*: THE TACONIC MOUNTAINS

LOCATION:

The Taconic Mountains run north-south along the center of Rutland County, splitting the Vermont and Champlain Valleys. The range begins in Hubbardton and extends southwards to the Massachusetts border.

PRIMARY CHARACTERISTICS:

- Mountains of up to 3,500 feet in elevation with steep slopes intermixed with upland plateaus
- Valleys in Ira, Tinmouth and Middletown Springs provide room for settlement and highway access, as do the larger towns of Poultney, Fair Haven, and Wells.
- Several lakes immediately west of the mountains
- Traditional activities in the Taconics include agriculture, forestry, and marble extraction.

RRPC Staff

View of Dorset Peak from Danby Four Corners

GEOLOGY AND SOILS:

Metamorphosed mudstones make up the majority of the Taconics rocks. They include slate, phyllite, and schist. Bands of slate are home to some of the most colorful forms of the rock in the world. Limestone and marble deposits are present and occasionally visible in the Tinmouth Valley and in Dorset Mountain. Soils include lake and alluvial sediments as well as occasional gravel deposits.

WATER, VEGETATION, WILDLIFE:

- Several water courses, including the Clarendon River and Poultney River begin in the Taconic Mountain range and lead towards the lower Poultney River to the west of the Otter Creek to the east. The Tinmouth Channel, a Class I wetland lies in a large upland valley. The largest lake fully within Vermont's borders, Lake Bomoseen, is located west of the mountain range, as are Lake St. Catherine, Lake Hortonia, and several smaller lakes and ponds.
- Vegetation is a mix of active agricultural land, deciduous and coniferous forestland, and several rare plant colonies found in the Tinmouth Channel, cliff areas, and elsewhere.
- The Taconics are home to a significant bear corridor stretching from Dorset Mountain in Danby northwards, pockets of deer, and a wide range of smaller mammals, birds, vertebrates, and invertebrates.

SETTLED AREAS:

No large villages are located within the Taconics, due in large part to difficult access from larger population centers. Middletown Springs is the largest village in the area; its initial growth occurred thanks to a mineral spring discovered in the mid 19th century. Most other settlements in the Taconics— in Tinmouth, Ira, and Danby, are considered hamlets.

RRPC Staff

Lake St. Catherine in Wells

LAND USE CONSTRAINTS:

Severe slopes, poorly drained soils, and poor access have limited development throughout much of the Taconic Mountains.

*Information for this section is drawn in part from *Wetland, Woodland, Wildland: a Guide to Natural Communities of Vermont.* Elizabeth Thompson & Eric Sorenson, Vermont Department of Fish and Wildlife and The Nature Conservancy, 2000

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DEFINITIONS

DENSITY: The range, scale magnitude or concentration of activity affecting the land use, impacting traffic flow, commercialism, and overall land use.

CONNECTING THE PLAN

The Future Land Use Chapter is the culmination of the entire Regional Plan. For background, look at the regional Profile.

homes being built on rural sites outside of traditional village or hamlet areas.

- Suburban type development, with less vernacular architecture, is also becoming more prevalent. Prime agricultural land is being subdivided and used for residential purposes.

Some towns have also been instrumental in promoting new development and redevelopment within their center, through private initiatives and public incentives, like grant programs such as the village/town designation, transportation enhancement grants, and municipal planning grants.

At the heart of the land use issue is a concern that development patterns in the form of low density, auto-dependent, discontinuous strip development is eroding the character of the area.

It is expected, based on current development practices in the Rutland Region and across the country, that this trend will continue.

MEETING CURRENT AND FUTURE NEEDS

The challenges presented by current development are complex.

There is a link between land use and towns' regulatory and nonregulatory controls. The quality of these regulations and plans, consistency with the adjacent towns' plans and that of the *Regional Plan* provide the framework for future land use.

Broad goals and specific actions presented throughout the *Regional Plan* provide the Regional Planning Commission and all users of this document with tools to address the issues highlighted above from a variety of perspectives.

The goals for future land use are the foundation of the Region's planning and development program. They are intended

National Agricultural Imagery Program, 2003, printed from the RRPC's GIS system

This aerial photograph of Fair Haven's village illustrates a compact village surrounded by working farm and forestland

Re-Adopted June 19, 2018

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.

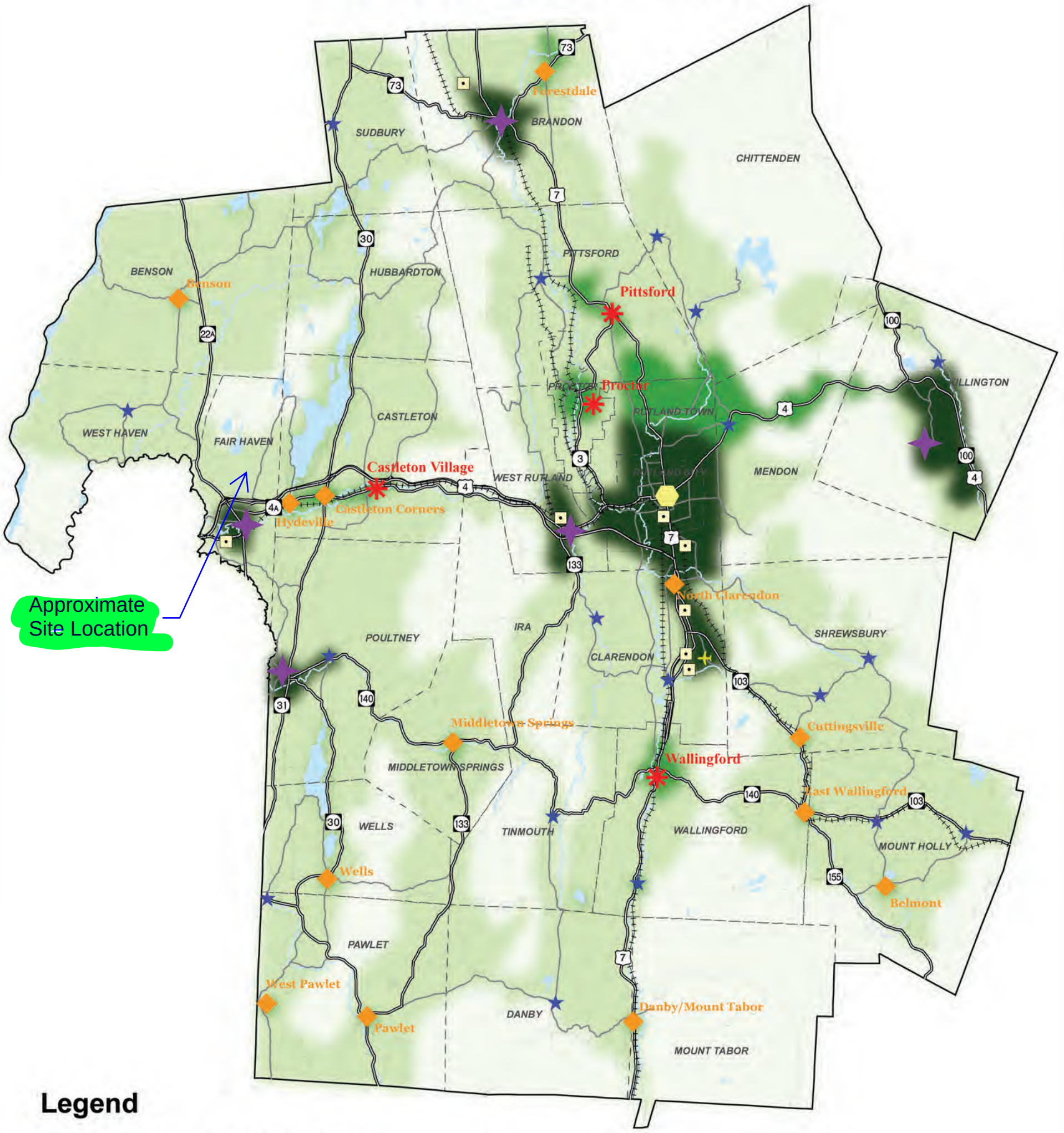
– US Census of Agriculture

RRPC Staff

Villages such as East Poultney are important features of the Region's landscape.

Re-Adopted June 19, 2018

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 24, 2006

Re-adopted June 19, 2018

Re-Adopted June 19, 2018

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 area 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

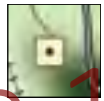
Areas shown as "high density" on the map are those most suitable for large-scale activity, within and in areas contiguous to the Region's downtowns, sub-regional centers, and industrial centers. They share a number of common features which make them attractive and suitable for these types of activities:

- 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

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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 Hortonia, 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.

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Chapter 12: Recreation

INTRODUCTION

Recreation is an important component of the lifestyle and livelihoods of many of the Region's residents. Much of the recreation that is available in the Region results from the geographic landscape—hiking, skiing, hunting, and snowmobiling in the Green Mountains, as well as fishing, boating, and swimming in the many lakes and rivers. The recreational opportunities in the Region are important to the health and welfare of both residents and visitors.

This chapter of the *Plan* examines the links between recreation, land use, economic development, transportation, and natural resources. The Recreation chapter also analyzes the provision and use of the Region's recreational resources for town officials, nonprofits, developers, and individuals.

CURRENT CONDITIONS

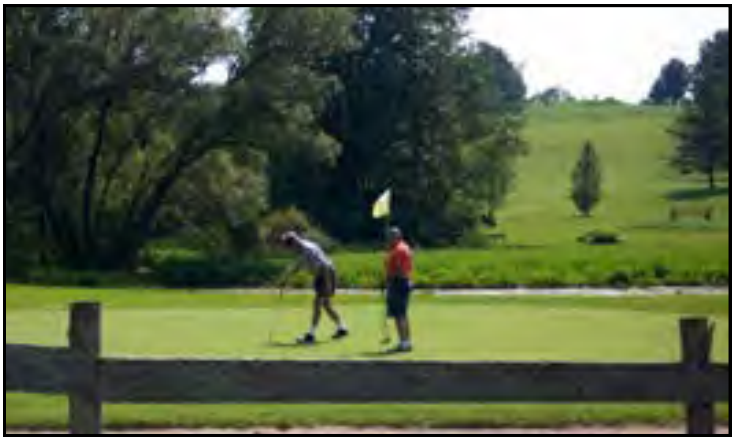
The provision of recreation throughout the Rutland Region varies depending on the size of the town and the role it plays in the Region.

The Vermont Statewide Comprehensive Outdoor Recreation Plan (SCORP) 2013-2017 noted that Vermonters participate in a wide range of outdoor recreational activities. In 2011, picnicking, swimming in lakes, and walking had the highest participation rates of all the activities included in the survey. The activities that were engaged in the most number of days of the year were walking, jogging/running, and riding ATVs. Some of the biggest changes in the outdoor resources and facilities available to Vermonters in recent years include:

- An increase in mountain bike trails, particularly trails managed by the Vermont Mountain Bike Association and Green Mountain National Forest

FAST FACT

Vermont is less than a day's drive from tens of millions of people and tourism in Vermont continues to grow. Many of these visitors come to Vermont specifically for recreational purposes.



RRPC Staff, Lucas Somers, RRPC Staff, www.killington.com (clockwise from top right)

The Rutland Region is home to a wide range of recreational opportunities: active, passive, individual, and family.

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CONNECTING THE PLAN

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 effects of development affect fish populations.

2,175-mile Appalachian National Scenic Trail. This trail is a 250,000-acre greenway extending from Maine to Georgia. The trail enters Rutland County in Mount Tabor, and makes its way north through the town of Killington. There are many access points to the trail within the Region.

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 Route 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 the spine of the Green Mountains. Other cross country ski trails are also maintained by private businesses, and can be found in the Green Mountain National Forest and the Coolidge State Forest.

The Vermont Association of Snow Travelers (VAST) is 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 private non-profit 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 approximately 20 miles long and connects West Pawlet and Granville, NY to Castleton through Poultney. This trail is used by pedestrians and bicyclists in the warmer months and by snowmobilers during the winter. Trail networks specifically designed for mountain biking exist in Pine Hill Park in Rutland City as well as at Killington Peak.

UNMET NEEDS

In the 2011 Outdoor Recreation Demand Survey, Vermonters thought that the following recreation facilities needed the most improvement:

- Facilities for people with disabilities
- Off-leash dog parks
- OHV/ATV trails and roads
- Marinas
- Fishing piers

The top five municipal priorities identified in the 2011 Outdoor Recreation Inventory were:

- Parks and open space
- Bike and pedestrian trails
- Baseball and softball fields
- Hiking trails
- Soccer fields

According to the 2013 Healthy Community Design survey conducted by the Rutland Area Prevention Coalition, many of the following resources are not available in rural communities:

- Off road bike and pedestrian paths
- Sidewalks adjacent to roads
- Skate parks
- Indoor and outdoor tracks
- Off-leash dog parks

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Adding even one of the above listed opportunities could have major impacts on recreation related health and wellness in the Region.

Recreational Planning Capacity and Resources

Low or non-existent recreation budgets in most towns limit the ability of municipalities to adequately plan and provide recreation options. Only half the towns in the Region have a recreation commission, recreation department, or recreation director, mainly because recreation is often viewed as a non-essential service for towns.

The capacity of most towns and groups is often insufficient 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. Towns with no recreation director or commission are at an even greater disadvantage and often depend on neighboring towns for 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 current facilities, 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. There is also an identified need for greater recreational opportunities for youth not interested in traditional sports leagues.

Access to Recreation Opportunities

Undeveloped 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 threatens 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 homeowner knowledge on the various forms of liability protection available.

Loss of access to water resources is also a concern, and towns with important water resources recognize the need to maintain

FAST FACT

The Rutland Area Physical Activity Coalition (RAPAC) is a group of businesses, organizations, and individuals that promote walking, cycling and other fun activities as a way to promote physical and mental well-being. This organization works to make Rutland county more pedestrian and bike friendly. RAPAC also develops trail systems for walking, running, and cycling.
www.walkbikerutland.org

Are these Facilities/Resources Available to the Public in your Town?

Answer Options	Yes	No
Baseball fields	16	5
Soccer fields	15	7
Tennis courts (indoor or outdoor)	8	15
Tennis courts (outdoor)	5	16
Skate parks (skate boards, roller skates, etc.)	2	20
Ice-skating rinks (indoor or outdoor)	5	16
Ice-skating rinks (outdoor)	3	18
Swimming pools (indoor or outdoor)	5	17
Tracks (indoor or outdoor)	5	17
Golf course	5	17
Other fields and rinks	5	14
Bike Path/Route	9	12
Public Parks-not including ball fields	14	8
Playgrounds	17	5
Community Gardens	5	16
Conservation Land	17	5
Hiking Trails	18	4
Beaches	4	18
Off-leash Dog Park	0	22

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season, and an increased unpredictability of precipitation events pose challenges to the health of Vermont's environment and residents, as well as to its economy. At the same time, these changes and challenges may provide opportunities for the expansion of warmer weather activities as colder weather activities become less viable.

Outdoor recreation activities associated with the winter season, which generate over $1 billion of revenue in the state annually, are likely to experience the most significant changes, with much less reliable snowpack and snowfall conditions anticipated, along with a substantial decrease in the length of the skiing, snowboarding, and snowmobiling seasons. By the end of the century, the number of snow-covered days in the Northeast is expected to decrease to as few as 27-40 days. Snowmobiling, cross-country skiing, snowshoeing, and sledding, which rely on natural snow cover, are the most vulnerable to these changes.

In addition, rising temperatures threaten to increase the frequency of severe heat waves, which pose challenges to summer recreation in a state widely appreciated for its mild summer temperatures. Improved preparedness, education, and warning systems will be essential to control the impact of extreme heat and unpredictable storm events on outdoor recreationists. Increasing temperatures will also encourage the expansion of pest species such as ticks and mosquitoes, which pose new and increasing human health threats such as West Nile Virus and Lyme disease

Aging Population

As the population of the Rutland Region ages, there will be a need for more recreational opportunities appropriate to the elderly. Some outdoor recreation resources of particular utility to older populations identified by Vermont's Area Councils on Aging include paved, smooth-surfaced walkways and bike paths, benches along paths and in parks, hand rails along paths and facilities where necessary, plowed paths for winter use, picnic shelters and park areas with vehicular access for individuals with mobility issues, opportunities for low impact activities such as bocce and croquet, adequate bathroom facilities and increased handicapped access at the state's fishing access sites. As the population ages, more of these facilities will become necessary to encourage physical health and activity in the elderly.

Open Space Development and Fragmentation

The development of the Region's open space poses a threat to many recreational opportunities as it fragments the natural landscape. Fragmentation can decrease access to recreational opportunities such

Vermont 2006 and 2011 Comparison
(Numbers in thousands. Expenditures in 2011 dollars)

	2006	2011	Percent change
Fishing			
Anglers in state	114	207	82
Days in state	1,665	2,215	33
In-state expenditures by U.S. anglers	$71,129	$131,317	85
State resident anglers	71	105	48
Total expenditures by state residents	$65,978	$68,612	4
Hunting			
Hunters in state	73	90	23
Days in state	1,111	1,584	43
In-state expenditures by U.S. hunters	$211,669	$292,328	38
State resident hunters	57	71	25
Total expenditures by state residents	$77,054	$323,047	319
Away-From-Home Wildlife Watching			
Participants in state	265	177	-33
Days in state	2,459	2,602	6
State resident participants	82	85	4
Around-The-Home Wildlife Watching			
Total participants	274	270	-1
Observers	193	204	6
Feeders	215	199	-7
Wildlife-Watching Expenditures			
In-state expenditures by U.S. wildlife watchers	$137,062	$288,507	110
Total expenditures by state residents	$102,287	$181,034	77

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as hiking, walking, and biking, and also makes it more difficult to reach these activities as there may be more roads and suburban developments in the way.

Private Land Access

Decreasing access to private land is also a threat to recreation, as many walking, hiking, and snowmobile trails cross over private land at some point. This is also a concern for hunting and fishing opportunities, as these sports sometimes necessitate crossing private land. However, many landowners are frightened of being held liable if someone is injured on their property, or do not want any of their property damaged, and therefore have a preference for not allowing people across.

Hunting and Fishing Participation

Hunting and fishing participation has varied slightly over the past several years in the Region, showing slight increases in participation from 2006 to 2011. This could be because of the popularity of the local foods movement, a desire to have control over a food source, or simply because more residents are enjoying the outdoors, particularly if they have children who hunt with them on youth weekends. However, with increasing fragmentation of land and decreasing private land access, it is unclear how this trend will continue.

Water Quality

Recreational enjoyment can be impaired by invasive species such as Eurasian watermilfoil in certain lakes. Many lake associations in the Rutland Region are actively involved in invasive species spread prevention or control projects. Visitors may encounter friendly "greeters" at public boat accesses, offering to inspect and remove any aquatic species from boats and trailers before launching, although their primary function is educating boaters about how they can prevent the spread of aquatic invasive species. Other pollutants, such as phosphorus, are causing frequent and severe algae blooms and impairing recreational opportunities across the state.

Public Trails Information

Although the locations and lengths of many of the public trails in the Rutland Region are generally available, there are some that are left off of lists or forgotten about. A current, updated, comprehensive listing and map of all of the Rutland Region's trails would be very beneficial to all of its residents, as many are unaware that hiking and walking trails exist near their homes.

Public Health and Quality of Life

The popularity of outdoor recreation, along with the land and waters that enable activities, has important implications for public health and quality of life in Vermont. From playgrounds, to fields for sports, to trails and walking paths, parks play an important role for recreation throughout the lives of Rutland residents, and public investment in these resources can contribute to stronger and healthier communities.

RUTLAND RPC GOALS

Given that financial resources for recreation are limited throughout the county, communities and organizations should sustain and expand recreation resources. Sharing of resources at the local, state, and federal level, and with the private sector, is equally important.

Local, regional, state and federal agencies in Vermont should coordinate growth management planning and policies to determine the best places for growth to occur. Public agencies should work with private businesses to ensure that recreational services complement and do not compete with each other.

Agencies, businesses and organizations providing recreation should work to share feedback from users with each other, so that services can be adjusted and coordinated to most effectively meet user

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needs.

Additional continued funding for public facilities upgrades and maintenance will be necessary. Smaller, more rural towns, should group resources when applying for recreation related grants and when forming recreation commissions. Community endowments and other private support is also an important component to municipal recreation programs.

Changes to the tax code at the state level that provide tax relief to landowners who allow recreational use of their property could also help keep access to privately owned recreation opportunities open.

Specific steps that can be taken to implement the solutions above:

- Create a Regional Open Space Plan.
- Create a Regional Bicycling Plan.
- Assist communities to conserve outdoor space and natural areas for outdoor recreation in or near areas of population concentrations. Help town officials to understand the tax and economic benefits and consequences of conserving land in their town.
- Ensure coordinated efforts between the Commission, other agencies, and area towns in planning for and managing outdoor recreation facilities and opportunities.
- Work with public transportation organizations to identify and serve recreation sites.
- Work with interested towns to modify subdivision regulations to require recreation facilities and easements as part of large subdivision applications.
- Support recreation infrastructure projects that are designed for multiple types of users.
- Work with municipalities to identify the location of future recreation areas on official maps.
- Assist towns in the creation of recreation commissions.
- Identify opportunities for resource sharing between towns for recreation provision.
- Support connectivity between trails throughout the Region.
- Work with town Conservation Commissions and Vermont Department of Forests, Parks and Recreation to increase local awareness of Municipal Forests and facilitate public usage.

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.

ADDITIONAL RESOURCES

- "Trails and Landowner Liability in Vermont" Handout, Vermont Trails and Greenways Council, June 2003.
- "2003 Rutland Region Recreation Report," Prepared by the Rutland Regional Planning Commission for the Vermont Department of Forests, Parks and Recreation, September 2003
- Vt. Stat. Ann. tit. 12, § 5791-5795 (1997)
- "Small Town Recreation Checklist," Vermont Recreation and Park Association
- Info on insurance extensions, municipal liability and their insurance policies etc.

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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.

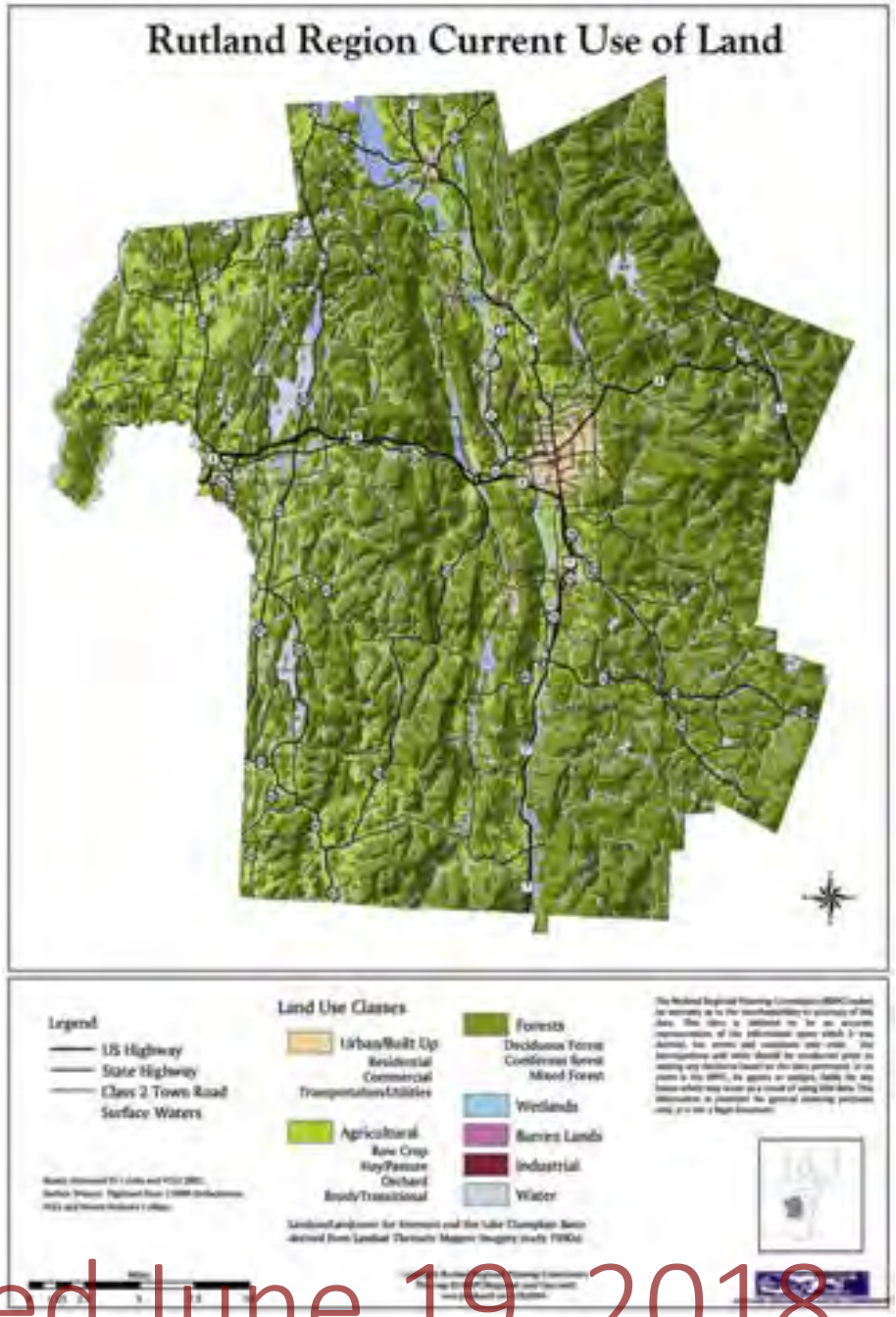
Forest Resources

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 people who come to view the foliage. Additionally, sugar maples are an important part of our forest resources as maple syrup (and associated products such as maple cream, maple sugar candy, etc.) are a regional

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.



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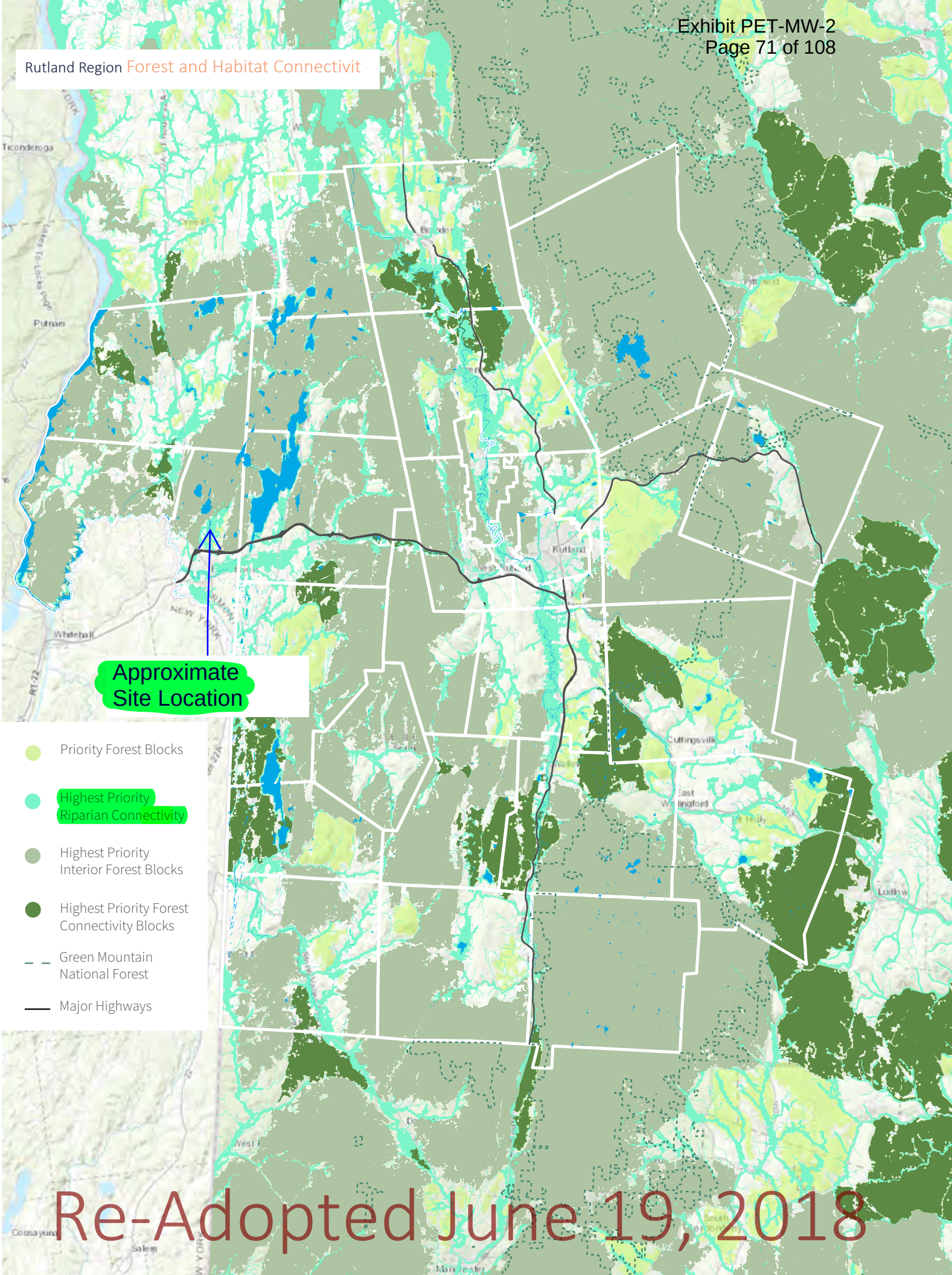
Rutland Region Forest and Habitat Connectivit
Approximate Site Location
Priority Forest Blocks
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Highest Priority Interior Forest Blocks
Highest Priority Forest Connectivity Blocks
Green Mountain National Forest
Major Highways
Ticonderoga
Putnam
Whitehall
Rutland
Cuttingsville
Ludlow
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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.

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.

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.

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)
- Poultney-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)

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CURRENT CONDITIONS

Scenic Resources

The Rutland Region has an abundance of highly scenic resources thanks to a landscape that is dominated by rugged mountain ranges, clear streams, and fertile valleys. Two mountain ranges transect the Region, the Green Mountains and the Taconic Mountains. Killington Peak in the Green Mountains is the second highest in the state.

Much of the Region's mountainous areas are part of the Green Mountain National Forest including the unique cliffs of the White Rocks National Recreation Area.

The Rutland Region also features picturesque lakes, ponds, wetlands, pools, waterfalls, and marshes. The largest lakes are Bomoseen, St. Catherine and Halfmoon. The major river is the Otter Creek which runs south to north through the Region. There is also Class II-III whitewater in a stretch of the Clarendon River and some thrilling falls at West Rutland.

Another distinguishing feature of the Region's scenery is its agricultural lands. Many of them occupy the valleys between the two mountain ranges while others cling to the Region's many hillsides.

These scenic resources have not only attracted numerous residents over time, they also are a major draw for visitors and a vital part of the Region's economic well-being.

Natural Habitat

There are eight *bioregions* in Vermont; these are areas with characteristic flora, fauna and environmental conditions that are delineated by natural rather than political borders. Five of these bioregions are in Rutland County, including parts of the Champlain Valley, Taconic Mountains, Valley of Vermont, Northern and Southern Green Mountain regions. Rutland's diverse environment allows for dramatic variability in climate, geology, topography, soils, and natural communities.

This high diversity of natural communities is reflected in our large number of wildlife species. Fishers, bobcats, coyotes, foxes, whitetail deer and bears are just some of the furbearing carnivores and omnivores that use our forests and waterways. Wild turkeys are increasingly found amidst our agricultural landscapes, while moose, large Rodentia (buck-toothed mammals), such as the Great American Beaver and the porcupine can be found in forests and marshlands. Songbirds and bats help keep summertime insects at bay, while raptors and other birds of prey, including hawks, eagles and owls, keep other prey populations in balance.

The Region's grasslands, marshlands, farmlands and forested lands promote significant avian diversity. Birding is a popular recreational hobby since the Region is also on a migratory flight path to Canada.

Rutland County also hosts the most diverse populations of Odonata (dragonflies and damselflies) in the state. This apparent abundance can also be attributed to a diversity of habitats as well as the extensive volunteer efforts to survey Odonata populations.

The diversity of natural communities in the Region has also led to a number of land conservation projects. Audubon Vermont, the Nature Conservancy, and the Vermont Land Trust are working with land owners and municipalities to protect the Rutland Region's natural heritage.

Rare, Threatened and Endangered Species

A rare species is one that has only a few populations and thus faces threats to its continued existence. Threats include loss of habitat, harassment, and collection.

CONNECTING THE PLAN

Vermont Planning and Development Act, Ch. 117 § 4302:

"To identify, protect, and preserve important natural and historic features of the Vermont landscape.

To maintain and improve the quality of air, water, wildlife, and land resources."

Municipal Development Plan, Ch. 117 § 4382:

The Plan for a municipality shall include:

"A statement of policies on the preservation of rare and irreplaceable natural areas, scenic and historic features and resources."

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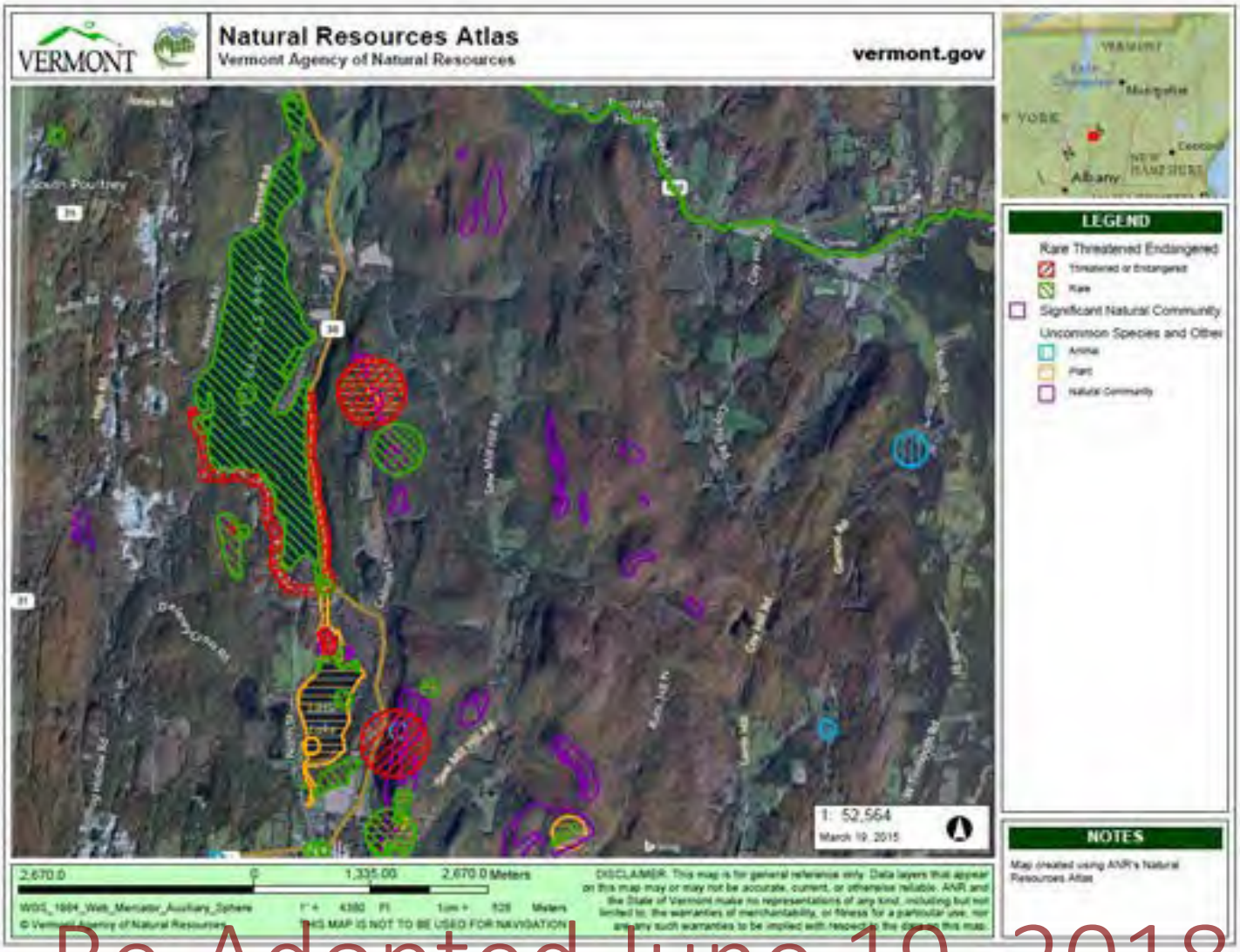
The Vermont Fish and Wildlife Department has a ranking system of rare species which ranges from S1 (very rare) to S5 (common and widespread). Species acquire these ranks based on population sizes and the degree to which the populations are threatened.

Threatened species are defined by state law as a species whose numbers are significantly declining because of loss of habitat or human disturbance, and unless protected will become an endangered species.

Endangered species are defined as species whose continued existence as a viable component of the state's wild fauna or flora is in jeopardy. Once identified, these species are protected under the Vermont Endangered Species Law (10 V.S.A. Chap. 123).

The Rutland Region is home to a number of species listed as rare, threatened, or endangered by the state. The timber rattlesnake can be found in only twelve Vermont towns, six of which are in Rutland County: West Haven, Fair Haven, Benson, Castleton, Hubbardton, and West Rutland. The same talus slopes in West Haven that house these rare snakes also are home to the 5-Lined Skink, which is the only lizard species native to Vermont. The Agency of Natural Resources provides maps of rare, threatened and endangered species locations. The Vermont Fish and Wildlife Department is responsible for updating the list of rare, threatened and endangered species in



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Case Study: Japanese Knotweed

Originally imported from Asia to North America as ornamentals and for the use in stabilizing disturbed sites, the Japanese Knotweed plagues the soils along roadsides and riverbanks. This species can grow to 10 feet tall, forms a dense hedge and blooms attractive flowers in the spring. Knotweed occurs in a wide variety of habitats, but is most commonly found in areas with full sunlight with disturbed soil (rivers, stream banks, near roads). Japanese knotweed grows in the early spring, preventing other species from establishing. This reduces the species diversity in the wildlife habitat.

A small patch can be controlled by placing black plastic over the plant topped with heavy materials like stones. Other options are to cut the plant at least three times per growing season until the rhizomes die back (can take up to five summers). Or, stems can be cut back in August and a solution of 25% glyphosate can be put into the stem (VTFW).

FAST FACT

Effective July 1, 2014, the Vermont Legislature passed the **Shoreland Protection Act** which regulates shoreland development within 250 feet of a lake's mean water level for all lakes greater than 10 acres in size.

The intent of the Act is to prevent degradation of water quality in lakes, preserve habitat and natural stability of shorelines, and maintain the economic benefits of lakes and their shorelands.

In addition, wind and solar energy generation facilities can also lead to habitat fragmentation.

Shoreland Development

Shoreline development regulations will protect important wetland, marshland, and riparian habitat, and an increase of water recreation could continue the promulgation of aquatic nuisance species.

Nuisance Species

Nuisance species will continue to spread northward as the climate shifts, causing an imbalance in local ecosystems and displacing native species of plants and animals.

All of these changes will have impacts on our natural heritage including loss of diversity, destruction of habitat, habitat fragmentation, degradation of water quality and aquatic habitat, and could lead to the loss of appreciation for the these less obvious features of our environment.

RUTLAND RPC GOALS

New Development

Development that adversely affects wildlife and natural habitats in Low Density Development Areas and Development-Constrained Areas (such as conservation areas) as shown on the Future Use of Land map shall be avoided.

No land development should be promoted where the effect of the proposed use unnecessarily impacts highly scenic landscapes, ecologically sensitive lands, or irreplaceable natural resources. To do so would be incompatible with land use policies contained in the *Regional Plan*.

Since new development has the potential to fragment natural habitat, all developments must:

- Not impinge on wetlands, other natural resources, including habitat;
- Be of a type or nature that is appropriate for location within regional growth areas;

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- Not unnecessarily fragment large tracts of forest or agricultural lands;
- Be of a design that is compatible with surrounding land uses;
- Avoid floodplains or other hazardous areas.

To minimize potential conflicts between wildlife resources and land development:

- Cluster or concentrate the density of land use within some sections of the parcel or involved lands in order to maintain or preserve significant habitats in large and undisturbed tracts;
- Design projects in such a manner as to avoid fragmentation of large forest tracts to maintain natural habitats by a grant of easement or covenant for protected areas
- Protect significant deer wintering areas (those identified and mapped by the State of Vermont) from residential development and other uses that threaten the ability of the habitat to support deer. Commercial, residential, and industrial developments are discouraged within deer wintering areas. Certain types of development may be permitted adjacent to deer wintering areas on finding by Vermont Department of Fish and Wildlife, or other wildlife experts, so that the integrity of the area will not be unduly disturbed.
- Encourage local, state and federal efforts to inventory and, where necessary, protect these resources for educational, recreational, and other purposes. Protection of threatened or endangered species are matters of public interest.
- In areas identified and mapped by the Vermont Department of Fish and Wildlife as containing necessary wildlife habitat, land development and subdivision planning shall utilize Department guidelines for protection of threatened or endangered species.

Energy Development

Assist municipalities in identifying areas for renewable energy development so as to not adversely impact wildlife and natural habitats.

Promote Smart Growth

To help reduce sprawl and the loss of diversity and habitat fragmentation, promote growth centers, downtowns and village designation in order to create concentrated, mixed-use development and in-fill of existing developed areas. Such planning will help preserve natural resources in outlying parts of a town.

- Do not support new development that unnecessarily destroys wildlife and natural habitats.

Utilize Regulatory Remedies

Assist municipalities to create bylaws, regulations and a zoning process to protect natural resources, including:

- In areas that are limited in water resources, critical wildlife habitat and other resources can be identified as districts where residential or commercial development is not appropriate.
- Create overlay districts to protect natural resources. Use overlay districts to delineate setbacks between development and wetlands, significant wildlife habitat, habitat for rare, threatened or endangered species, and unique natural environments.
- Create riparian protection zones or ridgeline districts to protect habitat and water quality.
- Use Site Plan Review and Conditional Use Review to ensure natural resource protection in districts that allow development.
- Promote Transfer of Development Rights (TDR) as a zoning tool to

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regulate development in identified areas for conservation. Once identified, a municipality can accept applications for zoning permits from areas it wants less development ("sending areas") to places the community would like to see more development ("receiving areas").

- Create the development of subdivision bylaws that include criteria for protecting natural resources.

Protect Natural Resources in the Municipal Plan

Assist municipalities to use municipal plans as the basis for regulation that protects natural resources. This can be done not only in required sections on the preservation of rare and irreplaceable natural areas and resources, transportation and land use, but elsewhere in the plan as well. Examples include using the plan's land use map to show forest or agricultural areas that contain natural resources the community wants to protect, while residential, commercial and industrial areas could be depicted in areas that would have the least detrimental effect on natural resources. Adopt a conservation plan within the municipal plan.

Create Municipal Conservation Commissions

Create a local conservation commission to inventory and study local natural resources, to recommend land parcels for town purchase, or administer conservation lands.

Acquire Land and Conservation Easements

Assist municipalities to acquire land and maintain a conservation fund to support land purchases and to utilize conservation easements to protect important lands from development while continuing to keep them part of a working landscape.

Manage Town Highways

Create major highway/road arteries away from natural resource areas, and discontinue roads in sensitive areas and turn them into recreational trails instead.

Road Design

Work with municipalities to design and re-design roads to facilitate wildlife movement with the use of wildlife overpasses, underpasses and crossings.

Create Municipal Forests

Work with municipalities to acquire land that could be used as municipal forest to maintain wildlife habitat, protect water supplies, and provide opportunities for conservation education.

Coordinate Efforts with Conservation Groups

Meet regularly with wildlife and natural community advocates, including Natural Resources Conservation Commissions and Districts and representatives of ANR, Vermont Land Trust and the Nature Conservancy, to determine actions to be taken to best address issues of local and regional significance, and to prioritize biannual initiatives.

Include New York State in Conservation Efforts

Establish a partnership with neighboring counties in New York to identify and protect shared natural assets.

Utilize Citizen Scientists for Data Collection on Habitats

Consider organizing local citizen scientists groups or coordinating with xisting ones, such as Keeping Track, the Vermont Institute of Natural Science (VINS), and Vermont Audubon to collect data and identify local areas in need of protection.

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Energy

The Rutland Regional Planning Commission Energy Plan conducts comprehensive energy planning at a regional level while also achieving state and local energy goals – most importantly, the goal to have renewable energy sources meet 90% of the state's total energy needs by 2050. The plan addresses three crucial issues for the people of the Rutland Region: energy security, environmental protection, and economic needs and opportunities.

Goals of this Plan

Maintaining land use development patterns supported by other chapters of the Rutland Regional Plan and 24 V.S.A. 4302.

Collaboration with Vermont Energy Investment Corporation (VEIC) to create a regional energy model that identifies targets for energy conservation and renewable energy generation.

Creation of specific strategies to help the region achieve state energy goals.

Creation of regional maps prioritizing locations for the development of future renewable energy generation facilities in the region.

Providing energy planning guidance to Rutland Region municipalities.

24 V.S.A. § 4348a(3) requires that Regional Plans contain:
An energy element, which may include an analysis of resources, needs, scarcities, costs, and problems within the region across all energy sectors, including electric, thermal and transportation; a statement of policy on the conservation and efficient use of energy and the development and siting of renewable energy resources; a statement of policy on patterns and densities of land use likely to result in conservation of energy; and an identification of potential areas for the development and siting of renewable energy resources and areas that are unsuitable for siting those resources or particular categories or sizes of those resources.

Vermont State Energy Goals

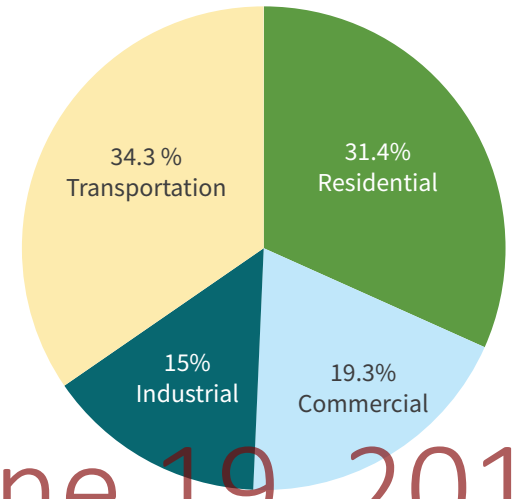
In 2011, the State of Vermont adopted a comprehensive energy plan (CEP) for Vermont to meet 90% of its total energy needs through renewable energy sources by 2050. The CEP was updated in 2016. The plan, developed by the Public Service Department (PSD), called for reducing energy consumption per capita, targets for meeting the remaining energy need from renewables, and renewable sector goals. The CEP was updated in 2016 although the goals were not altered.

Additional energy goals have also been set for Vermont's public utilitie for renewable energy generation, distributed generation, and ossil fuel use through Act 56 (the Vermont Renewable Energy Standard). The Energy Generation Siting Policy Commission (2013) and the Solar Siting Task Force (2015) each called for energy planning to be integrated with land use planning. Many of the components of municipal and regional planning are intertwined with energy issues, such as land use, economic development, transportation, housing, and natural resources.

Because of the statutory energy requirements, the RRPC has identifie regional goals and strategies for energy conservation and renewable energy generation that will support the a ainment of Vermont's energy goals.

RRPC collaborated with the Vermont Energy Investment Corporation (VEIC) to create a regional energy model to identi y targets for energy conservation and renewable energy generation. VEIC used the Long-range Energy Alternati es Planning (LEAP) modeling system to create statewide and regional models that provide possible pathways of accomplishing the state's goal of meeting 90% of its total energy demand through renewable energy resources by 2050 and analyze the potential energy demand within the region. The models also analyze regional energy generation needs

Vermont Energy Consumptio by End-use Sector



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Energy Security

Rutland Region is reliant upon other states and countries for a large portion of its energy needs. Vermont imports all of the gasoline, diesel fuels, and heating oil required for operating vehicles and heating homes and other buildings. Vermont currently obtains much of its electricity from hydroelectric facilities located out of state, primarily Quebec. Although these sources of electricity currently provide the region with low cost, renewable energy, the anticip ted construction of high-capacity transmission lines from Quebec to southern New England may create increased competitio for electricity between Vermont and other, faster growing states that also are seeking electricity from renewable sources. To address this issue, a state statute (10 V.S.A 580(a)) has set a goal that by 2050, 25% of the energy consumed within the state also will be produced in the state by renewable generation.

Environmental Protectio

Environmental quality in Vermont has degraded over the past few centuries due to fossil fuel use. While these impacts were imperceptible at fi st, it's clear to many Vermonters now that climate change is having a negati e impact on the environment.

The changing composition of the state's and region's forests may have an impact on the forest products and maple sugaring industries. Polluti n from coal-burning power plants in the Midwest continues to cause acid rain, which also threatens Vermont forests. In addition, higher temperatures threaten the future of the ski industry in the state as well as the industries that rely on skiing and tourism. More frequent and substanti l precipitation threatens public infrastructure – bridges, culverts, etc. – and financially burdens local governments' abilities o pay for repair or replacement.

Economic Needs and Opportunitie

In 2016, RRPC estim ted that regional residents spend approximately $68 million a year on gasoline for transportation (not including local businesses' expenses). While some of this money is retained by local distributors, much of it goes outside the state and the even the country. It's a similar situation for other fossil fuel-related expenses in the region, like home heating fuel. If the region was able to retain even a fraction of the money spent each year on fossil fuel-related expenditures, the result would be a tremendous financial gain for residents and businesses of the Rutland Region. As it is, every year hundreds of residents of the region require government assistance to pay for heating osts.

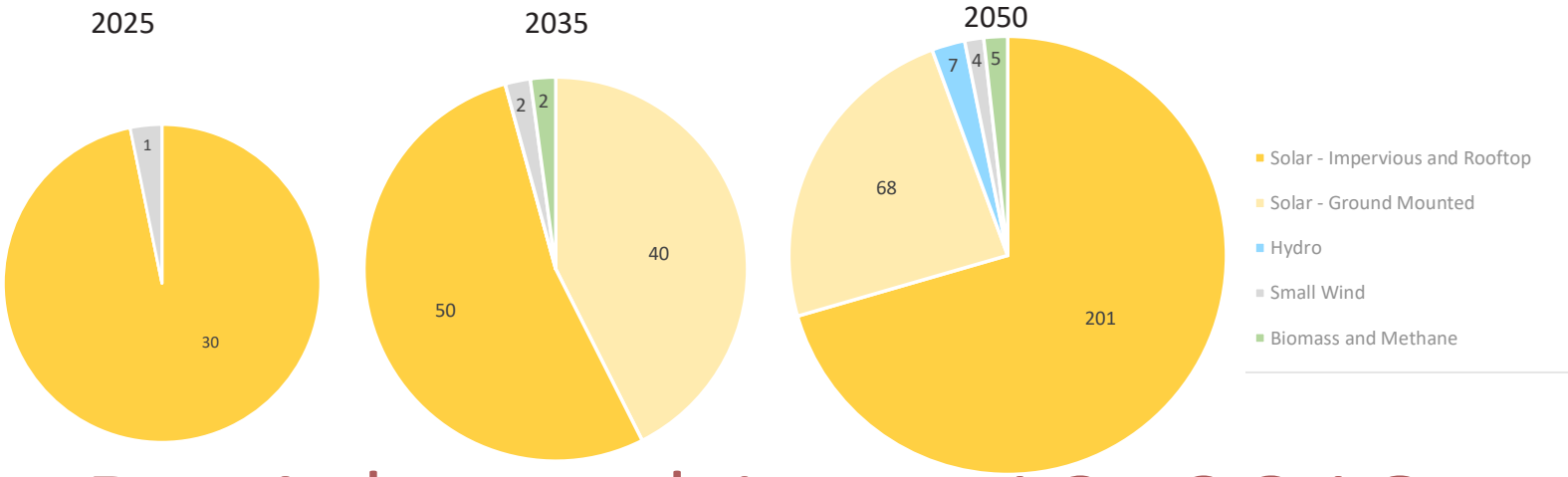
It is RRPC's goal to have the economic impacts from energy-related decisions in the region – both pro and con – spread as equally as possible across the region. This plan remains focused on accomplishing goals that will positi ely a ect the long-term environmental and economic sustainability of the Rutland Region.

Growing Importance of Electricity

Even though the growth of electric demand has slowed in recent years due to a variety of aggressive energy conservation programs, the overall demand for electricity is expected to increase steadily as the energy it carries replaces fossil fuels for transportation and space heating and cooling needs.

Electricity provides a viable path toward meeting the state's energy goals in several key areas. For example, electrifi ation of passenger vehicles would dramati ally reduce energy use in the transportation sector through use of more effici t drive systems, and the electrical energy that is used could be obtained from renewable sources. Similarly, the easiest transformation in space heating and cooling o en is to weatherize the structure and install highly effici t

Regional Renewable Energy Targets in MW



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Regional Targets For Conservation and Generatio

This plan's focus is on settin targets for fuel switching, conservation and generatio of energy across the region. To create targets for conservation and generation, RRPC worked with the Vermont Energy Investment Corporation (VEIC). The VEIC staff used LEAP (Long-range Energy Alternati es Planning) soft are to create a model of the demand and supply of energy in Vermont and the region. The model created in LEAP (Long-range Energy Alternati es Planning) contains two scenarios, both based on projected future energy demand. The fi st is the "reference scenario."

This scenario reflects current energy usage and generation trends. The second scenario is designed to achieve the goal of meeting 90% of Vermont's total energy demand with renewable sources. This scenario, called the "90x50 VEIC scenario," utili es data from the Vermont Total Energy Study (TES)- information from Vermont public utilities commi ed electricity supply and from stakeholder input - and Utility Facts 2013 - both produced by the Vermont Public Service Department.

The di erence in total energy demand between the "reference scenario" and the "90 x 50 VEIC scenario" is important. This di erence, or "avoidance," estim tes the amount of total energy demand that will need to be eliminated through conserva on e orts to ensure that the state and region's energy goals are met by 2050 and needs to be planned for by the region.

Model Inputs and Assumption

Data sources used to compile the model are primarily drawn from the Public Service Department's Utility Facts 2013 and data available from the Energy Information Administration (EIA), a U.S. Department of Energy entity that keeps official federal energy stati tics. Projections used in the model came from the Vermont TES. In the model, the number of persons per household is projected to decrease from 2.4 in 2010 to 2.17 in 2050.

Data and projections for commercial energy demand are derived from commercial building area (the "driver") and extracted from inputs in the TES. Industrial energy use is entered into the model using actual totals without a "driver" specified. Commercial and industrial demand calculated at the state level is then allocated to the regions by service-providing and goods-producing North American Industry Classifi ation ystem (NAICS) codes respecti ely.

Transportation energy use in the model is based on projections of county totals of vehicle miles traveled (VMT) available from VTrans. While VMT has risen through most of American history, VMT in Vermont peaked in 2006 and has been declining slightly ever since. Because of this and Vermont's e orts to concentrate development and promote public transit and car sharing, the model assumes that VMT in the state and the Rutland Region will remain fl t or decline despite growth in population and economic activity (statewide).

The 90x50 VEIC scenario also assumes that diesel used in heavy duty vehicles is replaced with biodiesel and that electricity will replace gasoline in passenger (light duty) vehicles. It is also projected that electricity will be the source of an increasing amount of energy used for space heatin , primarily because of the use of cold climate heat pumps.

More information regarding the Total Energy Study and Utility Facts can be found on the Public Service Department Website

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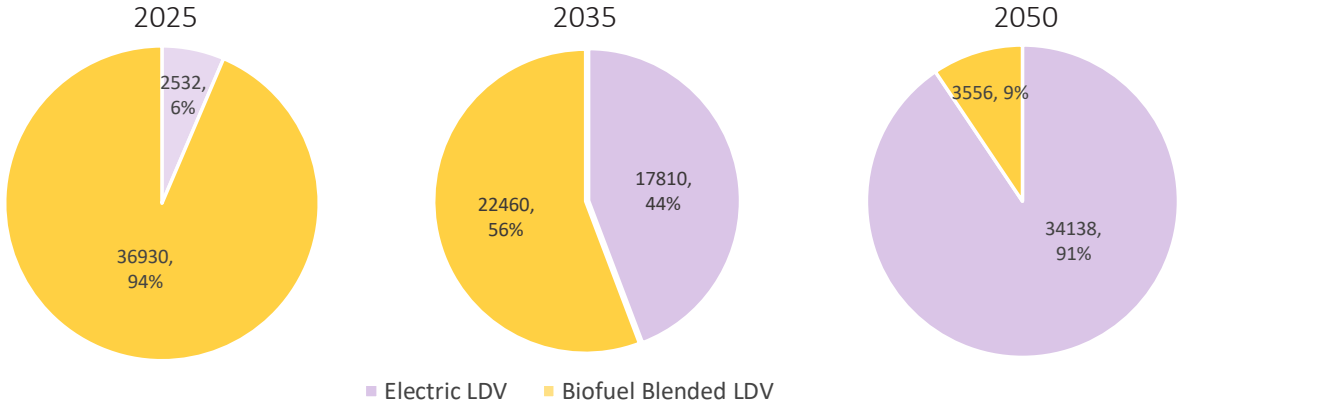
Targets for Fuel Switching with Light Duty Vehicle (LDV) Transportation in the Rutland egion



Displayed as number and percent of LDVs to have the fuel switched

Meanwhile, in the LEAP 90x50 scenario, Rutland Region heavy duty vehicles between 2015 and 2050 are anticip ted to transition from fossil fuels, primarily diesel fuels, to renewable fuels, such as biodiesel. The amount of energy consumption for diesel falls by 2050 and the use of biodiesel increases. In the reference (or business-as-usual) scenario, diesel use in heavy duty vehicles stays constant and the very limited use of biodiesel decreases even more from 9 to 2 thousand million BTUs. The RRPC recognized that the heavy-duty transportation sector is one it has little if any control over. However, municipalitie are encouraged to switch to renewable energy-powered equipment when feasible.

Electricity and Electrical Generatio

With the widespread shift from fossil fuels to renewable energy sources, consumption of some fuel sources such as solar and wood increase while most other types of fuels decline in use. The use of electricity demand in the region, however, remains relati ely the same in the LEAP 20x50 scenario due to electrifi ation of heating and some transportation. In terms of total demand in BTUs, the demand for electricity decreases by just 2% between 2015 and 2050; dropping from approximately 1,913 thousand million BTUs in 2015 to 1,903 thousand million BTUs in 2050.

The LEAP model provides some pathways for reaching the state and regional 90x50 goals. The targets developed by VEIC show the region meeting its generation targets primarily through the development of additional in-state solar and wind generation. Regionally, the targets call for the development of up to 174 MW of new solar generation and up to 50 MW of new wind generation, and 7 MW of new hydro generation.

The new solar and wind generation targets are based on the estim ted needs per the LEAP model to reach the region's energy use in 2050. The generation targets call for only the addition of renewable energy sources in the region and do not include using biomass as a source of electric generation.

The hydro generation target of about 7 MW in the region is based on a study wri en by Community Hydro, a hydropower advocacy organization. The study looks at generation potential at existing dams of all sizes in the region that could be retrofi ed to produce electricity or more electricity. The model assumes that hydroelectric generation from Hydro-Québec stays relati ely constant. Nuclear electricity production reflects the closure of the Vermont Yankee facility and no new nuclear generation in Vermont, while at the same time, projects a relati ely constant rate of increased production out-of-state, mostly from the Seabrook Station in N w Hampshire.

On the facing page are the region's 2050 targets in MWs and MWhs by renewable: solar, small and commercial-scale wind, hydroelectric and biomass. MWhs are energy generated over time and are determined by the capacity factor of each renewable. For instance, given the limitations on solar generation due to clouds and nighttim darkness, solar has a much lower capacity factor than biomass and methane generation.

The chart shows how these generation targets can be met by each of the region's 27 municipalities. It is a calculation of each municipality's generation potential in MW and is a comparison with the acreage available for prime and secondary solar and wind with total acreage. Clearly, each municipality has more than enough land to meet its targets. This is especially true since the region anticip tes that small-scale solar and wind are going to dominate the region's renewable generation in the coming decades and will require even less acreage than indicated in these data. Even Proctor, which has the least acreage suitable for solar and wind in the region, has double the acres it needs to meet its target- 1,201 acres suitable for solar and wind compared to a maximum of 630 acres needed to meet its target of 10.5 MW (using the most conservati e method for determining

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Energy Resource Maps

The Vermont Public Utility Commission (PUC) has jurisdiction over all energy generation facilities that are part of the public electrical grid.

The RRPC has developed renewable energy resource maps for four renewable energy resources: solar, wind, hydro and biomass, existi g renewable energy generation, and regional constraints and preferred areas. Through the creation of these regional energy resource maps, the RRPC is planning for the development of additional renewable generation facilities in the region (using the LEAP model targets as the basis) and providing clarity regarding regional land conservation and specific policies for the siting of renewable energy faciliti s. **The RRPC has excluded industrial wind facilities from planning for regional energy generation.**

The fundamental element of the energy resource maps is the natural existence of potential for each of the energy resources. The analyses used to produce maps of wind and solar resource areas were done by the Vermont Center for Geographic Information. These are the same analyses featured on the Community Energy Dashboard.

Prime Resource Areas

These are areas with high resource potential and no identified onstraints (Known or Possible).

Secondary Resource Areas

These are areas with high resource potential and no Known Constraints, but where at least one Possible Constraint exists.

Mapped Renewable Resource Areas

Solar Resource Area

These are areas where there is likely to be suffici t solar radiation for solar energy development. The GIS-based analysis factored in direction, slope and location of land to maps areas with high solar radiation po ential.

RRPC is projecting to help meet its renewable energy generation target with mostly non-utility and non-Standard O er Program scale solar (≤ 500 kW). Because of the rapid pace of technological advances in the field of PV solar, it is expected that residential, commercial and industrial scale projects will dominate the region's solar generation by 2050. For that reason, in addition to mapping solar resources for the town (as described above), RRPC included impervious areas in the regional Preferred Locations map which included parking lots roo ops, sand and gravel pits, disturbed land (under construction), industrial areas, quarries, farm complexes, transfer stations, and junk ards. The mapping analysis showed that there are 14,373 acres of impervious surfaces in the region, which does not include residential roo ops. This should be more than enough area to accommodate small scale solar and meet the region's renewable energy generation target. The impervious data layer available from VCGI is a subset of the National Land Cover Database 2001 and includes roo ops and paved areas.

Wind Resource Area

These are areas where there is likely to be suffici t wind at a specified height for industrial scale wind energy development. The analysis used digital wind speed at various heights (30, 50, and 70 meters) and identifie areas with the highest wind speeds at each of those heights.

The RRPC has decided not to include industrial scale wind in its renewable energy generation targets, so it is looking at areas other than the wind potential areas identifie that can accommodate residential scale (less than or equal to 10kW) and commercial scale turbines or windmills (less than or equal to 100 kW). Due to anticip ted technological advances, residential and commercial scale wind generation is projected to be feasible throughout most of the region at lower eleva ons in High and Medium Density Areas, as shown on the RRPC Future Land Use Map.

Hydro Resource Area

These are areas most feasible according to the natural conditions. Existin , powered and existing non-powered dam sites where a generator could be installed or existing hydropower sites where equipment could be upgraded or expanded to provide additional generation (with potential production) were mapped. Considerable time and expense would be involved with permittin hydropower projects, which are reviewed at the federal level.

Biomass Resource Area

Locations with high woody biomass potential and where renewable energy generatio would likely be most feasible according to the natural conditions of an a ea.

Certain areas where development was not possible – such as rivers and roads – were removed. The mapping also considers various other conditions, such as ecological zones that may impact the feasibility of renewable energy development. These conditions are known as constraints.

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Preferred Areas

Preferred Areas

Statewide preferred areas are roo ops (and other structures), parking lots, previously developed sites, brownfields, gravel pits, quarries, and Superfund sites and include many of the regional Impervious Surfaces. The impervious data layer available from VCGI is a subset of the National Land Cover Database 2001 and includes parking lots, roo ops, sand and gravel pits, industrial areas, disturbed land (under construction), quarries, farm complexes, transfer stations and junk yards.

Preferred Areas for New Renewable Generatio

The RRPC has determined that several types of locations in the region should be targeted for future solar generation. These locations a e not shown on the solar generation maps, yet are considered "preferred locations" y the RRPC. These suggested preferred locations a e merely a partial li t and it is anticip ted that municipalities will add to the following list:

Impervious Surfaces / Rooftops / Former landfill sites / Brownfields sites with Environmental Site Assessment / Earth resource extraction sites (sand pits, gravel pits, rock quarries) / Surface parking lots / Impervious areas within Industrial Parks

These sites are typically underutili ed (e.g., former land-fill si es, brownfield si es, and earth resource extraction sites) or are already heavily developed (e.g., roo ops and parking lots). Solar siting should be priori ed in these locations. The e currently is a lack of geographic data that accurately shows parking lots, former landfills, xisting and abandoned quarries and potential b ownfield lo ations in the region. RRPC is acti ely working to develop this data to help provide additional guidance or future development of solar facilities

In the Rutland Region, solar generation is the preferred method of renewable generation. Solar will have to meet generation levels higher than the targets set by the LEAP model to make up for the expected lack of hydro and wind generation facilities in the region. However, the generation targets remain feasible. The development of other types of renewable generation (e.g., wind, hydro, biomass) is also possible in the region, and the regional generation maps in this section provide guidance on how those types of renewable energy generatio facilities should be deployed in the region.

The maps along with accompanying statements and analyses provide comprehensive and clear directions with direction RRPC's regional land use policies on renewable energy generation

RRPC supports all kinds and scales of renewable energy generation; the only exception being industrial scale wind facilities. The reason for excepting industrial wind is because it generally does not conform with regional land use constraints in low density development designated areas in the regional plan and the region's Future Land Use map that discourage ridgetop and steep slope development. In addition, many Rutland Region municipal plans prohibit development in high elevations

The Rutland Region has more than enough land to meet its 2050 target for renewable energy generation - even a er subtracting the acreage included in the Regional Known and Possible Constraints- Current Use and Additional Conserved/ Protected Areas.

Using the most conservati e calculation for acreage needed per MW, 60 acres per MW, the Rutland Region needs 17,010 acres with Prime and Secondary Solar and Wind resources to meet its target. Even if all 169,173 acres in Current Use and 176,354 acres in Additio al Conserved/Protected Areas in the region are in Prime or Secondary Solar and Wind resource areas (which is not likely), the region still has 185,657 acres remaining in Prime and Secondary resources for potential generation a er deducting for the Regional Constraints.

A er adding the 14,372 acres of impervious surfaces in the region (the state's Preferred Areas), there are 200,029 acres with solar and wind potenti l. This is more than 11 times more than what is needed to meet the regional target.

The numbers are even more favorable for the region meeting its target considering that the acreage estim te for Current Use is infl ted because it includes data already accounted for in the state's Possible Constraints layer for prime, state and locally important soils. At this point, there is not a way to separate the state's Possible Constraints layer from that for all Current Use lands.

Also, even though the region considers utilit -scale wind as unsuitable, the acreage numbers for Prime and Secondary Wind include 30-meter hub heights which means the data accommodate residential and commercial-scale wind projects. As mentioned earlier, since the region anticip tes that smaller-scale solar and wind, residential and commercial, are going to dominate the region's renewable generation in the coming decades, this means much less acreage will be needed to meet the regional target than indicated by the data in the preceding figu e. The maps along with accompanying statements and analyses provide comprehensive and clear direction

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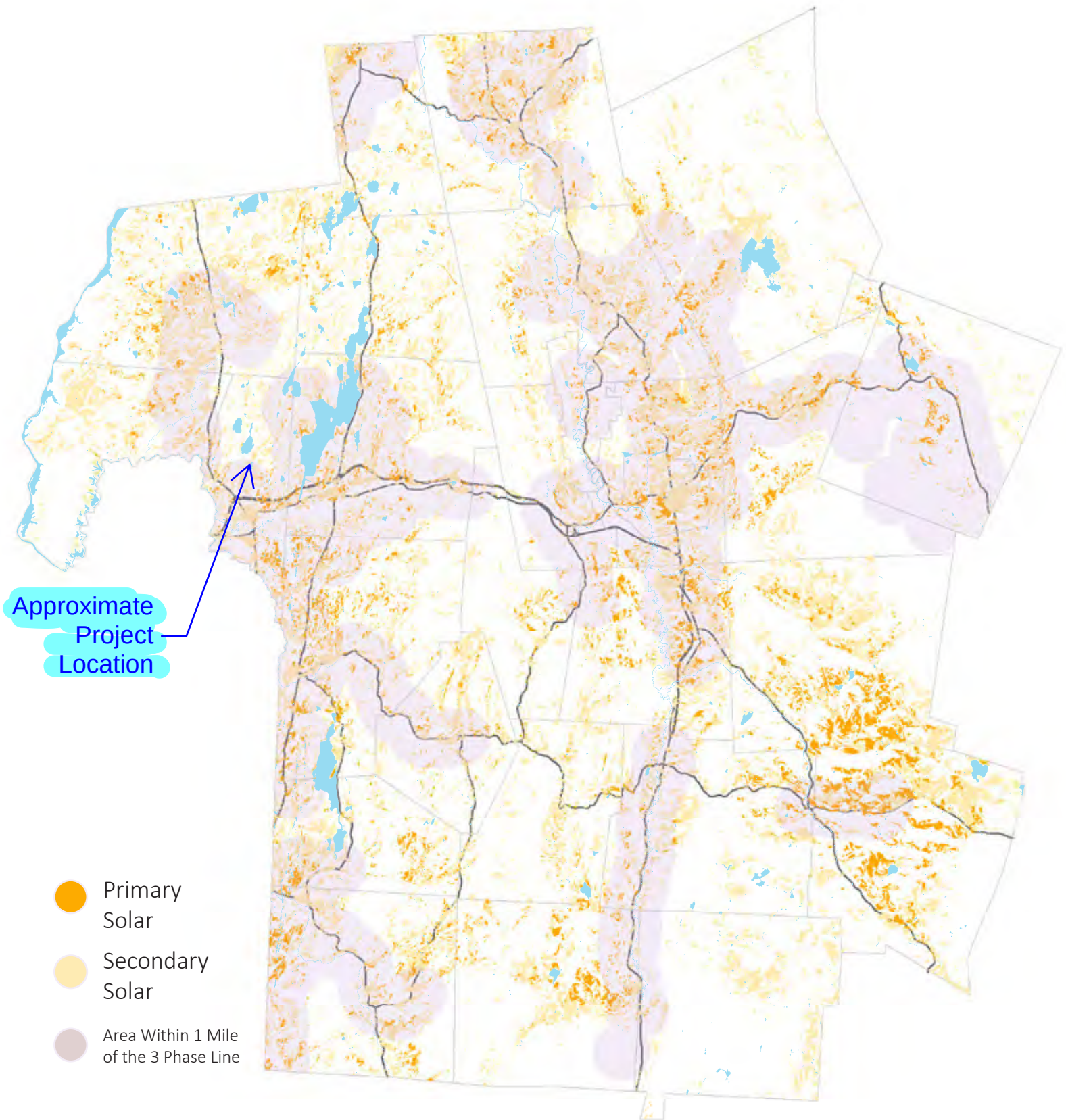
Regional Solar Resource Areas



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Additional egional and Community Standards for Energy Facility Siting and D velopment

To carry the most authority in a Public Utility Commission (PUC) p oceeding, a municipal or regional plan must be clear, specific, and onsistent in expressing community standards. A plan must be unambiguous on stating a ommunity's position on the d velopment of energy facilities. A ollaborati e approach shall be used to ensure there is a thoughtful pla - ning process that includes input from the region and the municipality and encourages developers and utilities o involve regional and municipal officials as early as possibl

The following sections l y out specific tandards for particular types of ene gy transmission and generation acilities. Where a new generation acility requires a new transmission facility, including electrical substations, both the eneration and transmission standards shall apply. The standards below are not the exclusive standards and are intended to apply along with policies elsewhere in the Rutland Regional Plan.

All Transmission and Generation acilities

1. The Rutland Regional Plan requires facilities o conform to all policies stated throughout the Plan.
2. All facilities shall onform to local, state and federal regulations
3. Every facility above 10 kW shall specify an action plan and gua anteed funding source for decommissioning to ensure the site is safe, stable, and free of structures and hazardous materials.
4. Road access to the facility shall not contribute to unsafe conditions or the general public.
5. Light pollution is minimi ed to every extent possible. Non-criti al outdoor lighting is ac ated by motion-senso s or on-site personnel. Light fi tures are shielded down to minimize light trespass and upward glare or glow. Lighting or air safety shall be radar acti ated.
6. Every facility, with the exception of wind turbines, shall be designed and onstructed to meet the audible noise regulation of the municipality; if the municipality has no noise tandard, the facility shall not exceed daytime l vels of 40 dBA Lmax and nighttime vels of 35 dBA Lmax, as measured at the property line.
7. No facility shall create conditions th t reduce or interfere with television, radio, radar, or other communication signals, including public safety communication ystems.
8. Every facility of 200 kW or greater generation apacity, and every transmission substation acility, shall prominently display 24-hour emergency contact information and file s e plans and emergency response plans with the fi e departments serving the location.
9. Facility construction and enovation is onsistent with historic preservation guidelines published y the Secretary of the Interior and the Vermont Division for Historic Preservation
10. Any proposed facility shall comply with the plan and bylaws of the municipality where it is to be located.
11. Any proposed facility shall consider the cumulati e impact of land use aesthetics, p operty values, forest fragmentation and landowner compensation or multiple ene gy generation and t ansmission facilities
12. Any proposed facility should avoid state-designated primary agricultural soils unless site-specific onditions a e not favorable for agricultural activitie
13. Any proposed facility should avoid forested sites and shall not remove forest cover equaling no more than 15% of the project footprint.

Solar Electric Facilities

Photovoltaic and other solar electricity facilities shall be designed, onstructed, and operated such that:
1. The facility is located to make use of a developed or existing tructure or brownfield si e, including parcels contaminated or perceived to be contaminated that otherwise hinders redevelopment.
2. The facility is designed to locate inverters and support structures away from existing esidences, wetlands, special flood areas, and slopes.
3. The facility is designed to reduce visibilities f om the road and from neighbors with setbacks and screening.

Hydropower Facilities

Hydropower facilities used o generate electricity shall be designed, constructed, and operated such that:
1. The facility makes use of an existing impoundme t or watercourse structure to generate electricity without changing the water quality, water temperature, upstream and downstream habitat of the facility. Vermont Agency of Natural Resources regulations or stream fl w shall apply. The Plan recognizes the viability and importance of utilizing xisting dams, including upgrading outdated equipment to maximize generation.

Re-Adopted June 19, 2018

Energy Strategies to Achieve Regional Targets: Conservation and Gene atio

To meet the 90x50 goal, LEAP establishes the following targets:

Reduce overall energy consumption in the Rutland Region by 32%, with a third of that coming from conservation measures.

For residential heating, virtually eliminate use of fossil fuels by switching to electric (heat pumps) and biodiesel.

For transportation, sharply curtail use of gasoline and other fossil fuels and replace with biodiesel and electricity.

RRPC adopts these statements of policy to demonstrate its commitment to meeting state and regional energy goals and to satisfy the determination standards established by the Vermont Department of Public Service:

Statements of Policy

RRPC supports conservation e orts and the effici t use of energy across the transportation, heating and electricity sectors.

RRPC supports the reduction of in-region transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation

RRPC supports pa erns and densities of concentrated development that result in the conservation of ene gy.

RRPC supports the development and siting of renewable energy resources in the Rutland Region that are in conformance with the goals, strategies, and standards outlined in this plan.

The plan up to this point reported modeling for the reduction of energy demand and the increased use of renewable fuels across three sectors – thermal, transportation and electricity – in the region. The following identifie actions specific to the Rutland Region. For these actions to succeed, there will need to be collaboration among local communities, regional organizations such as RRPC, private businesses, and state agencies.

Conservation Strategies

To help with the transition from fossil fuel use to renewable energy sources for heatin , the modeling done by LEAP developed several di erent pathways. In the case of the residential sector, it is through electrifi ation. For the industrial and commercial sectors, it is with an increased use of biodiesel, wood and electricity.

The availability of alternati e, effici t heating sources is key to ensuring greater thermal efficienc in the region. It is anticip ted that cold climate air-source heat pumps will be an effici t alternati e for residential and some commercial buildings. The RRPC will encourage municipalities to weatherize existing structures in the region's downtowns and village centers. These areas contain more residential and commercial units and include a very high percentage of rental housing, The RRPC supports e orts to reduce the costs of converting to heat pump systems and supports assistance programs to make such fuel-switching more a ordable for the region's residents.

Improving the energy efficienc of newly constructed structures can be addressed through regulatory means. Efficienc Vermont recently adopted a "stretch" code for commercial and residential structures in Vermont. A stretch code has higher energy standards than the currently required Residential Building Energy Standards and the Commercial Building Energy Standards. Also, some municipalities may be interested in adopting a building code to increase energy efficiencies There is potential for geothermal heatin , also known as ground source heat pumps. Several facilities in the region currently use biomass heatin , but there is only one district biomass heating facility in the region (where a central biomass facility heats several structures).

The modeling done by LEAP developed several di erent pathways. In the case of the residential sector, it is through weatherization and the use of electricity generated from renewable sources. For the industrial and commercial sectors, it is with an increased use of biodiesel, wood and electricity.

Thermal Goal

To reduce annual regional fuel needs and fuel bills for heating structures, and facilitate the transition from non-renewable sources to renewable fuel sources.

Thermal Implementation Actions

Strategize with NeighborWorks of Western Vermont Heat Squad and BROC-Community Action in Southwestern Vermont about ways to increase the effectiveness of the weatherization programs in the region.

In partnership with municipalities, utilities and other regional stakeholders, educate homeowners, including owners of rental housing, about weatherization and funding opportunities.

Re-Adopted June 19, 2018

Use of liquid biofuels to power vehicles and equipment used in regional agricultural and forestry operations should be strongly encouraged. Assist in efforts to obtain funding and expand related business opportunities.

Support municipalities in purchasing vehicles and heavy equipment that can use biodiesel and in purchasing biodiesel from local suppliers when available.

Electricity Strategies

To meet its energy goals, the Rutland Region will rely much more heavily on renewable energy delivered through electricity. This development of infrastructure to generate electricity from renewable resources must be consistent with the Rutland Region's goals to "protect the character of rural areas and resources areas by discouraging sca ered development and incompatible land uses" and to " protect the natural environment and its economic, ecological, sociological, psychological and aesthetic benefits Rutland Regional Plan, Future Use of Land, 2015, p. 27; and for "identi ying renewable energy development so as to not adversely impact wildlife and natural habitats", Rutland Regional Plan, Wildlife and Natural Habitats, 2015, p. 135.

Because of the expected increase in demand, largely from the transportation and thermal sectors, it will be necessary to conserve electricity, improve the efficienc with which electricity is delivered and used, and signifi antly increase the amount of electricity generated from renewable energy sources within the region.

The region will need to develop at least 387,962 MWh or approximately 285 MW of new generating capacity from solar, wind, biomass and hydro sources over the next 35 years. It's extremely important that these generating facilities be sited in locations with good access to the energy resources and close to load, while not adversely impacting important environmental or community resources.

Electricity Goal

Increase the renewable energy generation capacity in the region to include an additional 285 MW of new generating capacity from solar, small-scale wind, biomass and hydro.

Electricity Action Items

Assist municipalities into identifying preferred areas for development and siting of renewable energy generation facilities and, if requested, help in getting these sites qualified as net-metering preferred areas in the Public Service Department application process as needed.

Identify and map potential brownfield sites, gravel pits, quarries and other previously disturbed sites in the region that may be appropriate for future renewable energy generation facilities.

Identify and utilize all roof-tops and on-site locations in the region that have solar potential.

Work with municipalities to identify areas that are unsuitable for siting renewable energy generation facilities or specific scales of renewable energy generation facilities.

Identify opportunities to increase production at existing hydroelectric facilities through implementation of advanced operational controls, more efficient equipment, and/or conservation flow turbines at the dam.

Work with municipalities to set up microgrids to connect homes, businesses, and other buildings to their own central power sources. These microgrids can function as power islands in case of emergencies or power outages and can lower power costs for users.

The region will need to develop at least 387,962 MWh or approximately 285 MW of new generating capacity from solar, wind, biomass and hydro sources over the next 35 years. It is extremely important that these generating facilities be sited in locations with good access to the energy resources and close to load, while not adversely impacting important environmental or community resources.

Implementation easibility

This plan was created by the Rutland Regional Planning Commission, in partnership with The Vermont Department of Public Service and The Vermont Energy Investment Corporation. Public input was sought through a series of public meetin s and presentations during the development of this plan.

RRPC developed goals, strategies and implementation actions for conservation, consumption and generation that will help the Rutland Region achieve the 90x50 goal for renewable energy. There are issues with developing wind and hydro in the region. Solar generation is the preferred method of renewable generation in the region. Because of that, solar and perhaps biomass will have to meet generation levels higher than the targets set by the LEAP model.

The Regional Plan Implementation Timeline can be accessed at: **Rutland RPC Vision**

Re-Adopted June 19, 2018

FAIR HAVEN TOWN PLAN

Adopted by the Fair Haven Selectboard:

June 11, 2024

Fair Haven

Planning Commission

- Bob Richards (Chair)
- Cindy Pritchard
- Patrick Frazier
- Lorraine Brown
- Jason Coupal

Fair Haven

Selectboard

- Bob Richards (Chair)
- Glen Traverse (Board Clerk)
- Michael Doran
- Rich Greenough
- Chadd Viger

Thank you to all who helped!

Town Manager – Joe Gunter

Zoning Administrator – Phil Adams

<u>Technical Assistance from:</u>

Logan Solomon – Planner

RUTLAND REGIONAL PLANNING COMMISSION

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The Old Marsh Pond or Eagle Lake

INTRODUCTION

The proud Town of Fair Haven, "Town," is along the Vermont-New York border and is at the intersection of Route 22A and Route 4. The Town is in a great location, being 25 minutes from Rutland and about 1.5 hours away from Burlington VT, Hanover NH, and the greater Albany NY area.

Figure 1: Drone photography of the Town of Fair Haven

Fair Haven is 17.2 square miles in size, full of friendly people, scenic beauty, and businesses and services to meet your needs. With a vibrant business district, Victorian architecture, and a downtown park full of sugar maples, Fair Haven is a charming Town to call home and visit. Fair Haven was chartered in 1779, grew with the rise of the slate industry, and slowly evolved into the Town we know and love today.

Purpose

The purpose of the Fair Haven Town Plan, "The Plan," is to serve as a long-term guide for the future health and well-being of the community. Town Plans are updated and readopted every eight years per the Vermont Planning and Development Act (24 V.S.A. §4387a). The Plan is the initial component of an ongoing process, establishing a framework of planning recommendations to ensure that decisions made at the local, regional, and state levels align with the Town's objectives for providing a clear and positive direction for future development.
These objectives are listed as "Goals" in the box below and at the end of each respective chapter, alongside a set of actions. It is the intent of the Planning Commission, and the Town as a whole, to execute the listed actions over the next eight years and beyond.

To guide future growth and development of land, and public services, and to protect the environment, the Plan identifies the following goals:

1. To plan for, finance, and provide an efficient system of public facilities and services to meet current and future needs.
2. To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of Fair Haven's residents.
3. To encourage the availability of safe and affordable childcare.
4. To maintain and enhance recreational opportunities for Fair Haven's residents and visitors, and to preserve Fair Haven's New England character.
5. To provide a strong and diverse economy that provides satisfying and rewarding job opportunities and to expand economic opportunities.
6. Ensure and support the availability of safe and affordable housing for all residents and the efficient use of land.

7. Encourage a welcoming community where individuals and families from diverse backgrounds want to live in Fair Haven and are valued and respected.
8. To provide safe, convenient, economical, and energy-efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.
9. To identify, protect, preserve, and showcase important natural, scenic, cultural, and historic features and areas of Fair Haven's landscape.
10. To maintain and improve the quality of air, water, wildlife, and forests.
11. To support local agriculture, forestry, and related industries.
12. To provide for the wise and efficient use of Fair Haven's slate and geologic resources.
13. To make efficient use of energy, reduce emissions of greenhouse gases, and find a balance between the use of fossil fuels and renewable resources.
14. To support flood resiliency and ensure the Town of Fair Haven can recover from flood events quickly.
15. To plan development to maintain the historic settlement pattern of compact villages separated by rural countryside.

weather, there is a commemorative service in the Veterans Memorial Day Park to honor our members of the military who remain Missing-In-Action. This is the oldest remembrance event in the United States.

There are many active civic organizations in Fair Haven that welcome volunteers to carry out their programs and events including:
- The Art Club
- Catholic Daughters
- Cemetery Committee
- American Legion Post 49 and Auxiliary
- Fraternal Order of the Eagles Aeries 2784
- Masons Eureka Lodge #75 and Auxiliary
- Fair Haven Fire Department
- Slate Valley Community Action Center

Important Fair Haven Sites
- Diverse Architecture of the houses, churches, and downtown buildings.
- Fair Haven Airport Park: hiking, visiting the Dog park, and the RC Flyers (motorized model planes).
- Veterans Memorial on the east side of the park. Thursdays memorial gathering for POWs.
- Civil War Cannon on the North end of the park.
- The Historic Downtown.
- The Welcome Center on the border of Vermont and New York.
- Three murals: corner of Main and River Street; the corner of Main St. and Liberty St., and in the corner of the Main Street by the Tavern

Demographics

In 2020, 2736 people lived in Fair Haven. Figure 3 shows Fair Haven's population change over the decades. The population has fluctuated but is roughly the same as in the early 1900s.

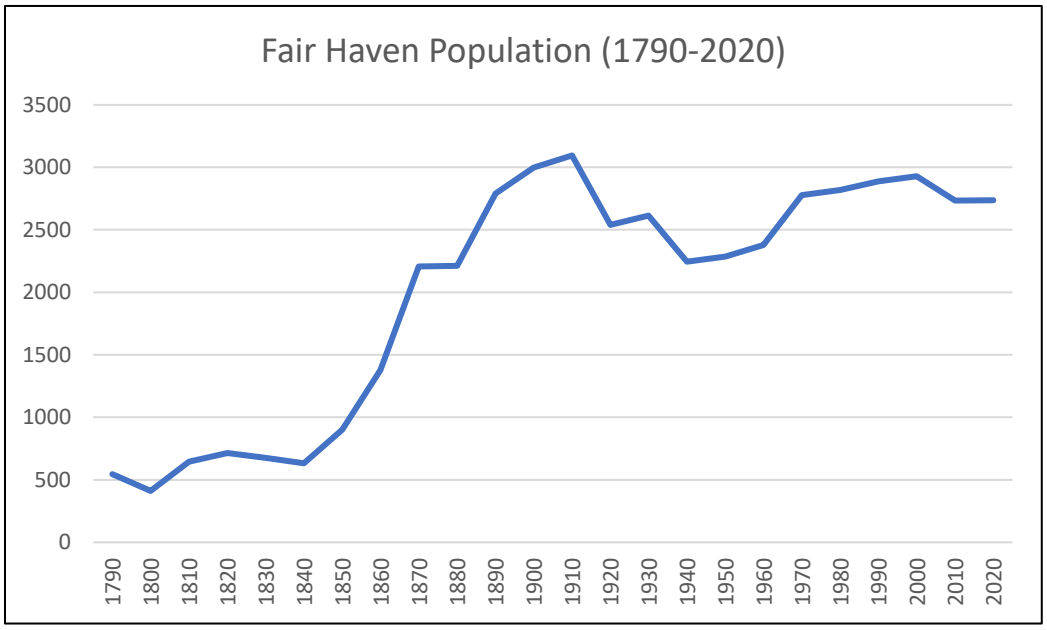


Figure 3: Town of Fair Haven Population (1790-2020)- *2020 U.S. Decennial Census*

HISTORY and CULTURE GOALS

1. To identify, protect, preserve, and showcase important natural, scenic, cultural, and historic features and areas of Fair Haven's landscape.

HISTORIY and CULTURE ACTIONS

1. Generate a Town open space, significant features, recreation/open space, and natural resources plan and work with the RRPC to acquire grants funds to lower the cost of creating and implementing the plan.
2. Continue to support Concerts in the Park, Spring Fling, Apple Fest, and other cultural events that promote Fair Haven and its viability as a sub-regional cultural hub to the greater Rutland County and eastern Washington County, New York regions.
3. Support the owner of the Opera House to help realize and reopen the venue for additional value-added cultural opportunity.
4. Promote cultural events by local and regional chambers of commerce, and the Fair Haven Historical Society in and around Fair Haven, especially related to cultural events.
5. Research and implement ways that ensure the preservation of Fair Haven's historic architecture and history.
6. Apply for historic grants (e.g., Historic Preservation of Vermont and the Vermont Community Development Program) to carry out Town-identified projects of historic consequence.
7. Create a Historic Preservation Board
8. Work with the Fair Haven Historical Society to do interactive presentations on Fair Haven's history. These presentations shall be for a variety of audiences, including for school-aged children.
9. Identify and designate a site for a museum that honors Fair Haven's history.
10. Ensure the integrity of the Green by forming a town committee and by annually allocating money to this effort.
11. Review and update Historic Properties currently listed on the State and National Registers of Historical Places
12. Review permits that pertain to Historic properties to ensure the historical integrity of the town is maintained.
13. Create a binder containing the full history of the town of Fair Haven that will be available for the people.

Recreation Facilities

Our Village Green contributes as much to our town's identity as anyone or anything in Fair Haven. Originally owned by Matthew Lyon, our most famous (and notorious) ancestor, it was granted to the town by Tilly Gilbert in 1805. With its large maples, marble post fence, park benches, shady walking paths, and a fountain in the middle, it is a beautiful centerpiece of our downtown. The green is rumored to be the only "spoked" town green left in Vermont, a layout where paths radiate outward from the fountain. Many people enter Vermont through Fair Haven every day and never see our lovely green. The Plan encourages the Town to find ways to draw people to our downtown and the Village Green, and all the events held on it, are a great opportunity to do so.

Besides our village green or just "The Park" as it is commonly known by our residents, there are five other areas in town which are or can be used for recreation of some kind:

1) The Fair Haven Union High School fields, where football, soccer, track, baseball, and softball can all be played formally in games.
2) The Fair Haven Grade School playgrounds and fields can be used for both formal and informal play. Anyone may play tennis on one of the courts if they are not already in use, and there are basketball hoops designed for pick-up games or individual practices.
3) Marsh Pond Wildlife Management Area, south of Old Marsh Pond, is a 90-acre parcel managed by the Vermont Fish and Wildlife Department and people fish, hunt, hike, and view wildlife here. Access to the parcel from Pond Road is restricted sometimes.
4) The "South School Playground" which is east of the Eagles' Club on Academy Street. It is small but there is room for a softball or Little League baseball field and a playground for small children.
5) The former airport grounds at the northerly end of Airport Road is ripe with potential. A "Fur Haven Dog Park", home for a model airplane club, or adding walking paths may make sense.

The Plan encourages the Town to scope adding recreation facilities at the South School Playground and former airport grounds and to seek public input on where/what recreation facilities and paths should be built.

PUBLIC FACILITIES AND UTILITIES GOALS

1. To plan for, finance, and provide an efficient system of public facilities and services to meet current and future needs.
2. To support educational and vocational training opportunities sufficient to ensure the full realization of the abilities of Fair Haven's residents.
3. To encourage the availability of safe and affordable childcare.
4. To maintain and enhance recreational opportunities for Fair Haven's residents and visitors, and to preserve Fair Haven's New England character.

PUBLIC FACILITIES AND UTILITIES ACTIONS

1. Annually review the Fair Haven *Local Emergency Management Plan* and *Local Hazard Mitigation Plan* and revise these plans as needed.

2. Collaboratively work with Fair Haven Schools, Stafford Technical Center, and surrounding towns to identify further opportunities for students to gain job training opportunities besides a four-year degree.
3. Promote state agency information on the Town website and in the Town Hall on best practices for home use of public facilities and services, including proper disposal of cooking grease, water conservation, and recycling.
4. Evaluate town-owned property's current use and identify potential future uses to benefit the citizens and environment of Fair Haven most efficiently.
5. Work with the Rutland Regional Planning Commission to identify and pursue funding opportunities to upgrade the wastewater facility, and other public facilities and services, as needed, to meet current and future needs.
6. Annually evaluate the *Consumer Confidence Report* and take action as needed to maintain Fair Haven's healthy water quality.
7. Attend training by state, regional, local, and community organizations to grow knowledge in meeting day-to-day and long-term public facility and utility needs.
8. Scope the feasibility of using Howard and Sheldon Reservoirs, or other waterbodies, as a potential emergency water source.
9. Work at adding recreation facilities at the South School Playground and former airport grounds and seek public input on where/what recreation facilities and paths should be built.
10. Address collection system needs. Some manholes need to be rehabbed and sewer lines replaced or lined. Specifically, Sewer Lines on Capital Hill, Prospect and Cedar were noted as poor condition during a 2022 Camera inspection and manholes at the beginning of West Street Prospect Street, and Cedar Street.
11. Enlarge Adams St. Pumpstations to accommodate both pumps running simultaneously during high flow situations.
12. Budget and plan sludge removal, given the trend in rising costs.
13. Encourage residents to join the Fair Haven Fire Department
14. Ensure Fair Haven Rescue Squad exists, given the distance from the Rutland Regional Ambulance service.
15. Acquire equipment, as needed and as the budget allows, to meet current and future facilities and utilities needs.
16. Continue participation in the regional Communications Union District to ensure meeting communication needs.
17. Work with the Fire Department to plan growth in a manner in line with the Department's capabilities.
18. Seek non-residential property tax-based sources of funding to meet facilities and utilities needs and infrastructure improvements.
19. Review the Town Reserve Funds to determine the baseline level of funding for each fund. Funds should be maintained on the identified based on an annual amount of growth to reach a specified amount or based on replenishment of an existing level already attained and only added to when a portion of the funds are drawn down for a specified purpose.
20. Maintain all recreational facilities and the Town's Recreation Department Program. Begin a search for a full-time Recreation Director.
21. Plant maple saplings in the Park every decade to replace big maples as needed.
22. Continue to support all cultural events that promote Fair Haven and the greater region.
23. Cooperate and Support Fair Haven's schools and relevant entities to continue developing a diverse college and career readiness to meet the needs of all students; to establish community engagement, service, and partnerships; to recruit, develop, retain, and leverage exemplary educators.

TRANSPORTATION

Fair Haven being along the Vermont-New York border and at the intersection of Route 22A and Route 4 makes it the "gateway" to Vermont from all points west and southwest. This prime location means efficient car travel time for residents and that many who drive by Fair Haven, including tourists from the tri-state, could take a quick detour to relax on the Green and enjoy our downtown.

At "Exit 2", US Route 4 intersects with Vermont Route 22A. In Fair Haven, US Route 4 delivers a great deal of traffic to VT Route 22A North, which is the main corridor on the west side of the state to Burlington, Canada and northern Vermont.

Vermont State Law, *19 VSA § 302,* defines town highways in four categories.

Class 1 Town Highways: an extension of a state highway routes and carry a state highway route number.

Class 2 Town Highways: the most important route in each town with the purpose of securing trunk lines of improved highways from town to town and to places which have more than a normal amount of traffic.

Class 3 Town Highways: minimum standards for Class 3 highways require that they be negotiable, under normal circumstances, all seasons of the year by a standard, manufactured, pleasure car. This includes, but is not limited to, sufficient surface and base, adequate drainage, and sufficient width capable to provide winter maintenance.

Class 4 Town Highways: are all other town highways including trails and pent roads. The Selectboard determines which highways are Class 4 highways.

Figure 13: Route 4 and 22A Signs

Fair Haven transportation map shows that Fair Haven has a total of 38.1 miles of roads of which 27.56 miles are town highways of which 8.2 miles are Class 2 Town Roads and 14.9 miles are Class 3 Town Roads. There are 10.54 miles of state and federal highway, of which 10 miles is Route 22A and Route 4.

A trolley ran from Rutland through Fair Haven to Poultney from 1903 to 1924 which supported Fair Haven's hospitality business which thrived from 1800 to the 1950s.

Parking and Traffic Patterns

The adequacy and design of parking in and near the downtown district has been the source of much discussion, but generally, it functions well. The free parking lot downtown is easily accessible to customers of the businesses of our main commercial area and functions as a park and ride. Some residents and employees also use the large free parking area on the westerly side of Route 4A and Route 22A through the middle of town.

The Vermont Agency of Transportation has performed over 75 one-day automotive traffic counts in town dating back to the 1990s. The highest volumes were on Route 22A and Route 4, with lower volumes as you get further away from these roads and the center of the urban compact. The Town's available traffic data as of the last couple of years is roughly historically average.

NATURAL, SCENIC, CULTURAL, AND HISTORIC RESOURCES

Fair Haven seeks to preserve its rare and irreplaceable natural, scenic, cultural, and historic areas, and features, and its working lands, including but not limited to the areas mentioned in this chapter. The Plan prohibits development that has undue and adverse impacts on these areas and features.

Conserved Lands

Figure 16 shows parcels that, as of 2021, are protected from development through public ownership, private ownership, or mechanisms such as conservation easements. The data is from the Vermont Protected Lands Database which is designed to facilitate conservation planning. These parcels are largely north of the urban compact, being owned by the Nature Conservancy or being a Town Forest, State Park, or Wildlife Management Area.

Marsh Pond Wildlife Management Area, south of Old Marsh Pond, is a 90-acre parcel managed by the Vermont Fish and Wildlife Department. The Wildlife Management Area is composed of wetlands and a mix of vegetation and northern hardwoods, providing important habitat for waterfowl, amphibians, beavers, muskrats, and more. Access to the parcel from Pond Road is restricted. Recreation here includes fishing, hunting, hiking, and wildlife viewing.

The 131-acre Old Marsh Pond is a natural pond artificially controlled by the John Wood Dam and is a warmwater fishery for a half-dozen different types of fish.

Fair Haven has two town forests. One surrounds Inman Pond, the Town's water source, ensuring the town has clean water for years to come. The second is the North Woods, between Bomoseen State Park and a parcel along the West Haven/Benson border, protecting an important wildlife corridor.

A small percentage of Bomoseen State Park, a 3,576-acre park, is in the Northeast corner of Fair Haven and includes Glen Lake. No Bomoseen State Park trails extend into Fair Haven, but we are a quick drive to a trailhead.

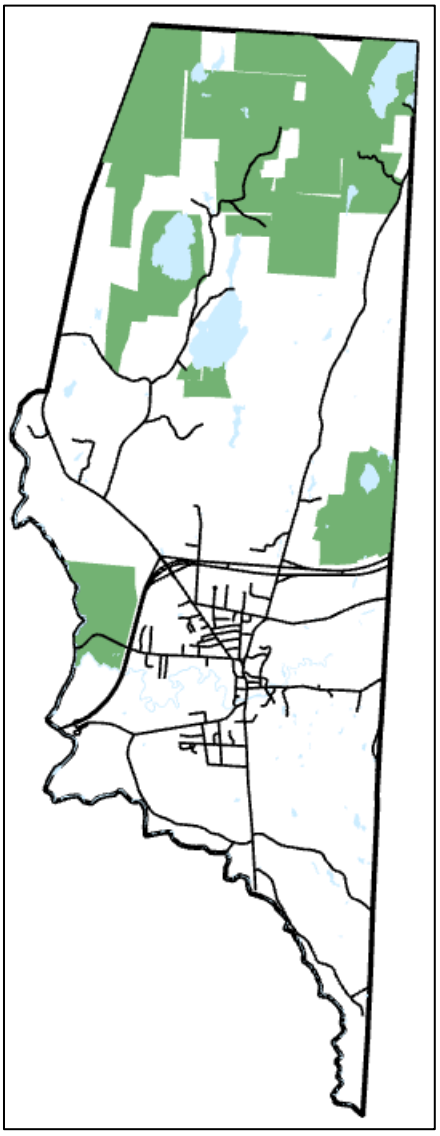


Figure 16: 2021 Vermont Protected Lands Database

Wildlife and Vegetation

We have most of the common Vermont animals, including black bear, eagle, and moose, but our most defining wildlife is the Eastern Timber Rattlesnake. The snake dens in the North Woods, one of two Vermont habitats for this rattlesnake, which is known for being timid and rarely out of its den.

Figure 17: Coiled Rattlesnake photo taken by Sue Reed

The vegetation in Fair Haven varies from decorative and uniform, like the canopy of sugar maples on the Green, to diverse, like in the North Woods where a mix of sugar maple, red maple, several types of oak and hickory, ash, birch, beech, pine, and hemlock thrive. Fair Haven's tree canopy is a valuable asset in providing shade and in protecting the town's air quality.

Main Waterbodies and Wetlands

While there are other small water assets in town, the main three are Inman Pond (our municipal water supply), the Castleton River and the Poultney River. The Poultney River comprises our southern and western town boundaries and the state line with New York. U.S. Route 4 between Exits 1 and 2. "Mud brook" also runs into the Poultney River northwesterly of the village.
The Castleton River has, since the start of the official town, been our historical source of industrial waterpower, and we are still hoping to have it generate an appreciable amount of electricity on the grid.

Figure 18: Fair Haven's Wetlands – *Vermont Agency of Natural Resources*

Wetlands are land areas with saturated soil for at least part of the year. They provide wildlife habitat, help manage water runoff, purify surface and groundwater, replenish aquifers, prevent erosion, and offer recreation opportunities.

Fair Haven's wetlands, shown in Figure 18, are scattered across the Town with a large concentration of wetlands east and southwest of the urban compact. In 1986, the Vermont Wetlands Act was passed by the Vermont Legislature which tasked the Water Resources Board to identify wetlands that need buffer zones to protect wetland function. They established two types of Wetlands, with Fair Haven only having Class II Wetlands, which is a slightly less restrictive category.

Working Lands/Natural Resource Extraction

River-valley soils and possibly the best climate in the State of Vermont have traditionally made agriculture, particularly dairy farming, an important land use in Fair Haven. While other, smaller agricultural endeavors are still underway in Fair Haven, it will be hard in the future for the town to replace the land use, jobs, and scenery that dairy farming has always provided our town. The Plan supports local agriculture, and home gardening, especially where prime agricultural soils are.

Fair Haven's main geological asset is slate being at the end of a slate vein spanning from the Town to Pawlet VT, and Granville NY. The sand on top of the blue clay in the village was once a beach on an

inland sea. Over millions of years blue clay became shale, and then ultimately slate. Our slate is tied to our economic well-being with residents employed in local quarries and mills. The Plan encourages the wise and efficient use of the Town's geological resources, particularly slate. While much of Fair Haven's blue clay was turned to shale and slate over millennia, in parts of town blue clay is still present in the substrate.

Fair Haven's forests over the years, like much of Vermont's, have been logged and replanted. The forested lands of today once were clearcut, generating logging revenue, and providing lands for cows to graze. Today, shown by Figure 19, Fair Haven is largely forested. The Town Forests from time-to-time are selectively logged. The Plan supports managing timber resources and updating forest management plans to protect Fair Haven's forests.

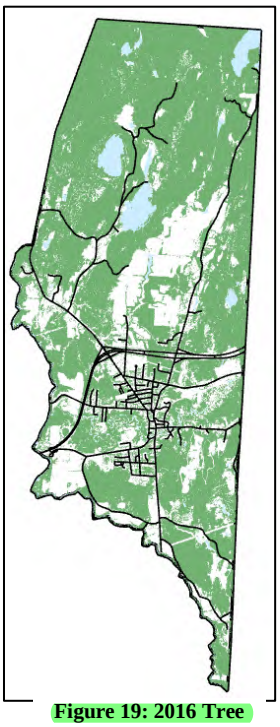


Figure 19: 2016 Tree Canopy - *UVM Spatial Analysis Lab*

Scenic Resources

Two major features dominate Fair Haven's landscape: the Taconic Mountains and the Poultney River Valley. Much of Fair Haven's rural character and appeal results from the scenic vistas that can be observed from many parts of the town and include an interplay of villages, mountains, forested hills, farms, fields, rivers, streams, ponds, and woodlands.

Fair Haven's scenic resources include but are not limited to Inman Pond, the Castleton River, State Forest Lands, Mud Brook, Old Marsh Pond, The Great Ledge (north of the village), Cedar Swamp, the Poultney River, North Woods (still untouched), Beaver Meadow and Carver's Falls. Fair Haven is also fortunate to have many tree-lined streets in the village and along outlining roads. Trees provide shade, beauty, and habitat, can serve as food sources, and reduce noise and pollution, as well as increase property values by as much as 10%.

NATURAL, SCENIC, CULTURAL, AND HISTORIC RESOURCES GOALS

1. To identify, protect, preserve, and showcase important natural, scenic, cultural, and historic features and areas of Fair Haven's landscape.
2. To maintain and improve the quality of air, water, wildlife, and forests.
3. To support local agriculture, forestry, and related industries.
4. To provide for the wise and efficient use of Fair Haven's slate and geologic resources.

NATURAL, SCENIC, CULTURAL, AND HISTORIC RESOURCES ACTIONS

1. Generate a Town open space, significant features, recreation/open space, and natural resources plan and work with the RRPC to acquire grants funds to lower the cost of creating and implementing the plan.

2. Support work by relevant entities that protect the Eastern Timber Rattlesnake and the snake's habitat.
3. Consider and seek public input on purchasing habitats and wetlands to protect and ensure no net loss of these important natural areas.
4. Market local natural resource products, including agriculture and forestry.
5. Oppose proposed development that adversely impacts the quantity and quality of Fair Haven's natural, cultural, historic, and scenic resources, including but not limited to the resources outlined in the chapter.
6. Promote best management practices on the Town's website and in the Town Office, including lawn fertilizers, and pesticides, that protect Fair Haven's resources.
7. Inventory existing quarries in Fair Haven and collaborate with owners to identify the best use of these geologic, historic, and cultural resources for the town's residents and the environment.

ENERGY

Fair Haven's electrical infrastructure can be classified into four categories: electric generators, transmission lines, distribution lines, and service lines. Transmission lines transport electricity over long distances from electric generators to a town. Distribution lines then carry electricity to a neighborhood. Service lines deliver power directly to a home or business.

With two large truck stops and at least three other gas stations, Fair Haven residents have plenty of access to gasoline, Kerosene, diesel (fuel) oil and other petroleum products for motor vehicles. Propane is readily available in small containers from at least three retail businesses in town and in bulk from several companies outside of town but not far away. Electricity, provided to the townspeople by Green Mountain Power Company, is still primarily delivered in Fair Haven by pole lines.

Energy use in the town of Fair Haven parallels patterns throughout other rural communities. Transportation and home heating are the two primary draws on fuel and energy. Fair Haven in 2022 used 16,336,135 kWh of electricity of which 58% is from the residential sector and the remaining 42% is from the commercial and industrial sectors.

The 2023 Vermont Energy Burden Report found that Vermont households on average spend 11% of their income on energy costs – including electricity, transportation fuel, and home heating fuel. The report found that in Fair Haven, the median household has a moderate energy burden, spending 10.4% of its income on energy costs.

Efficiency Vermont and NeighborWorks of Western Vermont share rebate information, conduct energy assessments and offer low-interest energy financing and bill assistance. The Plan encourages energy conservation and energy-efficiency measures in municipal buildings, and by residents and businesses to help lower energy use and costs. From 2020 to 2022, 202 residential energy projects occurred in Fair Haven using Efficiency Vermont rebates or services. Figure 20 shows most Fair Haven residents use fuel oil or kerosene to heat their homes.

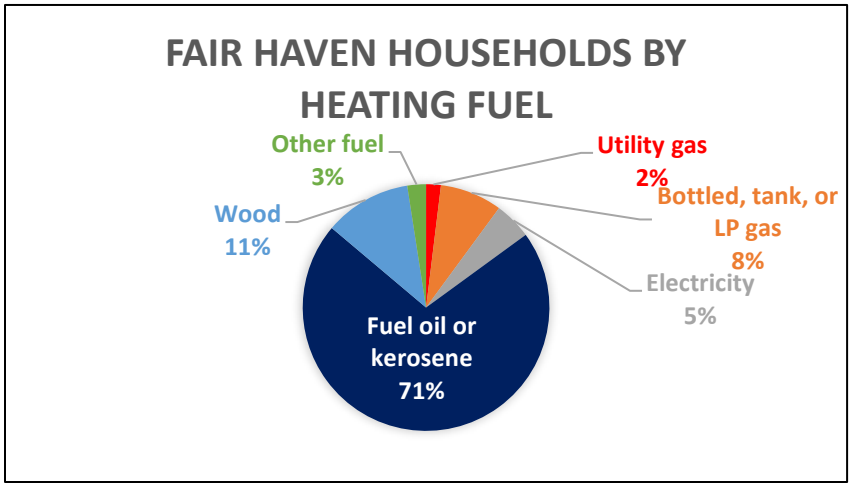


Figure 20: Households by Heating Fuel - 2022 American Community Survey

Hydroelectric

Fair Haven is blessed with an opportunity to produce hydroelectric power. According to a study done in 2014 and an existing FERC permit from before that the possibility exists to produce hydroelectric power either as a community endeavor or as a private business. The Upper Falls damn is an intact structure owned by the town and has preliminary if dated approval for such a project and a majority of the residents approved the project the last time it was asked. We see the river as a renewable

resource waiting for the right circumstances to allow capturing that power as it did when the town was begun.

Wood

11% of Fair Haven residents burn wood to heat all or part of their homes, shown in Figure 18. The most efficient residents have a small wood lot nearby, and it costs them a little in gasoline and a lot of sweat to heat their homes. Lacking that, they can buy wood cut and split, they can purchase it in bulk (and work it up themselves), or use wood pellets, for use in stoves or furnaces.

Solar and Wind

Regarding both solar and wind power as with all energy projects in the town, the most important criteria to consider is input from the residents of Fair Haven.

The state has established a set of ambitious goals to increase renewable energy. Fair Haven supports those goals through solar and wind for both power and heating. The town and our plan see solar at its best on homeowners' roofs but also encourages projects that utilize under employed spaces. Places like abandoned parking lots, brownfields, and unused quarry locations are prime targets. Our plan supports the regional restrictions placed on large industrial wind power projects of a 100kw or more. Height restrictions would have to be considered as well. The town may not discourage smaller wind projects focused on local benefit. In the case of both wind and solar any project would have to show a viable decommissioning plan.

ENERGY GOAL:

1. To make efficient use of energy, reduce emissions of greenhouse gases, and find a balance between the use of fossil fuels and renewable resources.

ENERGY ACTIONS:

1. Determine suitable places and citing criteria for renewable energy generation resources.
2. Continue the work by the Town of Fair Haven committee to explore and implement the use of our Upper Falls of the Poultney River for the generation of hydroelectric power for the Green Mountain Power Company grid.
3. Where possible and financially feasible, make Town-owned buildings as energy efficient as possible, especially as existing buildings are rehabbed or updated.
4. Work with landowners to ensure when new buildings are proposed, the design of such buildings should incorporate energy efficiency.
5. Work with landowners, NeighborWorks of Western Vermont and BROC Community Action to provide information at the Town Hall and on the Town Website about funding opportunities to lower the cost of making homes and businesses more energy efficient.
6. Seek public opinion on an Enhanced Energy Plan (EEP) that would allow the Town Plan to have substantial deference in the Section 248 regulatory proceeding. If the town decides to pursue this, work with the RRPC to ensure the EEP meets state requirements.

7. Further provide transportation alternatives to single occupancy car transportation, including pedestrian and bike facilities, and public transportation.
8. Support the installation of Electric Vehicle charging stations in Fair Haven.
9. Support alternative energy sources that do not conflict with any restrictions in the Plan.
10. Explore the feasibility of cooperative fuel-purchasing organizations and community energy-generating facilities to lower resident energy bills.

LAND USE

Fair Haven is 71.5 square miles of which about 8% is the residential and commercial village, 43% is rural and open lands, and 49% is forests, rocky hills, wetlands, and Town/State-owned lands. Topographically, Fair Haven is at a lower elevation than surrounding towns, with local rumors that the origin of "Fair" in Fair Haven is due to this topography providing the best or "fairest" climate in the State of Vermont. The town's highest point is 947 feet above sea level at the summit of "Coon's Den" within the untouched North Woods. The residential and commercial districts are generally flat and lie roughly 385 feet above sea level.

Fair Haven has a Village Center Designation, shown in Figure 24. The Village Center designation offers five benefits for local businesses to provide more welcoming storefronts and have greater accessibility: The 10% State Historic Rehabilitation Tax Credit, 25% Façade Improvement Tax Credit, 50% Code Improvement Tax Credit, and the 50% Technology Tax Credit. Also, the village qualifies as an existing settlement under criterion 9(L) of Act 250, relaxing regulations for future business development. The town may create a Special Assessment District within the Village Center, which can raise funds for capital expenses to support business projects. The village center also allows the town to have top priority for all state agency funding programs, many of which could further economic development. The Town intends to renew the Village Center designation as it supports the Plan's economic development, land use, housing, and transportation goals that all promote smart growth principles.

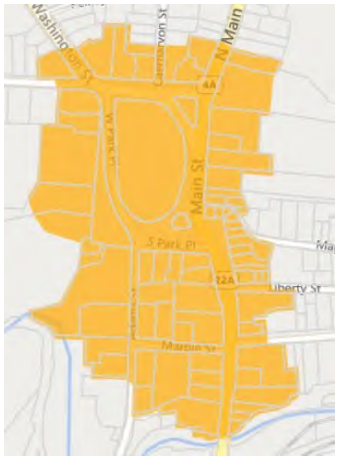


Figure 24: Village Center Designation - Vermont Planning Atlas

The Land Use chapter is based on the Town's objectives for future development as they relate to and are influenced by natural and socio-economic factors; The goals and actions outlined in previous chapters have been considered. This chapter divides the Town into land use districts, outlining current land use and recommended future land use types and intensity. The Vermont Planning and Development Act authorizes towns to implement land use regulations such as zoning bylaws, provided regulations conform with State planning goals (24 V.S.A. §4411a).

Fair Haven is divided into nine Future Land Use Districts: Downtown; Residential; River Mixed Use; Commercial; Industrial; Rural; Recreation; Watershed; Flood Hazard Area. Each district's boundaries can be located on the Future Land Use Map.

Fair Haven's Highest Priority Interior Forest and Connectivity Blocks are located in the Rural, Floodplain, Commercial (northern part), and Watershed Districts. These areas are important as forest blocks and habitat connectors and the Plan and Future Land Use Map aligns with Act 171 guidance to minimize forest fragmentation and promote the health, viability, and ecological function of forests.

Downtown

The purpose of the Downtown Land Use District is to promote the renovation and re-use of historic structures in Downtown Fair Haven and to promote the construction of buildings in keeping with the existing built environment and The Fair Haven Green. Regulations for this district are intended to promote commercial and residential activity and maintain the area as the center of activity for the town. Regulations shall allow for creative uses of upper stories for residential, commercial, or entertainment purposes.

Residential

The purpose of the Residential Land Use District to promote single- and multi-family residential neighborhoods within a short distance of Fair Haven Village and to allow for uses incidental to or harmonious with the area's character. No commercial or industrial use shall be established within the residential district except for permitted home occupations.

Mixed River

The purpose of the Mixed River Land Use District to promote a mix of residential and commercial use of land and buildings immediately adjacent to the Downtown District. Mixed-use structures are encouraged to provide for both small-scale commercial and upper-story dwelling units.

Commercial

The purpose of the Commercial Land Use District is to promote commercial activity in the form of retail stores, restaurants, professional and business offices, light industry, and other establishments as detailed in the latest amended/adopted Zoning Bylaws. Development should maintain the character of the neighborhood and should promote ease of access between neighboring parcels and uses for vehicles and pedestrians. In the small segment of the district where the Highest Priority Interior Forest and Connectivity Blocks are located, future development should be designed to minimize forest fragmentation and promote the health, viability, and ecological function of forests.

Industrial

The purpose of the Industrial Land Use District is to allow for light and heavy industry, such as slate or stone works, machine shops, textile manufacture, laundry and dry-cleaning plants, or similar operations as described latest amended/adopted Zoning Bylaws. These areas are and shall always be separated from residential and natural areas to minimize use conflicts.

Rural

The purpose of the Rural Land Use District is to maintain a balance between ongoing agricultural practices, slate quarrying, low-density residential settlement, commercial use, and light industrial uses in the town. Any residential development in this district should consider the effects of permitted quarries in the area and should be designed to minimize forest fragmentation and promote the health, viability, and ecological function of forests.

Recreation

The purpose of the Recreation Land Use District is to ensure and provide public recreation areas. The following six areas within the town borders are set aside as public recreational areas: (a) A small area of airport property used as a barbecue picnic recreation area (b) Louis Faryniarz Playground - the area east of the Grade School known as the "playground" (c) The area at Fair Haven Union High School

(d) The area at the former "South School" on Academy Street (e) The area of the Fair Haven Green known as the Park (f) The "Fur Haven Dog Park" north of the barbecue picnic recreation area

Watershed

The purpose of the Watershed Land Use District is the long-term protection of the Town's water supply. No development or any change in land use shall contaminate or potentially contaminate the Town's water supply (Inman Pond) nor fragment any wildlife corridor.

Floodplain

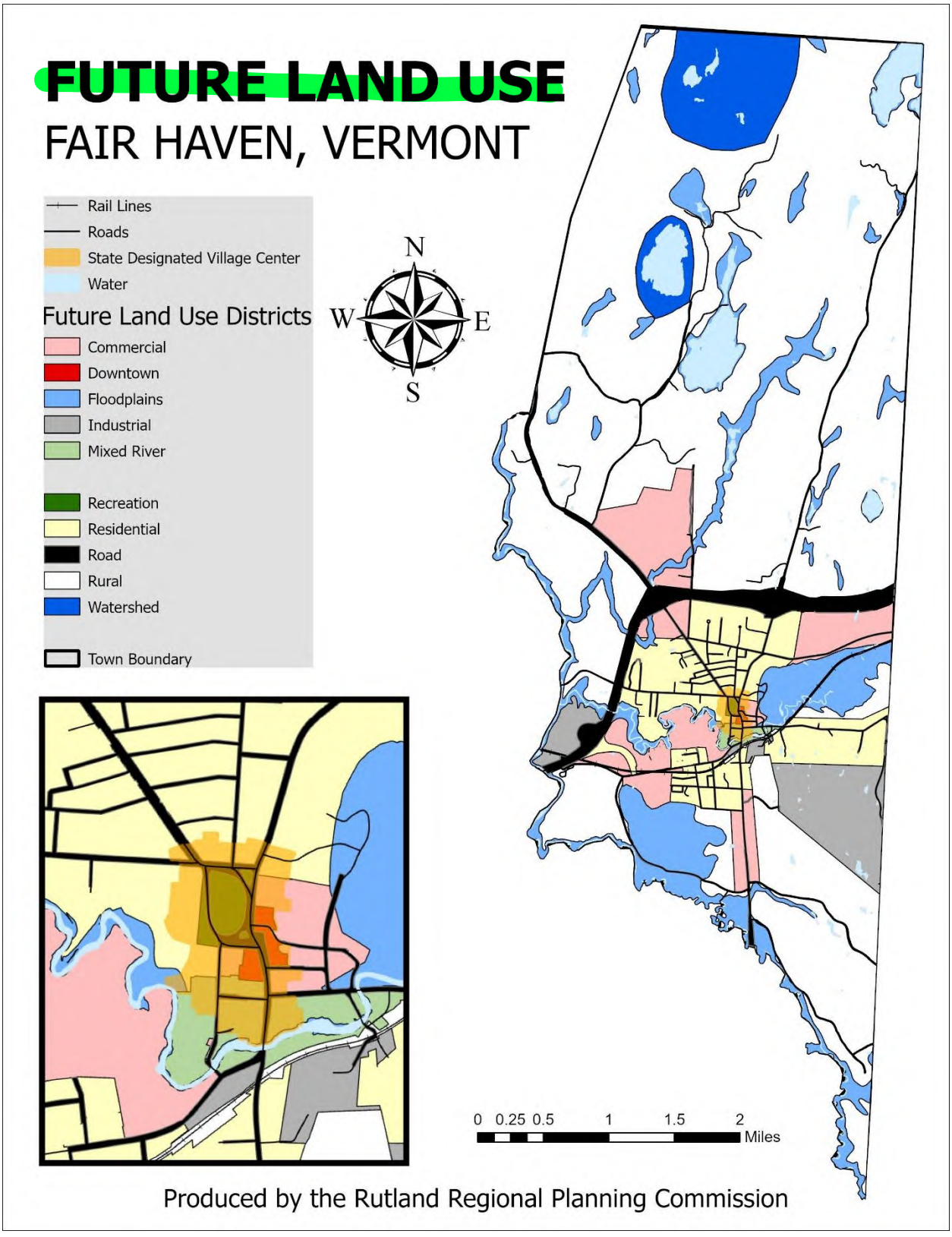
The purpose of the Floodplain Land Use District is to maintain the flood water carrying capacity of all flood-prone areas in the Town and to ensure that any structures or uses permitted within these areas are properly protected from flood hazards and minimize forest fragmentation and promote the health, viability, and ecological function of forests.

LAND USE GOAL

1. To plan development to maintain the historic settlement pattern of compact villages separated by rural countryside.

LAND USE ACTIONS

1. Implement current zoning regulations to promote orderly development.
2. Support or oppose development proposals based on meeting the land uses' purpose as defined in the Town's zoning and the Town's land use goal.
3. Work with prospective developers to adapt site plans to better conform with the Town's opinion, including minimizing forest and wildlife corridor fragmentation.
4. Re-obtain Village Center Designation or, if possible, obtain a Downtown Designation.
5. Encourage the rehabilitation of Main Street properties by promoting available financial resources that help offset the cost of doing so.
6. Participate actively in the formulation and implementation of the RRPC Regional Plan to ensure the regional functions of the area's municipalities are represented.


FUTURE LAND USE
FAIR HAVEN, VERMONT
Rail Lines
Roads
State Designated Village Center
Water
Future Land Use Districts
Commercial
Downtown
Floodplains
Industrial
Mixed River
Recreation
Residential
Road
Rural
Watershed
Town Boundary
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Miles
Produced by the Rutland Regional Planning Commission