



# PLANNING COMMISSION MEETING

Tuesday, June 27, 2023 at 6:30 PM

Chris Letourneau Meeting Room and via Zoom

**AGENDA**

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## Zoom Details:

**<https://us02web.zoom.us/j/6165843896?pwd=STduU2JzTmpiVmE1MXZSaWZWLzVadz09>**

**Meeting ID:** 616 584 3896 | **Passcode:** 5243524

**Dial by your Location:** 1 929 205 6099 (New York)

1. **CALL TO ORDER - 6:30 PM**
2. **ADDITIONS, DELETIONS, OR CHANGES TO THE AGENDA**
3. **DISCUSSION**
  - A.** Town Report Discussion - Review Vermont Town Reports and discuss options
4. **APPROVAL OF MINUTES 6/13/23**
  - A.** Planning Meeting Minutes
5. **PLAN NEXT MEETING AGENDA**
  - A.** Planning Meeting 7/11/23 6:30pm
6. **OTHER BUSINESS**
7. **DELIBERATIONS**
8. **ADJOURN**

Posted to the Town website, four designated places within the Town of Georgia (Town Clerk's Office, Georgia Public Library, Maplefields & Georgia Market), and e-mailed to the local media.

Signed: Douglas Bergstrom, Zoning Administrator, Planning Coordinator

Phone: 802-524-3524 | Fax: 802-524-3543 | Website: [townofgeorgia.com](http://townofgeorgia.com)

# TOWN OF SOUTH HERO TOWN PLAN 2023-2031



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# Introduction

## Goals & Objectives

1. Strive for public participation in the planning process at all levels.
2. Understand what the Town’s residents want for the future “look and feel” of the Town balanced against the potential impact on taxes.
3. Build upon and continue to improve our relationships with neighboring towns.

## Implementation



1. Encourage citizen participation at all levels of the planning process.
2. Continue working with Town residents to find ways to turn their vision for the future of South Hero into reality.
3. Collaborate with other municipalities and regional organizations to address important regional issues, such as improving water quality in Lake Champlain.
4. Consider the impact of land use decisions on adjacent municipalities.

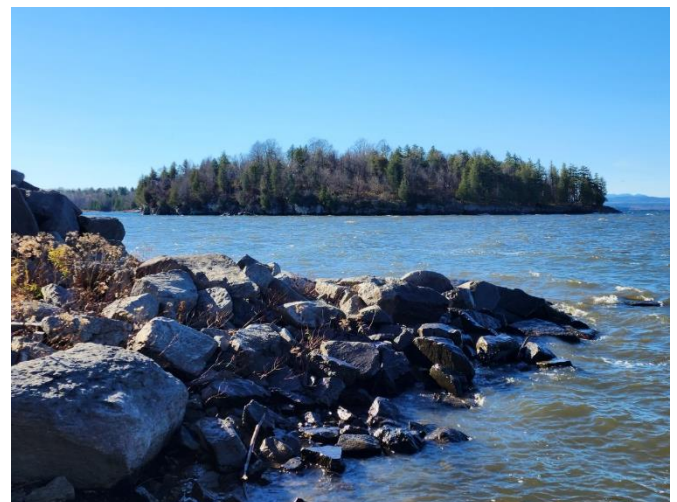
## Vision Statement

*South Hero, Vermont is a friendly, vibrant, and beautiful small Lake Champlain Island town where folks live, work, play and visit. The abundant recreational, agricultural and cultural amenities support healthy lifestyles, a sense of community, and a thriving local island economy.*

## Themes

As part of the development of the 2023 South Hero Town Plan, the Planning Commission identified five key themes to prioritize. Given that these themes cut across traditional areas of planning, the following icons are used to indicate where these themes are found throughout the plan.

-  **Vibrant Villages**
-  **Housing and Transportation**
-  **Recreation and Recreation Economy**
-  **Equity & Inclusion**
-  **Climate Change and Resilience**



*Figure 1.1: The Narrows. Credit: Mary Harwood*

## Equity and Inclusion

The South Hero Town Plan seeks to incorporate the principles of equity & inclusion in its process, vision, goals, and policies. Removing barriers to equitable opportunities for all residents allows the whole community to thrive.

Much like the other key themes, equity is not an independent goal but rather a consideration that helps to inform all other goals. In each chapter of the plan, readers will find a section explaining how the Town’s goals & policies will work towards a more equitable and inclusive community.

Each person has a valuable perspective on how the Town can best support its residents, and an equitable and inclusive South Hero recognizes this and strives to engage the whole community in its planning efforts. Engagement opportunities included a survey, community events and dedicated workshops, all with the goal of reaching residents who may not typically be involved in municipal planning efforts.

The Town recognizes that the work of creating an equitable and inclusive community is an ongoing process and is committed to continuing to re-evaluate how to ensure its planning best supports its goals for equity and inclusion.

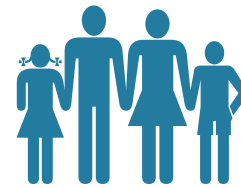
The Town of South Hero adopted a declaration of inclusion on June 14, 2021, the full text of which is included below.

### *Defining Equity and Inclusion*

**Equity:** Equity is ensuring fair treatment, access, opportunity, and advancement for all people, while at the same time striving to identify and eliminate barriers that have prevented the full participation of some communities.

**Inclusion:** Inclusive environments are places in which any individual or group is and feels welcomed, respected, supported, valued, and able to fully participate as their authentic selves. An inclusive and welcoming culture embraces differences, offers respect in words and actions for all people, fosters a diversity of thought, ideas, perspectives, and values, strives to create balance in the face of power differences.

*Source: Vermont League of Cities and Towns*



## Town of South Hero Declaration of Inclusion

The Town of South Hero condemns racism and discrimination in all forms, and welcomes all persons, regardless of race, color, religion, national origin, sex, gender identity or expression, age, disability or sexual orientation. The Town of South Hero commits to fair and equal treatment of everyone in our community and to be a place where individuals can live freely and express their opinions.

*Adopted by the Town of South Hero, June 14, 2021*

## Community Engagement

A key goal of the 2023 update process was to reach a broad range of residents to develop a community supported vision for the future of the Town. To achieve these goals, the Town Planning Commission held several public events, met with local organizations, and conducted a survey.

### Community Organization Meetings

To inform initial focus areas for the plan outreach efforts, the Town met with local & regional organizations including the Grand Isle County Alliance for Racial Equity, Take Action, Grand Isle Natural Resource Conservation District, Friends of Northern Lake Champlain, CIDER, Transportation Advisory Committee, Champlain Valley Office of Economic Opportunity, the South Hero Recreation Commission, South Hero Land Trust, and Local Motion.

### Town Plan Survey

The Town Plan Survey included 23 questions covering demographics and the following themes: housing & transportation, climate change & resilience, equity & inclusion, recreation & recreation economy, and vibrant villages. The survey was distributed online & in paper form at the Town Office and Worthen Library. Residents were sent a postcard with a link to the survey, and the survey was available at the June Community Cheers and Cheese event. The survey received 207 responses; 11.7% of year-round adult residents responded to the survey and 32 responses were received from seasonal residents. An analysis of the survey response demographics found that the survey underrepresented renters and residents aged 18-34. Therefore, it is important to consider that the survey may be biased as it relates to issues that primarily affect these groups. A full account of survey results can be found in the appendix.

### Community Events

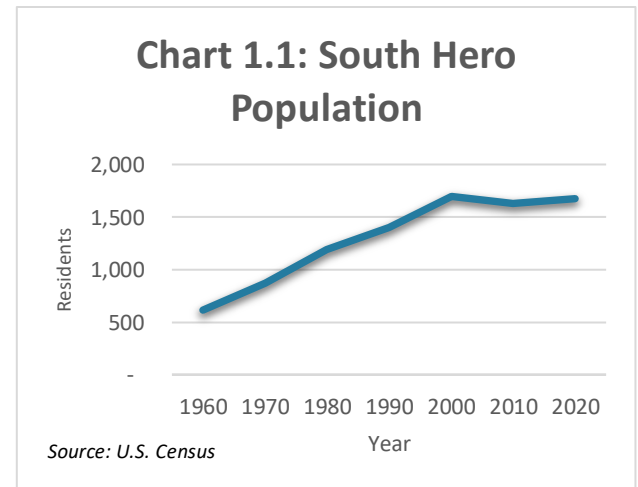
The Town Planning Commission participated in two “Community Cheers & Cheese” events. During the June events, residents were encouraged to leave comments about what they would like to evolve, maintain, and transform about South Hero

During the August event, the Planning Commission asked for feedback on a draft vision statement. The Planning Commission was also available to discuss the plan with residents at the Farmer’s Market several times throughout the summer.

The Town held a Village Vision Workshop in September 2022. Attendees discussed the current character of the two village zoning areas, and the desired future build-out via a map exercise.

The results of all these public outreach efforts have directed the vision, organization and goals & policies throughout this plan. Survey results and community input are noted throughout the plan, and have driven the vision, goals and policies found throughout the plan.

## Town Data Profile



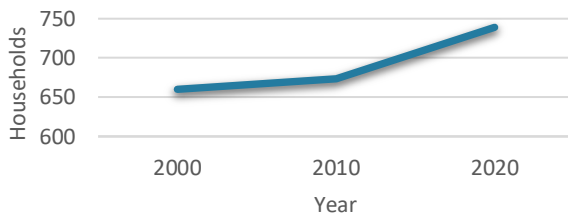
As of 2020, South Hero has 1,674 year-round residents. South Hero’s population grew rapidly from 1960 to 2000 and has stayed relatively stable over the last 20 years.

There is no specific data on percentage of seasonal residents, but it is understood that they are a significant group in South Hero.

South Hero’s population continues to age, with a 12% increase on the population over age 65 in the last 12 years. Despite this, South Hero continues to attract younger families, and the population under 18 has stayed relatively stable over the past 10 years.



**Chart 1.2: South Hero Household Growth**



Source: U.S. Census & U.S. American Community Survey

While population growth has slowed in the last 20 years, the number of households has continued to grow. This is likely due to a reduction in average household size in the region over the same period. Growth in the number of households will mean that the same population requires additional housing units over time.

## Compatibility with Neighboring Municipalities

From transportation to land use to water quality, a community's planning effort cannot happen without involving adjacent communities within the region. The Town of South Hero is adjacent to the Towns of Grand Isle in Grand Isle County and Milton and Colchester in Chittenden County. The following is a review of the relationship between the South Hero Town Plan and the plans of adjacent communities:

### Grand Isle

The Town of Grand Isle's plan was adopted in February 2007. The Rural Residential/Agricultural Zoning District, Commercial Recreation Shoreline, and Residential Shoreline Districts are immediately adjacent to South Hero's Residential District. These districts have comparable permitted and conditional uses. The South Hero Plan does not conflict with the Grand Isle Town Plan.

### Colchester

The Town of Colchester's plan was adopted on April 19, 2017. Colchester is not accessible to South Hero via road, but is connected via the Island Line bike path and ferry during the summer. Residential One District and Flood Plain District are the most adjacent to South Hero. Land uses are compatible

with proposed land uses in the adjacent South Hero. Lake Champlain serves as a buffer between the lower densities of South Hero and areas of Colchester with higher densities. The nearest growth center to the Town of South Hero is the Local Growth Center in the Town of Colchester at Exit 17 on Interstate 89.

### Milton

The Town of Milton last updated their development regulations on June 7, 2021. Milton's zoning districts on the border of South Hero are Agricultural/Rural Residential (R5) and Shoreland Residential (R6), as well as a Flood Hazard Overlay District. These Milton zoning districts include uses that are comparable to uses permitted in the Shoreline and Flood Hazard District in South Hero, the zoning districts located on the South Hero side of U.S. Route 2.

### Relationship to Regional Plans

South Hero is a member municipality of the Northwest Regional Planning Commission (NRPC), which provides a forum for municipalities in Franklin and Grand Isle County to act on behalf of the region. All communities, including South Hero, are entitled to equal voting representation by two locally appointed members of the governing Board of Commissioners. Each member municipality has the opportunity to participate in the NRPC Policy/Project Review Committee, Transportation Advisory Committee (TAC), Brownfield Redevelopment Program, and other subcommittees. NRPC is required to adopt a Regional Plan per Title 24, Chapter 117 of the Vermont Statutes Annotated. The Regional Plan is intended for use as a legal document, as a guide for decision makers and as an action plan to address issues of regional importance. The Regional Plan for the NRPC was adopted in July 29, 2015. South Hero is primarily in the agricultural Resource Planning area, which is compatible with South Hero's zoning. The Regional Plan acknowledges village centers as an appropriate location to maintain historic character of denser residential and commercial uses. The South Hero Town Plan conforms to the Northwest Regional Plan. The Chittenden County Regional Plan calls for the areas of Milton immediately adjacent & the closest portions of Colchester to South Hero to remain rural.

# Natural Resources and Land Use

## Goals & Objectives

1. Allow South Hero to grow in a responsible way, with respect for its unique characteristics, natural beauty and rural environment in a manner which encourages and nurtures South Hero’s sense of community and civic pride.
2. Support agriculture that follows best environmental management practices.
3. Ensure the compatible coexistence of development with major ecologically sensitive areas, such as wetlands, natural areas, Lake Champlain, scenic views and historic sites.
4. Enable mixed use of residential, agricultural, light industrial and/or commercial developments to flourish in the Town.
5. Encourage commercial and small, light industrial development within or adjacent to the designated Village Centers and along Route 2 and Route 314 in a way that maintains the beauty of the entrances to the Town from the east and west and prevents strip development.
6. Take advantage of existing or historical hamlets where appropriate.
7. Increase public awareness of the unique characteristics of South Hero in an effort to help preserve those characteristics for future generations.
8. Maintain adequate public access to the lake in an environmentally responsible manner.
9. Support efforts to reduce pollution and cleanup Lake Champlain, groundwater and air quality.
10. Re-evaluate and prioritize the “scenic views” list with consideration of how it can support protecting scenic views in the Town’s Development Regulations.

## Implementation

1. Restructure the Town’s Development Regulations to define and include the Proposed Land Use Areas of Village Core and Village Neighborhood.
2. Evaluate making provision for a Town Center with adequate capacity to host the Town Offices, recreation fields and other functions and facilities as the need develops. Commercial enterprises, in a public/private partnership or just private, should also be included in the evaluation.
3. Support purchase and/or donation of development rights to maintain agriculture and important natural areas outside of the village areas.
4. Encourage agricultural easements in subdivisions and promote Planned Unit Developments (PUDs) where soils are suitable.
5. Require that “building envelopes” be defined for house sites in subdivisions to ensure coexistence with wetlands, natural areas, and farmland.
6. Define “village core” area and “village neighborhood” area in the zoning regulations, encourage development in those areas and take steps to improve pedestrian and bicycle safety, and enforce appropriate speed limits.
7. Support, encourage and inform the public about innovative solutions for safe sewage disposal.
8. Support the development of retail, hospitality and service-based businesses best suited to serve the needs of residents, seasonal residents and the tourist population.
9. Reconsider the lot size limitations in zoning regulations.

10. Administer town regulations in a fair, consistent and efficient way and monitor them for their effectiveness and enforcement.
11. Support and participate in Federal, State and local efforts to improve water quality in Lake Champlain. Ensure Town Development Regulations support that effort.
12. The Town Planning Commission and Conservation Commission should stay up to date on State and federal regulations concerning wildlife, wetlands, natural areas, and water quality. Furthermore, the Commissions should determine how best to regulate these areas and monitor the effectiveness and enforcement of town regulations.
13. The Town shall support, seek out and apply for State, federal and private grants for the protection of natural areas, wetlands, scenic areas, recreation areas, and wildlife habitat.
14. The Town shall support donations, leases, and other private, voluntary ways to protect natural areas, wetlands, scenic areas, recreation areas, and wildlife habitat.
15. Town zoning and subdivision regulations shall be strictly and consistently enforced. All Town officials should be well-informed about these regulations.
16. In the Town Development Regulations, provisions shall ensure that development compatibly coexists with the following special environmental areas:
  - a. Natural areas, especially significant fossil sites
  - b. Critical habitat on the outer islands
  - c. Public access areas on the lake shore
  - d. Lake Champlain shoreline i.e., wetlands, including the “Crick” and the area of Round Pond
  - e. Scenic views
  - f. Flood plain areas
17. Ensure that the conversion of seasonal homes to year-round use meets local zoning standards and results in safe and adequate sewage disposal, water supply, and road access.
18. To protect the Lake Champlain shoreline and recognize its diverse and unique character, the Town Planning Commission and Conservation Commission shall keep apprised of lakeshore land use and identify shoreland areas that may be treated differently in the Town regulations.
19. Support State of Vermont efforts to minimize pollution to the Lake and groundwater.
20. Work cooperatively with the newly created Conservation Commission where appropriate.

## Natural Resources

The character and capacity of development in South Hero is physically influenced by topography, geology, soils, groundwater and surface water. This chapter provides a basis to understand the physical character of the town and its limitations and suitability for development. The Vermont Geological Survey, the USDA Natural Resource Conservation Service (NRCS) Web Soil Survey, Vermont Significant Wetland Inventory and other resources provide valuable information on the town’s natural resources. This information can be viewed at <https://anrmaps.vermont.gov/websites/anra5/>.

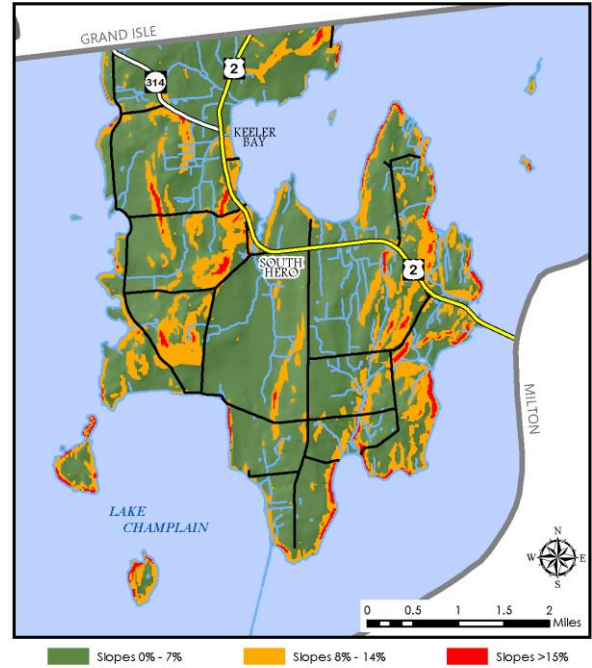
### Topography and Geology

South Hero is comprised of the southern portion of South Hero Island and the 7 outer islands of Providence, Stave, Fish Bladder, Cedar, Kellog, Sawyer and Carlton’s Prize. South Hero is primarily

low and flat with a few ridges and hills. The highest point in South Hero is a rounded hill reaching 279 feet above sea level about 1.8 miles southwest of South Hero Village. There is a small amount of land on hills and on the shorelands that have steep slopes over 15%. Development in these areas could result in destabilization and environmental damage, and therefore should be avoided.

The town is within the Champlain Lowlands physiogeographic region and has been shaped by historic ice ages and seas. As a result, there are many geologic sites of interest in South Hero. Fossil evidence may be found in many rock outcroppings throughout the town as much of the rock is in layers of sediments put down over millions of years. Lessor Quarry, located south of Sunset View Road approximately 0.25 miles from Route 2, is made up of Ordovician limestone about 450 million years old. It consists of thick layers of dark blue-gray limestones with fossils and occasional thin layers of shale. The site is used for research and field trips by UVM and other area students, however, it is on private land and permission must be granted before visiting the site.

### STEEP SLOPES



Legend for Steep Slopes: Green = Slopes 0% - 7%, Yellow = Slopes 8% - 14%, Red = Slopes >15%

### PRIMARY AGRICULTURAL SOILS



Legend for Primary Agricultural Soils: Light Green = Prime Soils, Light Orange = Statewide Importance Soils

### Soil and Earth Resources

**Agricultural Soils.** Soils that have the highest potential for agriculture based on soil physical and chemical conditions are mapped by NRCS and known as primary agricultural soils. The NRCS soil survey places soils in value groups that determine whether they meet various types of primary agricultural soils. Map X shows highest value Prime soils and second highest value Statewide Importance soils for agriculture. Not surprisingly, South Hero is made up almost entirely of soils that have good potential for agriculture. The town’s efforts to concentrate growth in villages and to carefully site limited development in the rural areas will help to preserve agricultural soils.

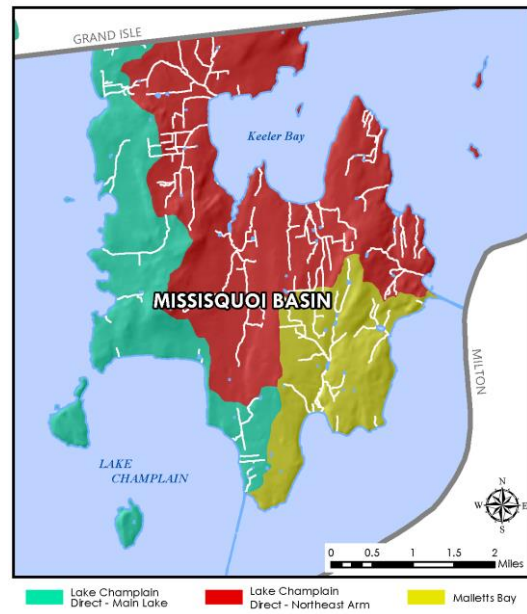
**Earth Resources.** Earth resources, including sand, gravel and stone, are important resources particularly for use in construction and road maintenance. Mapped soil data from the NRCS shows limited potential for sand and gravel extraction in the Town.

There is one mapped quarry in the area where there is sand and gravel potential. The Town of South Hero acquires sand and gravel from Highgate, gravel from North Hero, and salt is sourced from Barrett’s Inc. Given the limited potential in town, the likelihood of finding suitable property for a municipal sand/gravel quarry is not favorable unless the Town looks outside its borders. Despite this limited potential, it is important to ensure that any quarry, public or private, is properly designed, engineered and managed. Zoning standards shall include performance standards for extraction, noise, dust, hauling, reclamation and bonding to minimize impacts to neighbors. Proper end of life reclamation shall also be required.

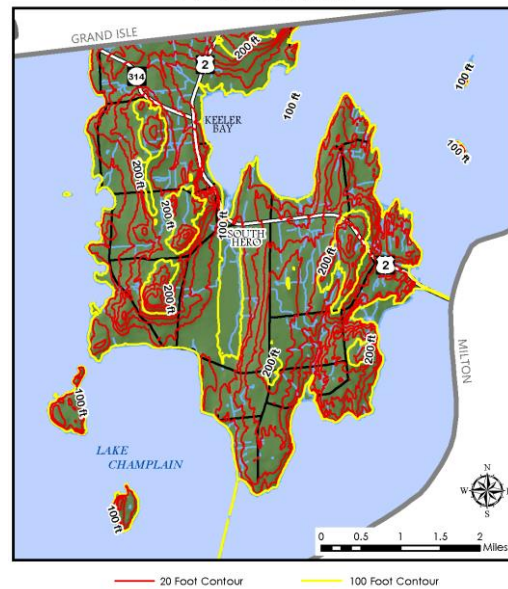
### Water Resources

**Streams and Drainage.** South Hero falls into the “Northern Lake Champlain Direct” watershed. Water from a series of unnamed streams and wetlands generally flow directly into Lake Champlain and needs to be monitored for excess phosphorus and other lake pollutants.

### WATER RESOURCES



### TOPOGRAPHY



Factors such as, larger rivers flowing into Lake Champlain, including the Lamoille (Colchester) and the Winooski River (Winooski), and overflows from the Burlington area can negatively affect the quality of water on the south end of South Hero Island. Flow from St. Albans Bay can negatively affect the Inland Sea area of South Hero from the Sandbar Causeway north around Kibbe Point into Keeler Bay and north to the Grand Isle Town border. Many homes get their drinking water directly from the Lake along the entire South Hero shoreline.

*Groundwater.* Some South Hero residents rely on groundwater wells for drinking water. The Town’s limited aquifer sources should be protected to ensure good water quality. Some wells in South Hero are impacted by hydrogen sulfide gas and residents may choose to treat their wells to address this.

*Wetlands.* Wetlands are mostly semi-aquatic lands that are flooded or saturated by water for varying periods of time during the growing season. In all wetlands, the presence of water creates conditions that favor the growth of certain plants, such as cattails, water lilies, alders, dogwood, red maple, and swamp oak. Wetlands are important to the town because they provide flood and storm water storage, surface and ground water protection, shoreline anchoring and erosion control, wildlife and migratory bird habitat, threatened and endangered species habitat, educational and recreation opportunities, and open space and scenic beauty.

Map X shows the location of wetlands mapped by the Vermont Significant Wetland Inventory; however, this map is not completely accurate or comprehensive and currently being updated. The State is working to improve the map by revising inaccurate wetland locations and adding new wetlands to the inventory, specifically those that are over a half-acre in size, that are connected to water, that are a vernal pool or headwater, and that contain significant natural communities, or rare species habitat.

The two most significant wetlands in South Hero are the South Hero Marsh Wildlife Area (the “Crick”) and the Round Pond Natural Area. The South Hero Marsh Wildlife Area outlets on the north side of U.S. Route 2, just west of South Hero Village, and extends southerly nearly to West Shore Road. The “Crick”, roughly 100 acres in size, is mostly wooded with deciduous trees. Round Pond is situated near the shoreline, northeasterly of the intersection of Landon Road and East Shore Road.

The pond is mostly open water; the wetlands are extensive and includes some marshes northerly along the shoreline. The area is an important protected nesting area for loons.

*Lake Champlain.* South Hero not only depends on the Lake Champlain for drinking water, fishing, swimming, boating and other recreational pursuits, but for its identity and sense of place. Summer tourism and property values are tied to its health and beauty. The Lake attracts businesses with a work force that appreciates the Lake’s natural beauty and Vermont’s working landscape.

Unfortunately, too much pollution is reaching Lake Champlain. Stormwater runoff travels into rivers, streams or directly into Lake Champlain from agricultural land, roads, parking lots, lawns, athletic fields, buildings, industrial facilities, forest harvesting operations, and streambank erosion.

Wetlands in Vermont are classified as Class I, II, or III based on the functions and values which they provide. Development on a Class I and II wetlands requires a VT Wetlands permit from the Department of Environmental Conservation.



Figure 2.1: View of Round Pond.

During periods when Lake Champlain is in flood stage, septic systems near the Lake are in danger of flooding and contributing to the pollution problem. Wastewater treatment plants off Island, in particular Burlington, Winooski, and St. Albans are an additional source of water pollution to Lake Champlain’s waters. South Hero recognizes the importance of clean water, a clean Lake Champlain and the negative impact a polluted Lake Champlain has on the State’s economy. South Hero supports efforts to decrease and stop all polluting of Lake Champlain.

Phosphorus is one of the nutrient pollutants found in stormwater and arguably the greatest threat to clean water in Lake Champlain. Too much phosphorus pollution stimulates excessive growth of algae and nuisance aquatic plant growth. Of particular concern is the toxic cyanobacteria, also called blue-green algae, that can turn the water green, release a horrid odor and make people and pets’ sick. For waters not meeting Vermont State Water Quality Standards, needed pollutant reductions are identified through Total Maximum Daily Loads (TMDLs). Tactical basin plans describe how these pollutant reductions will be achieved by outlining priority projects or actions, based on monitoring and assessment data, to protect or restore specific waterbodies. South Hero is within the Northern Lake Champlain Direct Basin (Basin 5), which completed a Tactical Basin Plan in 2020. The Plan recommends that South Hero complete a stormwater management plan to identify ways to limit nutrient loading from stormwater.

South Hero prepare a stormwater management plan to identify ways to further manage and treat stormwater before it makes it way to Lake Champlain.

Modeling has identified Keeler Bay for high phosphorous loading and as a result it is a priority for remediation and restoration.

Stemming from this data and planning, the South Hero Land Trust and Grand Isle Natural Resource Conservation District are leading a Keeler Bay Action Plan, with funding from the Lake Champlain Basin Program.



*Figure 2.2: South Hero’s White’s Beach at Green Up Day. The town beach is named after the family who lived nearby.*



*Town Plan Survey Results*

Respondents to the 2022 South Hero Town Plan survey strongly supported efforts to improve the water quality of Lake Champlain. Over 70% supported developing a stormwater master plan for the village area and more than two-thirds supported exploring municipal wastewater management in the village areas.

*Stormwater Management.* In South Hero, stormwater infrastructure consists of a series of catch basins, culverts, lines, and swales that transport stormwater to outfall points in Lake Champlain. Stormwater is a major cause of the impaired water quality in Lake Champlain. As noted above, the Tactical Basin Plan recommends that



*Figure 2.3: This new stone lined ditch on Kibbe Point Road was funded by Grants In Aid in 2022 and will reduce erosion and improve stormwater infiltration.*

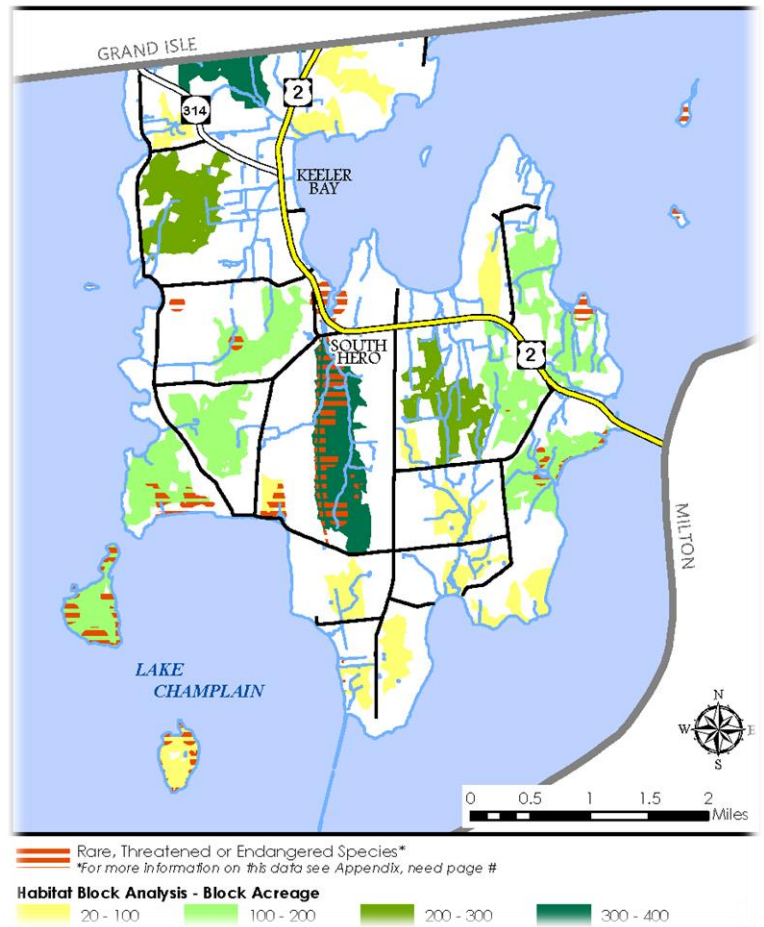
## HABITAT & NATURAL

The State issues a Municipal Roads General Permit, first in 2018 and again in 2023 to achieve significant reductions in stormwater-related erosion from municipal roads, both paved and unpaved. It covers discharges of regulated stormwater for town highways (Class 1-4) and municipal stormwater infrastructure associated with town highways. Municipalities are required to implement a customized, multi-year plan to stabilize their road drainage system. Funding through the Grants In Aid program is available for implementation projects.

Another way that South Hero can work on limiting the amount of stormwater that makes its way to Lake Champlain is to require that developments incorporate Low-Impact Development (LID). LID controls stormwater runoff at the lot level aiming to keep rainwater on-site before slowly releasing it. Examples include limiting impervious surface and green infrastructure techniques, such as rain gardens, rain barrels, and sites designs that allow maximized on-site infiltration of stormwater.

### Habitat Blocks, Wildlife Corridors and Forest Land

Wildlife is an important natural resource and an indication of a healthy, sustainable environment. The most important wildlife habitat blocks in South Hero consist of wetlands. The highest ranked habitat block is the area around the Round Pond Natural Area, while the largest habitat block is the Roy Marsh Wildlife Management Area that runs behind South Street from Route 2 to West Shore Road. The majority of both these areas are already protected as conserved land. Continuing to preserve these and the smaller habitat blocks is a priority for the Town. Over time, even low-density rural development and roads can fragment these areas, threatening the health, function and value of these forest areas. Any forestry use should follow accepted management practices.



South Hero has scattered areas of forested land, including mature forest, wetland forests, and young forests that are growing up from old farm fields and pastures. The Champlain Islands support growth characteristics of Central Woodlands, such as shagbark hickory, basswood, several maple varieties, beech and red and white cedar.

The predominant woodland variety is ash, exceeding 50% coverage in some parts of town. The invasive Emerald Ash Borer beetle (EAB) first infested South Hero in 2018. While EAB has spread into most of Vermont’s counties, its population is low and it has infested only a very small percentage of the state’s total ash trees. Managing the movement of infested ash material will slow the spread of EAB and allow time for planning, monitoring, and research. The Town should plan for removal of dead and diseased trees on Town property, which includes town road ROW’s under proper slow the spread protocol, and private landowners should be aware of the impact on their property.



### Air Quality

Air quality is generally high throughout Vermont, especially in rural communities such as South Hero. Motor vehicles are the largest source of air pollution in Vermont, which can create localized areas of poor air quality where traffic is congested. Air quality can also be impacted by weather patterns which carry pollutants from other areas. All efforts should be taken to maintain good air quality in South Hero.

### Scenic Areas

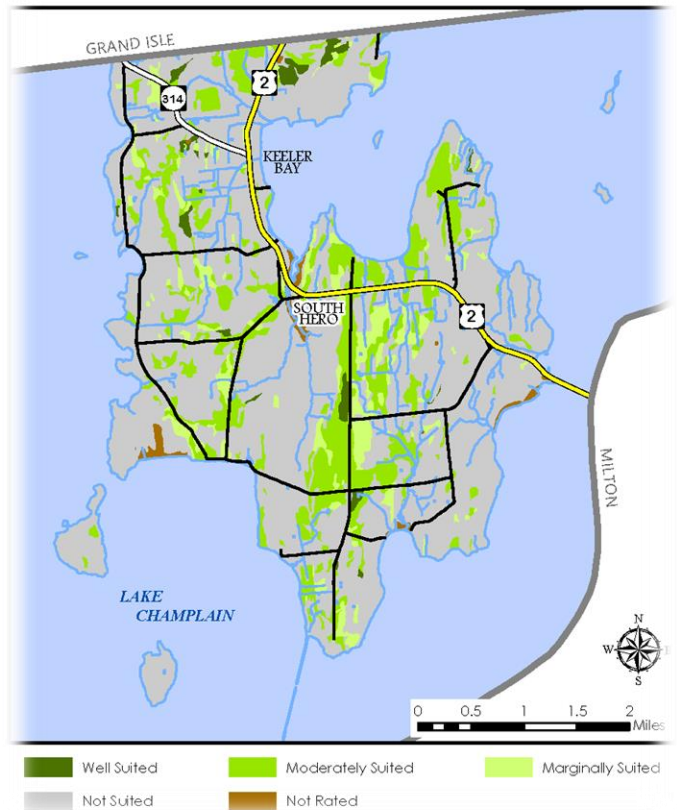
*Designated Scenic Views.* A scenic view is a publicly accessible area where an important and characteristic open vista may be viewed by the public. Scenic views may be from public roads, public recreation areas and from the lake. Many years ago, the Special Island Environment Committee found 14 scenic views and ranked them from 1 to 4, with 1 being the best. The Town will need to develop review standards in the South Hero Development Regulations to ensure that development is planned and sited with limited impact to these identified scenic views. A full list of scenic views can be found in Appendix A.

### Historic & Archeological Resources

*Historic Resources.* A historic building inventory identified 99 historic sites in South Hero. The list includes houses, farms, camps, log cabins, school houses, churches, stores, inns, cemeteries, an old boat launch and steam boat landing (from the days before the bridge) and barns. Groupings of historic buildings are in the following areas: 1) Sand Bar Historic District; 2) West Kibbe Point Historic District and 3) South Hero Village Center Historic District. There are no regulations for historic buildings in the Town of South Hero.

*Archeological Resources.* The state maintains an inventory of archeological sites across the state, including in South Hero. These areas are not listed publicly to protect these sensitive areas. Any archeological sites discovered in South Hero should be reported to the Vermont Division for Historic Preservation (VDHP).

## SEPTIC SUITABILITY



### Land Use

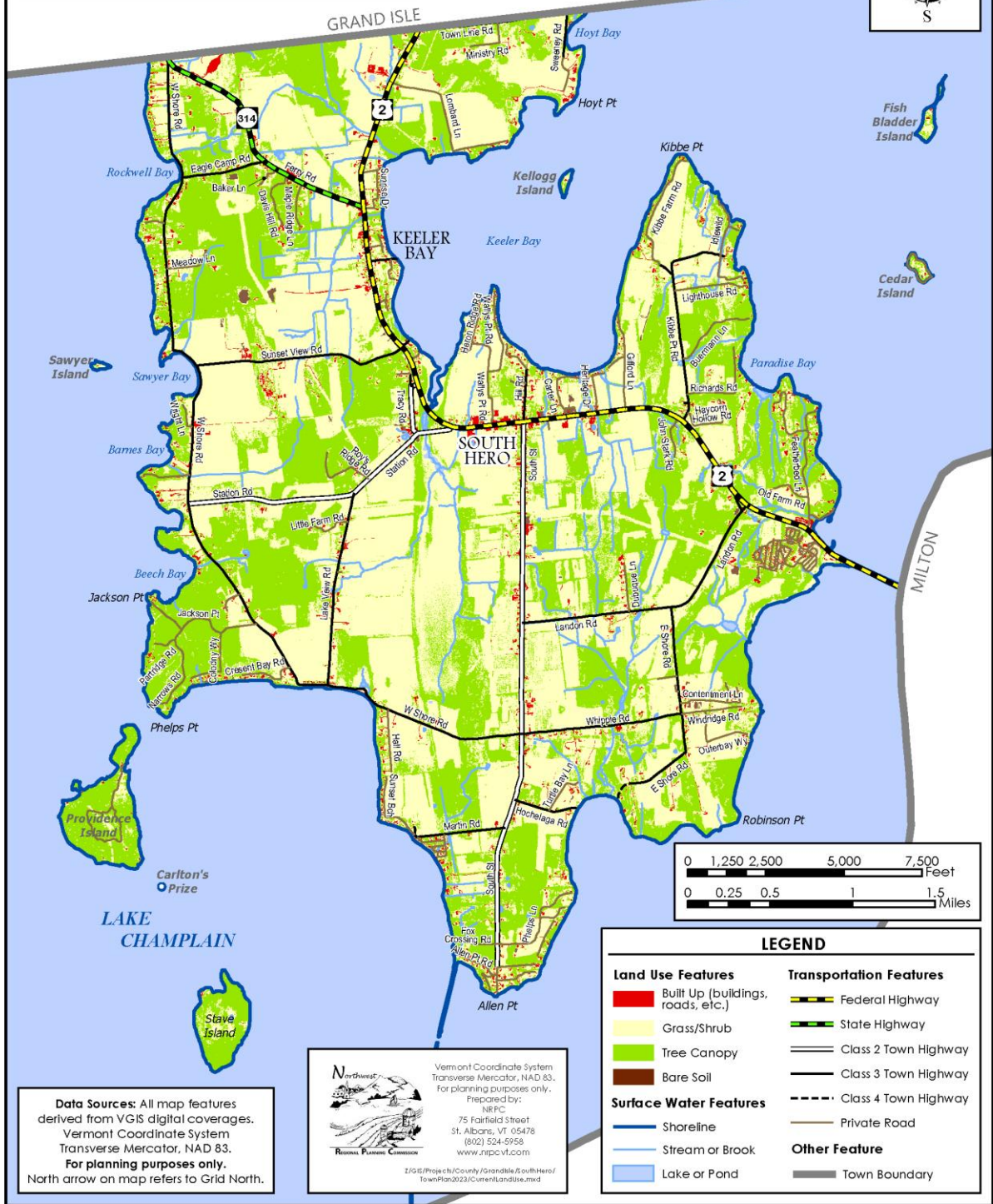
#### Current Land Use

Land use in South Hero consists of two village areas along Route 2 and rural areas with dispersed residences, working farms, home based and agricultural businesses, wetlands and open land. These uses are bounded by Lake Champlain with its small beaches, marshes, rocky shoreline, lakeshore residences and seasonal homes.

The Town’s history is rooted in agriculture, and over a quarter of the Town’s acreage is used for this purpose. The South Hero Land Trust works to preserve forest & farmland in South Hero. Over 19% of land in South Hero is preserved through one of the land trusts in the state. The amount of farmland in the town has remained relatively consistent since 2013.

# CURRENT LAND USE

## Town of South Hero



South Hero has a significant seasonal tourism industry with a large number of summer homes and camps located along Lake Champlain, in addition to a few marinas, public boat launches and a town beach. Roughly 13% of all land is used for seasonal dwellings, with 91% of those parcels being located on the lakefront. The number of seasonal residences listed with the town has remained relatively consistent from 2013 to 2020.

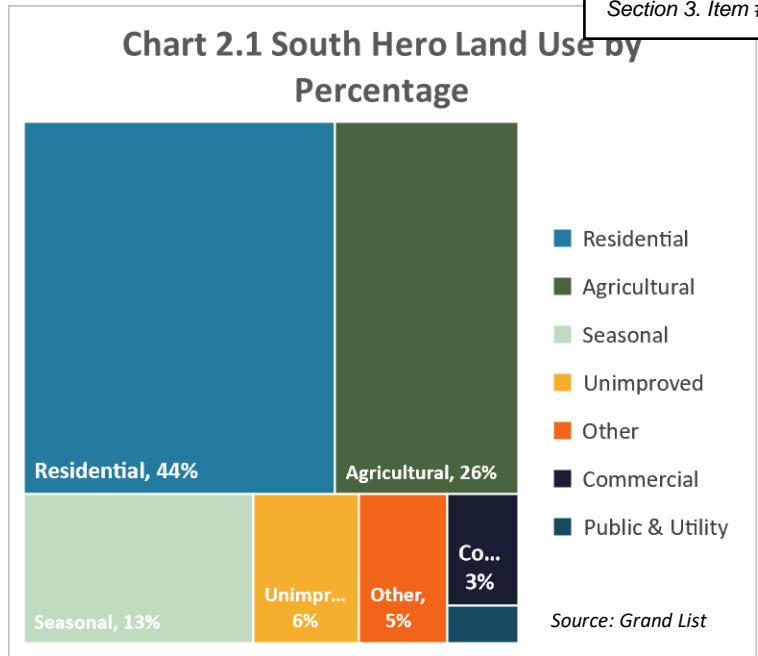
South Hero’s two village areas, South Hero Village and Keeler Bay Village, are located at two junctions along Route 2. The villages consist of a mix of residential, commercial and public land uses at a higher density than the rest of Town.

Outside of the village areas, residential development is located on larger rural lots integrated with agriculture, open land and wetland areas. Nearly half of all land in South Hero is in residential use, with an average parcel size of 5.5 acres. However, this number may be skewed by a few very large lots; of the 75% of residential properties on less than 6 acres, the average acreage is 1.7 acres. 33% of all residences are located on the lakefront.

### Considerations for Future Land Use

#### Planning for Villages.

South Hero’s village areas are important community centers with a mix of housing types and a variety of municipal services and businesses. The Town of South Hero has made a concerted effort to plan for responsible growth in the community that will enable the town’s rural, island character to continue into the future. The Town recognizes that the town’s rural island countryside and its vibrant villages go hand in hand. By planning for and regulating development to be concentrated in the town’s villages, the Town is concurrently setting policy to limit the intensity of development outside the villages. The town first adopted village zoning districts and associated regulations in 2020. The Town is currently studying whether municipal wastewater management is a possibility, which is critical to allow for concentrated residential



development, infill and commercial development. The Town is also engaged in a scoping study to make the village more walkable, safe for bicyclists and pedestrians and the streetscape more inviting. The 2023 South Hero Town plan makes further recommendations on how to continue shaping and implementing the vision for South Hero’s Villages.

Vermont has established a framework of “designations” to offer incentives that encourage communities to maintain vibrant concentrated settlements separated by rural countryside. These programs provide a variety of incentives for development in the designated areas,. Each program has a set of unique goals for making vibrant places. South Hero Village and Keeler Bay both have Village Center Designation (VCD). The village designation boundary is similar but distinct than the village core planning area boundaries.

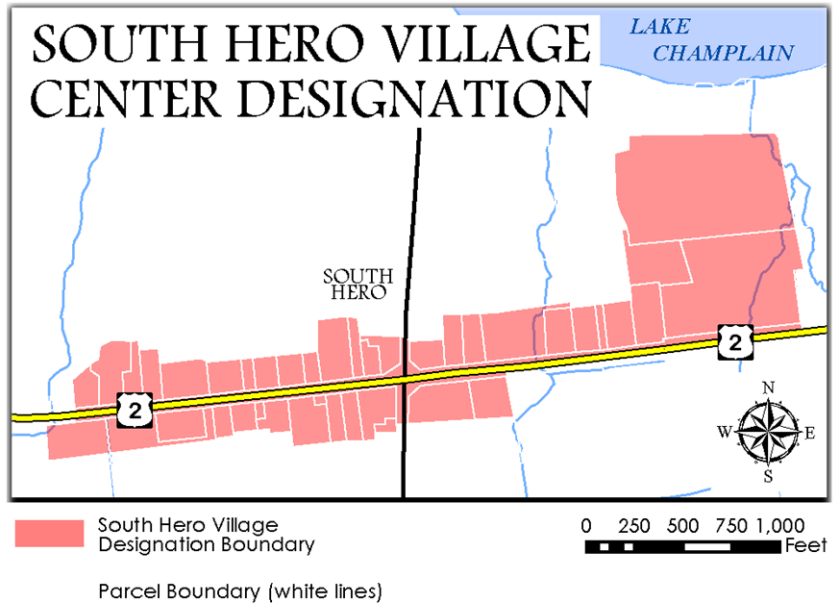
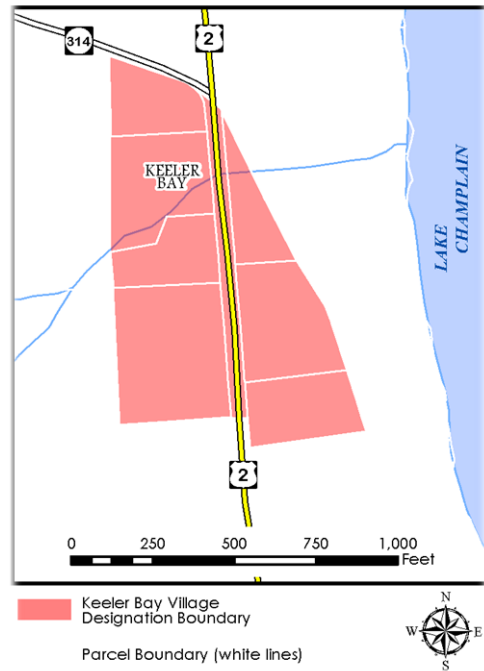
Village Center Designation supports small town revitalization with a variety of tax credits to support improvements to historic properties and priority consideration for several state grants. The VCD program has helped the Town of South Hero receive several State Grants including a Municipal Planning Grant to help create this Town Plan. Village Center designation is an important tool to further the town’s goals for a vibrant historic village center in South Hero Village and Keeler Bay Village.

Village Center Designation makes the town eligible for a designated Neighborhood Development Area, another state designation program that provides incentives for residential neighborhoods within or adjacent to village centers. Community scale or municipal wastewater treatment is a requirement. If municipal wastewater is development, the town should consider applying for a neighborhood development area.



*Commercial and Industrial Development.* Commercial and industrial development in South Hero should be of a scale and impact appropriate for the Town’s rural character. There are no areas in town designated exclusively for commercial or industrial uses. As a result, heavy industry is not appropriate in the town. Most commercial and light industrial uses are encouraged in or adjacent to the villages, however the particular use will determine the appropriate location. All commercial and light-industrial uses will have appropriate review standards that protect the scenic beauty of the Town, protect the quality of life for nearby residences and businesses through robust compatibility with the resources that the Town is trying to protect. Light-industries in particular will adhere to standards that ensure any manufacturing, fabrication, processing, assembly, storage or warehousing does not interfere with the character of the area. Home occupations will be encouraged throughout the Town provided they fit in with the surrounding neighborhood. All uses must demonstrate that they have adequate road access. The Town is working on developing a comprehensive definition of light-industry to include in the development regulations to further the Town’s vision for development.

### KEELER BAY VILLAGE CENTER DESIGNATION



*Agricultural Development.* Farms of all types are encouraged to remain on primary agricultural soils in the Town of South Hero. The best locations for farms are designated as primary agricultural land in the agricultural soils map. The Town encourages compatible home occupations and accessory on-farm businesses on farms, such as farm stands, value added agriculture enterprises, storage operations in barns, and bed and breakfasts. When a farm designated as prime agricultural land is proposed for subdivision, the Town will work with the owner/developer to locate house sites in a way that protects as much of the prime agricultural land as possible.

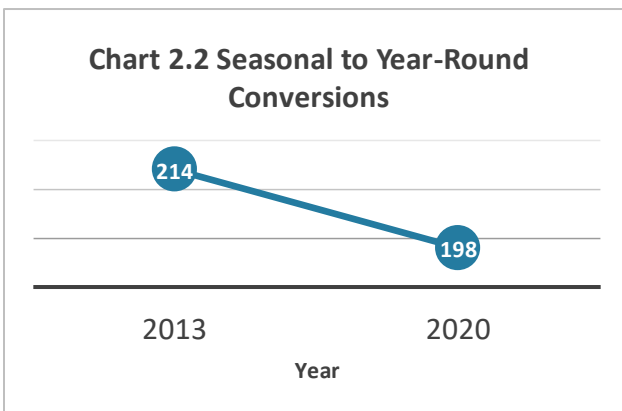
Important forest soils and forest resource areas should also be protected for the purposes of preservation and forestry activities.

*Seasonal Development.* The seasonal home community is important to the character of the Town of South Hero; however, there is a trend of seasonal to year-round conversion. Places that once were only occupied in the warmer months are now occupied year-round. Conversions in places where there is a dense pattern of seasonal homes along the shoreline and where soils for septic systems are poor and road access is limited can be problematic for a variety of reasons. To protect the water quality of the lake, to enable safe and efficient access to properties, and to protect the scenic beauty and fragile character of the shoreline, the Town will take measures within its authority to ensure properly functioning septic systems, year-round road access for emergency vehicles, and adequate lake shore and yard setbacks.

Beyond local authority, Act 172, the State Environmental Protection Act passed by the Vermont Legislature in 2014, imposes State standards and permit requirements that limits new development and tree cutting within 250 feet of the lake.

### Land Use Planning Areas

Land use planning areas lay out a framework for implementing zoning districts and associated standards for land use and development in the town. The following proposed land use maps illustrate the boundaries of five planning areas, in addition to a conservation and flood hazard overlay, while the following purpose statements prescribe in general terms, the amount, intensity and character of land use and development intended for the area. Zoning, other municipal regulations and ordinances will further the intent of the proposed land use planning areas by establishing zoning districts and appropriate zoning and subdivision standards of review. The permitting of new development shall take into the consideration the appropriate timing or sequence of land development activities in relation to the provision of necessary community facilities and services, such as wastewater and water infrastructure.



South Hero Town Plan 2023-2031

# PROPOSED LAND USE Village Insets

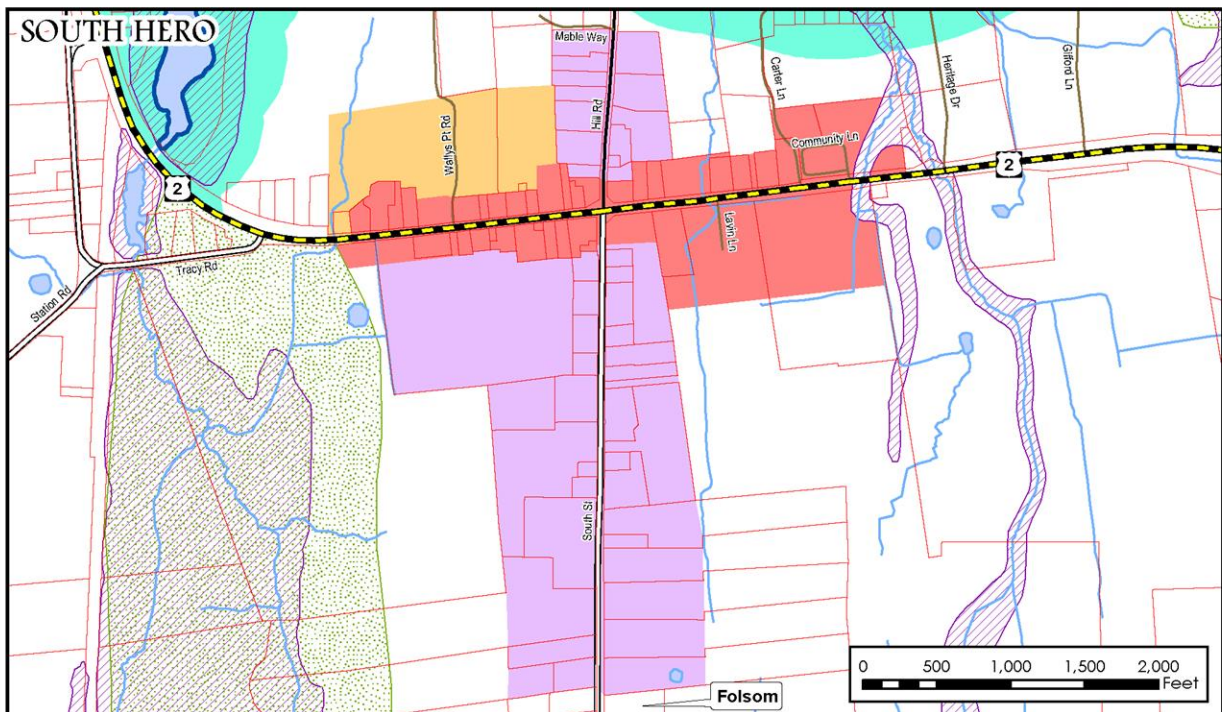
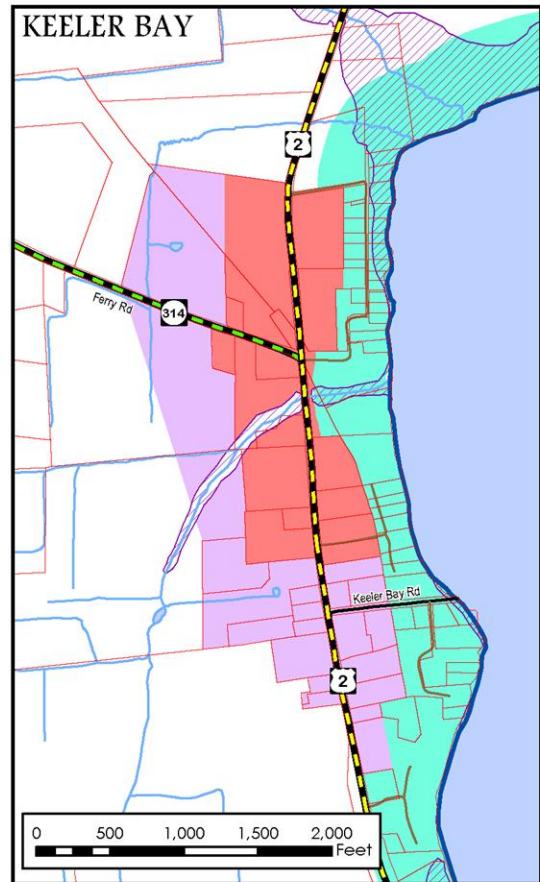
LEGEND	
<b>Planning Area Features</b>	<b>Transportation Features</b>
Village Core	Federal Highway
Village Neighborhood	State Highway
Under Consideration	Class 2 Town Highway
Shoreland	Class 3 Town Highway
Rural Residential	Class 4 Town Highway
Conservation	Private Road
Flood Hazard	<b>Surface Water Features</b>
<b>Other Features</b>	Shoreline
Town Boundary	Stream or Brook
Parcel Boundary	Lake or Pond



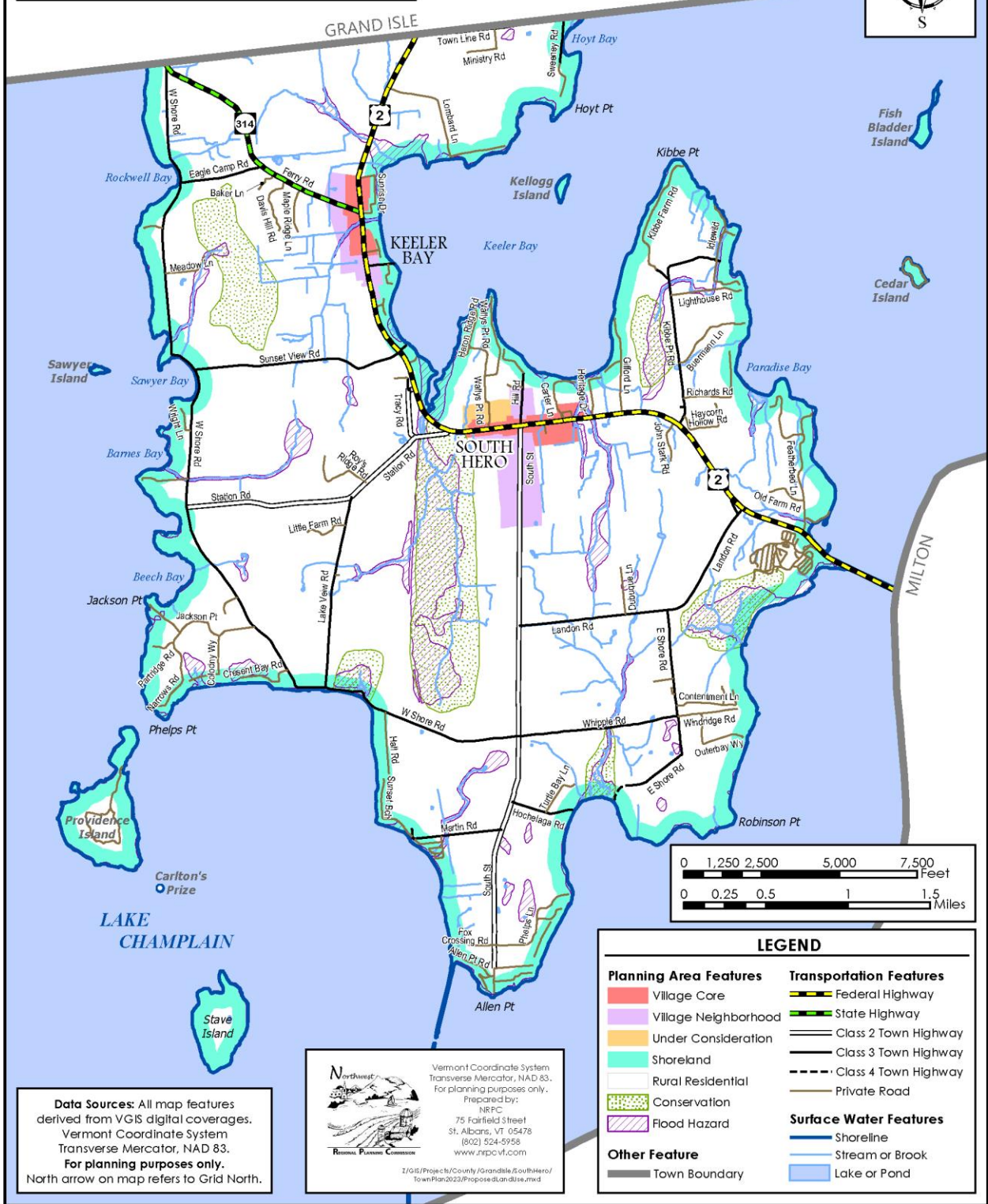
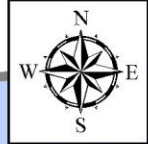
Vermont Coordinate System  
Transverse Mercator, NAD 83.  
For planning purposes only.  
Prepared by:  
NRPC  
75 Fairfield Street  
St. Albans, VT 05478  
(802) 524-5953  
www.nrpcvt.com

2/GIS/Projects/County/Grandville/SouthHero/  
TownPlan2023/ProposedLandUse-VillageInset.kml

**Data Sources:** All map features derived from VGIS digital coverages. Vermont Coordinate System Transverse Mercator, NAD 83. **For planning purposes only.** North arrow on map refers to Grid North.



# PROPOSED LAND USE Town of South Hero



*Village Core Land Use Planning Area Purpose Statement.* The purpose of the Village Core Land Use Planning Area is to provide a mixed use, concentrated core of South Hero’s traditional village centers. The planning area encompasses the historic village settlement area in addition to adjacent undeveloped land allowing for growth. Historic buildings are an important significant contributor to village character and should be preserved when possible. New development shall be consistent in siting and scale with the surrounding historic structures in the villages.

A mix of residential, commercial and public uses are intended to be located in the village core and should be designed and sited to further traditional village center characteristics such as walkable, pedestrian-friendly streets, sidewalks and walkways; human-scale buildings with architectural details, landscaping and lighting; an integrated street network; shops and services intermixed with homes; a variety of commercial establishments from retail shops to home businesses, professional offices, and tourist services; places for the community to gather for social and cultural events; and government services. Some small, low-impact industries may be appropriate.

To accommodate the planned density and intensity of use in the village core, a municipal wastewater system that allows for collective rather than individual onsite treatment is necessary. The Town is currently engaged in assessing the feasibility of a municipal wastewater system (see Section X for more information).

*Village Neighborhood Land Use Planning Area Purpose Statement.* The purpose of a Village Neighborhood Land Use Planning area is to accommodate walkable neighborhood adjacent to the village core areas. Village neighborhood planning areas are primarily residential in nature at a higher density than the rural residential area, but with less density than the village core. Home occupations and some limited commercial establishments may be integrated but with less intensity than in the village core. The planning area consists of historic residences along main roads in addition to land available for new development. New roads shall be constructed to create an

interconnected, walkable network and will be oriented to the street. It is intended that if a municipal wastewater system is developed it would be made available to the village neighborhood in addition to the village core.

*Rural Residential Land Use Planning Area Purpose Statement.* The purpose of the Rural Residential Land Use Planning Area is to provide for rural residential and limited business land uses at lower densities than the village neighborhood to preserve the traditional working landscape and to maintain South Hero’s rural character. Rural residential, small-scale commercial and light industrial land uses shall be balanced with the natural landscape of meadowlands, agricultural fields, wetlands and Lake Champlain views. Home-based occupations and agricultural related enterprises are common throughout the Rural Residential Land Use Planning Area.

Development shall be carefully sited and designed to limit impacts on important natural resources, including; primary agricultural soils, habitat blocks, wildlife corridors, wetlands and other natural areas. Locating development along field and forest edges, limiting the length of roads and driveways and clustering development are all good strategies to minimize impacts. Planned Unit Developments (PUDs) are a regulatory tool that can provide incentives for development that is designed to meet these goals, such as clustering development on smaller lot sizes and conserving the undeveloped portion of the subdivision. Conservation easements, use value appraisal/taxation and other methods that protect important natural resources, particularly primary agricultural soils are supported.



*Shoreland Land Use Planning Area Purpose Statement.* The Shoreland Land Use Planning Area includes land within 500 horizontal feet measured from the mean water level (95.5 feet above sea level) on the shoreline of Lake Champlain within the Town of South Hero. The purpose of this Land Use Planning Area is to carefully evaluate development in order to protect water quality, scenic beauty and to control development along public waters in the best interest of the community. Some parcels or portions of parcels within this district may be limited in their suitability for development.

*Conservation Overlay Land Use Planning Area Purpose Statement.* The purpose of Conservation Overlay Land Use Planning Area is to limit development in sensitive natural areas. Included are areas of state identified wetlands, floodplain and other sensitive resources as identified in the South Hero Town Plan with limited suitability for development.

# Transportation and Complete Streets

## Goals & Objectives

1. Maintain town roads and sidewalks in good condition as municipal budgeting and natural contingencies allow, with emphasis on the safety of all users and in compliance with State regulations.
2. Provide safe pedestrian access to village resources and businesses with sidewalks and other streetscape amenities.
3. Provide a variety of well-maintained scenic trails and paths throughout the Town.
4. Continue efforts so that the town’s road network can safely accommodate bicycle and pedestrian traffic.

## Implementation

1. Implement necessary improvements for compliance with the Municipal Roads General Permit.
2. Identify and upgrade undersized culverts to prevent washouts. Use best management practices for managing runoff during road construction or reconstruction.
3. Complete a Streetscape Scoping Study to improve pedestrian accessibility, including sidewalks, traffic calming elements and other streetscape amenities. Coordinate with LCIEDC’s S.H.O.R.E. project.
4. Support and participate with the LCIEDC’s S.H.O.R.E project to improve bicycle safety, share the road etiquette and other opportunities to create optimal experiences for cyclists from the Island Line Bike Ferry and local residents.
5. Communicate and coordinate with local residents on planned road improvements.
6. Support regional cooperation on trails development, interconnectivity of trails and connectivity of trails with destinations in order to provide non-motorized means of travel.
7. When conversions of seasonal homes to year-round occupancy are proposed, ensure that adequate all season access is provided for the occupants as well as for emergency vehicles as part of the zoning approval process for conversions.
8. Support Safe Routes to School and other walking projects.
9. Coordinate with VTrans on pedestrian accessibility and the need for reduced speeds and a crosswalk near the former Sandbar Inn & Restaurant.
10. Support public and private policies, programs or other efforts that promote alternatives to single-occupancy vehicle travel such as public transit improvements, car-sharing, telecommuting, flexible work schedules and school bus usage.
11. Support the construction of an additional park and ride lot near Exit 17.
12. Support CIDER’ efforts to provide transportation for elderly, disabled or other non-drivers.

## Transportation

The purpose of the South Hero transportation plan is to provide for safe, convenient, economic, and energy efficient transportation systems that respect the integrity of the natural environment, the vibrant Village areas, and the rural character of South Hero. The plan shall include the maintenance and necessary development of roads, public transit options and facilities for pedestrians, bicyclists, and motorists of all ages and abilities. It is more efficient

to accommodate all modes at the planning and design stage rather than try to retrofit.

## Complete Streets

Complete Streets is an to planning, design, construction and maintenance of our roadway network to consider all users, including pedestrians, bicyclists and transit riders. Context and current or potential travel patterns need to be considered in determining the appropriate way to meet the needs of all modes of transportation. Not every street or

road will be used by a wide variety of modes, but a complete streets approach considers all users, and seeks desirable, practical and affordable improvements that will be accepted by the community.

### Roads & Vehicle Traffic

The town maintains 22.09 miles of town roads with the use of town owned equipment, a full-time road foreman and 2 other full-time employees. The Selectboard appoints a Road Commissioner who directs the work done by the road crew. The budget is set by the Selectboard, approved by voters, and supported by taxes and additional state aid. Approximately 14 town roads are paved and 2 are gravel. The decision to pave a gravel road is currently balanced between maintaining a rural aesthetic, slower speeds, the convenience of blacktop and the availability of funds.

U.S. 2, a Federal Highway, traverses for about five and a half 5.783 miles along the western and northern side of the town. There is also state highway, VT 314, connecting US 2 to the ferry in New York State (1.592 miles in South Hero). Vermont Agency of Transportation completes actual and estimated traffic counts. The count shows an increase in traffic on Route 2 from 2019 to 2021 based on an actual count, from 8,837 to 9,156. It estimated a decrease in 2020, likely reflecting less travel during the pandemic. The northern mile of Route 2 and 314 are showing a decrease from 2019 to 2021, but it is based on estimated counts.

There are a large number of privately owned and maintained roads in the Town. The Town provides services on town highways only. New private roads and upgrades to support new development are required to comply with the Town’s Road Standards. The Town is not in the practice of accepting new town roads and is not obligated to, regardless of whether the private road is in compliance with town road standards.

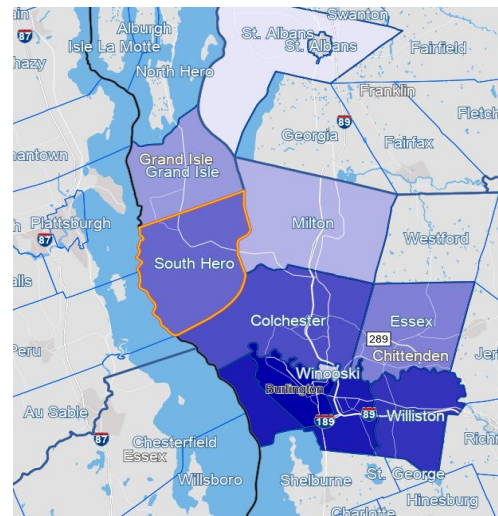
There are a large number of private maintained roads in the Town. The Town provides services on town highways only. New private roads and upgrades to support new development are required to comply with the Town’s Road Standards.

The Town is not in the practice of accepting new town roads and is not obligated to regardless of whether the private road is in compliance with town road standards.

In response to the Municipal Roads General Permit implemented as a result of the Vermont Clean Water Act (Act 64, 2015) to reduce stormwater runoff and erosion on local roads, South Hero has accessed and will continue to seek funding through the Agency of Transportation Grants In Aid Program to complete stone lined ditches and other important road improvement projects that improve stormwater management and the resiliency of local roads.

### Travel to Work and Commuting

The majority of workers living in South Hero (over 60%) travel to work in Chittenden County, with only 9% remaining in South Hero for employment. As a result, over 60% of commuters have over a 20-minute drive.



**Figure 3.1 Work Destinations, 2019**  
<https://onthemap.ces.census.gov>

Table 3.1 Average Annual Daily Traffic Counts (VTRANS)								
Route	Start Location	End Location	2019		2020		2021	
US2	Grand Isle Town Line	MM 1.158	6,111	Est.	5,176	E	5,172	Actual
US 2	MM 1.158	Milton Town Line 5.573	8,837	Actual	7,485	E	9,156	Actual
VT314	Route 2 intersection	Grand Isle Town Line 1.592	3,242	Est.	2,746	E	3,111	Estimate

## Bicycle and Pedestrian Facilities

South Hero is committed to ensuring a complete streets approach with roadway projects in the town. In the village specifically, this will mean the design and construction of improvements for bicycle and pedestrian facilities. In the rural areas of town, appropriate context sensitive solutions that factor in all users of the road will be employed.

South Hero’s roads attract a significant number of pedestrians and bicyclists. There are 4,398 feet of existing sidewalk along the north and south sides of Route 2 in the center of South Hero Village, there are no other dedicated bicycle and pedestrian facilities (other than off road trail networks). 1,604 linear feet of sidewalk were added since 2017. The Town is committed to expanding the network of pedestrian and bicycle amenities.

South Hero’s appeal as a destination for visitors who want to spend a day exploring by bike has been amplified by the Local Motion Bike Ferry, which brings 250+ cyclists into South Hero on weekend days in the summer (200+ during the week).






In 2021, the Lake Champlain Islands Economic Development Corporation received a Vermont Outdoor Recreation Collaborate grant to:

- Better manage and grow cycling and pedestrian activity in the Town of South Hero,
- Reduce friction between cyclists, motorists, residents, and local businesses in South Hero, and
- Maximize the economic impact of cycling and pedestrian traffic on the South Hero economy.

This project will result in a plan for townwide improvements for bicycle and pedestrian accessibility, connection and etiquette.

Specific to South Hero Village and Keeler Bay Village, the Town has received a grant from the VT Bicycle & Pedestrian Program to develop a scoping study for streetscape improvements in the villages that will calm traffic, improve pedestrian safety and the overall design of the streetscape for pedestrian and bicycle users. This scoping study will start in 2023.

### Why Complete Streets?

-  Streets that accommodate all users are safer for everyone, including automobile drivers and passengers.
-  Complete Streets can provide greater mobility and accessibility to those without a car.
-  Complete streets can offer a choice for less costly modes of transportation, which has economic benefit to individuals or families.
-  Active travel (walking and bicycling) can improve health and provide needed daily exercise.
-  It is more efficient to accommodate all modes at the planning and design stage and correct safety issues for non-automobile road users, rather than retrofit after the fact.

*Adapted from Complete Streets: A VT Guide for Municipalities, VT Dept. of Health, 2012*

Additionally, South Hero Land Trust (SHLT) and the SH Recreation Commission have developed several public access trails, and are now working on a linked network of pedestrian and cycling trails that will connect local parks and beaches to the downtown.



### Town Plan Survey Results

Pedestrian access in the villages was an important priority to residents responding to the South Hero Town Plan Survey. 90% of respondents supported the vision of safe pedestrian crossings and 83% supported the vision of a walkable village with connected and well-maintained safe sidewalks. In an open-ended question about what residents would like to see changed in South Hero, 14% referenced bicycle and pedestrian infrastructure. Throughout the community engagement process for the plan update, residents referenced walkability within the villages as well as bicycle and pedestrian connectivity between the villages as an important goal

## Community Transportation


*Commuter Parking.* There is one park and ride lot in South Hero on the east side of Route 2 north of Keeler Bay. Park and ride lots allow commuters to access car and vanpool options to save vehicle miles traveled and reduce carbon emissions.

*Senior and Special Needs Transportation.* Champlain Islanders Developing Essential Resources (C.I.D.E.R.), is a local organization dedicated to providing transportation services to seniors and people with disabilities in order to help them remain independent. CIDER provides paratransit transportation to critical needs such as to medical appointments.

*Public Transportation.* There are no regional public transit routes that directly service South Hero, nor does the Town provide any public transportation for its residents (other than the services offered by CIDER). The closest transit stop is located at the Chimney Corners Park and Ride in Milton, which provides service on Green Mountain Transits Milton Commuter (Route 56) or the St. Albans Link Express (Route 96) to Winooski and Burlington. The Town supports a new proposed State Park and Ride off of Interstate 89 Exit 17 in Colchester.

This new Park and Ride would be on the west side of Interstate 89 and would offer easy access to South Hero residents.

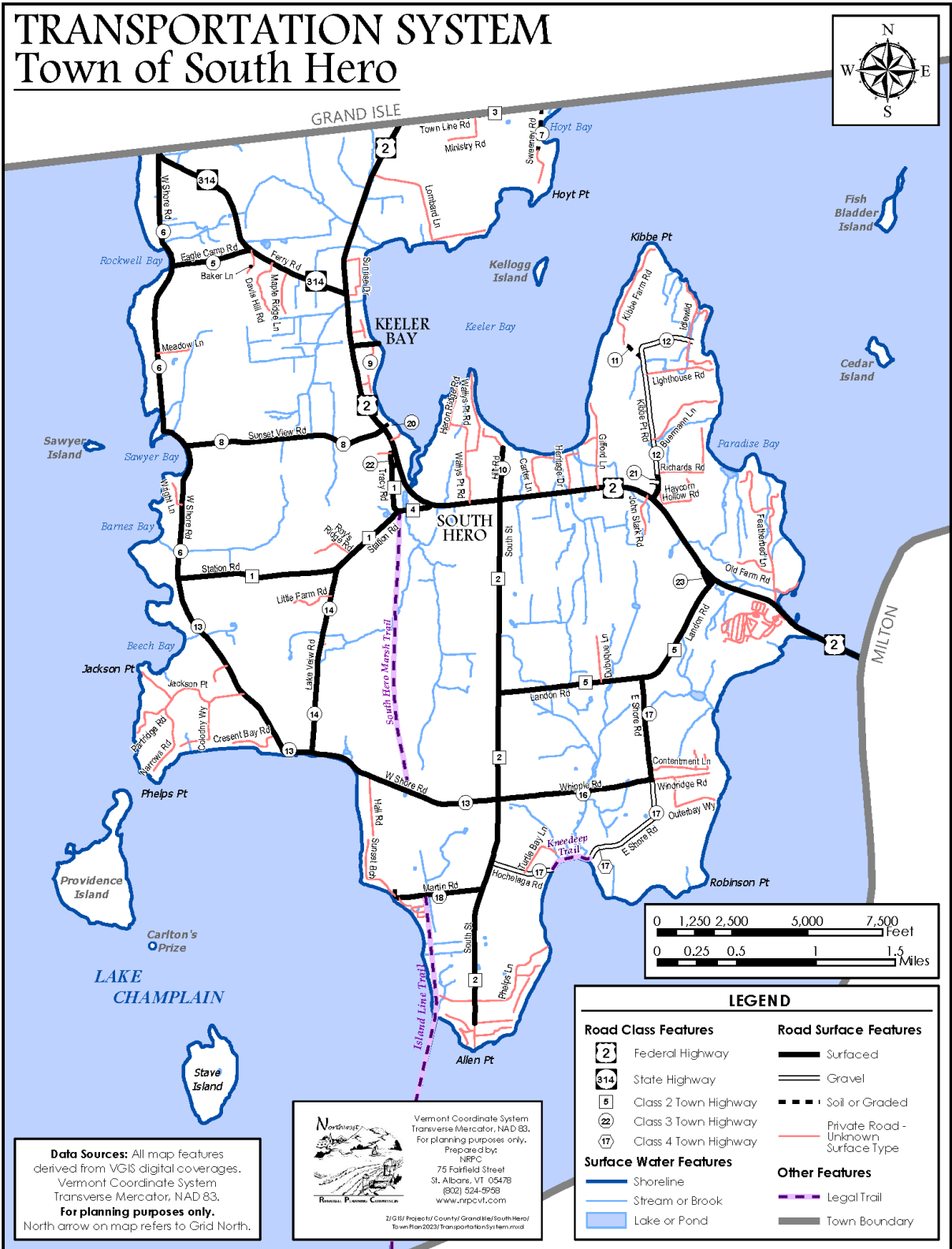
The Town supports the expansion of public transportation in South Hero, including expansion of flexible and micro transit options.



*South Hero Town Plan Survey Results*  
As part of the South Hero Town Plan Survey, roughly half of residents stated they would or were unsure of if they would use public transit. The most common reasons for wanting to use public transit were for appointments and transit connections. Almost 2/3s of those interested in using public transit were only interested in occasional use. Micro-transit or other flexible public transit options may be able to address these public transit needs.

*Ferries.* The Lake Champlain Transportation Company provides year-round ferry service between the town of Grand Isle and Plattsburgh, New York. The ferry dock is located on VT 314 in the Town of Grand Isle. Route 314 is an important link for the ferry traffic traveling to US 2 and I-89.

*Air and Rail.* Amtrak provides passenger rail service out of the St. Albans and Burlington depot on the Vermonter line which extends down to Washington, D.C. via Boston. A new route was added in 2021 with service to New York City. The Burlington International Airport in South Burlington, the Plattsburgh International Airport in Plattsburgh, and the Trudeau Airport in Montreal provide air service to the region. There is one identified water airstrip, West of Stave Island. Airstrips and helipads are not compatible with the quiet rural nature of South Hero. New airstrips and helipads shall not be built in South Hero unless they are designated for emergency use only.



# Municipal and Community Facilities and Services

## Goals & Objectives

1. Maintain and upgrade, where reasonable and necessary, municipal facilities and grounds at reasonable costs.
2. Strive to meet the basic needs of residents and access to affordable goods and services within town, including in times of emergency.
3. Ensure that new growth does not overburden town services by planning, budgeting, and exploring new ways to cover costs of growth such as impact fees.
4. Increase civic infrastructure, community engagement, and communication through transparent government.
5. Support and create outdoor recreation opportunities that are available to the public, including a system of multiple use paths, trails and recreational areas on municipal and private lands.
6. Support through policies and regulations the preservation of historic buildings and sites in South Hero.

## Implementation

1. Promote town plan objectives in the adoption of tax policies and planning for public facilities and services.
2. Explore innovative ways to finance and provide town services to reduce property tax burdens.
3. Explore ways to save on supplies, equipment and Town services (such as plowing) through cooperative efforts with other towns.
4. Encourage the involvement of community members in community affairs and Town government in order to increase the number of individuals represented while addressing Town issues. This will provide a broader perspective of ideas to consider when making important decisions.
5. Develop and maintain a capital budget and program that will identify anticipated town and school capital needs for a six-year period. Seek ways to minimize tax burdens on residents in any one year. The budget and program would contain a time frame for meeting anticipated needs and a method of financing the improvements.
6. Support efforts for education funding reform to address the property tax burdens imposed by Acts 60 and 68.
7. Investigate adopting impact fees, which would help finance the cost of specific town services.
8. Explore ways to increase the tax base without adding significant burdens on Town services. Among the ways to do this are to encourage light business growth in central locations, the use of vacant private and Town buildings for new uses, and encourage home-based businesses.
9. Encourage public/private partnerships to improve Town services whenever possible.
10. Encourage volunteers to participate in town government.
11. Support volunteers who are interested in creating and maintaining town trails and coordinate with regional trail projects.
12. Redevelop the Meeting House as a location for municipal and community events.
13. Support community events and activities such as farmers markets and weekend in the Islands
14. Ensure the Town continues to be represented in and participate in local and regional planning organizations such as the Northwest Regional Planning Commission, Lake Champlain Islands Economic Development Corporation (LCIEDC) Northwest Solid Waste District, etc.
15. Encourage the availability of safe and affordable child care.
16. Support the expansion of the Fire District #4 private water district and/or setting up other water districts in concentrated areas of the Town.
17. Support efforts to allow properly treated and filtered water from Lake Champlain to be used as potable water for domestic and business use.

18. Encourage water conservation and the use of water conservation devices.
19. Continue to support innovative solutions for safe sewage disposal for homes and businesses with waste water challenges. Encourage and embrace innovative new technologies for septic systems that would allow safe effluent disposal in challenged soils.
20. Pursue a municipal wastewater system for the South Hero village areas (South Hero Village and Keeler Bay Village) that implements the recommendations of the 2022-2023 South Hero Village Wastewater Feasibility Investigation.
21. Address the staffing issues of the Rescue Squad and the Fire Department.
22. The Town does not provide public facilities and services to the outer islands.
23. Encourage the development of communication technology infrastructure to and within the community.
24. Encourage a variety of telecommunications infrastructure. To this end, the Town should encourage solutions that minimize possible conflicts that might arise from these varied sources. Emergency broadcasting capabilities should be preserved first and foremost.
25. Encourage comprehensive, fast and reliable telecommunications network for the community. To this end, partnering with public and/or private companies may be appropriate Coordinate future growth with telecommunications providers to ensure that areas of expansion are adequately served
26. Continue to promote co-location of telecommunication facilities and appropriate siting and screening of these facilities from larger towers to smaller residential dishes.

### Tax Base & Cost of Services

In 2021 Grand List value is based on the 2019 reappraisal. Since 2013, property values on the Grand List have increased 5%. In the same time period, the municipal budget has increased 60%. This increase has been driven by a few factors including increasing salaries for town officers and adding emergency services personnel to the budget. The school budget has increased 24.5% in the same period, which is roughly in line with inflation.

Table 4.1 Property Values on Grand List			
Year	2013	2021	Change 2013-2021
<b>Total Property Values (in thousands)</b>	\$492,005	\$516,456	5.0%

Table 4.2 Total Budget by Year					
	2003	2013	Change '03-'13	2022	Change '13-'22
<b>Town</b>	\$441,025	\$756,439	71.5%	\$1,214,846	60.6%
<b>School</b>	\$3,454,198	\$3,212,116	-7.0%	\$ 3,997,890	24.5%
<b>Total</b>	\$3,895,223	\$3,968,555	1.9%	\$5,212,736	31.4%

Under Vermont’s Act 60 and 68, South Hero is required to transfer a significant amount of money raised by property taxes to the State for redistribution to other towns. This means that the education tax burden for South Hero is about double what is needed to support local requirements. Many South Hero taxpayers already feel overburdened by property tax rates, making them reluctant to approve any other spending in the town. Unless action is taken to relieve the property tax burden, improvements to existing Town services

and the expansion of Town services will be difficult to initiate. In 2022, the Town voted to approve a 1% local option tax to fund special projects without increasing municipal taxes. State law needs to be updated to include the Town of South Hero in the list of approved towns to collect the 1% local option tax. Our State legislators are attempting to update this legislation in 2023. Although most of its services are provided locally, the Town is joining with neighboring towns to identify services and resources that can be shared efficiently without sacrificing local control.



## Recreation

### Recreation Commission

A volunteer Recreation Commission plans several activities which are supported by tax dollars. For details and up-to-date information on programs visit <https://southherovt.org/departments/rec/>.

### Current Recreational Facilities

*State Parks.* The Round Pond State Park and Natural Area consists of approximately 125 acres of spectacular wetlands, fields, woodlands, and approximately 1,100 feet of Lake Champlain shoreline. This resource was conserved and was opened to the public in 2001.

#### *Public Trails.*

Trails make land available for walking, jogging, bicycling, horseback riding, skiing, snowmobiling, snowshoeing, and all-terrain vehicle use. These uses may not always be compatible with each other and trail planning should consider this.

Trail locations can include existing rights of way for roads and the former railroad bed and negotiated easements or licenses over private property.

There are six public trails existing in the Town today. Two (2) are located on private lands with easements, two (2) are located on state lands, one (1) is a connector between a private easement and state lands, and the Town owns the South Hero Recreation Trail. The town-owned Recreation Trail is located along the railroad bed from West Shore Road to Tracy Road as shown on MAP 6: Transportation System as the South Hero Marsh Trail. Additionally, the Island Line Rail Trail connects Martin Street in South Hero to Burlington in the summer via a bicycle ferry. The proposed 'Robinson Trail' would connect Tracy Road directly to a proposed crosswalk across South Street to Folsom School.

#### *Access to the Lake.*

Public access to the lake from the Town of South Hero is an important asset which enhances the recreational and scenic value of the town as a whole for residents, seasonal homeowners and visitors.

The public access areas in the Town are shown on the Facilities and Utilities map, and listed below:

- at the end of the public portion of Hill Road;
- at the end of the public portion of Lavigne Road as it comes into Keeler Bay;
- Keeler Bay Road at the first hard curve to the right;
- Vermont Fish & Wildlife Accesses:
  - Guilmette Access Area, at approximately 90 U.S. Route 2 near Featherbed Lane
  - Keeler Bay Access Area at the end of Sunrise Drive
- Sweeney Farm access off of Town Line Road (winter only);
- White's Beach (owned and maintained by the Town);
- Allen Point Access to "the Fill";
- The railroad bed on Keeler Bay, south of Keeler Bay Marina.
- "Knee Deep" Bay Trail; and
- Round Pond State Park on Landon Road.
- Keeler Bay Access Area at the end of Sunrise Drive
- Sweeney Farm access off of Town Line Road (winter only)
- White's Beach (owned and maintained by the Town)
- Allen Point Access to "the Fill"

### Future Recreation Planning

In recent years, there has been a significant increase in the use of trails & recreations spaces highlighting the value of these community spaces. Over 80% of all respondents to the Town Plan Survey stated they would use a multi-use path designed for walking & biking. Developing additional trails and recreational spaces that are inclusive & accessible to all residents is a priority for the Town. Such development will require cooperation and negotiation with landowners, town investigation of liability issues, good access including parking facilities, public support, provision of public safety, protection of wildlife habitat and natural areas, and public funds.

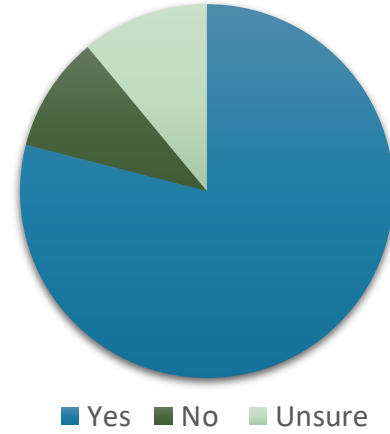
Volunteers can help in easement negotiations, trail planning, trail clearing, fundraising and monitoring. Federal and state funds are available for certain types of trails.

The Town and the Lake Champlain Islands Economic Development Corporation (LCIEDC) ([www.champlainislands.com](http://www.champlainislands.com)) are also considering how to best manage the Island Rail Trail to maximize economic benefits while reducing unintended consequences. The 2022 South Hero Town Plan Survey asked an open-ended question on the role of bicycle tourism in South Hero. While a plurality of residents stated they supported bicycle tourism, residents also noted that there is a need for better planning to ensure safety and reduce traffic impacts.

### Future Park Plans

Recognizing the need for additional recreational opportunities, the Town has begun planning for a future public park to be located behind the Old White Meeting House (South Hero Meeting House) in the South Hero Village. The Planning Commission has put forward as an initial recommendation that \$50,000 of ARPA funds be dedicated to the project and the Town is seeking additional funding sources to further plan & implement this priority.

**Chart 4.1: Would you or your family use a multi-use recreation path that was designed for walking/running, biking, etc.?**



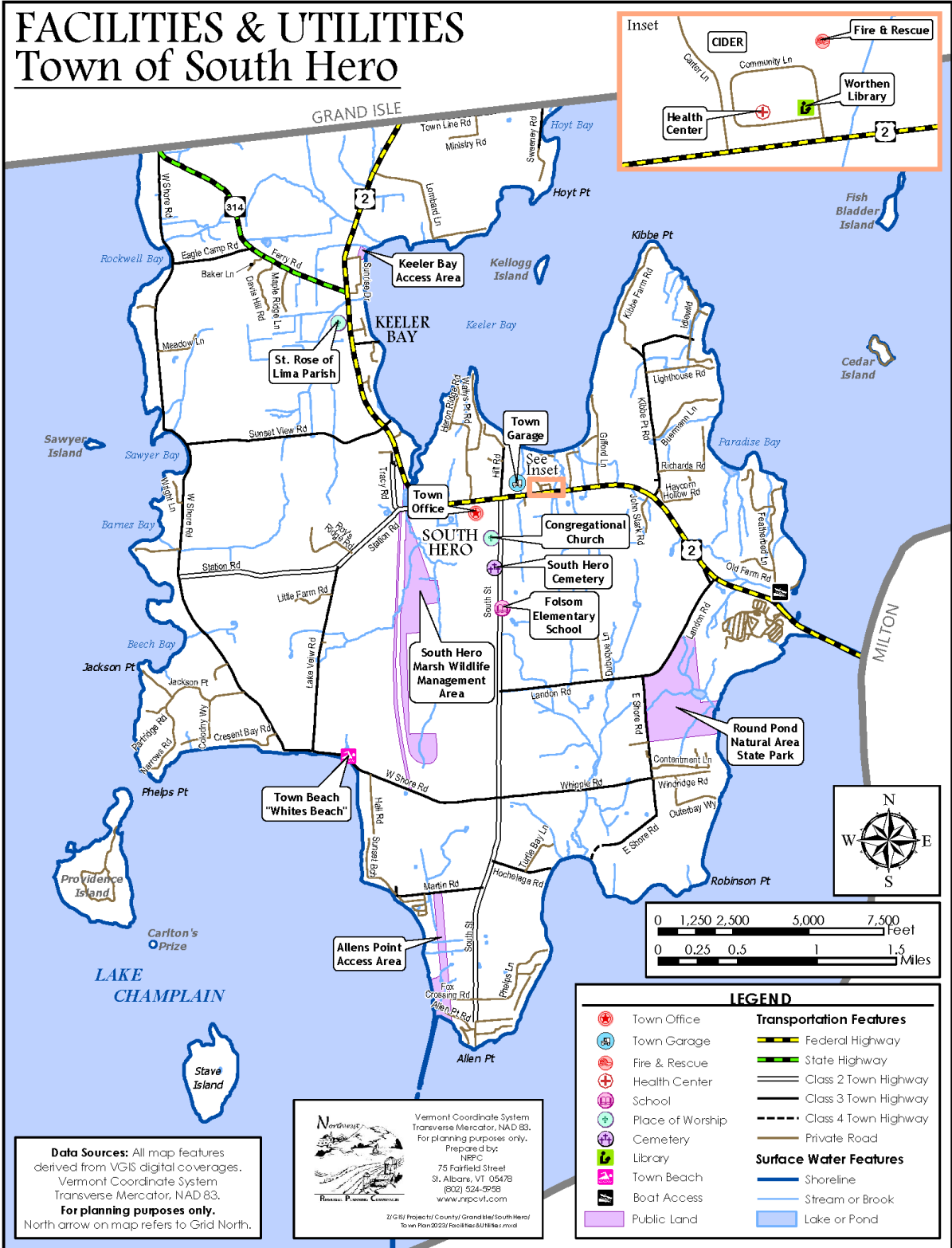
Source: Town Plan Survey

## Education & Childcare

### Education

The residents of South Hero recognize that a strong school system has a positive influence on the community. For this reason, it is important that the town keep, maintain, and enhance the Folsom Education and Community Center. It is integral to the identity of the town. The school provides a safe educational environment for students and a community building that serves as a focal point for community activities and events.

Built in 1948, and expanded in 1973, Folsom Education and Community Center serves grades K-8. It is noted for the dedication and morale of its teachers and staff, its high academic standards, and activism of volunteers in school and after-school programs. The school maintains an excellent student library. The gymnasium is also the site for the annual Town Meeting and other large community meetings.



After experiencing a peak of around 220 students in 1997, enrollment declined to about 110 students in 2012. Enrollment rebounded to around 150 by 2016 and has been level ever since.

Since GISU does not have a high school, students have school choice. Tuitions are set by the State Agency of Education.

Vocational and continuing education resources available to South Hero residents include the technical centers in Burlington & St. Albans, Vermont Adult Learning in St. Albans, and numerous post-secondary college opportunities throughout the state. Online courses offer continued learning opportunities from home of via the Worthen Library’s computer stations.

### Childcare

Over two-thirds of children under age 6 have all parents in the workforce and are likely in need of childcare. There are 1.2 children under 6 for each childcare spot in South Hero, meaning that many South Hero families may have challenges finding licensed care in their community.

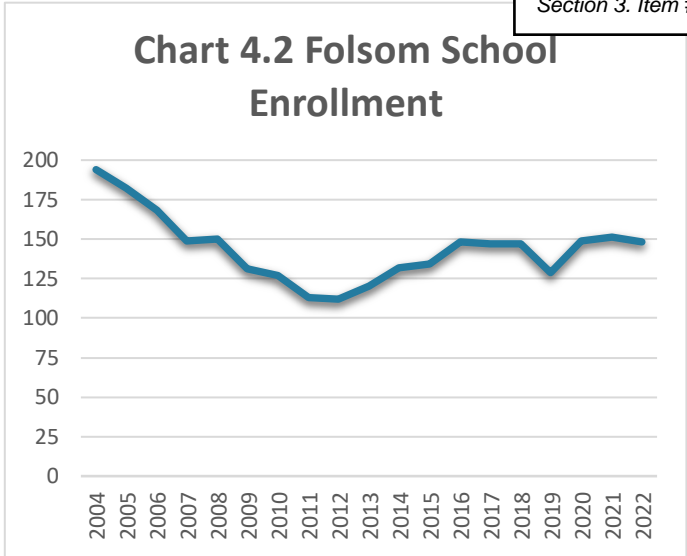
#### *Champlain Islands Parent Child Center (CIPCC)*

The Center received the Allen House in 2002, and the large “Red Building” portion of the Center was built in 2008 and serves as its primary facility for children ages 6 weeks through 5 years.

The Allen House is where universal pre-K students are taught. The Red Building serves as both daycare and preschool. Between both buildings, CIPCC serves 32 preschoolers annually and 24 infants and toddlers. The Allen House is also where the school provides after school care for Folsom students.

#### *Registered Daycare Centers & Homes*

There are two other registered daycare facilities in South Hero. Turn to Joy Early Learning Center ([www.TurnToJoy.com](http://www.TurnToJoy.com)) is located in South Hero Village and has Infant and Toddler Programs with a total capacity of 24 children. Their preschool program operates in Grand Isle.



Source: Vermont Department of Education

A registered home-based childcare provider, Roots & Wings, is located on South Street (<https://southherorootsandwings.weebly.com/>) It has a capacity of 10 children from infants to school-ages.

## Municipal & Community Facilities

### Solid Waste

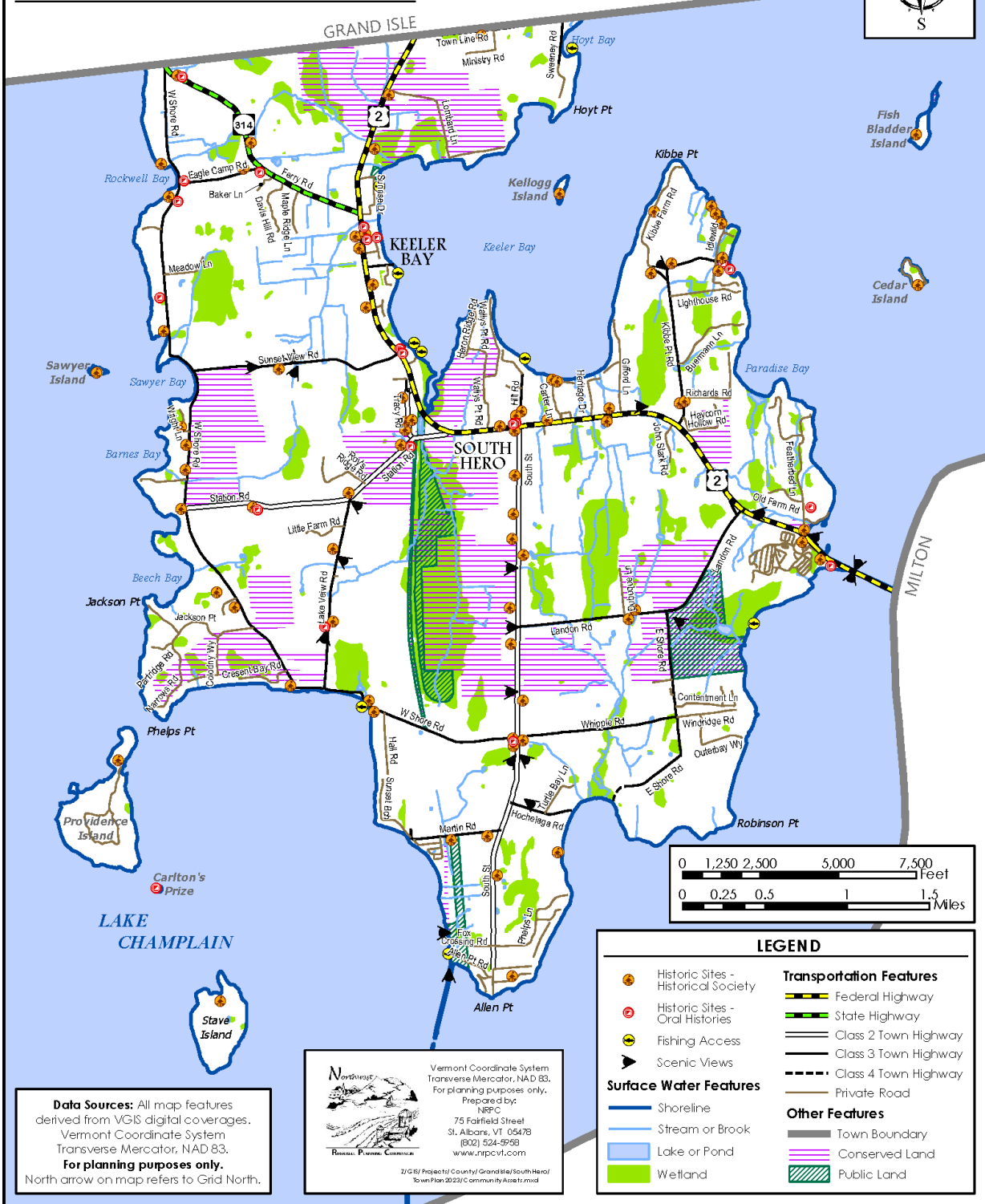
There is no town program for curb-side trash pickup. Residents are responsible for contracting their own service. Several times a year, special trash days are coordinated with the Northwest Vermont Solid Waste Management District (NWSWD) for the disposal of large items. The Town is a member of the NWSWD with transfer stations located at 362 West Shore Road in North Hero and the Georgia Recycling Center located at 158 Morse Dr, Fairfax, VT (see [www.nswsd.org](http://www.nswsd.org) for operating hours & closing) and continues to address the problems of household hazardous waste, sludge and other long term solid waste issues through the district.

### Fire Department & Rescue Squad

The Rescue Squad is staffed by a combination of trained volunteers and paid staff. Paid staff were funded by the Town voters starting in 2019 to alleviate staffing shortages. With the construction of the new senior housing facility the Rescue Squad anticipates an increase in calls and is considering hiring staff for nighttime shifts.

# COMMUNITY ASSETS

## Town of South Hero



**Data Sources:** All map features derived from VGIS digital coverages. Vermont Coordinate System Transverse Mercator, NAD 83. **For planning purposes only.** North arrow on map refers to Grid North.

**N**  
Vermont Coordinate System  
Transverse Mercator, NAD 83.  
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Z:\GIS\Projects\County\GrandIsle\SouthHero\TownPlan2023\CommunityAssets.mxd

**LEGEND**

<ul style="list-style-type: none"> <li> Historic Sites - Historical Society</li> <li> Historic Sites - Oral Histories</li> <li> Fishing Access</li> <li> Scenic Views</li> </ul> <p><b>Surface Water Features</b></p> <ul style="list-style-type: none"> <li> Shoreline</li> <li> Stream or Brook</li> <li> Lake or Pond</li> <li> Wetland</li> </ul>	<p><b>Transportation Features</b></p> <ul style="list-style-type: none"> <li> Federal Highway</li> <li> State Highway</li> <li> Class 2 Town Highway</li> <li> Class 3 Town Highway</li> <li> Class 4 Town Highway</li> <li> Private Road</li> </ul> <p><b>Other Features</b></p> <ul style="list-style-type: none"> <li> Town Boundary</li> <li> Conserved Land</li> <li> Public Land</li> </ul>
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The Town Fire Department is staffed by trained volunteers. The main funding of the operations of both these organizations is through public contributions. Some purchases of equipment for the Fire and Rescue Departments are funded by tax dollars. In 2018, both organizations moved into a shared building on Community Lane.

**Library**

After a \$1.5 million-dollar fundraising campaign, the Worthen Library was opened in 2019. Moving the library to its own dedicated building has allowed for an expansion in hours, additional programming, and for the library to be used for community meetings. Current programming includes lending books, movies, equipment as well as holding events for adults and children. The Library is primarily funded by a Town tax dollars, as well as by private fundraising. The library is staffed by two salaried librarians and many volunteers from the community.

**Water & Wastewater**

There is no town water system. There were several water/fire districts, three of which formed Water District 4, and constructed a pumping and chlorination system to supply water to some of the residents of South Hero and Keeler Bay Villages. The districts maintain their own budgets and fund their operations with assessments separate from town property taxes. Existing and future water supply needs in the Town could be impacted by the emerging zebra mussel problem in Lake Champlain and the state’s prohibition on the use of lake water for water supply in subdivisions. Investment and/or coordination with adjoining towns in providing water supply and distribution should continue to be considered.

In 2021, Fire District #4 installed 1,400 feet of upgraded and new water line to support the development of BayView Crossing, a 30-unit senior housing in the South Hero Village. The extended water line may also support additional growth in the Village.



*Figure 4.1 South Hero Fire and Rescue Building. Photo Courtesy of South Hero Volunteer Fire and Rescue Inc.*



*Figure 4.2 Worthen Library, photo from grand opening.*

There is no town sewer system. All residences and businesses must comply with state regulations when installing their systems. Being a Lake community the Town of South Hero encourages old wastewater systems be upgraded before there is a failure issue. New technologies are available that can even pre-treat wastewater.

The lack of wastewater capacity in the villages creates some barriers to the goal of having vibrant villages with a mix of housing, businesses, and municipal services. Development potential and density (the amount of development per acre) are directly dependent on the capacity of the soil and land to accommodate soil-based wastewater treatment. The Town is currently conducting a feasibility study to understand the potential options for decentralized wastewater treatment in the villages.

### Cemetery

There is a town cemetery located on South Street which operates with some town funding as well as funding from a cemetery trust fund and income from the sale of lots.

### Old White Meeting House

Also known as the South Hero Meeting House, was an historic church & meeting house constructed in 1816 in the heart of South Hero Village. Currently the building’s second floor houses Grannie’s Attic seasonally, while the first floor is unused. In 2019, the Town conducted an extensive survey effort and found that the majority of respondents wanted to keep the building and renovate it for year-round use. The Town has completed initial conceptual design and has received \$100,000 in grants to fund the renovations. The Town and a nonprofit community group are currently working towards funding the remainder of renovation costs through grants, fundraising and potential Town funds. At the 2023 Town Meeting day, residents voted in favor of a motion to conduct a study of the feasibility, cost, and seek grants for moving the Town Offices to the Old Meeting House site.

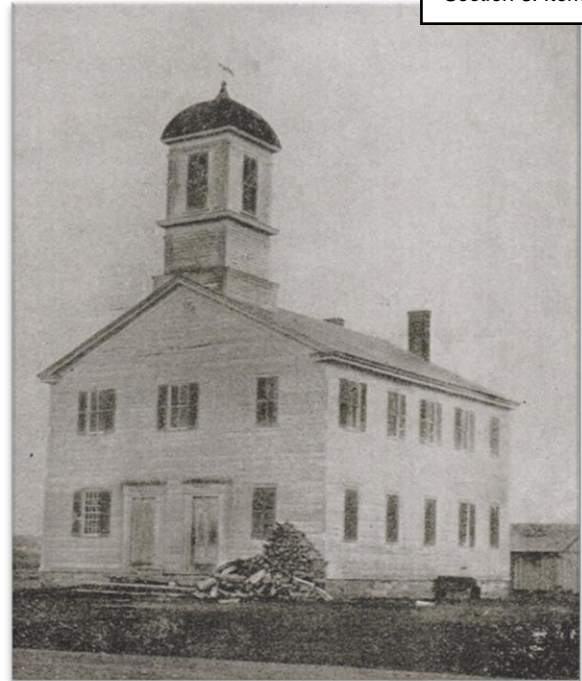


Figure 4.3: South Hero Meeting House (circa 1895)

### Community Health

Community health is measured by a variety of social factors such as education, health care access & quality, economic stability, neighborhood & housing stability, and social & community context. The Town’s investments in community planning such as; creating complete streets, recreation opportunities and community spaces like the Worthen Library, Old White Meeting House and proposed Recreation Park will all serve to support multigenerational community health goals.

South Hero has diverse array of health care services, both professional and volunteer, that contribute to the well-being of its residents. They include fire and rescue squads, a physical therapist, chiropractor, yoga studios, massage therapist, the Visiting Nurses Association



Figure 4.4: Social Determinants of Health

the Champlain Islands Parent Child Center and Champlain Islanders Developing Essential Resources, Inc. (C.I.D.E.R.), a non-profit group whose mission is “to develop and foster resources that enable the people of Grand Isle County, Vermont to live in their community with dignity.” C.I.D.E.R. provides direct services such as transportation and accessibility services, as well as collaborating with other groups. C.I.D.E.R.’s efforts are

directed at providing the resources and assistance that individuals need in order to remain living independently in their own homes, including providing wheelchair accessible transportation, senior meals, constructing wheelchair ramps and a variety of other programs. C.I.D.E.R. relies heavily upon over 130 volunteers.

The Community Health Center: Champlain Islands is located in South Hero Village at 52 Community Lane. Offered services include; primary care, medical, mental health and psychiatry. For appointments call: 802-372-4687. The Center is a Federally qualified Health Center with a mission to serve all, including those typically underserved. The nearest hospitals to South Hero are Northwestern Medical Center in St. Albans and the University of Vermont Medical Center in Burlington.

A notable loss to the healthcare services of South Hero was the closure of the South Hero Pharmacy in 2020. Residents must now travel off the Islands to access a pharmacy. This has created a healthcare barrier for some residents. There is a need for a pharmacy and the Town supports efforts to restore this health service.

### Telecommunications

Telecommunications facilities in South Hero include Consolidated Communications phone lines, Consolidated Communications Digital Subscriber Loop (DSL), Comcast Cable TV and internet, satellite television and radio, various cellular phone service antennas, wireless Internet providers such as HughesNet and GlobalNet, and shortwave radio frequencies that are operated by amateur operators and emergency services. Free Wi-Fi is available at the Worthen Library on Community Lane in the South Hero Village.

As telecommunications continue to become a vital part of everyday functions both at home and at work, pressures to increase the speed, reliability, and affordability of these networks will continue to escalate. Northwest Vermont is currently served by one internet transmission line originating to the south.

While the majority of South Hero has access to service that meets the minimum standards for broadband, 2% still lack broadband service and none are served by high-speed fiber.

The majority of residents have cellular access. The Town should continue to support improvements to the communication infrastructure so that all residents, government services, businesses, and the like can take advantage of existing and developing technologies. To support enhanced broadband access, the Town has joined the Northwest Communications Union District (NWCUD). The goal of the NWCUD is to bring fiber to every home and business in the district.

### Civic Organizations

Civic organizations are involved in children’s activities, historic preservation, agriculture, business, social services, church activities, and community events among other activities. The organizations and activities include Masons, Eastern Star, Granny’s Attic, 4-H, churches and church activities, Veterans of Foreign Wars, Camp Hochelaga (a YWCA girls camp), South Hero Players, and 4th of July Parade Committee.

The South Hero Land Trust (SHLT) is an active organization with the mission of protecting farmland, woodland, natural and recreational areas, and open spaces which help give South Hero its distinctive quality of life. According to their website, over 1,800 acres of land have been conserved in South Hero, protecting farmland, natural areas, lakeshore, and scenic vistas of Lake Champlain and the Green Mountains.



# Housing

## Goals & Objectives

1. Ensure that safe and adequate housing is available and affordable for South Hero residents.
2. Guide the Town in achieving well-managed residential growth that includes a diversity of housing types that meet the needs of South Hero’s population at every stage of life.

## Implementation

1. Implement zoning regulations in the town’s rural areas that require residential subdivisions to use land efficiently by clustering lots, expanding on the existing road network and sharing infrastructure, while preserving important resource lands, including but not limited to agricultural land and wetlands.
2. Implement zoning regulations that allow for concentrated residential development in the village districts at higher densities than allowed in other zoning districts.
3. Support efforts to provide adequate infrastructure to support concentrated development in village areas, including municipal wastewater, bicycle and pedestrian improvements and complete streets.
4. Support efforts that incentivize the development of accessory dwelling units for their ability to provide affordable housing options.
5. Study the impact of short-term rentals on the availability of affordable housing for year-round residents.
6. Support, and share information about, programs and resources that help to lower cost of home occupancy and assist in the preservation and maintenance of existing housing units, such as energy conservation, weatherization, and utility assistance.
7. Support, and share information about, programs and resources that assist seniors or low mobility residents remain in their homes such as HomeShare Vermont, Meals on Wheels, and CIDER.

## Current Housing Stock & Households

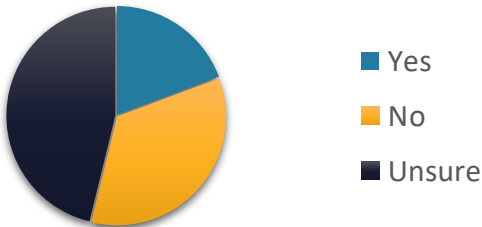
South Hero has 1,096 housing units. South Hero’s housing stock is comprised primarily of single-unit detached homes, the majority of which were built between 1960 and 1999. Approximately 163 units have been permitted in the past 20 years. These permitted units are overwhelmingly single-unit detached dwellings with just 2% of all permits being for multi-unit developments. It is important to note that not all permitted units may have been constructed. In 2022, the Bayview Crossing senior apartment complex opened. This complex has 30 rental units and includes a mix of market-rate and affordable units.

85% of South Hero’s year-round occupied housing units are owner-occupied, while 15% are renter-occupied.

## Seasonal Housing & Short-Term Rentals

Of the 1,096 total housing units, roughly 35% of South Hero’s housing stock is used seasonally, which is defined by the Census as units that are lived in less than half the year. According to the Grand List, over 90% of seasonal units have lake frontage. The proportion of seasonal units as a percentage of all housing units has grown by 9% over the last 10 years.

**Chart 5.1 Do you think the Town should adopt more restrictions on short-term rentals?**



In recent years, the number of short-term rentals has increased across the state of Vermont. Short-term rentals are properties rented for 30 days or less. In South Hero up to 2% of units are used as whole-house short-term rentals. Respondents to the Town Plan Survey were divided on whether or not the Town should implement specific regulations for short-term rentals. The plurality were unsure, while a third opposed restrictions and 20% supported restrictions

### Housing Affordability

Affordable housing is defined under 24 V.S.A . §4303 as shown in the box to the right. According to the U.S. Census American Community Survey, the median household income in the county in 2021 was \$85,154. This is higher than the median income of the MSA or state and was therefore used in the affordability calculations below.

### Rental Housing

According to the 2021 American Community Survey the median rent & utilities in South Hero is \$1,337. To meet the definition of affordability, a household would need to earn at least \$53,480 to pay the median rent. The median rent is affordable to most residents, but not to those with very low incomes. 18% of current renters in South Hero pay more than 30% of their income for rent (17 households).

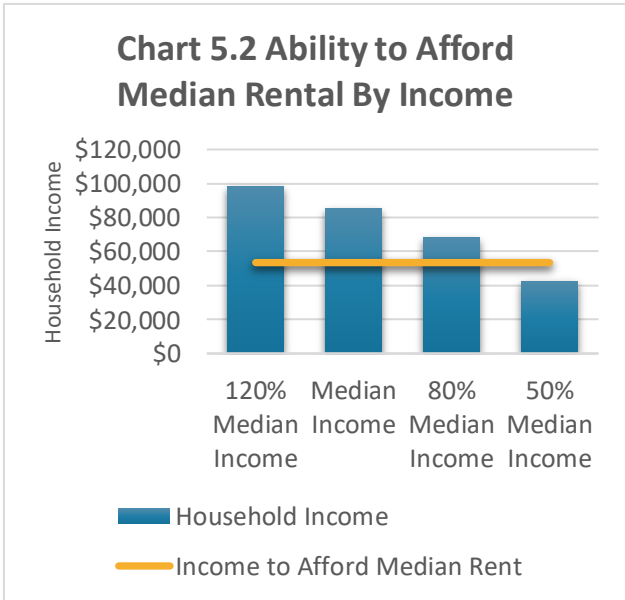
*Definitions*

**Affordable Housing:** Under 24 V.S.A. §4303 affordable housing is defined as:

- 1) Owner-occupied housing for which the total annual cost of ownership does not exceed 30% of the gross annual income of a household at 120 percent of the highest of the county median income, MSA median income, or statewide median income.
- 2) Rental housing for which the total cost of renting does not exceed 30% of the gross annual income of a household at 80% of the highest of the county median income, MSA median income, or statewide median income.

**Burlington-South Burlington MSA:** A Census-defined geographic region consisting of Chittenden, Franklin and Grand Isle Counties.

**Chart 5.2 Ability to Afford Median Rental By Income**



Source: U.S. Census American Community Survey S1901 ACS 5 Year Estimate; U.S. Census American Community Survey DP04 ACS 5 Year Estimate



Figure 4.3. Image of Bayview Crossing Senior Housing Complex. Image Courtesy of Cathedral Square.

### Homeownership

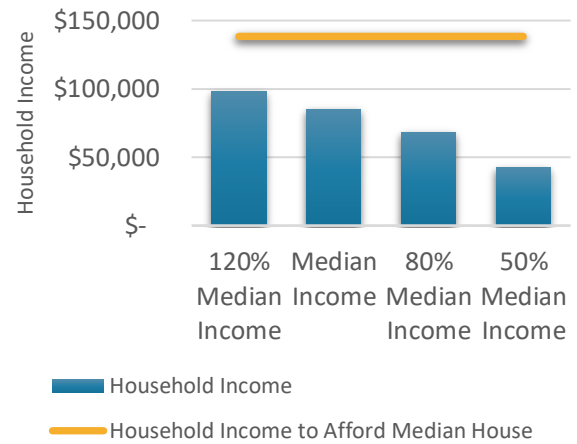
The median sale price of a home in South Hero has increased 74% from 2015 to 2021. Homeownership is extremely unaffordable for households making the median incomes for the county. A household would need an income of almost \$140,000 to afford the median home in South Hero.

Homeownership affordability limits were calculated using the VHFA Affordable Home Price Calculator under the assumption of a mortgage with 5% downpayment, and average interest rates, insurance, PMI and property taxes.

¼ of current South Hero homeowners pay more than 30% of their income on housing (97 households). Senior homeowners were more likely to find housing unaffordable.

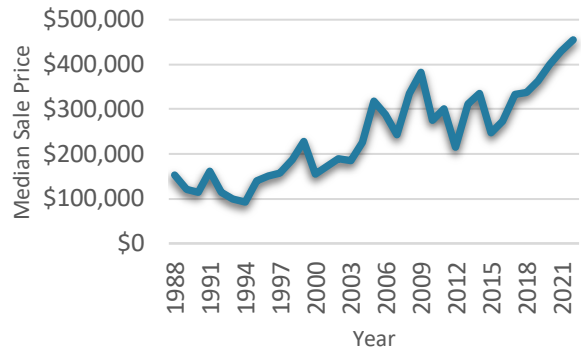
Many South Hero residents are concerned about the impact of high housing prices. In an open-ended survey question about the impact of the increased prices of housing in South Hero common response themes included concerns that only wealthy households would be able to afford to live in South Hero, that South Hero locals would be priced out, and that workers and young people would be priced out. Only 7% of respondents did not feel that price increases had an impact on the community. Roughly 30% of respondents were unsatisfied with current housing options in South Hero.

**Chart 5.4 Ability to Afford Median Home By Income**

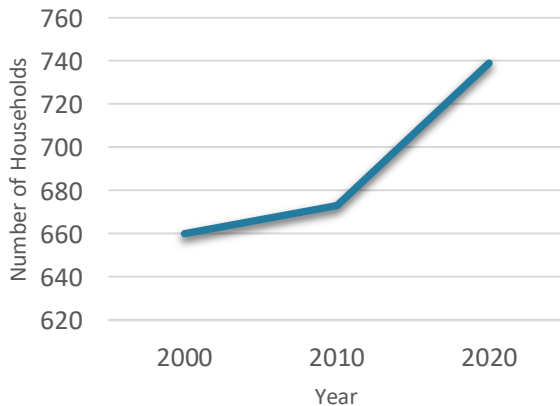


Source: U.S. Census American Community Survey S1901 2021 ACS Year Estimate; Vermont Department of Taxes, Property Transfer Tax (PPT) Records via Housingdata.org, VFHA Housing Affordability Calculator

**Chart 5.5 Median Home Sale Price In South Hero**



**Chart 5.3 South Hero Household Growth**



## Future Housing Needs

While the population of South Hero is relatively stagnant, the number of households has continued to increase over the last 20 years due to the trend of smaller households. If household sizes continue to get smaller, there will be a need for new housing units even if population remains similar. In South Hero many of these new smaller households are senior households, with the number of residents over the age of 65 nearly doubling in the last 10 years. Many of these households would likely prefer smaller, more affordable housing units that are easily accessible to services and community spaces.

There is also a need for more affordable housing options in South Hero. Very low-income households are unlikely to find affordable housing option in South Hero, and even those making above median incomes may be unable to afford homeownership.

To meet future housing needs, the Town will need to move away from the current development pattern of almost entirely large lot single unit houses.

Meeting housing demand with exclusively this type of development will lead to sprawl and will not address the affordability issues. Smaller units, multi-unit structures, accessory dwelling units and manufactured homes can all provide more affordable options. For instance, adding an accessory dwelling unit to an existing home provides a new rental unit and can reduce the housing costs for the homeowner.

Municipal regulations and policy play a major role in determining the location, density type and amount of housing available in South Hero.

The Town has identified South Hero Village and Keeler Bay Village as an appropriate place for denser housing development and should consider how best to reduce regulatory barriers to appropriately scaled residential development in these areas. Investments into infrastructure, such as community wastewater, can also support denser residential development.

**Equity and Housing**

Having a broad range of housing options at all price points can support an equitable and inclusive community. When housing options are unaffordable, those with median or low incomes are shut out of the community. Municipal regulations can contribute to this problem by creating unnecessary barriers to housing types other than single-unit structures.

# Local Economy

## Goals & Objectives

1. Support expansion of year-round businesses and jobs in South Hero, while continuing to ensure a strong seasonal economy.
2. Actively encourage commercial and small, light industrial enterprises in and near the village areas, in suitable locations on major roads, and in small, mixed use homesteads.
3. Support farming and maintain agricultural land to keep the rural landscape of the Town and help the local economy.
4. Support the development of home businesses and economic opportunities that fit with the rural character of South Hero.
5. Encourage and preserve economic diversity.

## Implementation

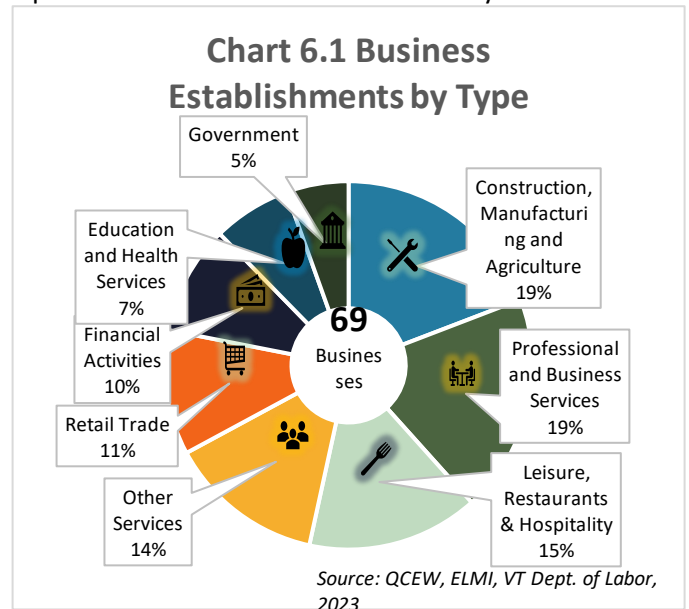
1. Home businesses should be encouraged, provided such operations do not interfere with the residential and agricultural character of the surrounding area.
2. Commercial development should be limited to where there is adequate sewage disposal capability, water supply, and road access and where the development will not adversely impact gateways to the village areas or contribute to strip development.
3. Promote incentives to maintain farms and preserve agricultural land, through tax policies, regulations, and the purchase of development rights and conservation easements.
4. Continue to study and support solutions to the lack of water and wastewater capacity in South Hero.

## Employment Trends

The labor force in South Hero hovers around 1,000, which includes residents of South Hero aged 16 and over that are employed or unemployed, including those in active military duty. The size of the labor force shrank by about 6% during the pandemic but seems to have recovered to pre-pandemic levels by the end of 2022. In December of 2022, the labor force was 1,029. The annual average unemployment rate for 2021 was 3%, down from an all-time monthly high of 10.2% in April of 2020.

South Hero has 69 year-round and seasonal businesses with 363 employees based on 2021 data from the VT Department of Labor. The number of businesses in 2021 is about the same as the number of businesses in 2010. 25% of the employees in South Hero work in the leisure and hospitality sector, 17% work in government and 16% work in retail trade.

Tourist and recreation businesses continue to be an area of economic growth; residents run riding stables, recreation facilities, charter fishing, restaurants and year-round lodging facilities. While not a major employer, agriculture remains a prominent sector of the local economy.



## Local Businesses

Businesses in South Hero are largely concentrated in the villages and include restaurants, health care, a small grocery stores, and a several other personal and professional services. There are many tourist services and attractions including: museums, gift stores, marinas, fishing accesses, nearby ferry service, fossil sites, farmers’ markets restaurant/snack bars/delis, gas stations, groceries, bed & breakfasts, campgrounds and historic sites. The closest chain supermarket is located off island in Milton. The Lake Champlain Islands Economic Development Corporation provides a directory of local businesses ([www.champlainislands.com](http://www.champlainislands.com)).

There is no data on the number of people that have home businesses (also referred to as home occupations) but there are many in South Hero due to good internet access and its remote location. The pandemic also increased the number of residents that work from home and while some returned to offices many maintained remote work. This is supported by data from the American Community Survey, which reports that the percentage of workers commuting to work 10 minutes or less increased from 19% in 2019 to 25% in 2021.

## Income

Median incomes in South Hero are higher than the County and State. The median family adjusted gross income (AGI) in 2021 was \$116,985, a 12% increase since 2019. This figure reflects income tax returns filed as married filing jointly and head of household. While the increase is sizable, the 2021 increase was not as high as the increase in inflation during that year. The poverty rate in South Hero is 4.8%, which is lower than the County and the State (U.S. Census Bureau, 2021 American Community Survey (ACS) 5-year estimates). The poverty rate is higher for the population aged 18-34 and for the population 5 years and under, indicating that affordability for young families is an issue in the community.

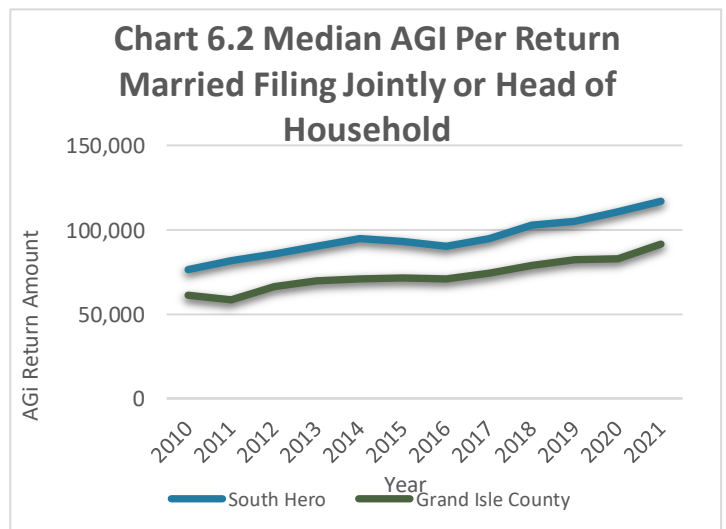
## Looking to the Future

South Hero’s economic development strategy is centralized around concentrating commercial and housing in the villages and continuing to expand and maintain its recreation and trail amenities to support local residents and a robust tourism economy. South Hero is a destination in the summer months for vacationers along with day time tourists arriving by bike on the ferry. Efforts to increase bicycle and pedestrian safety, amenities and better connect visitors to businesses and vice versa will grow this sector of the economy. The opportunity and impact of the tourist and recreation economy in South Hero is significant and cannot be emphasized enough.

Factors that influence current and future economic development in South Hero include current zoning and permitting processes, access to high-speed internet, cell phone coverage, and access to water and wastewater infrastructure.

Recently, the town worked with local developers on a new mixed-use development at the southern end of South Hero Village in response to the need for new municipal facilities, senior housing and businesses. The development on Community Lane is a great success that includes the Worthen Library, Fire & Rescue Departments, the Community Health Center, a deli/restaurant, 30 rental units of senior housing and additional commercial office space, including for South Hero Land Trust. A local brewery built a new space next door.

The town has zoning regulations that allow for increased density and mixed-use



development in its village areas, while limiting the density and intensity of development allowed outside the village areas. South Hero does not have any areas designated for industrial development but does allow for light-industrial development in all areas of town, including the village areas, as a conditional use with site plan review. It is important to allow for light-industrial development, but further work is needed to better define this use. It may be appropriate to designate certain areas where light-industry is not allowed.

It is important to ensure adequate telecommunications infrastructure for business development, including the increased demand for home occupations and remote work. While the majority of South Hero residents have access to service that meets the minimum standards for broadband, 2% still lack broadband service and none are served by high-speed fiber. The majority of residents have cellular access. To support enhanced broadband access, the Town has joined the Northwest Fiberworx (formerly Northwest Communications Union District).

Wastewater and water supply infrastructure are a significant hurdle for current and new development in the villages. There are several small private water districts, however there is no municipal wastewater system and local soils severely limit the capacity for on-site soil based wastewater management. In 2023 a feasibility study was in process to determine the potential for small, community waste-water systems to possibly serve the village areas.

# Flood and Climate Resilience

## Goals & Objectives

1. Encourage flood emergency preparedness and response planning in South Hero. Encourage flood emergency preparedness and response planning in South Hero.
2. Encourage the protection and restoration of floodplains, wetlands and upland forested areas that attenuate and moderate flooding and fluvial erosion.

## Implementation

1. Continue to be a member of the National Flood Insurance Program & ensure that the Land Development Regulations meet all NFIP minimum requirements to protect floodplains, prevent damage to property, and mitigate risk to human lives.
2. The Planning Commission, Selectboard, and Town emergency services personnel shall work with State and Federal agencies to ensure that connection to mainland Vermont via U.S. Route 2 is maintained during a flood event.
3. The Planning Commission and Selectboard shall draft and adopt a Local Hazard Mitigation Plan (LHMP) for South Hero that addresses mitigating risks posed by flooding and other disasters.
4. The Town Plan endorses the recommendations of the LHMP.
5. The Selectboard shall annually adopt a Local Emergency Operations Plan (LEOP).
6. The Planning Commission and Zoning Administrator should work with the Vermont Agency of Natural Resources to investigate future adoption of River Corridor or Fluvial Erosion maps and regulations.

## Flood Resilience

### Floodplain

The Town of South Hero is in the unique position of being on an island, surrounded by the waters of Lake Champlain. The land is fairly flat, and there are few streams of any significance on the island. The result is that the island typically does not face catastrophic inundation resulting from single major storm events such as hurricanes. The flooding that does occur tends to be from the rising waters of Lake Champlain. Such flooding tends to start slowly and last for an extended amount of time. Flooding can pose major transportation issues, property damage, and environmental damage to Lake Champlain.

South Hero’s Land Development Regulations includes standards specific to development in the Special Flood Hazard Area (SFHA), or 100-year floodplain, as delineated by FEMA on the Town’s Flood Insurance Rate Maps (FIRM). Existing FIRMs are dated as effective on June 15, 1978 and the Flood Insurance Study was published in June 3, 1988.

A new version of the FIRM is expected to be released in 2023.

The 100-year flood plain includes several tributaries to Lake Champlain, the “Crick”, and several wetlands (See Flood Insurance Rate Maps for Town of South Hero in Town Clerk’s Office for official descriptions.) Map X also depicts the 100-year flood zones.

**South Hero Local Hazard Mitigation Plan**

In 2018, the Town adopted a local hazard mitigation plan (LHMP) which has been approved by FEMA. The plan details historic events and future mitigation of major disasters, including flooding, severe thunderstorms and winter storms.



All adopted flood hazard regulations meet or exceed minimum requirements set by the National Flood Insurance Program minimum. Adoption of flood hazard regulations and the FIRM allows the Town to be a member of the National Flood Insurance Program (NFIP) and enables all residents of South Hero to purchase flood insurance. As new flood maps are released by FEMA, the Town may need to further update its floodplain regulations to maintain NFIP compliance.

The primary flood threat facing the Town is posed by Lake Champlain. The last time Lake Champlain exceeded the USGS Major Flood Stage Elevation (101.5 feet above Sea Level) was in 2011. The Lake has exceeded 100 feet in elevation approximately 5 times in the past 15 years (see Chart X). The most recent large flooding event was the Flood of 2011. During that flood Lake Champlain’s waters reached a height of 103.27 feet above sea level (ASL) as measured at the USGS gage at the Echo Center in Burlington. Flooding was exacerbated by waves caused by high winds.

Flood risk on Lake Champlain in South Hero is greatest from mid March to early June, with the highest risk during early May as melting snow from the mountains flows into the Lake and raises the water level. Abnormally high rainfall during this time frame increases the likelihood of flooding.

Roughly 5% of all structures in South Hero are located in the 100-year floodplain. The location of private property in the floodplain has led to issues with septic systems and unsecured personal property such as propane tanks. More attention should be paid by the Town to ensure that lakeshore property owners located within or near the Special Flood Hazard Area take proper precautions against flooding. Such precautions should include securing propane or other fuel tanks in compliance with the NFIP, as well as securing any loose personal property that might get washed into the Lake during a flood. Further investigation needs to be done regarding ways to improve septic systems to be more tolerant of flooding in cooperation with the State Agency of Natural Resources.

Section 3. Item #A.

There are four flood stages defined by USGS for Lake Champlain. These are:

- Action Stage, at 99.9 feet Above Sea Level (ASL),
- Flood Stage, at 100.0 feet ASL,
- Moderate Flood Stage, at 101 feet ASL, and
- Major Flood Stage, at 101.5 feet ASL.

Parts of South Hero, such as the south end of Keeler Bay, Wally’s Point, and parts of West Shore Road, and U.S. Route 2 near Milton are and will continue to be the parts of South Hero most at risk for flooding from Lake Champlain West Shore Road is a Town road and Route 2 is a U.S. highway. During the 2011 flood, access to South Hero across the causeway from Milton on U.S. Route 2 was reduced to one lane due to flooding through the wildlife preserve at the State Park. A more severe flood could pose serious access problems for residents of South Hero because U.S. Route 2 is one of the only three means of vehicle access to the Lake Champlain Islands from the United States.

Lake Champlain flows north into Canada, via the Richelieu River before proceeding to the St. Lawrence River in Montreal before eventually flowing to the Atlantic Ocean. That means that Canada, which is north of Vermont, is actually “downstream” when referring to Lake Champlain’s flow. After the flooding in 2011, an international joint commission was formed to examine potential structural and non-structural solutions to minimize impacts of flooding. The report recommends two measures as possible structural measures to reduce flooding, selectively removing material and constructing a weir in the Richelieu River and allowing moderate levels of waters to be diverted through the Chambly Canal during flood events. South Hero encourages cooperative efforts between the US and Canada to reduce Lake flooding.

### Stream Corridor

Another type of flooding that occurs in rivers and streams is fluvial erosion. Fluvial erosion occurs when fast lateral and vertical movement of streams and rivers cause erosion of the bank. Historic attempts to control stream flows, such as channelization, can increase risks for fluvial erosion. For smaller streams with a drainage area of between .5-2 square miles, the Vermont Agency of Natural Resources recommends limiting development in a stream corridor of at least 50 feet from the top of the bank to protect human life and infrastructure. South Hero has adopted river corridor standards that limit development near its streams.

### Climate Resilience

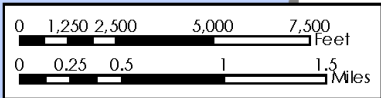
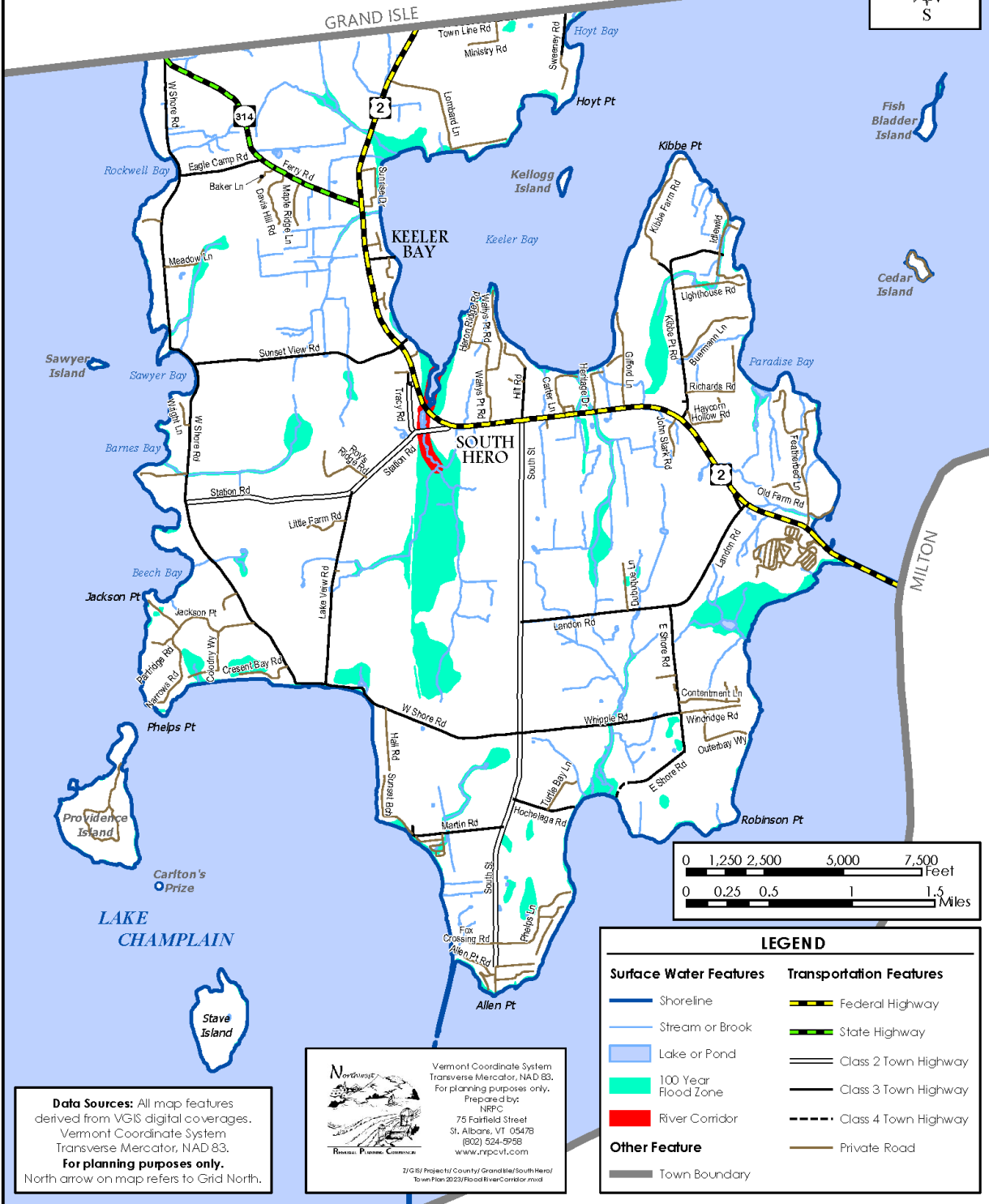
In Vermont as a whole, climate change is expected to bring increased precipitation, warmer average temperatures, and increases in the strength and frequency of storms (Vermont Climate Action Plan). In the Lake Champlain Basin, rising temperatures are expected to result in less ice cover and an increase in average annual precipitation and increased storm intensity. In the shorter term, increased heavy storms will likely increase flooding. In the long term, by 2100 the Lake’s average level may rise as much as 1-2 feet (Lake Champlain Basin Program). Statewide insured losses are expected to increase 2-4% by 2050 as a result of climate change (Vermont Climate Action Plan-  
<https://climatechange.vermont.gov/about>).

The Town will need to plan for and adapt to these effects in order to reduce impacts to residents, infrastructure and property. South Hero is uniquely vulnerable to climate impacts because of its location on Lake Champlain and the high number of shoreland properties. Town should consider developing a climate resilience plan to identify climate vulnerabilities. Many climate vulnerabilities will need to be addressed at the regional or state level, such as the resiliency of the electric grid against severe storm events.

**Equity in Flood & Climate Resilience**

Climate and flood resilience planning efforts must focus first on those most impacted by climate change and who have the least social and economic resources to adapt to its effects. Studies have shown that groups such as low-income residents, senior residents and residents of color are among those more likely to be impacted by climate change (Vermont Climate Action Plan). For instance, while the homes of individuals at all income levels may be located in the floodplain, those with lower incomes are less likely to be able to afford mitigation efforts. Furthermore, frontline communities should be included in climate resilience planning to ensure that proposed solutions meet the needs of those most impacted.

# FLOOD & RIVER CORRIDOR Town of South Hero



LEGEND	
<b>Surface Water Features</b>	<b>Transportation Features</b>
Shoreline	Federal Highway
Stream or Brook	State Highway
Lake or Pond	Class 2 Town Highway
100 Year Flood Zone	Class 3 Town Highway
River Corridor	Class 4 Town Highway
<b>Other Feature</b>	Private Road
Town Boundary	

**Data Sources:** All map features derived from VGIS digital coverages. Vermont Coordinate System Transverse Mercator, NAD 83.  
**For planning purposes only.**  
North arrow on map refers to Grid North.


 Vermont Coordinate System  
 Transverse Mercator, NAD 83.  
 For planning purposes only.  
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ZGIS Project by County/Grand Isle/South Hero/  
Town Plan 2023/Flood/River Corridor.mxd

# Energy

## Goals & Objectives

1. Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
2. Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
3. Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
4. Focus growth within and adjacent to the villages.
5. South Hero supports energy conservation efforts and the efficient use of energy across all sectors.
6. South Hero supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
7. South Hero supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from South Hero to other parts of the region.
8. South Hero supports the development and siting of renewable electricity generation resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of electricity generation in identified preferred locations shall be favored over the development of other sites.
9. South Hero supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
10. Support local farms and the local food system.

South Hero supports efforts to transition to renewable energy. The majority of energy use in South Hero is used for heating & transportation. Around 4% of South Hero residents use energy-efficient heat pumps, while 37 residents have registered electric vehicles.

There is around 4 MW of renewable energy generation resources in South Hero, the majority of which are solar facilities. Supporting increased renewable energy and reduction in greenhouse gases will require a more significant shift towards energy efficient technologies such as heat pumps, weatherization and electric vehicles. A full enhanced energy plan is included as an appendix to this plan.

**Chart 8.1 Total Energy Use (in billion BTUs)**

<b>Thermal Energy Use</b>	117
<b>Electrical Energy Use</b>	39.7
<b>Transportation Energy Use</b>	67

# Implementation Program

The Town Plan includes a number of implementation strategies to implement the goals & objectives of the plan. The table below outlines the key plan implementation strategies, recommended timeline and who is responsible for the action. The timing for each action is either ongoing, long (5+ years), medium (2-3 years) or short (less than 2 years).

Implementation Program

Implementation Strategy	Specific Implementation Action	Timing	Responsibility
<b>ENGAGE</b> (Introduction)	Encourage citizen participation at all levels of the planning process.	Ongoing	Planning Commission
<b>ENGAGE</b> (Introduction)	Continue working with Town residents to find ways to turn their vision for the future of South Hero into reality.	Ongoing	Planning Commission
<b>ENGAGE</b> (Facilities and Services)	Encourage the involvement of community members in community affairs and Town government in order to increase the number of individuals represented while addressing Town issues. This will provide a broader perspective of ideas to consider when making important decisions.	Ongoing	Planning Commission
<b>ENGAGE</b> (Facilities and Services)	Encourage volunteers to participate in town government.	Ongoing	Selectboard
<b>COLLABORATE AND COORDINATE</b> (Introduction)	Collaborate with other municipalities and regional organizations to address important regional issues, such as improving water quality in Lake Champlain.	Ongoing	Planning Commission & Conservation Commission
<b>COLLABORATE AND COORDINATE</b> (Introduction)	Consider the impact of land use decisions on adjacent municipalities.	Ongoing	Planning Commission
<b>COLLABORATE AND COORDINATE</b> (Facilities and Services)	Explore ways to save on supplies, equipment and Town services (such as plowing) through cooperative efforts with other towns.	Ongoing	Selectboard, Town Highway Dept.
<b>COLLABORATE and Coordinate</b> (Facilities and Services)	Ensure the Town continues to be represented in and participate in local and regional planning organizations such as the Northwest Regional Planning Commission, Lake Champlain Islands Economic Development Corporation (LCIEDC) Northwest Solid Waste District, etc.	Ongoing	Planning Commission & Selectboard
<b>COLLABORATE AND COORDINATE</b> (Transportation and Complete Streets)	Support and participate with the LCIEDC's S.H.O.R.E project to improve bicycle safety, share the road etiquette and other opportunities to create optimal experiences for cyclists from the Island Line Bike Ferry and local residents.	Short	Recreation Commission & Planning Commission
<b>COLLABORATE AND COORDINATE</b> (Transportation and Complete Streets)	Communicate and coordinate with local residents on planned road improvements.	Medium	Highway Dept.
<b>COLLABORATE AND COORDINATE</b> (Transportation and Complete Streets)	Support regional cooperation on trails development, interconnectivity of trails and connectivity of trails with destinations in order to provide non-motorized means of travel.	Medium	Recreation Commission

<b>COLLABORATE AND COORDINATE</b> (Transportation and Complete Streets)	Coordinate with VTrans on pedestrian accessibility and the need for reduced speeds and a crosswalk near the former Apple Island Resort property.	Short	Plan Commission, Zoning Administrator
<b>COLLABORATE AND COORDINATE</b> (Natural Resources and Land Use)	Support and participate in Federal, State and local efforts to improve water quality in Lake Champlain.	Ongoing	Planning Commission
<b>COLLABORATE AND COORDINATE</b> (Natural Resources and Land Use)	Support State of Vermont efforts to minimize pollution to the Lake and groundwater.	Ongoing	All Town Departments
<b>COLLABORATE AND COORDINATE</b> (Natural Resources and Land Use)	Work cooperatively with the newly created Conservation Commission where appropriate.	Ongoing	Planning Commission & Conservation Commission
<b>COLLABORATE AND COORDINATE</b> (Transportation and Complete Streets)	Support the construction of an additional park and ride lot near Exit 17.	Ongoing	Planning Commission & Selectboard
<b>COLLABORATE AND COORDINATE</b> (Transportation and Complete Streets)	Support and coordinate with CIDER on providing transportation for elderly, disabled or other nondrivers.	Ongoing	CIDER
<b>COLLABORATE AND COORDINATE</b> (Climate and Flood Resilience)	Continue to be a member of the National Flood Insurance Program.	Ongoing	Selectboard
<b>COLLABORATE AND COORDINATE</b> (Climate and Flood Resilience)	The Planning Commission, Selectboard, and Town emergency services personnel shall work with State and Federal agencies to ensure that connection to mainland Vermont via U.S. Route 2 is maintained during a flood event.	Ongoing	All Town Departments
<b>COLLABORATE AND COORDINATE</b> (Climate and Flood Resilience)	The Town Plan endorses the recommendations of the LHMP.	Ongoing	All Town Departments
<b>REGULATE</b> (Natural Resources and Land Use)	Restructure the Town’s Development Regulations to define and include the Proposed Land Use Areas of Village Core and Village Neighborhood.	Short	Planning Commission
<b>REGULATE</b> (Natural Resources and Land Use)	Encourage agricultural easements in subdivisions and promote Planned Unit Developments (PUDs) where soils are suitable.	Medium	Zoning Administrator
<b>REGULATE</b> (Natural Resources and Land Use)	Require that “building envelopes” be defined for house sites in subdivisions to ensure coexistence with wetlands, natural areas, and farmland.	Short	Zoning Administrator & Development Review Board
<b>REGULATE</b> (Natural Resources and Land Use)	Reconsider the lot size limitations in zoning regulations.	Short	Planning Commission

<b>REGULATE</b> (Natural Resources and Land Use)	In the Town Development Regulations, provisions shall ensure that development compatibly coexists with the following special environmental areas: a. Natural areas, especially significant fossil sites b. Critical habitat on the outer islands c. Public access areas on the lake shore d. Lake Champlain shoreline i.e., wetlands, including the “Crick” and the area of Round Pond e. Scenic views f. Flood plain areas	Short	Plan Commission
<b>REGULATE</b> (Natural Resources and Land Use)	Ensure that the conversion of seasonal homes to year-round use meets local zoning standards and results in safe and adequate sewage disposal, water supply, and road access.	Medium	Zoning Administrator
<b>REGULATE</b> (Natural Resources and Land Use)	To protect the Lake Champlain shoreline and recognize its diverse and unique character, the Town Planning Commission and Conservation Commission shall keep apprised of lakeshore land use and identify shoreland areas that may be treated differently in the Town regulations.	Short	Planning Commission & Zoning Administrator
<b>REGULATE</b> (Natural Resources and Land Use)	Town zoning and subdivision regulations shall be strictly and consistently enforced. All Town officials should be well-informed about these regulations.	Ongoing	Zoning Administrator
<b>REGULATE</b> (Housing)	Implement zoning regulations in the town’s village districts that allow for concentrated residential development at higher densities than allowed in other zoning districts.	Short	Planning Commission
<b>REGULATE</b> (Housing)	Support efforts that incentivize the development of accessory dwelling units for their ability to provide affordable housing options.	Short	Planning Commission
<b>REGULATE</b> (Transportation and Complete Streets)	When conversions of seasonal homes to year-round occupancy are proposed, ensure that adequate all-season access is provided for the occupants as well as for emergency vehicles as part of the zoning approval process for conversions.	Short	Planning Commission & Development Review Board
<b>REGULATE</b> (Natural Resources and Land Use)	Ensure the Town’s Development Regulations are complimentary to regional and state water quality improvement efforts.	Short	Planning Commission & Conservation Commission
<b>REGULATE</b> (Natural Resources and Land Use)	The Planning Commission and Conservation Commission should determine how best to regulate these areas and monitor the effectiveness and enforcement of town regulations.	Medium	Planning Commission & Conservation Commission
<b>REGULATE</b> (Climate and Flood Resilience)	The Planning Commission and Zoning Administrator shall ensure that the Land Development Regulations meet all NFIP minimum requirements. The Planning Commission shall ensure that the Land Development Regulations continue to protect floodplains, prevent damage to property, and mitigate risk to human lives.	Short	Planning Commission & Zoning Administrator
<b>REGULATE</b> (Climate and Flood Resilience)	The Planning Commission and Zoning Administrator should work with the Vermont Agency of Natural Resources to investigate future adoption of River Corridor or Fluvial Erosion maps and regulations.	Short	Planning Commission & Zoning Administrator

<b>REGULATE</b> (Local Economy)	Home businesses should be encouraged, provided such operations do not interfere with the residential and agricultural character of the surrounding area.	Ongoing	Zoning Administrator
<b>REGULATE</b> (Local Economy)	Commercial development should be limited to where there is adequate sewage disposal capability, water supply, and road access and where the development will not adversely impact gateways to the village areas or contribute to strip development.	Medium	Planning Commission, Development Review Board, and Zoning Administrator
<b>EVALUATE/STUDY/PLAN</b> (Natural Resources and Land Use)	Evaluate making provision for a Town Center with adequate capacity to host the Town Offices, recreation fields and other functions and facilities as the need develops. Commercial enterprises, in a public/private partnership or just private, should also be included in the evaluation.	Medium	Selectboard, Planning Commission & Development Review Board
<b>EVALUATE/STUDY/PLAN</b> (Natural Resources and Land Use)	The Town Planning Commission and Conservation Commission should stay up to date on State and federal regulations concerning wildlife, wetlands, natural areas, and water quality.	Ongoing	Planning Commission & Conservation Commission
<b>EVALUATE/STUDY/PLAN</b> (Facilities and Services)	Explore innovative ways to finance and provide town services to reduce property tax burdens.	Ongoing	Town Administrator & Selectboard
<b>EVALUATE/STUDY/PLAN</b> (Facilities and Services)	Investigate adopting impact fees, which would help finance the cost of specific town services.	Medium	Planning Commission & Town Administrator
<b>EVALUATE/STUDY/PLAN</b> (Facilities and Services)	Explore ways to increase the tax base without adding significant burdens on Town services. Among the ways to do this are to encourage light business growth in central locations, the use of vacant private and Town buildings for new uses, and encourage home-based businesses.	Ongoing	All Town Departments
<b>EVALUATE/STUDY/PLAN</b> (Transportation and Complete Streets)	Complete a Streetscape Scoping Study to improve pedestrian accessibility, including sidewalks, traffic calming elements and other streetscape amenities. Coordinate with LCIEDC's S.H.O.R.E. project.	Short	Planning Commission, Selectboard, Zoning Administrator & Town Administrator
<b>EVALUATE/STUDY/PLAN</b> (Climate and Flood Resilience)	The Planning Commission and Selectboard shall draft and adopt a Local Hazard Mitigation Plan (LHMP) for South Hero that addresses mitigating risks posed by flooding and other disasters.	Short	Planning Commission, Selectboard, Town Administrator
<b>EVALUATE/STUDY/PLAN</b> (Climate and Flood Resilience)	The Selectboard shall annually adopt a Local Emergency Operations Plan (LEOP).	Short	Selectboard & Town Administrator
<b>EVALUATE/STUDY/PLAN</b> (Local Economy)	Continue to study and support solutions to the lack of water and wastewater capacity in South Hero.	Medium	Planning Commission, Selectboard & Town Administrator
<b>EDUCATE AND INFORM</b> (Natural Resources and Land Use)	Support, encourage and inform the public about innovative solutions for safe sewage disposal.	Short	Planning Commission &



			Zoning Administrator
<b>EDUCATE AND INFORM</b> (Facilities and Services)	Promote town plan objectives in the adoption of tax policies and planning for public facilities and services.	Ongoing	Planning Commission, Selectboard & Town Administrator
<b>EDUCATE AND INFORM</b> (Housing)	Support, and share information about, programs and resources that help to lower cost of home occupancy and assist in the preservation and maintenance of existing housing units, such as energy conservation, weatherization, and utility assistance.	Ongoing	Planning Commission & Zoning Administrator
<b>EDUCATE AND INFORM</b> (Local Economy)	Promote incentives to maintain farms and preserve agricultural land, through tax policies, regulations, and the purchase of development rights and conservation easements.	Ongoing	All Town Departments
<b>FACILITATE</b> (Facilities and Services)	Encourage public/private partnerships to improve Town services whenever possible.	Ongoing	Selectboard & Town Administrator
<b>FACILITATE</b> (Facilities and Services)	Encourage the availability of safe and affordable child care.	Medium	Selectboard
<b>FACILITATE</b> (Facilities and Services)	Support community events and activities such as farmers markets and weekend in the Islands	Short	Selectboard, Planning Commission & South Hero Land Trust
<b>FACILITATE</b> (Facilities and Services)	Support the expansion of the Fire District #4 private water district and/or setting up other water districts in concentrated areas of the Town.	Medium	Selectboard, Planning Commission & Fire District #4
<b>FACILITATE</b> (Facilities and Services)	Support efforts to allow properly treated and filtered water from Lake Champlain to be used as potable water for domestic and business use.	Medium	Planning Commission, Selectboard
<b>FACILITATE</b> (Housing)	Support efforts to provide adequate infrastructure to support concentrated development in village areas, including municipal wastewater, bicycle and pedestrian improvements and complete streets.	Medium	Selectboard, Planning Commission & Town Administrator
<b>FACILITATE</b> (Facilities and Services)	Support efforts for education funding reform to address the property tax burdens imposed by Acts 60 and 68.	Medium	Town Administrator
<b>FACILITATE</b> (Natural Resources and Land Use)	Support purchase and/or donation of development rights to maintain agriculture and important natural areas outside of the village areas.	Ongoing	Planning Commission, Development Review Board, Zoning, Town Administrator
<b>FACILITATE</b> (Natural Resources and Land Use)	Support the development of retail, hospitality and service-based businesses best suited to serve the needs of residents, seasonal residents and the tourist population.	Ongoing	Planning Commission, Development Review Board, Zoning, Town Administrator
<b>FACILITATE</b>	The Town shall support, seek out and apply for State, federal and private grants and shall support donations,	Ongoing	Town Administrator

(Natural Resources and Land Use)	leases and other private voluntary ways to protect natural areas, wetlands, scenic areas, recreation areas, and wildlife habitat.		
<b>FACILITATE</b> (Facilities and Services)	Support volunteers who are interested in creating and maintaining town trails and coordinate with regional trail projects.	Ongoing	Recreation Commission, South Hero Land Trust
<b>FACILITATE</b> (Transportation and Complete Streets)	Support Safe Routes to School and other walking projects.	Short	Planning Commission, Recreation Commission
<b>FACILITATE</b> (Transportation and Complete Streets)	Support public and private policies, programs or other efforts that promote alternatives to single occupancy vehicle travel such as public transit improvements, car-sharing, telecommuting, flexible work schedules and school bus usage.	Short	Town Administrator
<b>DEVELOP/CONSTRUCT</b> (Facilities and Services)	Redevelop the Meeting House as a location for municipal and community events.	Medium	Selectboard, Town Administrator
<b>DEVELOP/CONSTRUCT</b> (Transportation and Complete Streets)	Implement necessary improvements for compliance with the Municipal Roads General Permit.	Short	Selectboard, Highway Department
<b>DEVELOP/CONSTRUCT</b> (Transportation and Complete Streets)	Identify and upgrade undersized culverts to prevent washouts. Use best management practices for managing runoff during road construction or reconstruction.		Selectboard, Highway Department

# Appendix 1: Scenic Resources

## #1 Scenic Views

- Sunset View Road overlooking the ridge to the south/west and west with the lake and Adirondacks in the background.
- At the intersection of Landon Road and East Shore Road there is a view across Round Pond into the bay with the Green Mountains in the background. The view is enhanced by the farm fields which surround the intersection.
- Along causeway traveling in both directions on Route 2: panoramic view.

## #2. Scenic Views

- Route 2 from Kibbe Point Road east to the town line on the Sand Bar; offers views of the Green Mountains to the east with the lake in the foreground.
- Route 314 as it tops the hill approximately 300 yards from the town line. This slope offers a view of the lake with Plattsburgh and the foothills of the Adirondacks in the background.
- West Shore Road at junction with Eagle Camp Road looking west over Rockwell Bay. The lake is in the foreground with Plattsburgh in the background.
- West Shore Road overlooking Sawyer Bay with the lake in the foreground and Adirondacks in the background. Also, scenic looking east into the fields surrounding the bay.
- White’s Beach on West Shore Road viewing the lake to the west with the Adirondacks in the background. Sunsets and beautiful island views of Providence Island, Carleton’s Prize and Stave Island.
- South Street from the top of the hill headed south after Whipple Road and for a distance of approximately 100 yards. Views of the lake, greater Malletts Bay, the Adirondacks and the Green Mountains.
- The railroad bed from the point where it emerges into the lake at the south end of the island and proceeds into the lake, i.e. The Fill. Views are spectacular in all directions.
- Hochelaga Road from the top of the hill as you turn off of South Street to the turn off for Camp Hochelaga. Views of the lake and the Green Mountains.
- Town Line Road looking east and south from the top of the hill at Sweeney’s Farm. Views are of the lake, Keeler Bay and the Green Mountains.

## 3. Scenic Views

- South Street has views to the west from Folsom School to the Kinney’s Farm. Some lake views but mostly the Adirondacks.
- The intersection of Lakeview Road and Station Road has views to the east and south with fields in the foreground and the Green Mountains in the background.

## #4. Scenic Views

- All of Lakeview Road may be considered scenic from views of the farm fields and the “Crick” to the left with the ridge line running along the right and finally the lake and the Adirondacks to the west.
- All lake public access areas afford views of the lake and surrounding areas.
- From Kibbe Point Road at the first sharp curve to the right there are views of the lake and the Green Mountains to the east with farm fields all around the area.

# Appendix II: Enhanced Energy Plan

## Goals & Objectives

1. Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
2. Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
3. Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
4. Focus growth within and adjacent to the villages.
5. South Hero supports energy conservation efforts and the efficient use of energy across all sectors.
6. South Hero supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
7. South Hero supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from South Hero to other parts of the region.
8. South Hero supports the development and siting of renewable electricity generation resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of electricity generation in identified preferred locations shall be favored over the development of other sites.
9. South Hero supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
10. Support local farms and the local food system.

## Strategies

1. Coordinate annually with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to South Hero residents.
2. Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.
3. Determine if there is a need to create a municipal Energy Committee, appoint an Energy Coordinator, or provide greater funding and support to existing municipal boards to coordinate energy-related planning in South Hero and to educate residents about the goals of this plan.
4. Investigate a revision to the zoning bylaw that would incentivize compliance with the state’s stretch code, or similarly high environmental standard, through the issuance of a bonus density.
5. Review the 2011 energy audit for any needed updates and make recommendations to the Selectboard for the municipal capital budget.
6. Promote and provide information about the GoVermont website (<https://www.connectingcommuters.org/>) which provides information citizens about ride share, vanpool, and park-and-ride options.
7. Identify areas that may be appropriate for a wood-fired district heating facility.
8. Study the expansion of public transit routes in South Hero.
9. Plan for and install electric vehicle charging infrastructure on municipal property.
10. Review municipal road standards to ensure that they reflect the “complete streets” principles as outlined by Vermont Agency of Transportation and Vermont Department of Health ([http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP\\_PA&N%20Complete\\_streets\\_guide\\_for\\_VT\\_communities.pdf](http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP_PA&N%20Complete_streets_guide_for_VT_communities.pdf)).
11. Review local policies and ordinances to limit water and sewer services to those areas of town where additional development will not contribute to sprawl.
12. Investigate the installation of a municipal solar and/or wind net-metering facilities to off-set municipal electric use.
13. Investigate installation of a community-based renewable energy project.

- 14. Encourage firefighters to have training in fighting fires on structures that have solar installed and on battery storage facilities & vehicles. .
- 15. Develop and adopt a municipal solar screening ordinance.
- 16. Investigate the need for an additional municipal park and ride facility.

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further local, regional, and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (90 x 50 goal), and the following:

- A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
- B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
- C. Vermont's building efficiency goals under 10 V.S.A. § 581;
- D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
- E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005.

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable South Hero to achieve “substantial deference” instead of “due consideration” in Certificate of Public Good (CPG) proceedings for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that South Hero will have a greater “say” in CPG proceedings before the Vermont Public Utility Commission about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and contain the following information:

- A. An analysis of current energy resources, needs, scarcities, costs, and problems.
- B. Targets for future energy use and generation.
- C. “Pathways,” or implementation actions, to help the municipality achieve the established targets.
- D. Mapping to help guide the conversation about the siting of renewables.

### Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each sector of energy use (thermal, transportation, electricity) and electricity generation in South Hero. Several different units of measurement are used in this section. Please refer to Table A.13 for more information about unit conversions.

*Thermal Energy.* Table A.1 shows an estimate of current residential thermal energy demand in South Hero, based on data from the American Community Survey (ACS 2016-2021). The data shows that 43% of households in South Hero depend on fuel oil as their primary source for home heating. This is followed by propane (29.1%) and wood (16.8%). Wood includes both cord wood and wood pellets. The nearest natural gas pipeline is located in Milton and is not likely to be extended to South Hero in the future.

**Table A.1 - Current South Hero Residential Thermal Energy Use**

Fuel Source	South Hero Households (ACS 2016-2021)	South Hero % of Households	South Hero - Households Square Footage Heated	Municipal Thermal Energy Use in British Thermal Units (BTUs) BTU (in Billions)
Natural Gas	3	0.5%	6,480	0
Propane	161	29.1%	33,2080	20
Electricity	22	4.0%	33,800	2
Fuel Oil	238	43.0%	469,000	28
Coal	0	0.0%	0	0
Wood	93	16.8%	193,040	12
Solar	2	0.4%	4,320	0
Other	31	5.6%	66,960	4
No Fuel	3	0.5%	6,480	0
<b>Total</b>	<b>553</b>	<b>100.0%</b>	<b>1,112,160</b>	<b>67</b>

The ACS data showing households in South Hero using natural gas for heating is an error. Data from Efficiency Vermont shows that South Hero residents are adopting heat pumps at a higher than average rate, despite consisting of only 3% of the population of Grand Isle and Franklin Counties nearly 7% of reported heat pump installations in the region occurred in South Hero.

Estimates for commercial and industrial thermal energy use are more difficult to calculate due to the lack of accurate information available. Table A.2 provides an estimate of total commercial energy use (thermal and electricity). The estimate is based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 50 billion BTUs per year, is used as thermal energy for commercial uses.

*Electricity Use.* Table A.3 shows 2021 electricity use in South Hero per date available from Efficiency Vermont.

**Table A.2- Current South Hero Commercial Energy Use**

Commercial Establishments in South Hero (VT DOL)	73
Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)	0.725
Estimated Thermal Energy BTUs by Commercial Establishments in South Hero/year (in Billions)	50

South Hero’s total electricity use has increased since 2015 from 10.5 million kWh in 2015 to about 11.6 million kWh per year in 2021. According to Efficiency Vermont, the average residential usage per household has increased from 6,450 kWh per year to 7,309 kWh per year between 2015 and 2021. During the same period, overall commercial and industrial electricity usage decreased from 3.8 million kWh to 3.5 million kWh.

South Hero’s average residential usage in 2021 was about 300 kWh lower than the average residential kWh use in the region (but this may be due in part to the high number of seasonal homes in South Hero).

**Table A.3 - Current South Hero Electricity Use**

Use Sector	Current Electricity Use in South Hero – 2021 (Efficiency Vermont) (kWh)	Current Electricity Use (in Billion BTUs)
Residential	8,090,868	27.6
Commercial and Industrial	3,532,267	12.1
<b>Total</b>	<b>11,623,135</b>	<b>39.7</b>

Increases in electrical energy usage may be partially related to increases in use of electricity for heating and transportation, as data from Efficiency Vermont shows that more South Hero residents are adopting electric vehicles and heat pumps.

South Hero is served by one electric utility: Vermont Electric Cooperative.

*Transportation.* Table A.4 contains an estimate of transportation energy use in South Hero. NRPC estimates that South Hero residents drive personal vehicles approximately 12.925 million miles per year and spend about \$2 million on transportation fuel expenses per year. This calculation does not include expenses for commercially owned and operated vehicles.

As of 2021, there were 37 electric and hybrid vehicle registrations in South Hero according to the Vermont Department of Motor Vehicles.

*Electricity Generation.* There is currently .4 MW of electricity generation capacity from renewable generation facilities located in South Hero. This capacity results in approximately 812.39 MWh of electricity generation per year. All of this generation is from net-metering solar facilities located in South Hero. The amount of electricity generation in South Hero is roughly equal to the annual electricity use of about 121 households in Vermont based on information available from the U.S. Energy Information Administration (6696 kWh per VT household per year).

Table A.5 organizes information about existing generation in South Hero by type of facility. Map A.4 shows the location of all electricity generators in South Hero with a capacity greater than 15 kW. A full list of electricity generators in South Hero can be found at the end of this section (Table A.12).

South Hero has good access to electric transmission and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. The ease of access to this type of infrastructure in South Hero may make development of renewable energy facilities easier and more cost-effective than in other surrounding communities with more existing grid infrastructure.

<b>Transportation Data</b>	<b>Municipal Data</b>
Total # of Passenger Vehicles (ACS 2016-2021)	1,098
Average Miles per Vehicle (VTrans- 2019)	11,772
Total Miles Traveled	12,925,656
Realized MPG (2013 - VTrans 2015 Energy Profile)	23.4
<b>Total Gallons Use per Year</b>	<b>552,378</b>
<b>Transportation BTUs (Billion)</b>	<b>67</b>
Average Cost per Gallon of Gasoline in 2021 (NRPC)	3.50
<b>Gasoline Cost per Year</b>	<b>1,933,324</b>

Map A.2 shows the electricity transmission and three-phase distribution infrastructure in South Hero. The map shows a three-phase distribution line in the town along VT Route 314, US Route 2 and South Street. There is also a transmission line that carries electric from New York State to Milton, VT via South Hero. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

<b>Generation Type</b>	<b>MW</b>	<b>MWh</b>
Solar	0.65	797.17
Wind	0.01	15.33
Hydro	0.00	0.00
Biomass	0.00	0.00
Other	0.00	0.00
<b>Total Existing Generation</b>	<b>0.40</b>	<b>812.49</b>

*Biodigesters.* While not included in the targets for energy use and generation, another potential source of energy in South Hero are anaerobic biodigesters. Biodigesters capture methane from manure or food waste and convert it into a renewable gas which either can be used in natural gas pipelines or transformed into electrical energy on-site through use of a generator. Anaerobic biodigesters can have beneficial climate impacts as they reduce methane emissions and can offset use of traditional natural gas. Biodigesters can also provide an important source of income for farmers. A major barrier to the expansion of biodigesters is that many small farms do not generate enough manure to make the biodigester profitable.

*Equity and Affordability.* Reaching South Hero’s energy goals will bring both environmental and economic costs and benefits. The equity issues related to who will bear those costs is of continuing concern to South Hero. A just energy transition requires that all residents have equitable access to the benefits and costs of the energy transition. The efficiency of green technologies offers savings for consumers as seen with electric vehicles, electric heat pumps, newer appliances, residential solar, etc. These technologies often require upfront investment, making them more difficult to access for residents with lower income. Low-income workers in Vermont also tend to work in industries that are more susceptible to the effects of climate change such as tourism and agriculture and are often disproportionately impacted by natural disasters like flooding. Equity for all residents will be considered in every decision about energy.

## Targets for Use and Generation

The second required element of an enhanced energy plan is creation of targets for future energy use.

Northwest Regional Planning Comm with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and renewable electricity generation to meet the State of Vermont’s 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan ([www.nrpcvt.com](http://www.nrpcvt.com)).

Regional targets for energy use and renewable electricity generation were disaggregated to create municipal targets. These municipal targets were also designed to ensure compliance with the Department of Public Service’s Municipal Determination Standards. Tables A.6, A.7 and A.8 show the targets for future energy use for South Hero by sector (totals are cumulative).

One thermal target for South Hero in 2050 is to have 85.3% of structures be heated by renewable energy sources. Much of this transition is likely to come from conversion to electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. Regionally, the target also relies on wood heating being a continued source of residential heating. However, South Hero has a low a target for new efficient wood heat systems (5 by 2050). This is due primarily to the high proportion of existing households in South Hero that already use wood heating systems. Although there is only a low target for converting other types of heating to efficient wood heating, South Hero strongly encourages residents’ conversion of existing wood heating systems to more advanced wood heating systems.

**Table A.6 - Thermal Targets**

<b>Thermal Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	44.5%	57.6%	85.3%
New Efficient Wood Heat Systems (in units)	0	0	5
New Heat Pumps (in units)	84	191	358
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	25%	73%



<b>Table A.7 - Transportation Targets</b>			
<b>Transportation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	11.2%	34.0%	91.2%
Electric Vehicles	125	937	2229
Biodiesel Vehicles	285	569	1100

Newer wood heating systems are more efficient and have less greenhouse gas emissions than older wood heating systems. Table A.6 also includes targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

The transportation energy targets for South Hero are similarly ambitious. By 2050, almost 91.2% of transportation energy will need to come from renewable sources in order to meet the 90 x 50 goal. This will primarily be done through the conversion light-duty passenger vehicles from fossil fuels energy sources to electric energy.

Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (10,927.45 MWh) is about 22 times more than the current generation capacity (493.63 MWh) within the Town of South Hero.

However, conversion of heavy-duty vehicles from diesel to biodiesel sources. Biodiesel technology and infrastructure will certainly need to advance tremendously in coming years to meet this ambitious target.

<b>Table A.8 - Electricity Targets</b>			
<b>Electricity Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Increased Efficiency and Conservation (BTUs)	25.2%	48.3%	100.7%

Targets for electricity use are complex to interpret. Electricity use in South Hero is targeted to double by 2050 (Table A.8). This increase in use will likely be driven by conversions to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels (Vermont Comprehensive Energy Plan - 2016, page 44).

<b>Table A.9 – Renewable Electricity Generation Targets</b>			
<b>Renewable Generation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Total Renewable Generation Target (in MWh)	3,606	7,212	10,927

Table A.9 shows the electricity generation targets for new electricity generation in South Hero in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh).

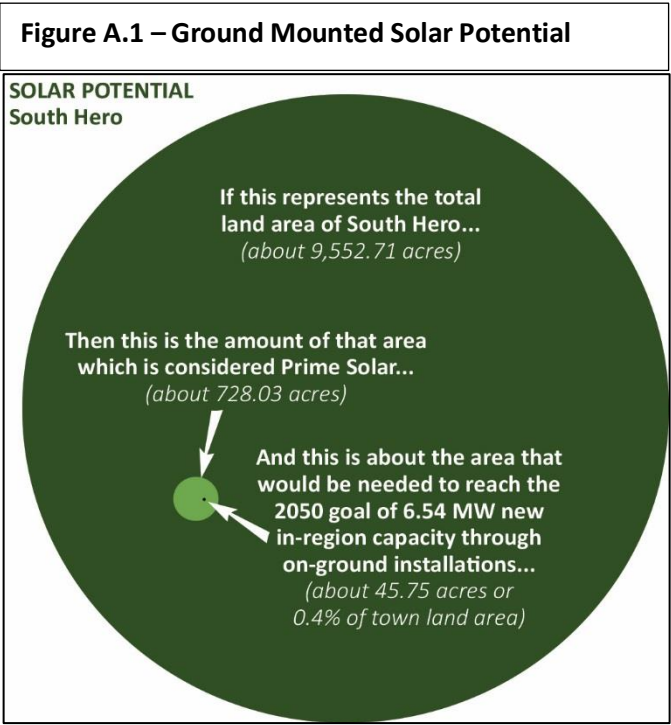
Table A.10 - Renewable Electricity Generation Potential		
Resource	MW	MWh
Rooftop Solar	1	1,149
Ground-mounted Solar	515	631,111
Wind	1,285	3,939,726
Hydro	0	0
Biomass and Methane	0	0
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>1,801</b>	<b>4,571,986</b>

Based on mapping and calculations completed by NRPC, South Hero has sufficient land to meet the above electricity generation targets. South Hero has access to the renewable electricity generation capacity outlined in Table 7.10. This estimate shows that South Hero has considerably more potential for renewable electricity generation than what is needed to meet the renewable electricity generation targets in Table 7.9. This generation capacity was calculated using the “base” layers for solar and wind. For an explanation of what constitutes a “base” layer, please see the mapping subsection below.

South Hero supports NRPC’s position regarding “commercial” and “industrial” wind facilities. The NRPC Regional Plan finds that the construction of new “industrial” or “commercial” wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an “industrial” or “commercial” wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. South Hero encourages the use of these sources for electricity and thermal energy generation, especially on farms.

**Figure A.1 – Ground Mounted Solar Potential**



## Mapping Energy Resources and Constraints

The third required element of an enhanced energy plan is the inclusion of maps that will provide guidance to the community and developers regarding the location of new renewable generation facilities. South Hero has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Municipal Determination Standards, including access to energy resources and constraints to renewable development. All maps may be found at the end of this section.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable electricity generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When an electricity generation facility is proposed, the presence of all natural resources constraints on site shall be verified as a part of the application.

*Mapping Methodology* Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass “potential” in South Hero based on information provided by the Vermont Sustainable Jobs Fund. “Known” and “possible” constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable electricity generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table 7.11. The known constraints and possible constraints used to create the maps include constraints that are required per the Municipal Determination Standards from the Department of Public Service and regional constraints selected by NRPC.

*Solar and Wind.* The solar and wind maps show both “base” and “prime” areas. Base areas are areas with electricity generation potential, yet may contain possible constraints. Prime areas are areas that have electricity generation potential that do not contain known or possible constraints. Areas that do not contain electricity generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general abundance of base and prime solar areas in South Hero, including many areas located within ½ mile of transmission and three-phase distribution lines. The following preferred locations for solar generation facilities by the Town of South Hero: rooftops, parking lots, and landfills. Brownfield sites located outside of the village areas of South Hero and Keeler Bay are also considered preferred locations.

South Hero strongly prefers solar facilities that have less than 5 MW (~20 acres) in generation capacity. This preference is a reflection of the community’s dedication to preserving the aesthetic and rural qualities of South Hero by restricting the geographic size of solar facilities. In addition, South Hero prefers that solar facilities greater than 149 kW in generation capacity to be sufficiently separated from other similarly sized solar facilities to “break up” the visual impact of two or more solar facilities located next to each other and to preserve South Hero’s rural character.

All solar facilities to be sited in South Hero shall include proper screening. The Town of South Hero hopes to adopt a municipal solar screening ordinance in the future.

South Hero has relatively good access to base and prime wind resources. These areas are generally concentrated near the lakeshore, particularly in the western part of town.

*Hydro and Biomass.* The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays “base” and “prime” areas. However, these categories are not necessarily indicative of electricity generation potential. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide electricity generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural

Resources. The hydro map shows some known and possible constraints that could impact the redevelopment of some dam sites. South Hero has no existing dam sites and the development of new dam sites is extremely unlikely due to South Hero’s island location and the extensive regulatory process involved in developing new dams.

### Conclusion

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. South Hero is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, affordable, and secure energy future.

<b>Table A.11 – Mapping Constraints</b>		
<b>Solar, Wind and Biomass Maps - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>Confirmed and unconfirmed vernal pools</b>	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
<b>River corridors</b>	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
<b>National wilderness areas</b>		VCGI
<b>FEMA Floodways</b>		VCGI/NRPC
<b>Class 1 and Class 2 Wetlands</b>		VCGI
<b>Designated Downtowns, Designated Growth Centers, and Designated Village Centers</b>	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas</b>	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain - 500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>Ground and surface waters drinking protection areas</b>	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
<b>Vermont Conservation Design Highest Priority Forest Blocks</b>	The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal	ANR

	natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)	
<b>Public water sources</b>	A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
<b>Municipal Conservation Land Use Areas</b>	Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. The are no areas identified in the South Hero Town Plan were included in this category.	NRPC
Constraint	Description	Source
<b>Protected lands</b>	This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements held by non-profit organizations.	VCGI
<b>Deer wintering areas</b>	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR
<b>Hydric soils</b>	Hydric soils as identified by the US Department of Agriculture.	VCGI
<b>Agricultural soils</b>	Local, statewide, and prime agricultural soils are considered.	VCGI
<b>Act 250 Agricultural Soil Mitigation Areas</b>	Sites conserved as a condition of an Act 250 permit.	VCGI
<b>Class 3 wetlands</b>	Class 3 wetlands in the region have been included as a Regional Possible Constraint. The inclusion of this resource as a regional	ANR

	constraint is consistent with goals and policies of the Northwest Regional Plan.	
<b>Municipal Conservation Land Use Areas</b>	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. No areas identified in the South Hero Town Plan were included in this category.	NRPC
<b>Hydro Map - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
None		
<b>Hydro Map - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
"303d" list of stressed waters		ANR
Impaired waters		ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI

ate in Table 7.12 displays facilities that have a Certificate of Public Good from the Vermont Utilities Commission generate electricity. The Town of South Hero recognizes that some of the data in the table may be out of date or t. The Town of South Hero also recognizes that some identified facilities may no longer generate electricity.

Table A.12 Generation Facilities

Category	Sub Category	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	Ground-mounted PV	565 West Shore Road	2960	Net Metered	Vermont Electric Coop	20
Solar	Ground-mounted PV	89 East Shore Road	17-3418	Net Metered	Vermont Electric Coop	15
Solar	Ground-mounted PV: Tracker	76 Lakeview Road	414	Net Metered Group	Vermont Electric Coop	11.59
Solar	Ground-mounted PV: Tracker	316 South Street	18-2204	Net Metered	Vermont Electric Coop	11.4
Solar	Ground-mounted PV: Tracker	135 Kibbie Point Rd	5078	Net Metered	Vermont Electric Coop	11
Solar	Ground-mounted PV: Tracker	142 Ferry Rd	3986	Net Metered	Vermont Electric Coop	10.8
Solar	Ground-mounted PV	561 West Shore Road	2977	Net Metered	Vermont Electric Coop	8.89
Solar	Ground-mounted PV	72 South St	17-2858	Net Metered	Vermont Electric Coop	7.6
Solar	Ground-mounted PV	549 Rt 2	2345	Net Metered	Vermont Electric Coop	6.41
Solar	Ground-mounted PV	74 Whipple Rd	17-4328	Net Metered	Vermont Electric Coop	6
Solar	Ground-mounted PV	16 Hall Road	3063	Net Metered	Vermont Electric Coop	4.03
Solar	Ground-mounted PV: Tracker	134 East Shore Road	6264	Net Metered	Vermont Electric Coop	4
Solar	Ground-mounted PV	14 Whipple Rd	1740	Net Metered	Vermont Electric Coop	2.74
Solar	Ground-mounted PV	14 Narrows Road	506	Net Metered	Vermont Electric Coop	2.17
Solar	Roof-Mounted PV	479 West Shore Rd	1861	Net Metered	Vermont Electric Coop	26.93
Solar	Roof-Mounted PV	505 W Shore Rd	19-0628	Net Metered	Vermont Electric Coop	22.8
Solar	Roof-Mounted PV	159 Landon Road	17-4672	Net Metered	Vermont Electric Coop	13.6
Solar	Roof-Mounted PV	320 South St	2726	Net Metered Group	Vermont Electric Coop	12.08
Solar	Roof-Mounted PV	316 South Street	7288	Net Metered	Vermont Electric Coop	12
Solar	Roof-Mounted PV	30 Wally's Point Rd	3935	Net Metered	Vermont Electric Coop	11



							Section 3. Item #A.	
Solar	Roof-Mounted PV	51 Martin Road	17-4574	Net Metered	Vermont Electric Coop	10.4		
Solar	Roof-Mounted PV	25 Martin Road	17-3741	Net Metered	Vermont Electric Coop	10.4		
Solar	Roof-Mounted PV	153 West Shore Road	3801	Net Metered	Vermont Electric Coop	10		
Solar	Roof-Mounted PV	15 Lakeview Rd	18-3630	Net Metered	Vermont Electric Coop	10		
Solar	Roof-Mounted PV	14 Featherbed Lane	18-1230	Net Metered	Vermont Electric Coop	10		
Solar	Roof-Mounted PV	14 Melcher Place	6932	Net Metered	Vermont Electric Coop	10		
Solar	Roof-Mounted PV	113 East Shore Rd	6673	Net Metered	Vermont Electric Coop	10		
Solar	Roof-Mounted PV	29 Kibbe Farm Rd	2796	Net Metered	Vermont Electric Coop	9.83		
Solar	Roof-Mounted PV	75 South Street	1268	Net Metered	Vermont Electric Coop	9.19		
Solar	Roof-Mounted PV	25 Haycorn Hollow	3126, 18-0631	Net Metered	Vermont Electric Coop	8.9		
Solar	Roof-Mounted PV	122 Station St	4007	Net Metered	Vermont Electric Coop	8.25		
Solar	Roof-Mounted PV	7 Hochelaga Road	2639	Net Metered	Vermont Electric Coop	8.08		
Solar	Roof-Mounted PV	30 Ferry Rd	1716	Net Metered	Vermont Electric Coop	7.87		
Solar	Roof-Mounted PV	39 Eagle Camp Road	18-2771	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	31 Featherbed Lane	19-0576	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	10 Keeler Bay Rd	18-4181	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	245 South St	18-4017	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	17 Turtle Bay Lane	18-3281	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	467 West Shore Road	17-4795	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	17 Tourville Drive	17-3596	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	33 Colony Way	7263	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	33 Crescent Bay Road	3881	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	135 Ferry Rd	19-3600	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	139 East Shore Rd	19-3898	Net Metered	Vermont Electric Coop	7.6		
Solar	Roof-Mounted PV	77 Landon Rd	5437	Net Metered	Vermont Electric Coop	7		
Solar	Roof-Mounted PV	328 U.S.	1135	Net Metered	Vermont Electric Coop	6.65		

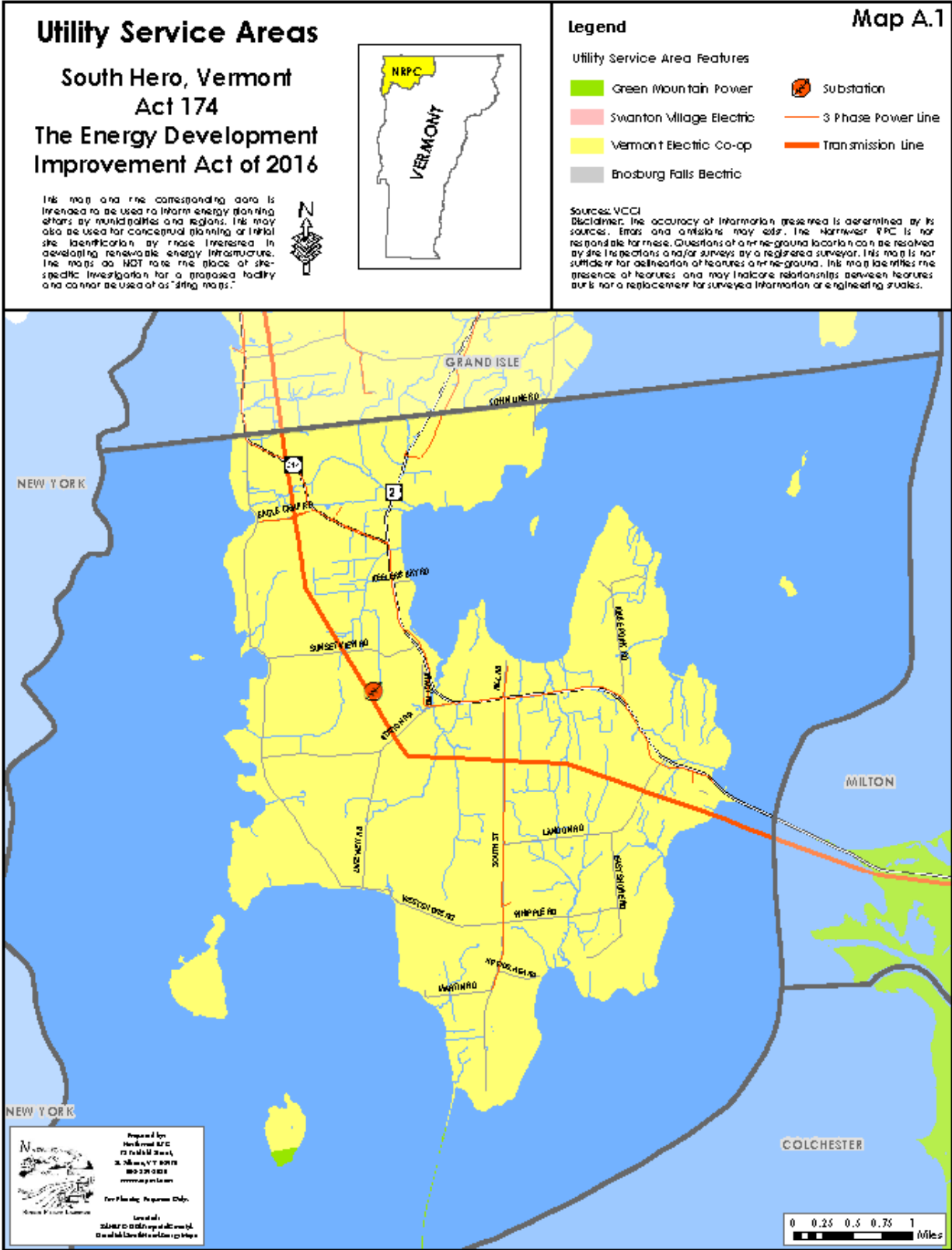
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	Mounted PV	Route 2			Metered	Electric Coop		
Solar	Roof-Mounted PV	85 Whipple	18-0416		Net	Vermont		
	Roof-Mounted PV	88 Kibbe			Metered	Electric Coop	6.6	
Solar	Roof-Mounted PV	Point Road	2722		Net	Vermont		
	Roof-Mounted PV	117 Lakeview			Metered	Electric Coop	6.42	
Solar	Roof-Mounted PV	Rd	2692		Net	Vermont		
	Roof-Mounted PV	25 Sweeney			Metered	Electric Coop	6.38	
Solar	Roof-Mounted PV	Farm Rd	18-1991		Net	Vermont		
	Roof-Mounted PV	349 West			Metered	Electric Coop	6	
Solar	Roof-Mounted PV	Shore Road	17-4329		Net	Vermont		
	Roof-Mounted PV	357 South			Metered	Electric Coop	6	
Solar	Roof-Mounted PV	St	17-2600		Net	Vermont		
	Roof-Mounted PV	1 Mott Lane	17-3269		Metered	Electric Coop	6	
Solar	Roof-Mounted PV	4 Chase Ln	17-2780		Net	Vermont		
	Roof-Mounted PV	146 East			Metered	Electric Coop	6	
Solar	Roof-Mounted PV	Shore Road	17-2737		Net	Vermont		
	Roof-Mounted PV	64 Featherbed			Metered	Electric Coop	6	
Solar	Roof-Mounted PV	Lane	5642		Net	Vermont		
	Roof-Mounted PV	42 Sweeney			Metered	Electric Coop	6	
Solar	Roof-Mounted PV	Rd	5370		Net	Vermont		
	Roof-Mounted PV	19 Ferry Rd	3894		Metered	Electric Coop	6	
Solar	Roof-Mounted PV	45 Heron			Net	Vermont		
	Roof-Mounted PV	Ridge Rd	2732		Metered	Electric Coop	5.93	
Solar	Roof-Mounted PV	15 Fox			Net	Vermont		
	Roof-Mounted PV	Crossing Rd	2652		Metered	Electric Coop	5.9	
	Roof-Mounted PV	21 Contentmen			Net	Vermont		
Solar	Roof-Mounted PV	t Lane	2875		Metered	Electric Coop	5.59	
	Roof-Mounted PV	44 RichaRds	No		Net	Vermont		
Solar	Roof-Mounted PV	Rd	number		Metered	Electric Coop	5.46	
	Roof-Mounted PV	321 Rt 2	2877		Net	Vermont		
Solar	Roof-Mounted PV	161 Landon			Metered	Electric Coop	5.24	
	Roof-Mounted PV	Rd	17-3362		Net	Vermont		
Solar	Roof-Mounted PV	9 Meadow			Metered	Electric Coop	5.2	
	Roof-Mounted PV	Lane	2173		Net	Vermont		
Solar	Roof-Mounted PV	308 South			Metered	Electric Coop	5.1	
	Roof-Mounted PV	Street	18-3182		Net	Vermont		
Solar	Roof-Mounted PV	86 Featherbed			Metered	Electric Coop	5	
	Roof-Mounted PV	Lane	18-1748		Net	Vermont		
Solar	Roof-Mounted PV	5 Sandbar			Metered	Electric Coop	5	
	Roof-Mounted PV	Heights			Net	Vermont		
Solar	Roof-Mounted PV	Drive	17-0233		Metered	Electric Coop	5	
	Roof-Mounted PV	45 South			Net	Vermont		
Solar	Roof-Mounted PV	Street	18-0496		Metered	Electric Coop	5	
Solar	Roof-Mounted PV	14 South St	17-2641		Net	Vermont	5	

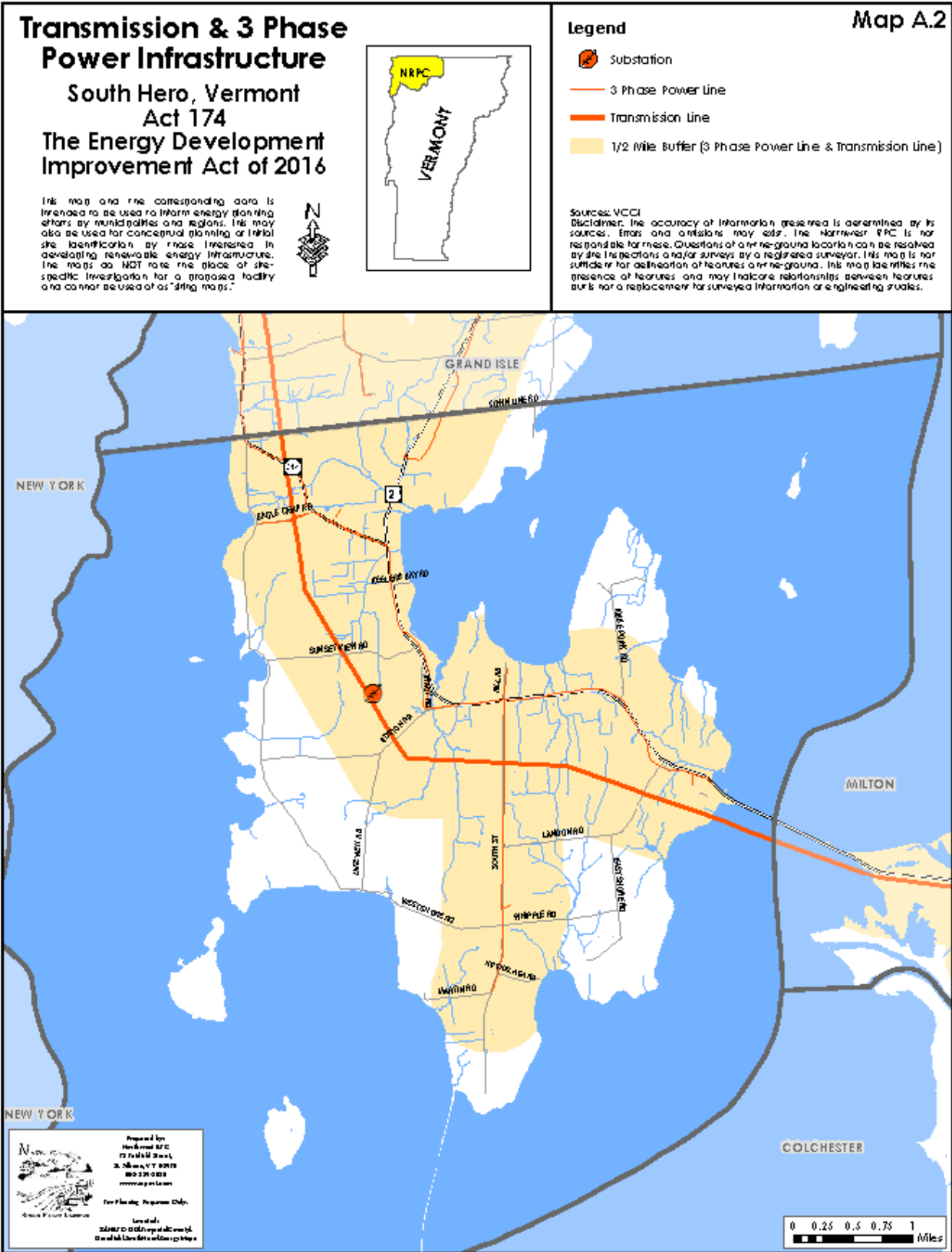
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Solar	Mounted PV Roof-Mounted PV	69 Sunset Beach Road	7277	Metered Net	Electric Coop Vermont			
Solar	Mounted PV Roof-Mounted PV	30 Haycorn Hollow	5563	Metered Net	Electric Coop Vermont	5		
Solar	Mounted PV Roof-Mounted PV	8 Whipple Rd	3099	Metered Net	Electric Coop Vermont	5		
Solar	Roof-Mounted PV	6 Sandbar Heights	17-4611	Net Metered	Vermont Electric Coop	4.26		
Solar	Roof-Mounted PV	9 Old Farm Rd	17-0213	Net Metered	Vermont Electric Coop	3.8		
Solar	Roof-Mounted PV	86 LombaRd Lane	7222	Net Metered	Vermont Electric Coop	3.8		
Solar	Roof-Mounted PV	104 Kibbe Point Road	2302	Net Metered	Vermont Electric Coop	3.8		
Solar	Roof-Mounted PV	10 Windridge Road	17-3398	Net Metered	Vermont Electric Coop	3.73		
Solar	Roof-Mounted PV	58 West Shore Road	2851	Net Metered	Vermont Electric Coop	3.6		
Solar	Roof-Mounted PV	50 Whipple Rd	1838	Net Metered	Vermont Electric Coop	3.21		
Solar	Roof-Mounted PV	380 South Street	1026	Net Metered	Vermont Electric Coop	3.19		
Solar	Roof-Mounted PV	22 South Street	18-0270	Net Metered	Vermont Electric Coop	3.19		
Solar	Roof-Mounted PV	15 Allen Point Road	7257	Net Metered	Vermont Electric Coop	3		
Solar	Roof-Mounted PV	47 Colodny Way	3929	Net Metered	Vermont Electric Coop	3		
Wind	Small Wind	134 East Shore Road	398	Net Metered	Vermont Electric Coop	3		
Wind	Small Wind	76 Lakeview Road	414	Net Metered	Vermont Electric Coop	2.5		

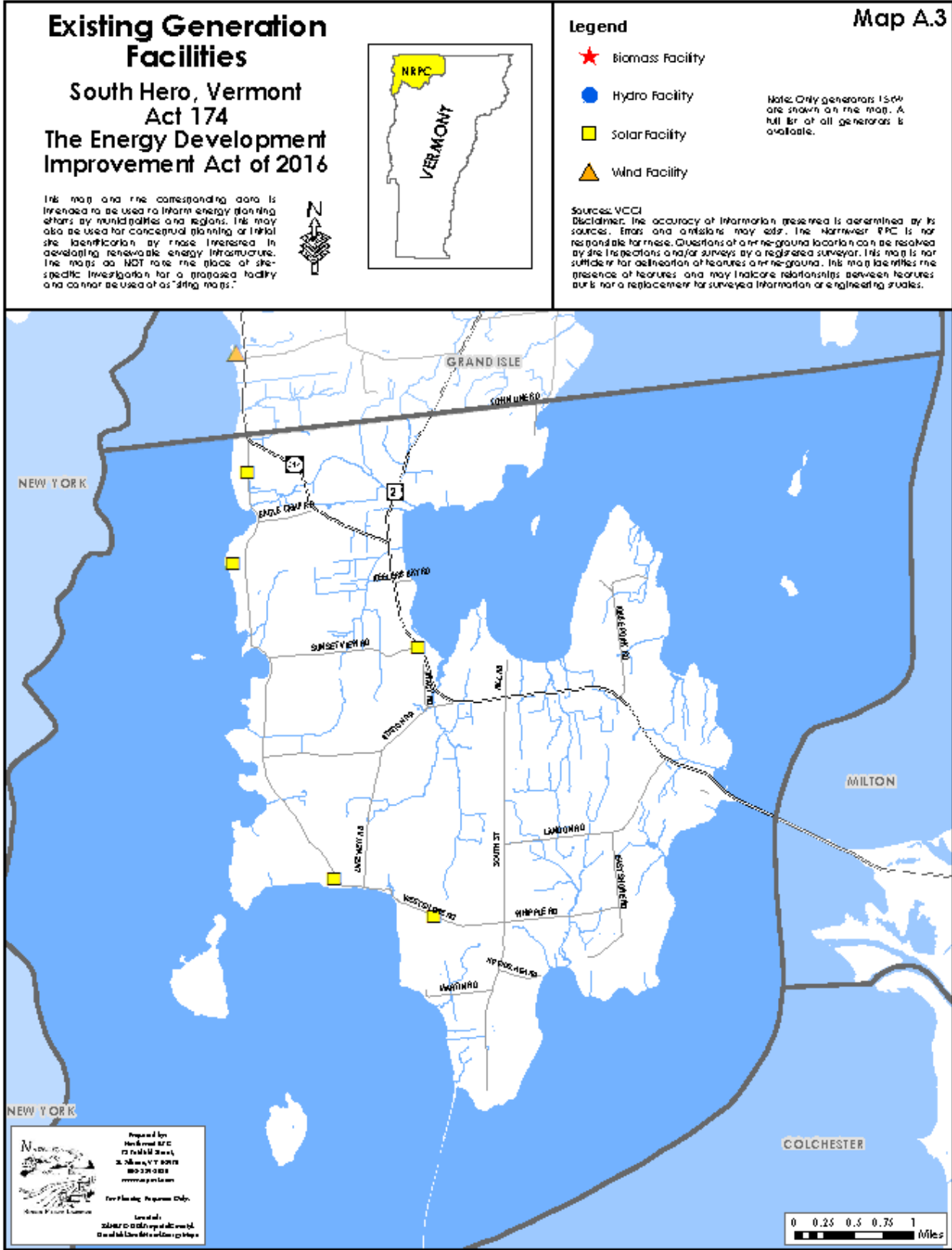
**Table A.13 Standard Conversions - BTU to Unit**

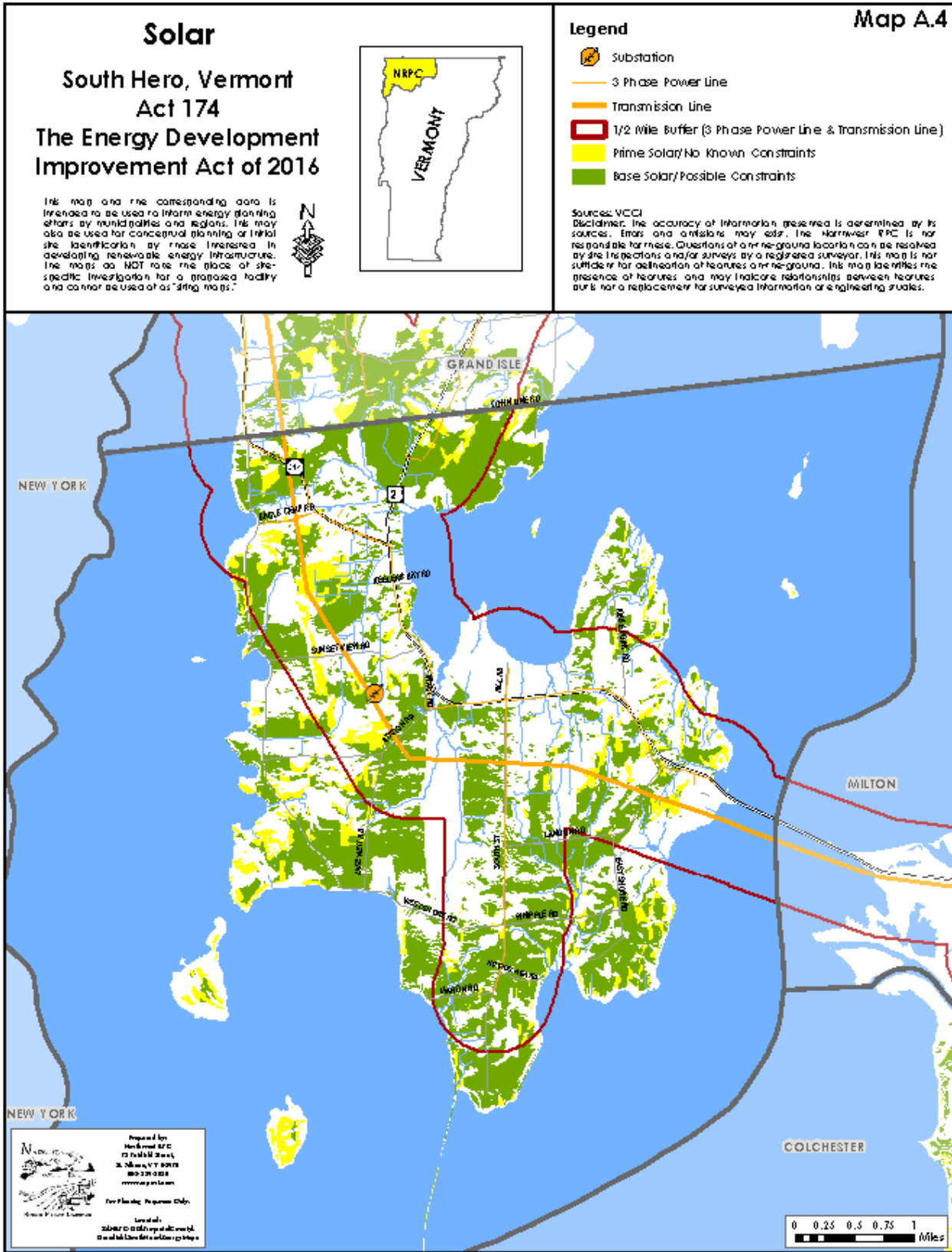
Unit	Unit Type	British Thermal Units
Kilowatt	Kilowatt	3,412
Gasoline	Gallon	120,404
Ethanol	Gallon	84,714
Diesel Fuel	Gallon	137,571
Heating Oil	Gallon	137,571
Residual Fuel Oil	Gallon	149,690
LPG	Gallon	84,738
Kerosene	Gallon	135,000
Biodiesel	Gallon	127,595
Wood Pellets	Ton	16,500,000
Cord Wood	Cord	20,000,000
Wood	Pounds	8,000

Natural Gas	Cubic Feet	103,200
Compressed Natural Gas	Pounds	20,160
Coal	Short Ton	19,490,000

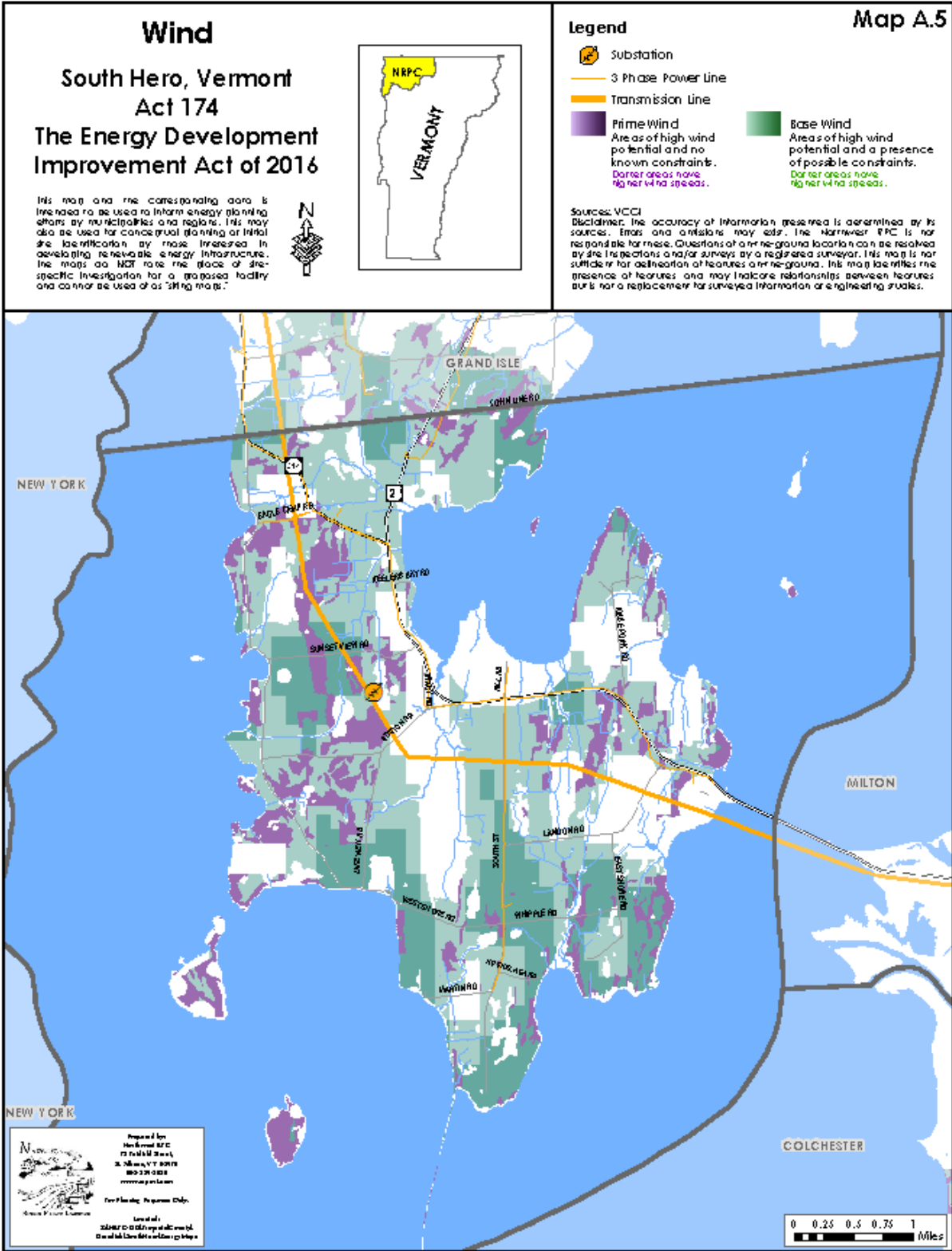


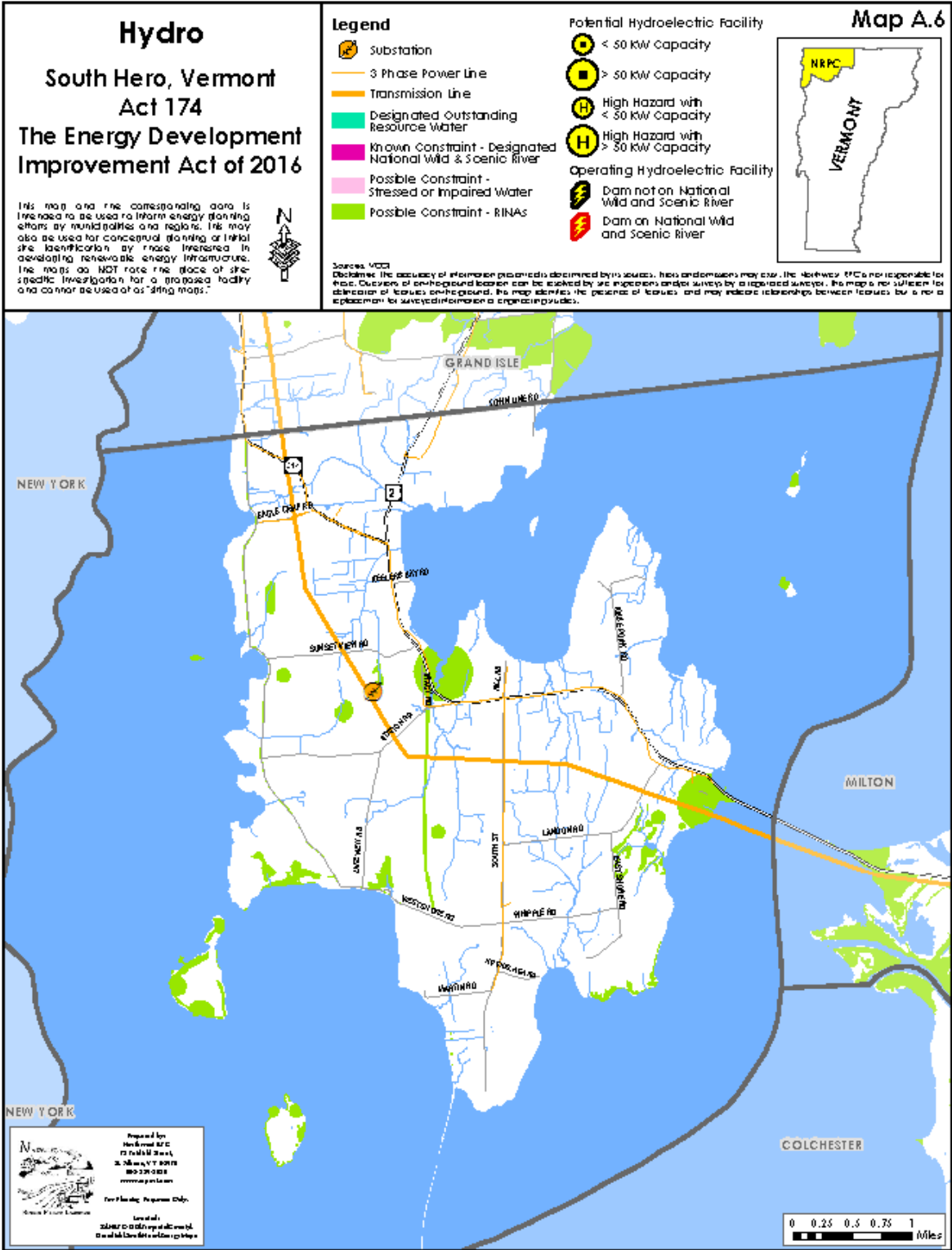












# Berkshire Municipal Plan

Prepared by the Berkshire Planning Commission

October 5, 2020



**ACKNOWLEDGEMENTS**

**Cover photo:** Berkshire Center,  
by Tami Lantz

Prepared by the Town of Berkshire with technical assistance from  
the Northwest Regional Planning Commission

The Town of Berkshire website (<https://berkshiretownvt.weebly.com/>) provides  
additional community resources and information.

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## BERKSHIRE MUNICIPAL PLAN: AT A GLANCE

### A Snapshot of the Community

Berkshire's population is growing, but slower than it was from 2000-2010. The majority of this growth is because of new residents moving into the town. The population of Berkshire is also aging; 37% of residents are age 45 or older.



Population Growth 2010-2020

### A Place for Home

Housing in Berkshire is a mix of isolated, rural residences and farms and small, clustered settlements in the hamlets of West Berkshire, Berkshire Center, and East Berkshire. House prices have increased from \$91,000 in 2000 to \$146,400 in 2018. Home ownership remains affordable for those making the county median household income, but unaffordable to lower income residents.



Affordability Gap for Homeownership Costs in Berkshire							
Percent of HH Median Income	County Median HH Income	30% of Income Per Month	Taxes & Insurance	Income Available for Housing per Month	Maximum Affordable Mortgage	County Median Sale Price Primary Residences (2017)	Owner Affordability Gap
Median (100%)	\$62,214	\$1,555	\$414	\$1,141	\$226,103	\$204,500	\$21,603
Low (80%)	\$49,771	\$1,244	\$414	\$830	\$164,480	\$204,500	(-\$40,020)

### Earning a Living

Most Berkshire residents commute to jobs in other Franklin County towns. However, there are 11 businesses in the Town employing 171 workers. In the last 10 years the number of businesses has shrunk slightly but the number of jobs has increased. Agriculture remains important to the Town, with 55 parcels of land used for farming.



11  
Businesses



171  
Jobs



55  
Farm  
Parcels

#### Berkshire Commuter Shed

1. Enosburgh (13.4%)
2. St. Albans City (11.2%)
3. St. Albans Town (10.6%)



28 minutes  
Length of Average  
Commute

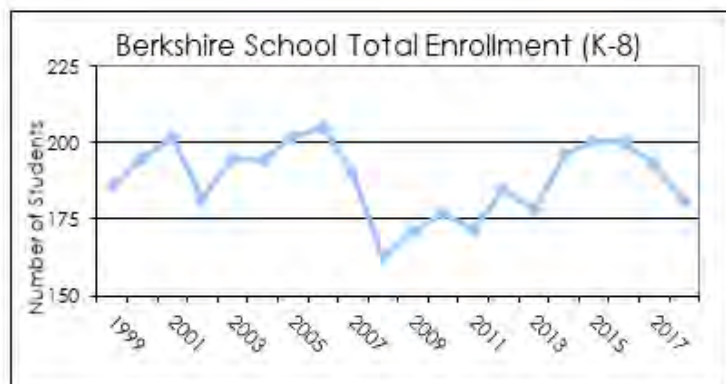
### Earning a Living Cont.

The median household income in Berkshire is \$53,182, which is below the median for the State and County. However, incomes have been steadily increasing in Berkshire and the percent of people living below the poverty line has fallen from 13.6% in 2000 to 8.3% in 2017.



### Providing for the People

Berkshire Elementary School provides education for students pre-K through grade 8. Currently, there are 181 students enrolled (K-8). School enrollment has remained stable over the last 20 years. This trend may continue even as Berkshire's population increases because Berkshire's population is aging. However enrollment may increase if new families move into Berkshire.



### Keeping It Rural in the Future

Land use planning will ensure that Berkshire maintains its rural, agricultural character while at the same time providing sufficient space for residential, commercial, industrial, and community development.

#### Land Use Districts and Their Purposes



**Wellhead Protection District:** To protect the quality of water used in municipal systems.

**Rural Lands District:** To conserve the forest and agricultural areas of town with limited rural residential development.

**Extended Village District:** To maintain the village as the focus of social and economic activity, with commercial, civic, and residential development.

**Flood Hazard Area Overlay District:** To reduce health and safety risks from flooding by restricting development in high risk areas.

### PROPOSED LAND USE



# Berkshire Municipal Plan Goals 2020-2028

## A Sense of Place

- GOAL 1:** To protect in good quality the abundant natural and historic resources in Berkshire.
- GOAL 2:** To support the continuation of agriculture and forestry, which contribute to the rural character and sense of place in Berkshire.
- GOAL 3:** To protect the citizens, property and economy of Berkshire and the quality of their rivers as natural and recreational resources by using sound planning practices within designated Flood Hazard Areas and river corridors.

## A Place for Home

- GOAL 1:** To provide safe and affordable housing for all segments of the population.

## Earning a Living

- GOAL 1:** Promote a balanced, diverse economic base, with a focus on locally owned enterprises.

## Providing for the People

- GOAL 1:** Make efficient use of public funds to maintain a sound fiscal balance.
- GOAL 2:** Ensure reasonable, functional and orderly development of all utilities, facilities, and services.
- GOAL 3:** Provide Town residents with the best possible education and childcare opportunities without overburdening the town's resources.
- GOAL 4:** Maintain and enhance recreational opportunities for Vermont residents and visitors.
- GOAL 5:** Provide and maintain a safe, economical, and functional transportation network for vehicular, pedestrian, and recreational use within the Town.
- GOAL 6:** Maintain and enhance community infrastructure and activities, both social and physical, which sustain and improve the health and well-being of all residents.

## Enhanced Energy Plan

- GOAL 1:** Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
- GOAL 2:** Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- GOAL 3:** Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
- GOAL 4:** Focus growth within and adjacent to the villages.

## Keeping It Rural in the Future

- GOAL 1:** To maintain the rural, agricultural character of the Town of Berkshire, including the historic settlement pattern of small hamlets separated by rural countryside.
- GOAL 2:** To protect important natural resources and agricultural use of the land, while at the same time providing sufficient space in appropriate locations for residential, commercial, industrial development, and for community facilities.

# Berkshire Municipal Plan Implementation 2020-2028

The table below lists the short-term actions that the Berkshire Planning Commission recommends to implement the goals & policies of this Town Plan.

**Responsible Parties:** PC (Planning Commission), SB (Selectboard), DRB (Development Review Board), ZA (Zoning Administrator), Town (to be determined)

**Partners:** NRPC (Northwest Regional Planning Commission), FPR (VT Forest, Parks, & Recreation), Fire Dept. (Berkshire Fire Department)

IMPLEMENTATION ACTIONS	RESPONSIBLE PARTY & PARTNERS
<b>The Sense of Place</b>	
Develop a management plan for the Town Forest <ul style="list-style-type: none"> <li>Contact the County Forester.</li> </ul>	Town, FPR
<b>A Place for a Home</b>	
Conduct a local housing study to evaluate the condition and affordability of housing within the community. This analysis should evaluate the impacts of short-term rentals and seasonal housing. <ul style="list-style-type: none"> <li>Apply for a Municipal Planning Grant (MPG), contact NRPC for assistance developing an MPG application.</li> </ul>	Town
<b>Earning A Living</b>	
Pursue a Village Center designation for East Berkshire and West Berkshire. <ul style="list-style-type: none"> <li>Contact the Planning and Outreach Manager at the VT Agency of Commerce and Community Development.</li> </ul>	SB / PC
<b>Providing for the People</b>	
Work with the Recreation Committee to develop wayfinding signage for Berkshire's recreation opportunities. <ul style="list-style-type: none"> <li>Coordinate joint meeting of Committees</li> </ul>	PC
Develop a capital improvement plan and budget that includes a maintenance schedule and plan for road improvements. <ul style="list-style-type: none"> <li>Contact NRPC for assistance.</li> </ul>	SB
<b>Enhanced Energy Planning</b>	
Coordinate with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Berkshire residents. <ul style="list-style-type: none"> <li>Host an Efficiency Vermont Button Up workshop, contact NRPC for assistance.</li> </ul>	PC, NRPC
Determine if there is a need to appoint an Energy Coordinator, or support existing municipal boards to coordinate energy-related planning in Berkshire and to educate residents about the goals of this plan. <ul style="list-style-type: none"> <li>Contact NRPC for assistance.</li> </ul>	PC, SB
Identify challenges and opportunities for public transit by reviewing route schedules and needs of Berkshire community to ensure that Berkshire is regionally connected via public transit. <ul style="list-style-type: none"> <li>Review existing GMT Routes. Contact the GMT Public Affairs and Community Relations Officer.</li> </ul>	PC, SB
Provide firefighters with training in fighting fires on structures that have solar installed. <ul style="list-style-type: none"> <li>Utilize training resources provided by the VT Department of Public Safety Division of Fire Safety.</li> </ul>	SB, Fire Dept.

## THE PLANNING PROCESS



"Grazing Cows" (Photo Credit: Meg St. Pierre)

### A) PURPOSE

The purpose of municipal planning is to provide a basis for local influence in identifying and solving problems, meeting challenges and opportunities, and achieving goals and objectives on behalf of the Town and its citizens. The municipal plan provides the framework and the guidelines upon which to base municipal action regarding the development of housing, industry, and services, and for meeting virtually all community needs. The plan contains the vision of what is considered vital and necessary to the residents of the community, as well as the means for local government to influence the actions of those who look to bring change to the community or its environment. It is planning's function to attempt to direct and coordinate these actions to further the goals of the community, so that all changes promote the general health, safety, and welfare of residents.

### B) THE PLANNING PROCESS

The Vermont Municipal and Regional Planning and Development Act (Title 24, Chapter 117) authorizes municipalities to "undertake a comprehensive planning program . . . and to prepare, maintain, and implement a plan within its jurisdiction" (Section 4381). Accordingly, in 1987 the Selectboard of the Town of Berkshire

appointed the Berkshire Planning Commission to conduct studies and prepare a comprehensive plan for the Town.

The first attempt to develop a plan for the community was in the early 1970s when the Town adopted interim zoning for two years in recognition of the need for planning. A municipal plan was completed in 1974, but failed to receive voter approval. In 1981, the plan was reintroduced along with a proposed zoning bylaw for the community, but both were defeated. The Town did adopt a Flood Hazard Area Bylaw in 1983 so that Berkshire landowners would be able to obtain flood insurance. This bylaw received voter approval in 1984 and is currently in effect. The Selectboard also approved another year of interim zoning in 1987 in order to give the new Planning Commission time to prepare the municipal plan. The first municipal plan was finally adopted in August of 1989. The Plan has since been revised in 2000, 2005, 2010, 2015, and now in 2020. The Zoning Bylaws and Subdivision Regulations, including flood hazard regulations, were last updated in 2019 as a unified development ordinance.

The plan itself should be a "living document" which is subject to revision at any time, as needs dictate, and indeed it must be updated and readopted every eight years, in accordance with state law. The work of the Berkshire Planning Commission and all other interested citizens will continue in the meantime, as they proceed with the implementation of the plan. This process may include:

- ⇒ the preparation of appropriate bylaws and programs designed to direct the course of future growth and development (e.g., zoning and/or subdivision regulations, an official map, a capital budget and improvement program);
- ⇒ the review of development proposals for conformance with the town plan;
- ⇒ preparation of future studies to identify and plan for specific problems or situations that may arise; and
- ⇒ regular review and revision of the plan, bylaws, and programs to ensure that they reflect changing conditions and needs.

Citizen participation is important at all levels of the planning process. Opportunities for citizen involvement have been assured through community surveys, public meetings, and occasional reports in the *County Courier*. Commission members also consult neighboring town plans and occasionally meet with planners from other communities in order to coordinate their planning efforts. These efforts are intended to foster the broadest level of public participation possible, and to utilize the planning process as a vehicle for exercising an inclusive, community-wide vision for the future of Berkshire.



## **GETTING FROM THERE TO HERE: PLAN IMPLEMENTATION**

The Comprehensive Municipal Plan for the Town of Berkshire discusses at length, the Town's history, present situation, and proposals for desirable growth and development in the future. Implementing the plan by turning it into a living, functional document is the ultimate challenge of the planning process.

Proper implementation of this plan will require continuing the planning process as outlined in the first four goals of "Act 200" (Figure 2.1). All Berkshire residents are encouraged to participate actively in each stage of the planning process. Development should be guided by local decision-makers, with consideration given to the appropriate use of the Town's resources and the consequences of growth. Cooperative efforts should be undertaken between Berkshire and its neighboring municipalities, the region, and the state in developing compatible plans.

### **Figure 2.1**

#### **Act 200 Planning Process Goals**

- (1) To establish a coordinated, comprehensive planning process decisions by municipalities, regional planning commissions, and state agencies.
- (2) To encourage citizen participation at all levels of the planning process, and to assure that decisions shall be made at the most local level possible commensurate with their impact.
- (3) To consider the use of resources and the consequences of growth and development for the region and the state, as well as the community in which it takes place.
- (4) To encourage and assist municipalities to work creatively together to develop and implement plans.

Also, as required by Act 200, the Town's planning process will be reviewed and "confirmed" by the Regional Commission at least once over the next eight years. This will ensure that the Town remains eligible for state planning appropriations and grants. These funds are intended to assist in the financing of local planning efforts. At the same time, the Town is expected to continue to provide financial support for the local and regional planning process.

### **Work Program**

The work program on the following pages outlines a recommended course of action over the next eight years to implement the long-term goals and objectives identified within the plan. This program is intended as a guide for the planning commission. It is recognized that the planning commission may not have the time or funding to be able to accomplish all that is set forth. Plan implementation through the development of zoning and subdivision regulations should be given

immediate attention and meeting the requirements of Act 200 should be ongoing.

## **A) WORK PROGRAM**

### ***The Continuing Planning Process:***

- Work to incorporate the goals and planning elements of Act 200 (Title 24, Chapter 117 V.S.A.) into the plan and the planning process (8 years).
- Pursue regular communication with neighboring communities, the Regional Commission, and state agencies in order to coordinate planning efforts.
- Sponsor public informational meetings and workshops to encourage public participation in the planning process.
- Pursue available grants as needed to fund planning efforts.

### ***Previous Implementation Actions:***

From 2015-2020 the Town of Berkshire completed two regulatory implementation actions identified in the previous Town Plan. As part of a 2017 Municipal Planning Grant project, the Town updated its Land Use and Development Regulations. This addressed two previous plan implementation actions.

- The regulations included strengthened flood hazard bylaws that mitigate risks to public safety, critical infrastructure, historic structures and municipal investments from inundation and erosion.
- The Town conducted an analysis of the current zoning districts to identify the effectiveness of the defined density per district for managing growth. The Town considered implementing a conservation district, but ultimately determined that this district was not necessary to protect the natural landscape of Berkshire due to the rural nature of the Town.

Additionally, the Town developed an official website to better communicate with Berkshire residents (<https://berkshiretownvt.weebly.com/>). This website should continue to be maintained by the Town.

**Plan Implementation:**

The Implementation Plan table below lists the strategies that the Berkshire Planning Commission recommends to implement the goals and policies of this Town Plan.

**Responsible Parties:** PC (Planning Commission), SB (Selectboard), DRB (Development Review Board), ZA (Zoning Administrator), Town (to be determined),

**Partners:** NRPC (Northwest Regional Planning Commission), FPR (VT Forest, Parks, & Recreation), VANR (VT Agency of Natural Resources), DHCD (VT Department of Housing & Community Development), USFWS (U.S. Fish & Wildlife Service), VTrans (VT Agency of Transportation), PPP (Public Private Partnership)

**Timeline:** Short (1-4 years), Medium (5-8 years), Long (>8 years), Ongoing

IMPLEMENTATION ACTIONS	RESPONSIBLE PARTY & PARTNERS	TIMELINE
<b>The Sense of Place</b>		
Explore adding two additional water source protection areas to the applicable zoning district. The two water supplies that should be considered include the area associated with spring supplying the East Berkshire Water Coop as well as the Berkshire Elementary School supply.	PC	Medium
Identify historical structures for potential nominations to the state and national historic registers	SB, Historical Society	Medium
Conduct a Scenic Resource Inventory to identify important viewsheds in Town	PC	Medium
Develop a management plan for the Town Forest <ul style="list-style-type: none"> <li>• Contact the County Forester.</li> </ul>	Town, FPR	Short
<b>A Place for a Home</b>		
Promote programs that provide housing rehabilitation grants and low-interest loans such as those provided by Champlain Housing Trust, USDA Rural Development and Vermont Housing & Conservation Board.	Town	Ongoing
Conduct a local housing study to evaluate the	PC	Short

IMPLEMENTATION ACTIONS	RESPONSIBLE PARTY & PARTNERS	TIMELINE
condition and affordability of housing within the community. This analysis should evaluate the impacts of short-term rentals and seasonal housing. <ul style="list-style-type: none"> <li>Apply for a Municipal Planning Grant (MPG), contact NRPC for assistance developing an MPG application.</li> </ul>		
<b>Earning A Living</b>		
Support efforts to develop high speed internet connectivity, including working with regional and statewide organizations	SB	Ongoing to Long
Pursue a Village Center designation for East Berkshire and West Berkshire. <ul style="list-style-type: none"> <li>Contact the Planning and Outreach Manager at the VT Agency of Commerce and Community Development.</li> </ul>	SB / PC	Short
<b>Providing for the People</b>		
Develop a road policy & ordinance.	SB	Medium
Develop a capital improvement plan and budget that includes a maintenance schedule and plan for road improvements. <ul style="list-style-type: none"> <li>Contact NRPC for assistance.</li> </ul>	SB	Short
Explore the feasibility of community sewer system in East Berkshire to enhance economic development	SB	Long
Consider reclassification of Class IV roads as legal trails	SB	Medium
Develop construction standards for roads (and sidewalks)	SB / Highway Department	Medium
Explore feasibility of pedestrian facilities in the hamlets of West and East Berkshire and alternative recreation paths in all parts of town.	PC	Medium
Utilize the Town website as an opportunity to enhance communications with residents.	SB/PC	Ongoing
Work with the Recreation Committee to develop wayfinding signage for Berkshire’s recreation opportunities. <ul style="list-style-type: none"> <li>Coordinate joint meeting of Committees</li> </ul>	PC	Short
Support the School district in the development	SB	Medium

IMPLEMENTATION ACTIONS	RESPONSIBLE PARTY & PARTNERS	TIMELINE
of a Safe Routes to School Program.		
<b>Enhanced Energy Planning</b>		
Explore the possibility of installing an electric vehicle charging station on municipal property.	SB	Medium
Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.	ZA	Ongoing
<p>Coordinate with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Berkshire residents.</p> <ul style="list-style-type: none"> <li>• Host an Efficiency Vermont Button Up workshop, contact NRPC for assistance.</li> </ul>	PC, NRPC	Short
<p>Determine if there is a need to appoint an Energy Coordinator, or support existing municipal boards to coordinate energy-related planning in Berkshire and to educate residents about the goals of this plan.</p> <ul style="list-style-type: none"> <li>• Contact NRPC for assistance.</li> </ul>	PC, SB	Short
Conduct an energy audit of municipal and other public buildings to identify weatherization retrofits and incorporate the recommendations into the municipal capital budget.	SB, PC	Medium
Promote and provide information about the GoVermont website which provides information citizens about ride share, vanpool, and park-and-ride options. ( <a href="http://www.connectingcommuters.org/">www.connectingcommuters.org/</a> )	TC	Ongoing
Promote use of cold climate heat pumps through education and coordination with Efficiency Vermont.	PC, SB	Long
<p>Identify challenges and opportunities for public transit by reviewing route schedules and needs of Berkshire community to ensure that Berkshire is regionally connected via public transit.</p> <ul style="list-style-type: none"> <li>• Review existing GMT Routes. Contact the GMT Public Affairs and Community Relations Officer.</li> </ul>	PC, SB	Short

IMPLEMENTATION ACTIONS	RESPONSIBLE PARTY & PARTNERS	TIMELINE
Review municipal road standards to ensure that they reflect the “complete streets” principles as outlined by Vermont Agency of Transportation and Vermont Department of Health.	PC, SB	Ongoing
Promote a working landscape outside of designated growth and residential areas, e.g. by working with land trusts and landowners of farm and forest tracts to conserve key parcels of land.	PC	Ongoing
Investigate and facilitate the installation of a community-based renewable energy project.	PC	Long
Provide firefighters with training in fighting fires on structures that have solar installed. <ul style="list-style-type: none"> <li>• Utilize training resources provided by the VT Department of Public Safety Division of Fire Safety.</li> </ul>	SB, Fire Dept.	Short/Ongoing
Develop and adopt a municipal solar screening ordinance.	PC, DRB	Medium
Investigate the need for a municipal park and ride facility.	SB	Medium
<b>“Keeping It Rural” In The Future</b>		
Promote resources that educate landowners on the best management practices of forest stewardship by distributing information on available resources from the County Forester and existing programs such as the Vermont Woodlands Association	PC, FPR	Medium

### A SNAPSHOT OF THE COMMUNITY



"Entering East Berkshire from Above" (Photo Credit: Tami Lantz)

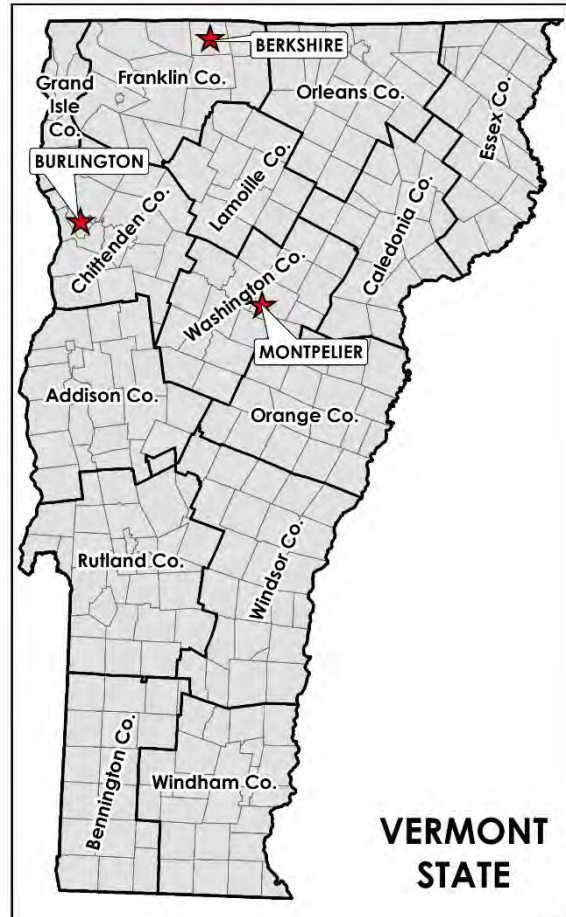


"1880 Delivery Wagon at Meat Market on Main Street (Rte. 105) in East Berkshire" (Source: [UVM](#))

## A) PHYSICAL LOCATION AND BOUNDARIES

The Town is located in the northeast corner of Franklin County, which is in turn situated in northwestern Vermont. Berkshire is bounded by the Province of Quebec to the north, the Town of Franklin to the west, the Town of Richford to the east, and the Town of Enosburgh and the incorporated Village of Enosburg Falls to the south.

The Town of Berkshire covers more than forty-three square miles of land (27,900 acres), and due to an error in computation, was granted 2,000 acres more than was normally granted to Vermont towns at that time in history. Berkshire is therefore larger, geographically, than most towns in the State.



## B) RELATIONSHIP TO THE NORTHWEST REGION

Berkshire is predominantly a rural town lying within the eastern sub-region of the Northwest Region. It is recognized within the Regional Plan as one of the most important agricultural towns in Franklin County. Under the Regional Plan, most of the Town lies within designated "agricultural lands" and the remaining land, considered unsuitable for farming, is included in a "conservation/forest resource" category. The three hamlets of the community, West Berkshire, Berkshire Center, and East Berkshire, are expected to remain the principal areas of population within the Town.

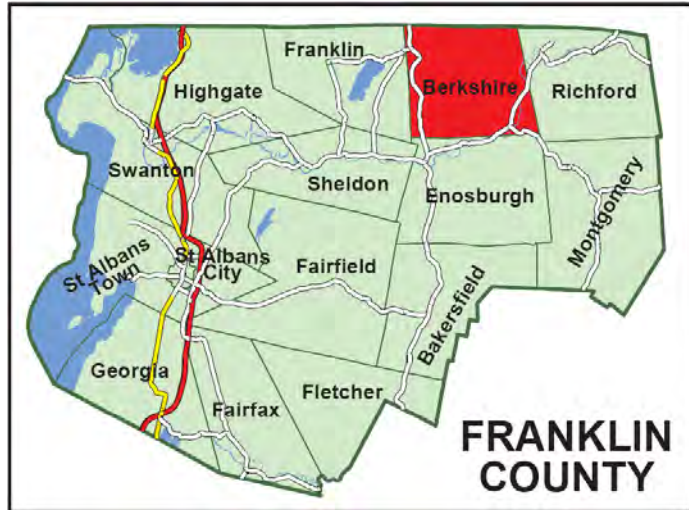
The Town of Berkshire is located between two urban service areas, Richford Village and Enosburg Falls. It is anticipated that the residents of Berkshire will continue to rely upon these areas for services such as medical and educational facilities, and retail services. While, Berkshire is experiencing the effects of the expansion of employment opportunities of Burlington and St. Albans, northern Franklin County is not experiencing as much growth as southern Franklin County. The neighboring municipalities of Enosburg Falls and Richford provide expanded market opportunities for Berkshire.



The Missisquoi River furnishes the Town and the Region with an important natural asset. The Regional Plan calls for protection of the river and adjacent lands to protect water quality and to preserve its scenic character. The Northern Forest Canoe Trail has been established in Berkshire along the Missisquoi River.

Within the Regional Plan, it is expected that Berkshire will retain its rural, agrarian character.

Continued economic health for the Town lies in the protection of its agricultural resource base and maintaining a viable agricultural industry, principally dairy, supplemented by tourism and other related land uses. It is also anticipated that the Town will not be the site of significant urban-type development over the life of the Regional Plan. Growth in the adjacent urban service areas; however, is expected to increase the pressure for residential development on roads leading into Berkshire from these centers. It is recommended within the Regional Plan that most new residential growth occur in and between the communities of West Berkshire and Berkshire Center, on soils suitable for on-site systems.



## C) NOTABLE MOMENTS IN BERKSHIRE'S HISTORY

### *First Settlement*

The first "European" settlers arrived in Berkshire in 1791 and established farms in the following years. Job L. Barber and Daniel Adams were the first individuals to settle in Berkshire. However, possibly the most influential early settlers of Berkshire were Stephen Royce, Sr. and his son. Stephen Royce, Sr. moved from Franklin, Vermont to Berkshire and established a farm in 1792. Mr. Royce erected the first frame house in Berkshire in 1799, which still stands today in East Berkshire. His son, Stephen Royce, Jr., resided in this same house until his death in 1868. Stephen Royce, Sr. was very active in promoting the organization of the Town of Berkshire in 1794. He was the first representative to the State Assembly from Berkshire in 1796. His son Stephen Royce, Jr. served in the Vermont Supreme Court, the United States circuit and district courts, and he was elected Governor of Vermont in 1854. Following the arrival of these first settlers in 1792, additional settlers moved to Berkshire for the opportunity to establish farms in an area where the soil produced plentiful harvests.

1791	First European settlers arrived
1794	Organization of the Town of Berkshire
1864	Henry I. Stanley built a cheese factory in East Berkshire
1868 (April 29)	East Berkshire fire
1872	Railroad between Richford and St. Albans was built
1942	Berkshire Fire Department Established
1969	New Berkshire Elementary School opens, last three remaining school houses close.
2007	Town Hall renovations completed and historic building reopens as municipal offices.

Berkshire in the 1800s was principally a farming community. By the mid-1800s, most of the forests had been cleared away, and the Town had well over 150 dairy farms. The average dairy herd numbered between 20 and 30 head of cattle. Many farmers were engaged in other agricultural activities as well, including the making of cider and maple syrup, and cattle breeding. Frederick W. Comings of East Berkshire kept 73 beehives in addition to his dairy. Philo S. Ewins, a dairy farmer in West Berkshire, invented the Ewin's improved sap evaporator, and held an 1882 patent on his invention (he also patented a car heater in 1882).

Berkshire also developed centers of commercial activity in the 1800s. East Berkshire contained one hotel, three stores, two millinery shops, a horse-powered churn factory, a carriage shop, two blacksmith's shops, an undertaker, and, by the mid-1850's about 150 inhabitants. The business district had to be rebuilt after a destructive fire destroyed much of it on the evening of April 29, 1868. The fire, which started in the attic of the hotel known as the "Brick House", broke out at about 5:00 p.m. Gale force wind spread the fire through wood structures on both sides of the street, and before midnight, 36 buildings, including the Calvary Episcopal Church, were reduced to ashes. Firefighting was hampered by a scarce water supply due to a previous period of prolonged drought.

Henry I. Stanley's cheese factory in East Berkshire, built in 1864, produced about 80,000 pounds of cheese per year. William Sampson and Company's horsepower and pump manufactory was established in East Berkshire 1873. The firm produced about 15 horsepower and 350 churns per year, in addition to doing a general repair business. W. H. H. Fenniman's carriage shop, established in 1878, employed four men and turned out about forty carriages and sleighs per year, and also had a general repair business.

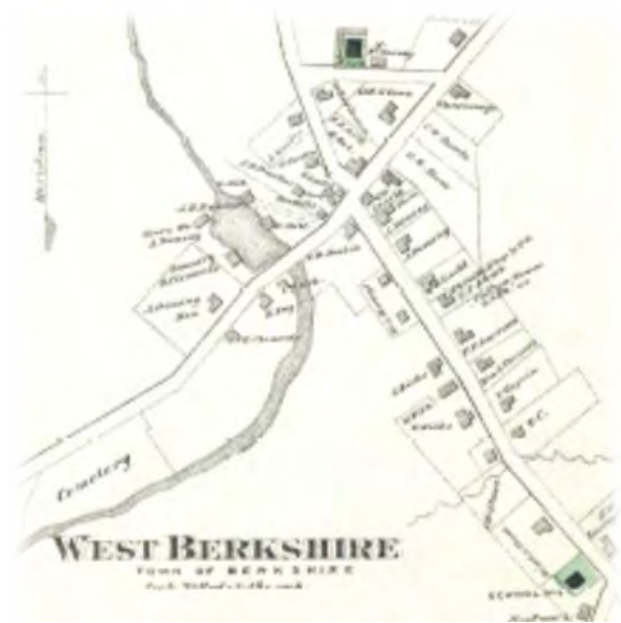
The Village of West Berkshire in the mid-1800s contained one hotel, two stores, a tannery, a sash and blind manufactory, a wheelwright and blacksmith shop, an undertaking and cabinet shop, and about one hundred inhabitants. The West Berkshire flouring mill, owned by George A. Jones, was equipped with three "runs" of stones, and did custom work. Collin Goddard's tannery in West Berkshire produced over one thousand hides per year. A. L. Goddard's tannery, also located in West Berkshire, employed three men. L. A. Weld's sawmill in West Berkshire was built in 1865. Approximately 25,000 feet of lumber were cut in the mill each year. A cider mill was connected to the sawmill, where 240 barrels of cider were produced annually.

In the mid-1800's, two stores, and a blacksmith shop were located in the small hamlet of Berkshire Center, which had a population of about fifty people. Farmers in Berkshire were able to market their milk locally at the cheese plant in East Berkshire owned by Henry Stanley. The plant was purchased by Guy Marcy in 1900, and was operated as a creamery.

### ***Introduction of Rail Service***

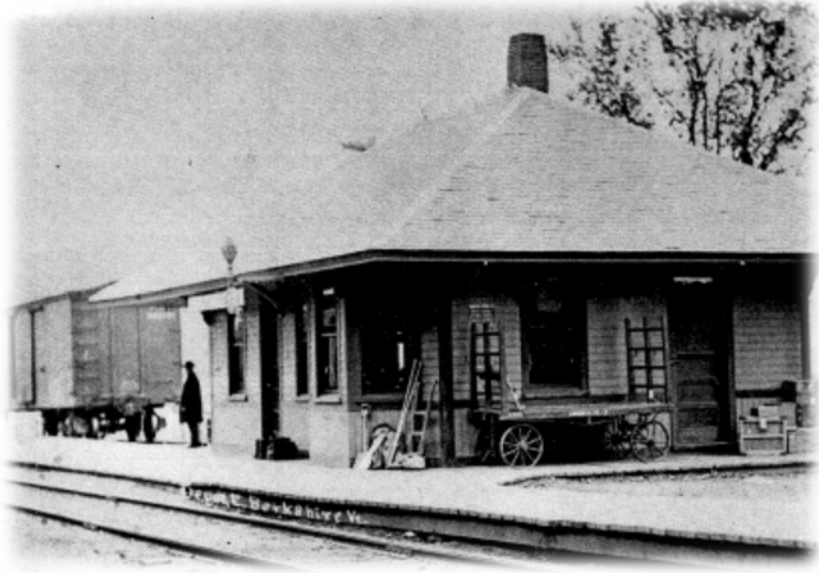
Rail service in Berkshire dates back to the 1870s when an intersecting railroad between St. Albans and Richford was built. The construction of this line was started around 1872.

The completion of the rail link in the late 1870's between St. Albans and Richford was an extremely important development for people living in Berkshire. They were then able to easily transport merchandise to markets south and west through the rail center in St. Albans, and to points east and north through Richford.



**1871 DeBeers Atlas Maps of  
East Berkshire and West Berkshire**

The Central Vermont Railway offered freight and passenger service to the residents of Berkshire in the late 1800s, and these services continued through the First World War and into the 1920s and 1930s. The Central Vermont schedule in 1919 included two passenger train stops daily in East Berkshire, and one freight stop. Local merchants shipped butter on Mondays, and cattle on Fridays. They also



**Train Depot, East Berkshire**  
**Photo Courtesy of Berkshire Historical Society**

shipped cream, and received shipments of coal and other commodities by rail. Local students were able to take the train to school in Richford in the morning, and return in the evening. The local train station also offered telegraph services.

The railroad maintained two rail sidings in Berkshire, one in the village of East Berkshire adjacent to the train station, and one west of the village along Route 105. Trains were fired by coal-powered steam engines until the 1950's, when diesel engines began to be used more extensively. After a derailment damaged a bridge over the Missisquoi River at Sheldon Junction in 1984, limited operations continued until both sections were abandoned in early 1990s. The rail line through Berkshire is now rail banked and has been converted to the Missisquoi Valley Rail Trail.

The Berkshire Historical Society and the Enosburgh Historical Society Museum have collected many historical items from this time period, which are available to view by appointment. Residents can also contact the Historical Society to receive information on the history of their properties.

### ***Farming and Manufacturing in the 1900's***

Many of the manufacturing concerns that were established in Berkshire in the 1800's continued to prosper through the first half of the 1900s; however, very few new businesses were created and most were closed as the railroad declined. The Samson Power and Thresher Company stayed in business into the 1940s making wagons, tables, cupboards, and various other wood products, including sleds, cow stanchions, wheel barrows, and other farm equipment. Gasoline engines

replaced horsepower, which had been manufactured at Sampson Power. The company marketed Majestic Gasoline Engines, a very popular make of gasoline engine, during the 1920s, 1930s, and 1940s.

Berkshire supported two creameries in the 1900's, both located in East Berkshire: The United Farmers Creamery, located on the outskirts of East Berkshire on Route 105 toward Richford, and the Maple Hills Creamery, located near the railroad station. In 1915, Guy Marcy combined his operations with B. H. Combs and Sons, who operated a receiving station and creamery in East Berkshire. He also joined forces with the Rouse family, who operated creameries in Richford and Montgomery. The new company was called Maple Hills Creamery Company, Inc. The company produced sweetened condensed milk during the First World War, sold cream, butter, casein, and later shipped fluid milk to Boston. In 1932, Maple Hills Creamery sold out to Consolidated Dairies, which later became New England Dairies. In the late 1940, New England Dairies was sold to United Farmers, and in the late 1950's the creamery was closed down altogether. With the introduction of bulk tanks, storing and preserving milk was simplified, and large milk tankers were able to carry milk over long distances. Local creameries no longer remained a necessity.

The dairy industry in the 1900s remained an integral part of the Berkshire economy, providing a stable income to large numbers of farmers, and to individuals whom they employed. Many of the smaller farms were incorporated into larger farms, and milk production increased as farming became more mechanized, and as breeding practices improved. As farming evolved in the 1900s, the number of dairy farms in Berkshire decreased, the amount of land in farming remained fairly constant, and total milk production increased dramatically. In the twenty-first century, the number of small family dairies has further decreased, with more of the land in farming being consolidated under a smaller number of large industrial-scale dairies.

## D) COMMUNITY PROFILE

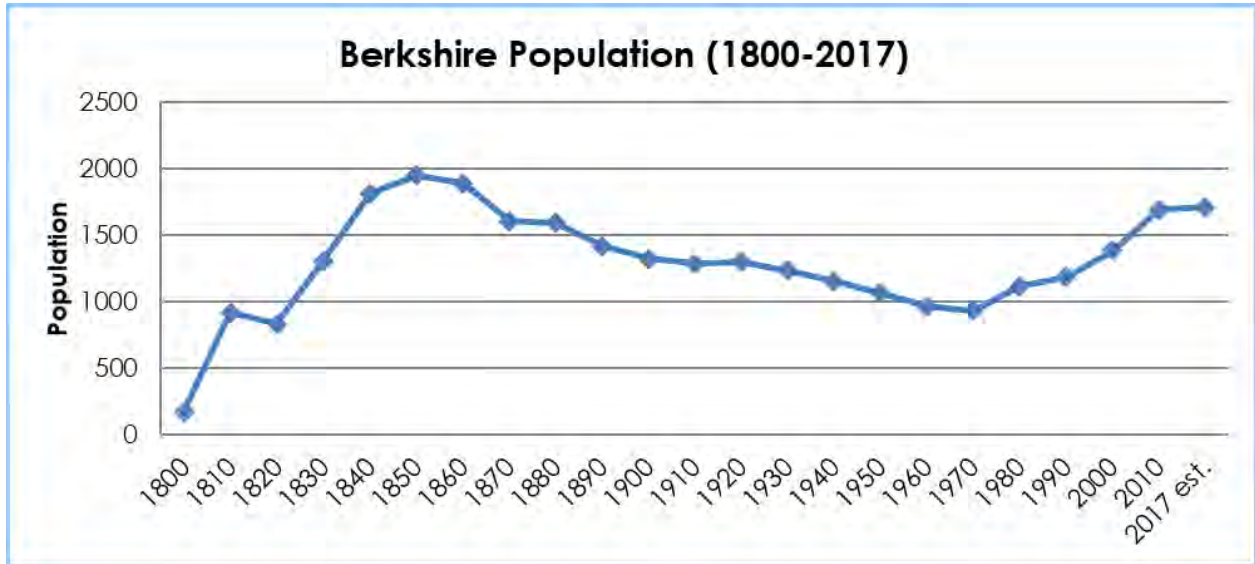
### ***Population: Past Trends and Future Growth***

The population of Berkshire reached its peak in 1850 with nearly 2,000 residents. The population decreased for the following 120 years to below 1,000 in 1960 and again in 1970. In 1980; however, Berkshire matched the growth trend occurring around Franklin County when it registered 1,116 citizens, a 20% increase over the 1970 population. Figure 3.1 shows population trends in Berkshire from 1790 to 2017.

Much of the population increase from 1970 to 1980 (69%) was due to more people moving into the Town than moving out (net migration). The remaining increase was the result of natural increase, where the number of births exceeded the

number of deaths. Since natural increase generally stays quite constant over time, population decline over the majority of the 20<sup>th</sup> century was due to migration out of Berkshire. Figure 3.2 shows natural increase and net migration in Berkshire from 1970 to 2010.

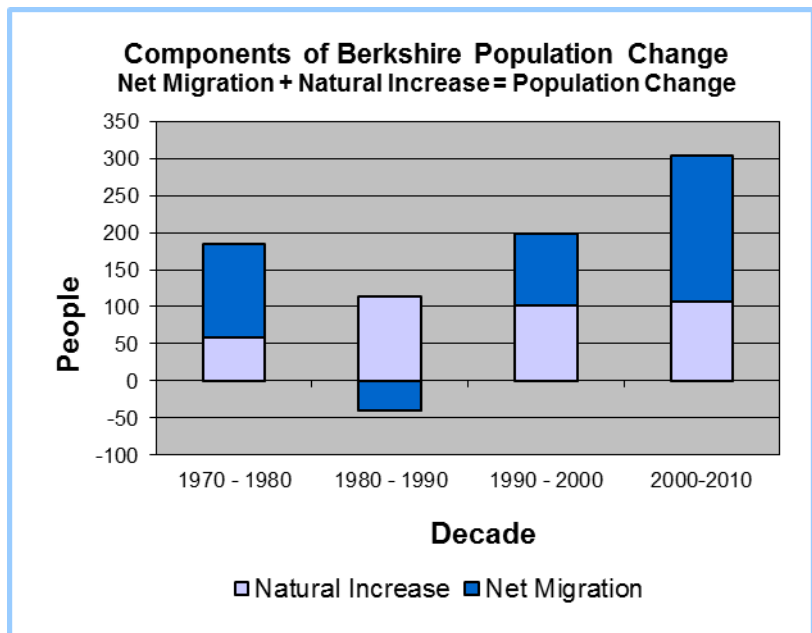
Figure 3.1



Data Source: U.S. Census Decennial; U.S. American Community Survey

Figure 3.2

The Town’s population reached 1,711 in 2017. From 1980 to 1990, Berkshire experienced moderate growth compared to the County and adjacent towns. The following decade, Berkshire’s population grew at a greater rate than the County and several adjacent towns at over 16 %. Just under half of the increase was due to in-migration. From 2000 to 2010 the population increased by 304 people, over 60% of this growth is attributed to in-migration.



From 2000 to 2010, Berkshire was one of the fastest growing towns in Franklin

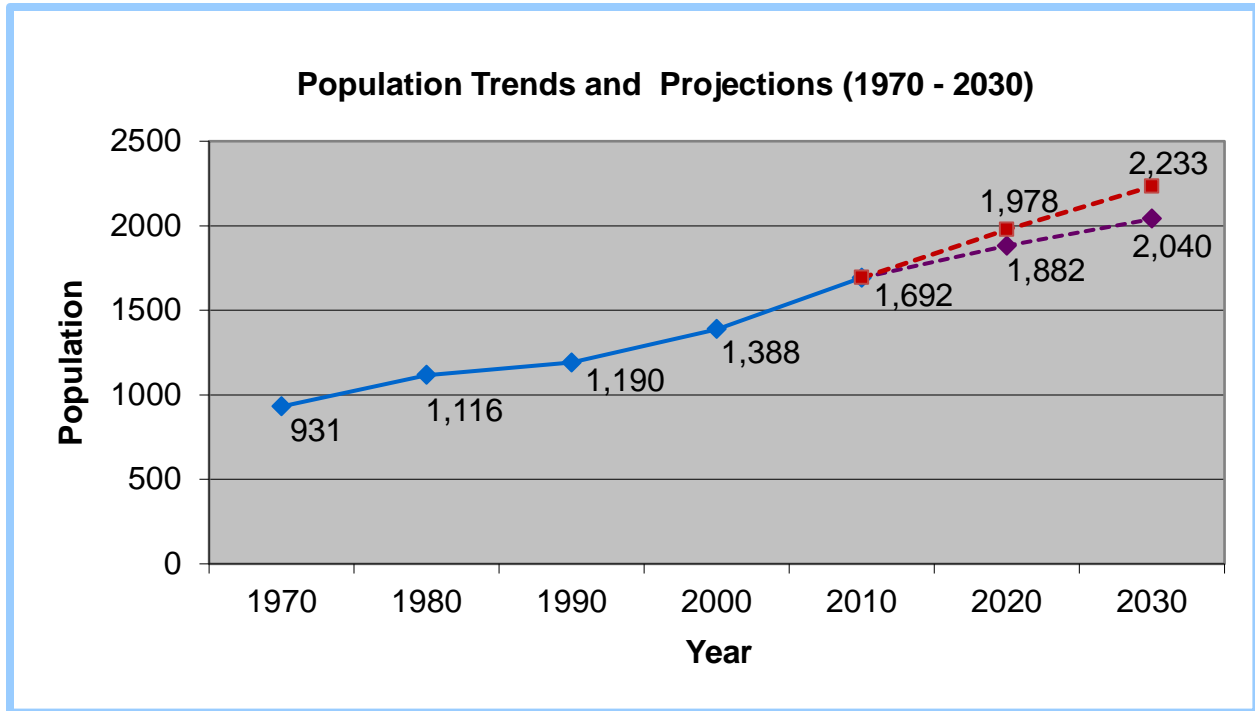
County, with a 21.9% increase in population from 2000 to 2010. However, since 2010 growth has slowed, with a net gain of only 19 residents (1.1%) between 2010 to 2017. Table 3.2 and 3.3 below show population and population change from 1980-2017 for Berkshire and surrounding communities.

<b>Table 3.2 Population of the Surrounding Area</b>					
	1980	1990	2000	2010	2017 (est.)
Berkshire	1,116	1,190	1,388	1,692	1,711
Enosburgh Town and Village	2,070	2,535	2,778	2,781	2,758
Franklin	1,006	1,068	1,268	1,405	1,414
Montgomery	681	823	992	1,201	998
Richford	2,206	2,178	2,321	2,308	2,458
Sheldon	1,618	1,748	1,990	2,190	2,317
Franklin County	34,788	39,980	45,417	47,746	48,816
Data Source: U.S. Census Decennial; U.S. American Community Survey					

<b>Table 3.3 Population Change (%)</b>				
	1980-1990	1990-2000	2000-2010	2010-2017 (est.)
Berkshire	6.63	16.64	21.9	1.1
Enosburgh Town and Village	-1.27	6.57	0.1	-0.8
Franklin	14.92	13.60	10.8	0.6
Montgomery	20.85	20.53	21.1	-16.9
Richford	6.16	18.73	-0.6	6.5
Sheldon	8.03	13.84	10.1	5.8
Franklin County	14.92	13.60	5.1	2.2
Data Source: U.S. Census Decennial; U.S. American Community Survey				

It is difficult to make accurate population projections for small population bases, but they nonetheless are useful planning tools. Population projections are based on past trends in birth, deaths and migration so they provide good estimates of future conditions. The Vermont Agency of Commerce and Community Development produced a report calculating projections based on past trends from the 1990-2000 ("high") time period and 2000-2010 ("low"). Figure 3.3 shows the actual population of Berkshire from 1970 to 2010 and two scenarios of the population change over the next 20 years. Based on these projections, Berkshire could potentially experience continued growth of 11-17% by 2020 with growth slowing to 8-13% by 2030.

Figure 3.3



Data Source: U.S. Census; Vermont Agency of Commerce and Community Development. Vermont Population Projections 2010-2030 Report, released August 2013.

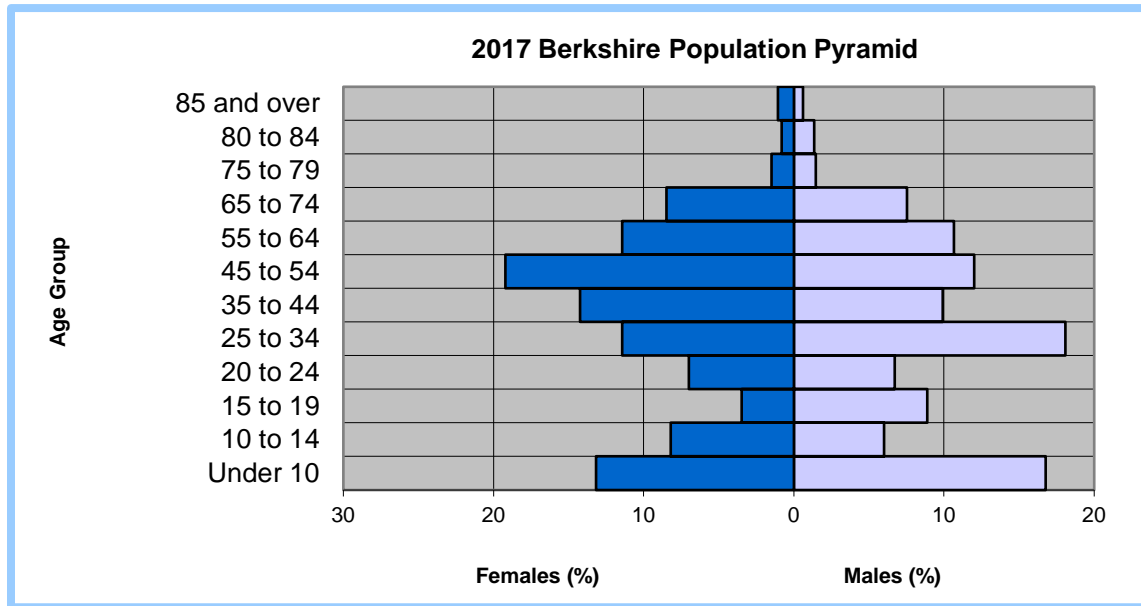
**Population Age Groups**

Age distribution trends can be useful in predicting future service needs, especially for school capacity and senior services. The 2010 Census reports that the median age in Berkshire was 38.3 years old, which is about the same as the median for Franklin County and 3.2 year younger than the state of Vermont. As of 2017, the median age dropped somewhat to 34.2, younger than the 2017 state median of 42.8 years old.

The distribution of age groups in Berkshire is similar to that of Franklin County, around 26% of the population is between 45 and 64 years of age, and an additional 11% is 65 or older. As the middle-aged population approaches retirement age, demand for senior services such as housing options and rural transit will likely increase. Only 27% of the population is between the ages of 25 and 44. In combination with the trend of decreasing family and household size, this has resulted in static school enrollment (see Section VI). A breakdown by age category in Berkshire is shown in Figure 3.4.



Figure 3.4



Data Source: U.S. Census American Community Survey 2017

### THE SENSE OF PLACE



West Berkshire Four Corners, Early 1900's. The Phoenix House is on the right. (Photo Credit: Berkshire Historical Society)



The Phoenix House Restaurant 2018 (Photo Credit: The Phoenix House)

## A) NATURAL RESOURCES AND ENVIRONMENT

### *Climate*

#### Climatic Conditions

Climate represents the normal or average type of weather conditions that are characteristic of an area over a long period of time. Climatic conditions depend upon a number of locational factors, such as latitude, elevation, and topography, which affect atmospheric conditions, including temperature and precipitation patterns, prevailing winds, humidity, and cloudiness. Climate is an important consideration in the planning process because it affects such things as bedrock weathering, soil development and erosion, plant growth, air quality, road maintenance, and winter heating bills.

The entire State of Vermont lies within the "prevailing westerlies", a belt of air moving eastward that encircles the globe in the mid-latitudes. Our climate in Vermont is dominated by cold dry air from sub-arctic Canada, particularly in the winter months, and warm, moist air, which moves northward from the Gulf of Mexico, mainly during the summer. Occasionally, we also feel the effects of cool, damp air moving inland from the North Atlantic. At times, Vermont experiences violent thunder and windstorms as weather patterns shift, but tornadoes and hurricanes are rare.

Berkshire, located between the Champlain Lowlands and the Green Mountains proper, does not experience the moderating effects of Lake Champlain nor the cooling effects of neighboring higher elevations. January temperatures average between 16 F and 18 F; the mean temperature in July is around 70 F. Since Berkshire is located on the western side of the Green Mountains, it does receive relatively more precipitation, in the form of rain and snow, than areas in the islands and on the lake plain.



**Seasons of Berkshire**  
**Photo Credits: Jere Levin and**  
**Arnold Byam**

Due to its latitude and location in the foothills of the Green Mountains, Berkshire has a relatively short growing season, averaging less than 120 days between the killing frosts of spring and autumn. This limits the types of crops that can be produced. Cool weather crops, such as hay, wheat, rye, oats, and some root crops, are particularly well suited to these growing conditions. Hybrids of warm-weather crops such as corn have also been developed for this climate. Rainfall is adequate for most types of crops.

The climate of Berkshire is pleasant, particularly in the summer months. Buildings, however, must be built with sufficient insulation, and efficient heating systems to stave off the cold of winter. The freeze and thaw cycle that makes the maple sap run also buckles poorly drained pavement and roads. Spring thaws and rains bring flooding and the muck of "mud season" that makes many dirt roads and driveways impassable. The adversities associated with living in a northern Vermont climate can be lessened by the proper planning, siting, and construction of new development; and the benefits are many, clean air, warm summers, white winters, and year-round outdoor recreational opportunities.

#### A Changing Climate

Over the past decade, international scientific consensus has acknowledged that the climate is changing. The effects of climate will be felt internationally and in a number of ways. It can be anticipated, however, that Berkshire and Vermont in general will see different weather patterns than what has been historically experienced. This will have an effect on several industries such as tourism, especially for skiing, and agriculture, particularly sugaring. In addition, important natural resources may be affected by changes in the climate.

#### Air Quality

Weather patterns, and wind direction in particular, are important in the discussion of air quality. Prevailing winds are generally from the west, but may vary in direction and intensity at a particular site from season to season, day to day, and hour to hour. Wind, along with other atmospheric conditions, should be considered in siting any industry that produces airborne emissions. Such emissions, including pollutants, smoke, and noxious odors, may be harmful to human health and the environment in high enough concentrations. It is therefore important for local officials to consider the requirements of maintaining clean air in conjunction with the need for economic development.

Presently no potentially air-polluting industries are located in Berkshire. The cumulative impact of minor sources-- including automobile emissions and some agricultural practices-- may have a greater impact on local air quality in the

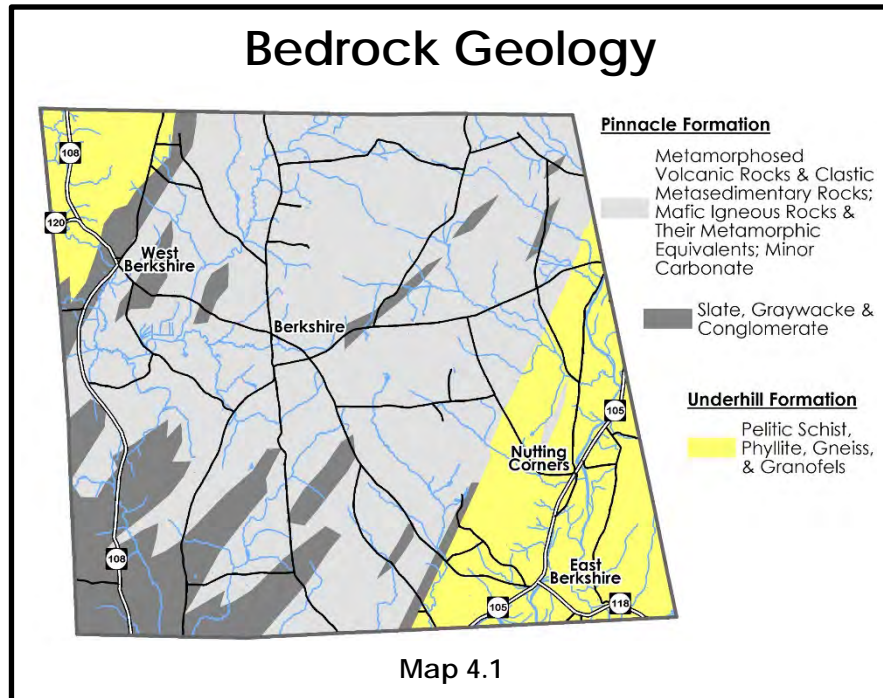
future.

## Geology

### Bedrock Geology

Geologic events have directly affected Berkshire's topography, soils, and drainage patterns, which in turn have influenced the patterns of local community and economic development.

Berkshire lies amid the western foothills of the Green Mountains, between the Champlain Lowlands (lake plain and islands) to the west and the Green Mountain anticlinorium (Green Mountains proper) to the east. This area is underlain by rocks formed from sediments and volcanic material deposited some 600 million years ago (Cambrian period), which were then changed and hardened (metamorphosed) by the heat and pressure of mountain building. Two bedrock formations predominate: the older Pinnacle Formation, underlying most of Berkshire, and the younger Underhill formation, found in northwest and southeast corners of Town. A small area where the Missisquoi River crosses the border into Richford is underlain by the Sweetsburg Formation, a layer of black slate with thin, whitish banding.



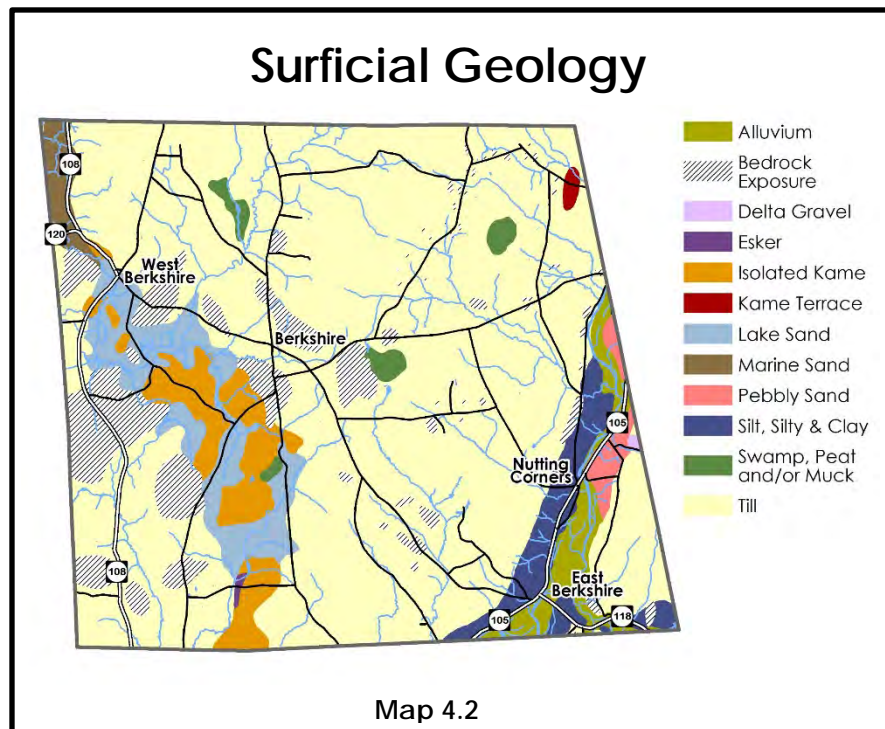
The Pinnacle Formation includes two bedrock members. One was formed from water deposited sands that were changed into a coarse sandstone interbedded with metamorphosed clay sediments, and includes such minerals as quartz, sericite, and chlorite (shown as slate, graywacke, and conglomerate in dark grey on Map 4.1). The other, known as Tibbit Hill volcanics, underlies most of Berkshire, and consists of metamorphosed volcanic rock interbedded with the greywacke (shown as metasedimentary rocks; mafic igneous rocks, and their metamorphic equivalents; minor carbonate in light grey on Map 4.1). Minerals associated with the volcanics include albite, epidote, and chlorite. Copper, once mined in Berkshire, is also found with the volcanics. Lava flows and structures associated with this member are visible in outcrops near Ayers Hill.

The Underhill Formation, marked from the Pinnacle Formation beneath it by a layer of dolomite and slate, consists mainly of interbedded phyllites and schists. Interbeds of slate and greenstone are found in the southeast and small beds of

dolomite and marble outcrop in the northwest. The Pinnacle Formation is shown as polytactic schist, phyllite, gneiss, and granofels in yellow on Map 4.1.

### Surficial Geology

Materials deposited during and after glaciation, including glacial tills, outwash sands and gravels, and lake bottom sediments, cover much of the Town's surface. These are the parent materials from which most soils in Berkshire have developed over the last 10,000 years, since the glacier's last retreat. Also found on the surface are organic peats and mucks that have accumulated in low-lying areas and more recent flood deposits adjacent to rivers and streams.



Tills, consisting of unsorted, poorly drained materials, cover most of Berkshire in a thin layer. Exposed bedrock, boulders, and shallow soils are common in till areas. Level terraces of well-sorted sands and gravels, deposited during glacial melt, are located along the Missisquoi River and other stream valleys in Town. Of particular note is isolated kame, formed along the side of an ice sheet that once existed in the valley now occupied by Trout Brook and Mineral Brook. These kame deposits are often good sources of sand, gravel, and ground water and provide a well-drained, level surface on which to build. As such, they represent an important resource to the Town that may be subject to competing and not always compatible uses. Lake bottom silts and clays, deposited in the valley occupied by the Missisquoi River, are poorly drained and unsuited for most types of development, as are most flood and organic deposits. Map 4.2 shows surficial geology materials in Berkshire.

### Earth Resources

A number of minerals and metals are associated with the metamorphosed volcanic bedrock that underlies much of Berkshire. Copper was once mined in Town, but the operation proved to be uneconomical. Mineral collection areas exist at outcrops, but minerals are not likely to be present in commercial

quantities.

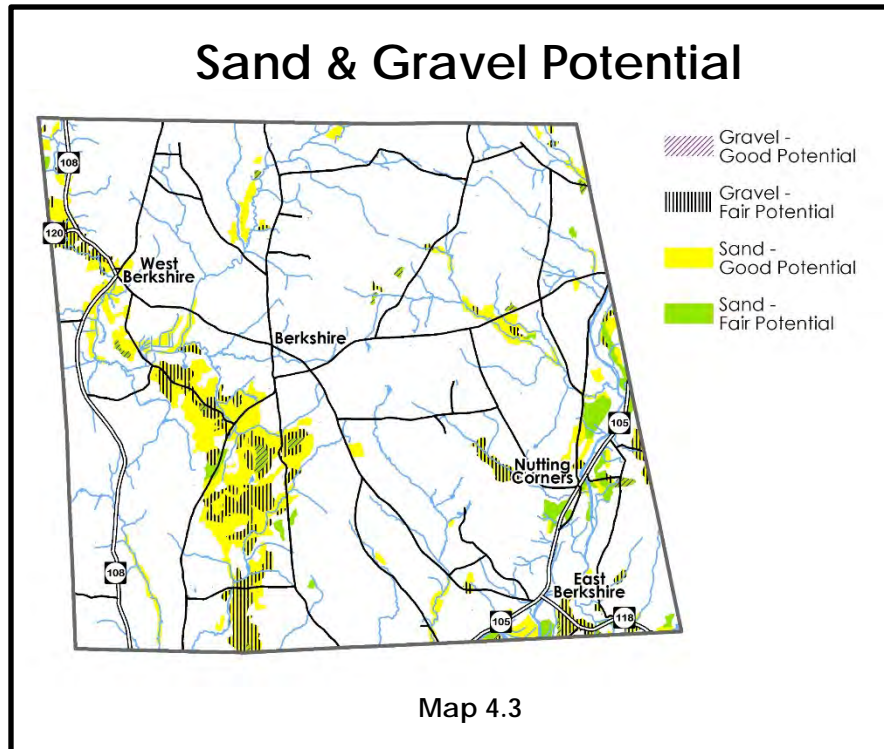
Sand and gravel deposits, however, are present in economically viable amounts, and extraction operations have been on-going (Map 4.3). The Town currently owns and operates its own gravel pit on Mineral Brook Road. There is increasing demand for sand and gravel for use in construction and road maintenance, and deposits are in limited

supply. These deposits are a valuable resource for the community that should be protected until needed and developed for the benefit of local residents.

The environmental and social impacts of extraction operations also need to be considered in their development. These include ground water contamination and the elimination of ground water recharge areas; the alteration of surface drainage patterns, soil erosion, and stream sedimentation; the possible destruction of environmentally and archaeologically sensitive areas; noise, dust, and increased amounts of heavy traffic; the diminished scenic quality of the landscape, and limited utility for subsequent uses of a site; and reduced property values. Many of these adverse impacts can be minimized through appropriate site planning and development, erosion control, the phasing of operations, and proper site reclamation.

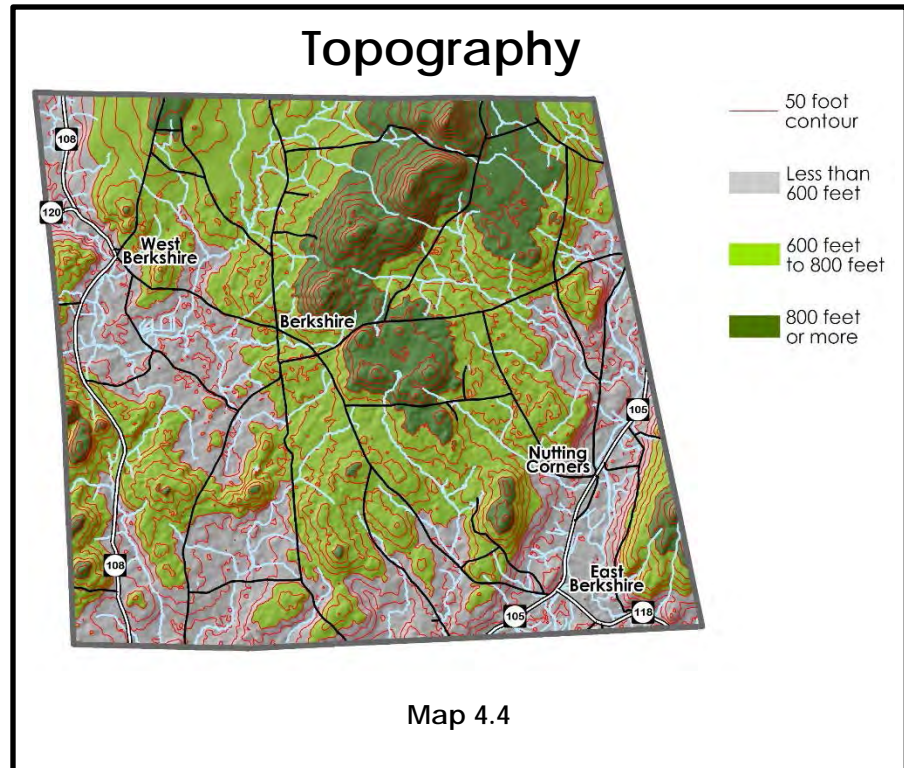
#### Significant Geologic Sites

Three areas of particular geologic significance for their educational and scientific value have been identified in Berkshire and are included in the Vermont Natural Areas Inventory completed in the 1970s: Ayers Hill, the Berkshire Kettle Hole, and the Berkshire Copper Mine. These are discussed in more detail in the Unique and Fragile Areas section.



## Topography

Because topography provides natural barriers to movement and often influences the accessibility and use of land, topographic information is important in planning for land use, transportation routes, and the location of public services and facilities. A general observation regarding past development is that “grade follows grade.” In other words, graded land uses such as transportation routes, just as water, follow paths of least resistance. It is no coincidence that roads and railways often follow stream and river valleys.



## Elevation

Elevations in Berkshire range from around 415 feet above mean sea level (m.s.l.) along the Missisquoi River southwest of East Berkshire, to 1,326 feet atop Ayers Hill near the northern border (Map 4.4). Most development in the Town is located between 450 feet and 750 feet. Areas of high elevation, including ridge and hill tops, are often visible and contribute much to the scenic beauty of the area. The hills in north central Berkshire, including Ayers Hill, have also been identified as probable bedrock aquifer recharge areas. Consequently, ridge and hill tops, and areas over 800 feet in elevation, should be protected from unsightly and potentially harmful development.

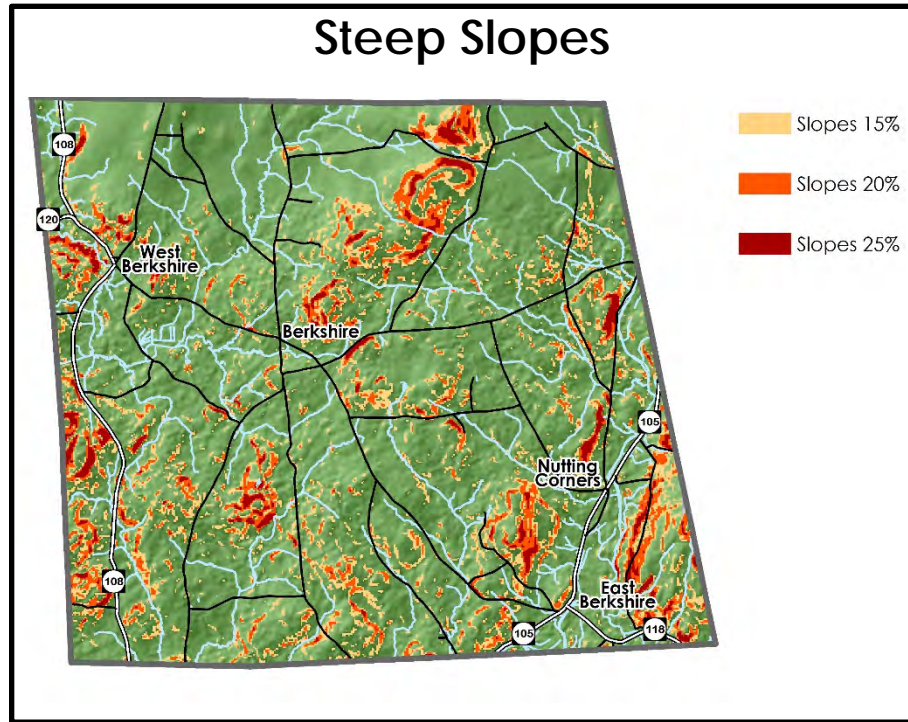
## Slope

One of the most important factors controlling the potential use of a given parcel of land is slope. Slope is the inclination, or change in elevation, of land over a horizontal distance, and is often expressed as a percentage (number of feet of vertical rise over 100 feet of horizontal distance). Slopes are an important consideration not only because of the environmental constraints that they impose with regard to drainage and bearing capacity, but also because of the environmental damage that may result from their alteration. Major causes of



slope destabilization include vegetation removal and undercutting slope banks. Slope destabilization can result in accelerated runoff and soil loss, septic system failure, and in the extreme, landslides and building collapse.

Land that is nearly level is generally more productive for farming, and is also more easily and inexpensively developed for industrial, commercial, and residential uses. Steeply sloping land is usually best used for timber production, which minimizes the potential for erosion and provides wildlife habitat, recreation, and open space. These types of uses



Map 4.5

are not incompatible, but steep terrain with multiple uses requires careful land management and appropriate land use controls. Steep slopes over 15%, 20%, and 25% are shown in Map 4.5, while general recommendations for the appropriate use of land with regard to slope are given in Table 4.1.

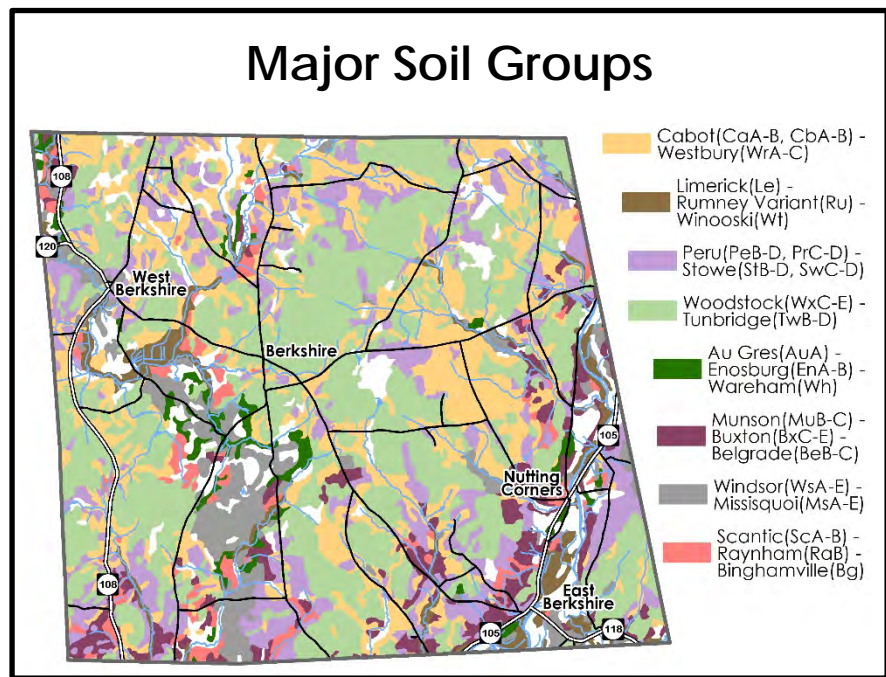
Table 4.1: Slope Categories	
Average Slope	Uses/Restrictions
0 – 3% (SCS: "A")	Suitable for most types of agriculture and constructions, including higher density residential, commercial, and industrial development. Since land is nearly level, drainage may be a problem.
3 – 8% (SCS: "B")	Suitable for many types of agriculture, single-family homes on larger lots, as well as low-density multi-family housing, minor roads, and smaller commercial and industrial buildings. These slopes have a minimum of restrictions.
8 – 15% (SCS: "C")	Suitable for limited types of agriculture, single family homes on large lots, as well as low density multi-family housing, timber production, and recreational/open space uses. Where necessary, terracing, retention ponds, retaining walls, and other engineering techniques may be needed to prevent runoff and erosion.

<p>15 – 25% (SCS: "D")</p>	<p>Suitable for timber production, limited residential, recreational, and open space uses. Construction becomes very costly on these slopes, rapid runoff and erosion problems are likely. These slopes are unsuitable for most types of on-site septic systems.</p>
<p>Over 25% (SCS: "E")</p>	<p>All construction should be avoided on these slopes because of high costs and the likelihood of damage to the environment. Vegetation removal and construction could lead to widespread slope failure.</p>

**Soils**

Soil is perhaps the most important physical factor governing the use of the land. Most soils in Berkshire, having developed from materials deposited during glaciation, represent a 10,000 year investment that has resulted in a very valuable and limited resource.

In the context of land use planning, four soil characteristics are of particular concern: bearing capacity, erodibility and stability, drainage, and resource value (for agriculture, forestry, building material, etc.). These characteristics are generally dependent on particle size (sand, silt, and clay) and water content. Poorly drained, fine-grained



Map 4.6

(clay) soils have the greatest limitations for most types of land use, in particular, anything requiring the installation of an on-site septic system. In contrast, coarse-grained, well-drained sandy soils, though often unattractive for agriculture, are generally suited for residential, commercial, industrial, and related uses.

Soils are classified on the basis of their structure, form, composition, and suitability for various types of development. The latest soil survey in Franklin County was completed by the Natural Resource Conservation Service in 1998. Major soil groups from this survey are shown in Map 4.6 and listed in Figure 4.1. The information in Figure 4.1 is intended for planning purposes only; more detailed information regarding particular soil types is available in the Soil Survey, which

should be consulted for specific site analyses.

### Figure 4.1 Soil Groups

#### Limerick (Le)- Rumney Variant (Ru)- Winooski (Wt)

These soils are found along the Missisquoi River and the Trout River in the vicinity of East Berkshire, and along the Pike River south of West Berkshire. They formed recent flood plain deposits, and tend to be moderately well-drained to poorly drained loamy soils.

Limitations are severe for building of any kind on these soils and septic systems, due to seasonal flooding and wetness. The depth to bedrock is generally 5 feet or more, however the depth to the seasonal high-water table varies from zero to 3 feet. Winooski soils are considered prime agricultural soils; Limerick and Rumney soils are also primary agricultural soils of statewide importance. None of these soils are considered a good source of roadfill, sand, gravel, or topsoil.

#### Au Gres (AuA)- Enosburg (EnA-B)- Wareham (Wh)

These soils are found in only one location in Berkshire, along the west side of the Missisquoi River where it intersects with Route 105 north of East Berkshire. The soils of this group formed on terraces and old lake plains from materials deposited by glacial melt water, and are generally somewhat poorly drained to poorly drained, level or gently sloping, fine sandy loams.

Limitations are severe for septic systems and building of any kind, again due to wetness. Flooding does not occur; however, the depth to the seasonal high-water table is only 0 to 1.5 feet. Depth to bedrock is generally 5 feet or more. Enosburg soils are considered prime agricultural soils; Au Gres soils are also primary agricultural soils of importance to the state. Au Ores soils are a good source of sand, and Wareham soils are a fair source. None of these soils provide a source of roadfill, gravel, or topsoil.

#### Munson (MuB-C)- Buxton (BxC-E)- Belgrade (BeB-C)

These soils are found in several locations: between Route 108 and Trout Brook north of Enosburg Falls, north of the Missisquoi River in the vicinity of East Berkshire and Samsonville, west of Route 108 near the Canadian border, and west of Route-105 where it enters the Town of Richford. These soils also formed from Mater-deposited materials on old terraces and lake plains. They are gently sloping to steep, somewhat poorly drained to moderately well-drained, silty and clayey soils.

Limitations for building are severe due to seasonal wetness, frost action, slope, and low bearing capacity. Depth to bedrock is 5 feet or more; depth to the seasonal high-

water table averages between 0.5 and 3.5 feet. BeB is considered a prime agricultural soil, and BeC, BxC, MuB, and MuC are considered primary soils of statewide importance. BeB is also considered a good source for topsoil, while BeC, BxC, and MuC are fair sources of topsoil, otherwise, these soils are not suited for topsoil, roadfill, sand, or gravel.

#### Scantic (ScA-B)- Raynham (RaB)- Binghamville (Bg)

The soils of this group are found in two small areas in Berkshire: near the northwest corner of the Town, and at the southern boundary near North Enosburg. These soils also formed from water deposited material in depressions or on old lake plains. They are level to gently sloping, poorly drained silt and clay soils.

Limitations are severe for building and on-site sewage disposal due to wetness, frost action, and low strength. Depth to bedrock is generally 5 feet or more and depth to the seasonal high-water table varies from 0 to 2 feet. RaB and Bg are considered prime agricultural soils, and ScA and ScB are considered primary agricultural soils of statewide importance. None of these soils are suitable for roadfill, topsoil, sand, or gravel.

#### Windsor (WsA-E)- Missisquoi (MsA-E)

Windsor and Missisquoi soils are found in a swath of land extending from the Berkshire-Franklin boundary near West Berkshire to the Enosburg line south of the Enosburg Town Forest. They are also found in an area northeast of the Missisquoi River where it crosses Route 105, in a small area northwest of this, and south of Route 118 in East Berkshire. These are nearly level to very steep, excessively drained sandy soils that also formed from water deposited material on old glacial terraces and lake plains.

These soils are particularly suited for development, limitations are slight for building and septic tank absorption fields in areas having slopes of 0 to 8 % (slope categories A and B) and moderate in areas of 8 to 15 % slope (category C). Development limitations increase as slope increases due to ground water seepage and greater slope instability. Depth to bedrock is 5 feet or more, and depth to the seasonal high-water table is 6 feet or more. Windsor and Missisquoi soils (A and B) tend to be droughty, but are considered primary agricultural soils of statewide importance. Windsor soils, where slope permits, are good sources of roadfill and sand, but are unsuitable for gravel and topsoil. Missisquoi soils, also depending upon slope, are suitable for roadfill, sand, and gravel, but unsuitable for topsoil. Because water infiltrates easily, Windsor and Missisquoi soils often overlie sand and gravel aquifers.

#### Woodstock (WxC-E)- Tunbridge (TwB-D)- Rock Outcrop (RoE)

These soils are found in two areas: the north central section of Berkshire, and in the southeast corner of Town. The soils in this group formed from till deposits on hills and bedrock ridges and consist of shallow, excessively or well drained, loamy soils interspersed among rock outcrop. Slope conditions vary greatly.

Limitations for building and sewage disposal are generally severe due to slope conditions and shallow soil depth, however only moderate limitations exist on Tunbridge soils (B and C) for dwellings and small buildings without basements, and road construction. Depth to bedrock averages 10 to 40 inches; depth to the seasonal high-water table is 6 feet or more. These are not considered primary agricultural soils, though Tunbridge soils are considered a good to fair source of topsoil, depending upon slope. These soils are unsuitable for roadfill, sand, or gravel.

#### Peru (PeB-D, PrC-D)- Stowe (StB-D SwC-D)

These are the most common and widespread soils in the Town of Berkshire, formed from till deposits on the upland slopes of hills and mountains. These areas are gently to steeply sloping, and are underlain by a silty, cemented subsurface layer, called a fragipan, which tends to impede drainage.

Limitations for building on Stowe soils are moderate to severe, depending upon slope, due to wetness, frost action, and the presence of large stones and rocks. The Stowe and Peru soils all have severe limitations for septic tank absorption fields. StB soils have slight limitations for an area sanitary landfill, and, along with StC and StD soils, moderate limitations for a trench landfill. Depth to bedrock is 5 feet or more and depth to the seasonal high-water table is 1 to 3 feet. The more gently sloping Peru and Stowe soils (PeE and StB) are considered prime agricultural soils, while StC is also considered a primary agricultural soil of statewide importance. More gently sloping Stowe soils are fair sources of roadfill and topsoil. None of these soils are suitable for sand or gravel extraction.

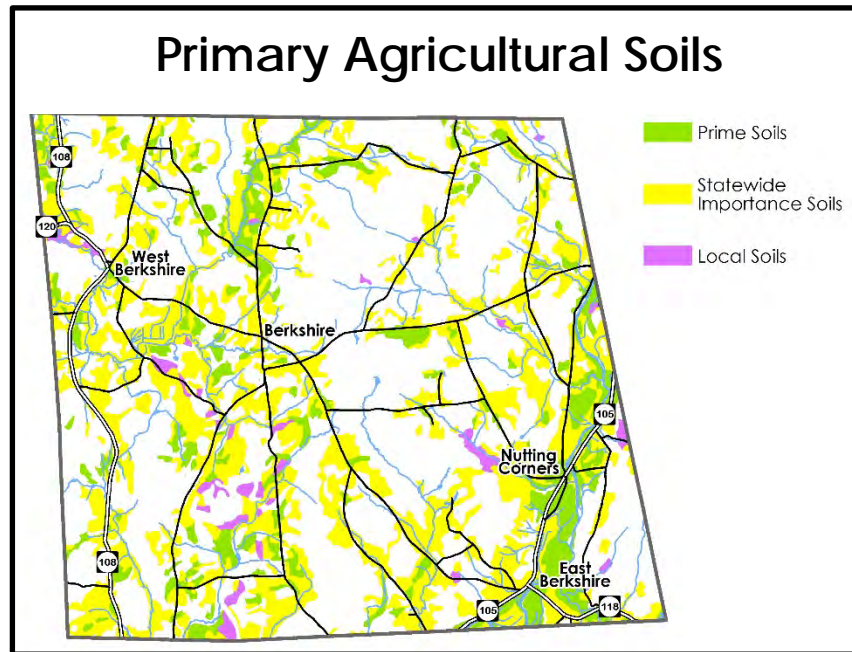
#### Cabot (CaA-B, CbA-B)- Westbury (WrA-C)

The soils of this group are found in three areas spread widely across the northern two-thirds of the Town. They are soils that have formed from tills and organic matter found on the lower slopes and low-lying areas of the foothills. A fragipan, at a depth less than 3 feet, is also characteristic of these soils, which tend to be level to gently sloping and poorly drained.

Building limitations are moderate to severe, due to slope, wetness, frost action, and the presence of large rocks and boulders. Depth to bedrock is 5 feet or more; and depth to the seasonal high-water table varies from 0.5 to 2 feet. These soils are not generally suitable for on-site septic and sanitary facilities; however, Westbury soils do provide suitable landfill cover material. Cabot (CaA) and Westbury (WrA-B) soils are considered poorly drained.

### Primary Agricultural Soils

Primary agricultural soils, as defined by Vermont's Land Use and Development Law (Act 250), include soils which, based upon their chemical and physical properties, are considered especially suited for agricultural use. These are subdivided into "prime" soils having a very high potential and few limitations for producing food, feed, forage or fiber crops; and "good" soils of statewide importance that have good potential, but one or more limitations that may restrict the choice of crops and require more careful management. The Vermont Agency of Agriculture also recognized "local" soils with agricultural potential, but which are not regulated under Act 250. Prime, statewide, and local agricultural soils are shown in Map 4.7.



Map 4.7

In the rolling hills and mountains of northwestern Vermont, primary agricultural soils, and "prime" soils in particular, are a very limited and valuable resource. Agriculture depends upon the availability of high-quality land, in large enough acreages (a "critical land mass"), to make crop production economical. However, many of the best agricultural soils, because of their physical properties, are also attractive for more urban-type development, such as the subdivision of land for the construction of roads, houses, businesses, and industry. Berkshire is no exception.

This conversion of primary farmland into built-up development is the cause for much concern statewide. Building on farmland effectively takes it out of production and reduces an already limited resource base. In Berkshire, much of the best farmland, located along roads winding through the Town, is still in agricultural production. In the past, more acres have been lost to shrub and forest cover with the abandonment of hill farms, than to development; but because of the importance of agriculture to the community, farmland conversion and fragmentation are prominent local concerns.

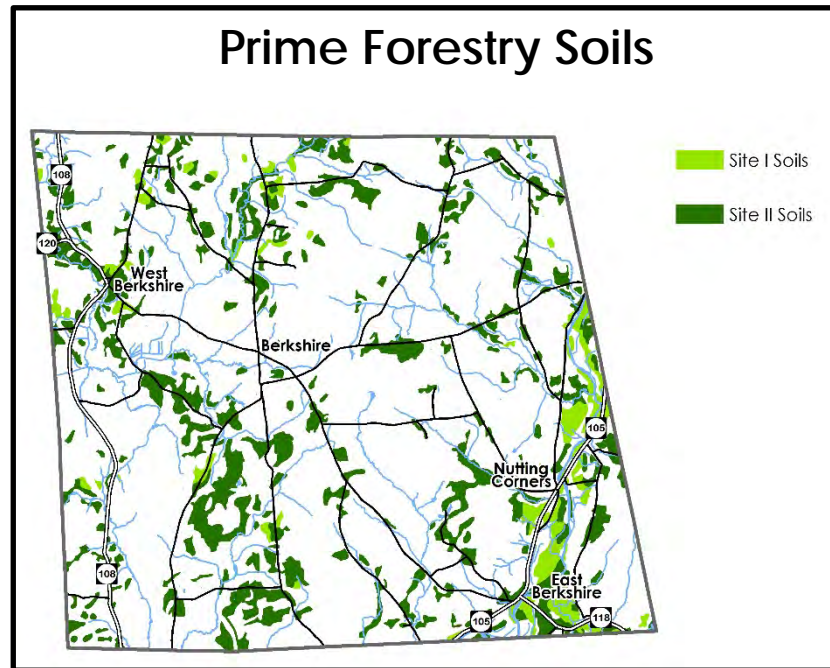
Retaining large enough acreages of the best soils for agricultural use is necessary for the continued existence of farming in Berkshire. It is important; however, to also consider social and economic factors when determining what land should be reserved for agriculture in the future.

### Primary Forestry Soils

Primary forestry soils have also been identified by the State according to their productivity for commercial forestry. These soils are included within "Site I" and "Site II" productivity classes based upon their chemical and physical make-up and are shown in Map 4.8.

Similar concerns exist regarding the development and fragmentation of commercial forestry soils as for agricultural soils.

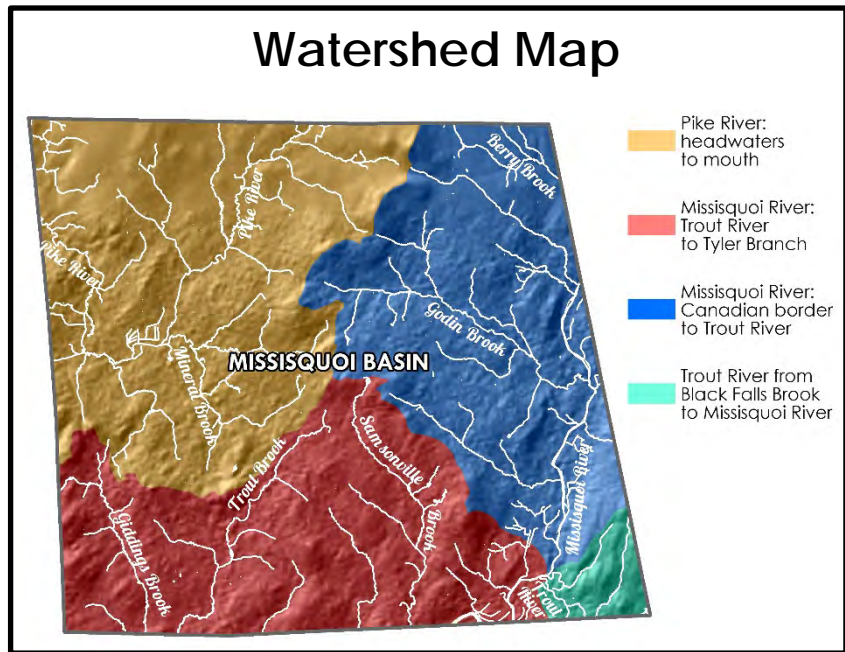
They are more widespread in Berkshire than primary agricultural soils and although there is some overlap with these soils, most primary forestry soils remain undeveloped. Primary forestry soils include many soils, which because of slope or drainage, are not suitable for intensive development. This may reduce certain development pressures, but even low intensity development such as seasonal home construction may result in fragmentation and limit access to good forestland. Again, socio-economic factors, as well as the soil resource, should be considered in determining which tracts of potential forestry land should be reserved for that use.



Map 4.8

## Water Resources

Water is to the earth as blood is to the human body. Water is essential to the life of the individual and the community, but too often, its continued availability and purity are taken for granted. Consideration of the quantity and quality of water resources, and the fact that water does not recognize political boundaries in its movement, are basic to the planning process. This requires some



Map 4.9

understanding of the way water circulates through the environment (the "hydrologic cycle"), how human actions can modify this cycle, and the possible impact of these modifications on the water supply and the environment.

## Surface Water

Berkshire is located within the Missisquoi Basin (Map 4.9), a network of rivers and streams stretching across northern Vermont and ending in Missisquoi Bay and Lake Champlain. The Missisquoi River and its tributaries drain most of Berkshire. The Missisquoi crosses the southeast corner of Berkshire and flows in a southwesterly direction through Town. A major tributary, the Trout River, flows into the Missisquoi at East Berkshire. Other tributaries include Trout Brook and Giddings Brook in the southwest corner of Town.

The Pike River and its tributaries drain the northwest part of Town into Missisquoi Bay. This river originates in the north central hills of Berkshire, flows southwest where it joins with Mineral Brook, and then flows northward into Franklin where it receives water from Lake Carmi. It then reenters Berkshire and exits at the Canadian border.

The section of the Missisquoi River from the Quebec border at East Richford to its mouth, including the segment in Berkshire, has been identified as an important recreational river for boating and fishing. The 10.5 mile segment through Berkshire has also been cited as an important fishery for natural populations of smallmouth bass, and natural and stocked populations of brown trout. The Trout River into



East Berkshire is also a fishery-- the home of natural populations of brown and rainbow trout (Vermont Rivers Study 1986).

Additionally, after a three year study, the Missisquoi and Trout were officially designated by Congress as National Wild and Scenic Rivers in 2015. This places these two rivers among the Nation's most valued and beautiful rivers that remain in their natural state. Designation as a Wild and Scenic River ensures that about 70 miles of the Missisquoi and Trout Rivers will continue to be protected as natural assets in the area and provides access to grants to support efforts to increase recreational access to these rivers by fisherman, hunters and paddlers. The two rivers are also part of the Northern Forest Canoe Trail, which maps a network of waterways from Canada across Lake Champlain into New York State. The trail is a recreational paddling route that includes lakes, rivers and streams and attracts a variety of visitors.

### Water Quality

While water quality is generally good, many rivers and streams in Berkshire have been experiencing water quality issues associated with point and non-point sources of pollution. Historically, "point" sources of pollution, such as the Village of Richford Sewage Treatment Plant, were considered the most significant threats to water quality. However, as state and federal permitting requirements have begun regulating these facilities, the "nonpoint" sources of pollution (i.e., decentralized activities across the landscape that result in pollution, such as farming and development) have come to be recognized as the dominant source of pollution in the watershed. Water quality issues in the rivers and streams in Berkshire are contributing to the water quality issues experienced in Missisquoi Bay and greater Lake Champlain, where they all ultimately flow.

"Stormwater" is a non-point source of pollution that applies to rain and snowmelt that runs off impervious surfaces like roofs, driveways and roads. As it flows into streams and lakes, stormwater runoff often picks up pollutants such as oils, fertilizers and sediment. Excess stormwater also contributes to erosion and increases stream volumes during peak storm events. Berkshire's stormwater drainage system consists of a network of culverts and ditches along the town highway network.

New residential and commercial development in Berkshire is encouraged to implement stormwater mitigation strategies, otherwise known as Low Impact Development (LID). The main aim of LID is to design a site that prevents and minimized environmental degradation. Common LID techniques that mitigate the adverse impacts of stormwater runoff include minimize total land disturbance, reduce the amount of impervious surfaces and protect existing natural areas like forest stands and stream buffers.

Each year the State of Vermont prepares a list of waterways that are impaired and are unable to meet water quality standards (the 303d list and the impaired list outside the scope of 303d). They also prepare a list of waterways that may be impaired but are in need of further assessment before being added to the list. The impaired waterways and those in need of further assessment are listed in Table 4.2.

**Table 4.2 List of water quality impairments affecting the use of surface waters in Berkshire as designated by the 2018 303d list.**

Stream Section	Pollutant	Impaired Use	Water Quality Problem
Berry Brook, mount up to and including North Tributary (Approx. 1 Mile)	Sediment, Nutrients	Aesthetics, Aquatic Life Support	Agricultural runoff, Aquatic Habitat Impacts
Godin Brook	Sediment, Nutrients	Aesthetics, Aquatic Life Support	Agricultural runoff, Aquatic Habitat Impacts
Samsonville Brook	Sediment, Nutrients	Aesthetics, Aquatic Life Support	Agricultural runoff, Aquatic Habitat Impacts
Trout Brook, Upstream from mouth for 2.3 miles	Nutrients	Aquatic Life Support	Agricultural runoff

In a healthy watershed, streams are able to maintain a state of equilibrium and can carry the water, sediment and debris, even in high flows, without dramatic changes in depth, width or slope. These streams have access to a floodplain, a low-lying area adjacent to the stream, where floodwaters can go. When streams become heavily modified and floodplain areas are developed or filled, the streams are taken out of equilibrium. Often they can become deeply incised, water velocity and erosion can increase, and the stream can become capable of creating greater flood damage and sediment is moved downstream, reducing water quality. This process of stream channel evolution, which can be seen occurring throughout the Missisquoi and Pike River Watershed, is shown in Figure 4.2.

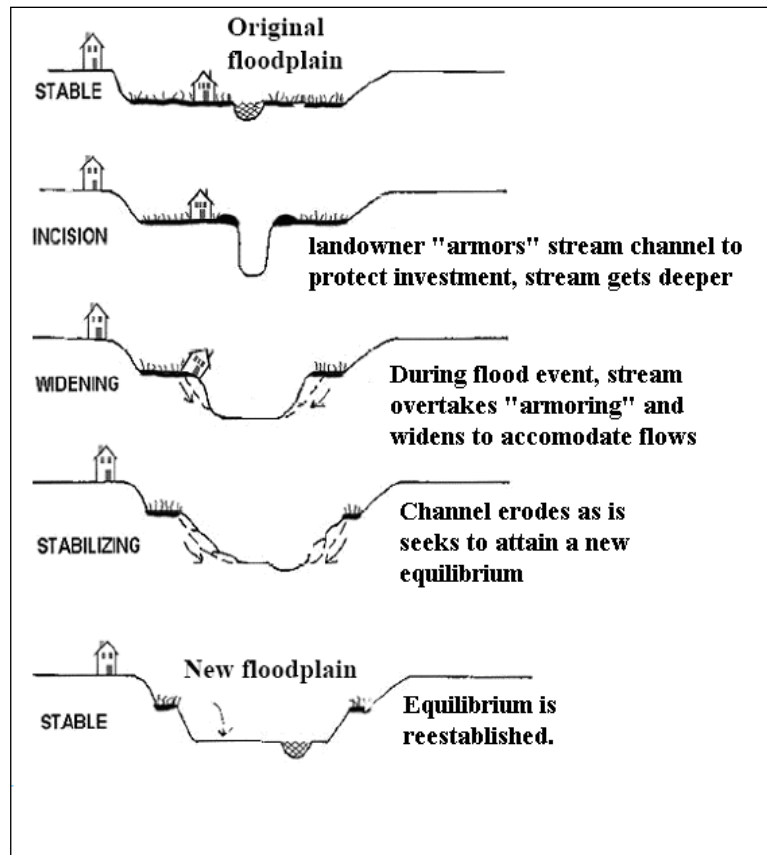
Local conservation efforts are taking place around Berkshire's waterways to improve water quality. The Missisquoi River Basin Association (MRBA), a local volunteer organization has formed partnerships with the federal Fish and Wildlife Agency and the Natural Resources Conservation Service to carry out various projects to protect water quality and recreational opportunities throughout the Missisquoi Watershed.

Data has been collected by the Vermont DEC River Management Program about the physical condition of the mainstem of the Missisquoi River, Trout River, and the Pike River. These studies, called

stream geomorphic assessments, document a stream's general characteristics, including width, slope, streamside vegetation and streambed materials, as well as issues impacting the stream, including erosion, modifications of the stream channel, the presence of bridges and culverts, etc. This comprehensive information about a river can provide important baseline data from which restoration projects and needs assessments can be determined.

In order to protect local streams, restore equilibrium, and improve water quality, a number of strategies can be employed such as limiting development in the floodplain, maintaining vegetated buffers along stream channels, and properly sizing public and private bridges and culverts. Vegetation along the streambank can help to naturally stabilize the stream, to filter out pollutants before they reach the stream and provides habitat. Berkshire currently requires that new development be setback at least 100 ft from any pond and a setback of at least 100 feet or the width of the mapped River Corridor (whichever is greater) for streams and river for water quality protection.

Figure 4.2. Stream Channel Evolution



### Ground Water

Ground water is currently the source of all drinking water in Berkshire. Most ground water comes from rain and snow that seeps into sandier soils and cracks or spaces in underlying bedrock, which then travels into storage areas called aquifers. In this way, the ground water supply is replenished or recharged. The water table defines the upper limit of saturation, and may vary with the seasons. Areas covered with glacial till, which include much of Berkshire, are usually poor recharge areas due to the high clay content of the soils and the presence of a fragipan. More permeable sand and gravel deposits such as those in the western part of Town, and fractured bedrock at higher elevations with little soil cover, are generally good recharge areas.

### **Figure 4.3 Potential Ground Water Recharge Areas in Berkshire**

#### Possible Gravel Recharge Areas

- 1) Extending from the Canadian border to the Enosburg Town line, following the glacial isolated kame terrace. It includes within its area West Berkshire Village, Mineral Brook, the lower Pike River, and the Enosburg Village Forest and reservoir. Overlying this recharge area are mostly Windsor-Missisquoi soils and a small amount of Limerick-Rumney Variant-Winooski soils. State geologists have identified this area as having high potential for ground water supply.
- 2) North of East Berkshire on both sides of Route 105. Overlying these are Au Gres-Enosburg-Wareham soils, and Windsor-Missisquoi soils.
- 3) In the northeast corner of the town, overlain by Scantic-Raynham-Binghamville
- 4) In the southeast corner of the town, overlain by Windsor-Missisquoi soils.

#### Probable Bedrock Recharge Areas

- 1) In the hills (including Ayers Hill) between the North Road and Lost Nation Road.
- 2) In the southwest corner of Town on the hill near the Missisquoi and Trout Rivers.

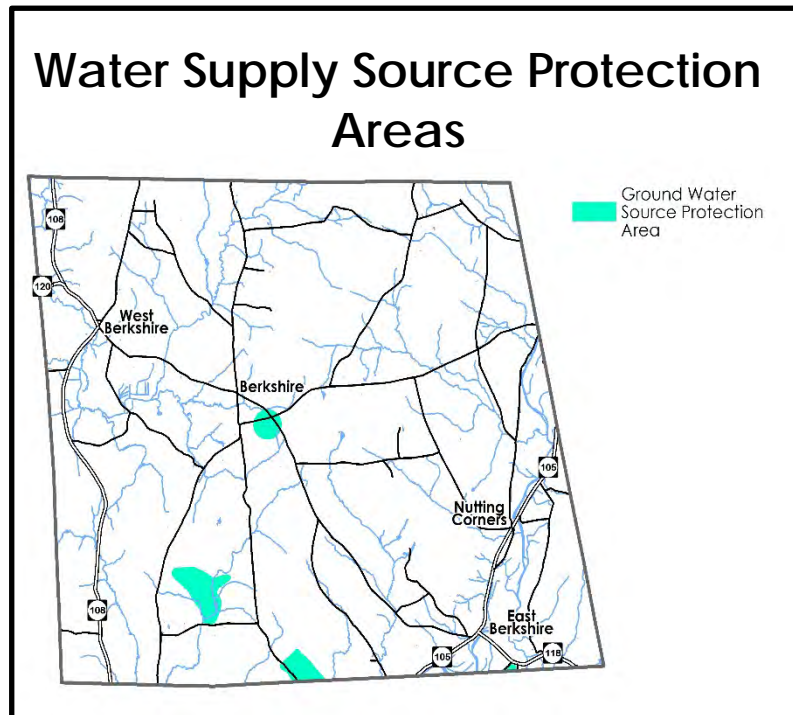
Defining actual areas with good potential for water supply is a difficult and expensive task, requiring large amounts of field survey work and data analysis. Consequently, areas with potential for good groundwater recharge are designated based on soil cover and existing knowledge of the underlying bedrock. Several "probable" and "possible" good recharge areas have been identified in Berkshire and are listed in Figure 4.3.

Ground water feeds rivers, lakes, and wetlands, appears at the surface in the form of seeps or springs, and is often pumped out of the ground for human use. Since ground water is usually less easily polluted or contaminated than surface water, it is a valuable source of drinking water. As noted earlier, Berkshire depends heavily on ground water for its water supply.

It is important to note; however, that human activity occurring in a recharge area

can affect the quality and quantity of the ground water supply. Paving large areas of land or pumping too much water can deplete the supply. Leaking septic systems and underground gas tanks, road salt, industrial wastes, and agricultural applications of chemicals are common sources of ground water pollution. Once a ground water system is contaminated, cleaning it up is very expensive and difficult, if not impossible.

The Federal Source Water Protection Program was established to protect groundwater that supplies public drinking water systems. Since 1985, the delineation of Public Water Source Protection Areas (SPA) has been required for all proposed new sources for Public Community Water Systems. This program emphasizes proper management of lands within Source Protection Areas to reduce or restrict potentially contaminating activities. The State also has the Groundwater Protection Rule and Strategy that was adopted in 2005. This provides restrictions, prohibitions, standards, and criteria for a groundwater protection.



Map 4.10

There are four Water Supply Source Protection Areas in Berkshire (See Map 4.10), two of which are protected through local zoning. This plan proposes to add the remaining two ground water source protection areas to the zoning regulations to afford them equal protection as identified on the Proposed Land Use map. The water supplies protected in zoning include the one located on the north side of Reservoir Road associated with two gravel wells that supply the Enosburg Falls Water System and another associated with the water supply for the Dairy Center. It is located on the border of Enosburgh and Berkshire surrounding the Dairy Center on Route 105. The area located on the border of Berkshire and Enosburgh between Perley and Woodward Neighborhood Roads, associated with spring supplying the East Berkshire Water Coop should be protected. Additionally, the groundwater source protection area associated with the Berkshire Elementary School and surrounding the School should also be protected.

### **Critical Areas**

Critical areas, for the purposes of this plan, are defined as natural areas requiring special protection from development. They include areas that have environmental, ecological, educational, and/or scenic value, such as wetlands, shorelands, flood hazard areas, important wildlife, and endangered or threatened species habitats, and other areas of biological, hydrological, or geological significance.

### Wetlands

Four large wetland areas are located in Berkshire (see Map 4.11, page 43). Two are located along the Pike River and Mineral Brook, another is found on the south side of the Berkshire-Richford Road near Lost Nation Road, and the fourth is located east of Lost Nation Road. Wetland areas are defined by the state as “those areas ... that are inundated by surface or ground water with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction” (10 V.S.A. 902). This definition includes but is not limited to marshes, swamps, sloughs, potholes fens, river and lake overflows, mud flats, bogs, and ponds.

Wetlands are indispensable but fragile natural resources. They are important for a variety of reasons. They provide temporary storage for floodwaters and thereby reduce flooding and protect the quality and quantity of ground water. They improve surface water quality by storing organics, chemically breaking down or removing pollutants, and filtering eroded sediments. They provide spawning and feeding habitat for fish and other aquatic life, and a wide diversity of habitat for other wildlife, including waterfowl, birds, mammals, furbearers, amphibians, and reptiles. Wetlands also provide habitat that may be critical for the survival of rare, threatened, or endangered species, valuable resources for education and research in the natural sciences, and a diversity of recreational opportunities and economic benefits. Finally, wetlands contribute to community open space, and the overall beauty of the landscape.

The U. S. Fish and Wildlife Service, using color infrared aerial photography, identified nearly 200 smaller wetland areas scattered throughout Berkshire. These are located on National Wetlands Inventory Maps. Most of these wetlands are small marshy (palustrine) areas, characterized by open water, emergent plant growth (e.g., aquatic plants), forested cover, or shrub and scrub growth.

Not every wetland area supports all wetland functions; however, critical functions may be performed by a particular wetland, or by an aggregate of smaller wetland areas within a larger area. The Secretary of Natural Resources, as required by state (10 V.S.A., Chapter 37, § 905b), has adopted Wetland Rules for the identification and protection of Vermont's significant wetlands. Under these rules, all wetlands in Vermont are designated as Class I, Class II or Class III wetlands (Figure 4.4). There are no Class I wetlands in Berkshire. There are however many wetlands identified in Berkshire designated as Class II.

The State regulates land use within designated wetland areas (Class I and Class II) and requires buffer strips that protect these wetlands from potential adverse impacts of adjacent land uses.

Activities that will not adversely affect the functions and values of these wetlands are permitted.

The local planning commission is responsible for undertaking studies, making recommendations on wetland protection, and indicating those areas proposed for protection within its municipal plan.

### Flood Resiliency

In response to the unprecedented flooding that occurred on Lake Champlain in the spring of 2011, and in Central and Southern Vermont during Tropical Storm Irene in September 2011, there has been an increased awareness statewide of the dangerous effects of flooding and fluvial erosion. As climate change threatens meteorological norms, and as increased development and impervious surfaces put more pressure on the State's streams and rivers, communities must reexamine their approach to assessing risks posed by inundation flooding and fluvial erosion.

### Flood Hazard Areas

Inundation flooding involves the rise of water over a floodplain, and is regulated by the National Flood Insurance Program (NFIP). Historically, the Town of Berkshire has been subject to periodic flooding of the Missisquoi River and its tributaries. The

### **Figure 4.4 State Wetland Classification**

**Class I** -include those wetlands that the considered exceptional or irreplaceable, and merit a high degree of protection.

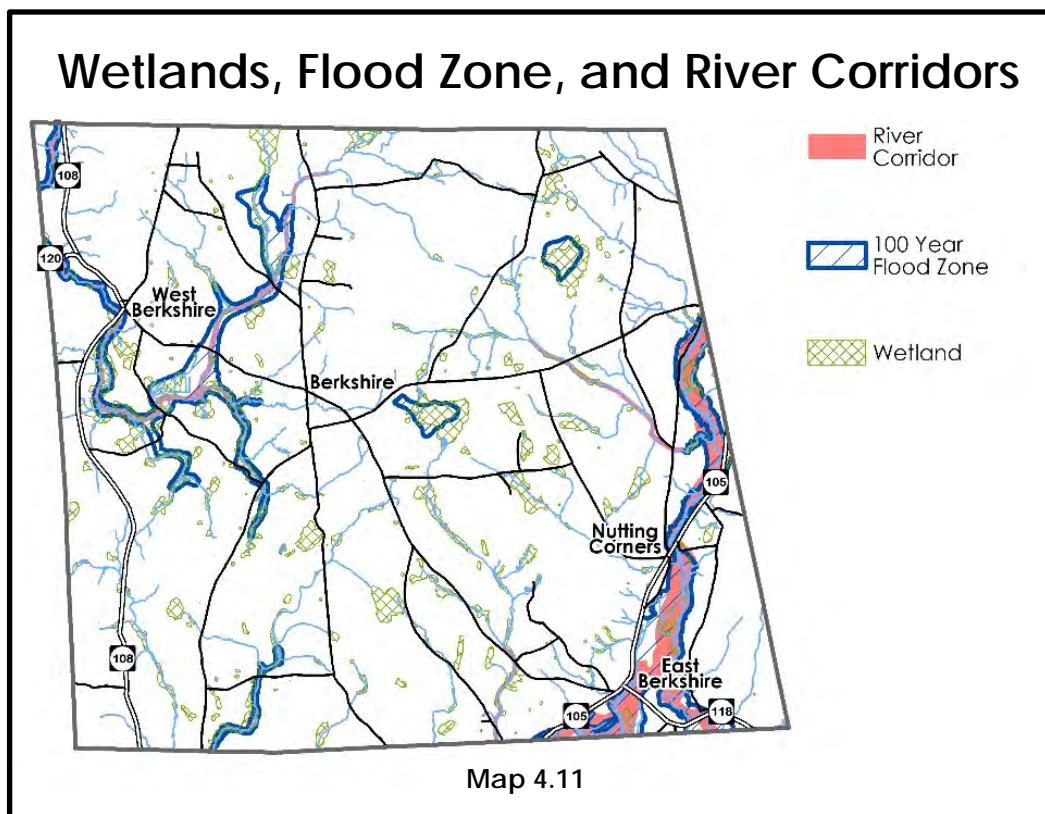
**Class II** -includes those wetlands that appear on NWI maps and any contiguous unmapped wetlands, and are protected by a minimum 50-foot buffer.

**Class III** -includes those wetlands that are not designated Class I or Class II wetlands. Class III wetlands are not protected under the Vermont Wetlands Rules, but may be regulated under the Clean Water Act, Sec 404.

Missisquoi River, the largest river in Berkshire, is surrounded by a substantial floodplain. In general, the flood plain of the Missisquoi River in Berkshire is largely undeveloped area composed of marsh, woodland, or land that is in agricultural use. However, East Berkshire is an exception, with a dense population that is subject to substantial risk of flooding. Portions of the state highways (Rte 105 and Rte 118) and Missisquoi Valley Rail Trail are also located in the Missisquoi River flood plain. The Pike River, Mineral Brook, Trout Brook and Trout River are tributaries of the Missisquoi River in Berkshire. Each tributary has its own floodplain.

Flooding most frequently occurs in Berkshire during the late winter and early spring when rainfall mixed with snowmelt causes water levels to rise on the Missisquoi River. Ice jams have not caused major damage to structures along the Missisquoi River in East Berkshire in recent years, but it has been responsible for field and riverbank erosion.

The most severe flood on record occurred in November 1927, resulting in the loss of most of the livestock in the town & village and destroying several bridges. A storm brought 3.2 inches of rain in 24 hours, and a total of 6.32 inches over its entire duration. Many Berkshire residents had to be evacuated from their homes by boat. Farms in the community lost much of their livestock, and bridges, including the Nutting Bridge north of East Berkshire and a number of covered bridges, were swept away (Flood Insurance Study, Town of Berkshire, Federal Emergency Management Agency, 1980).





The most recent damaging flood event in Berkshire occurred in October 2019. More information on past flood occurrences can be found in Berkshire's Local Hazard Mitigation Plan (LHMP).

The Federal Emergency Management Agency (FEMA) requires communities who participate in the National Flood Insurance Program to adopt flood hazard regulations, which is structured to minimize risk to life and property. Participation in the NFIP is required for property owners to become eligible for federally-backed mortgage loans and flood insurance. Currently, the Town of Berkshire participates in NFIP and has five properties with flood insurance policies with a total value of over \$1 million.

As indicated in the discussion on maintaining stream equilibrium (Figure 4.2), construction within floodplain areas has several negative impacts, including restriction of flood flows and decreases in flood storage capacity. Impervious surfaces, such as driveways and roofs, hamper the ability of floodplains to absorb water, and to assimilate nutrients from residential and agricultural runoff.

Berkshire has incorporated Flood Hazard Area Regulations into their Land Use and Development Regulations, which place an additional set of regulations on areas of Special Flood Hazard (the 100 year floodplain) as identified on the FEMA Flood Insurance Rate Maps (Map 4.11). In 2019, Berkshire updated these regulations by adopting standards that go beyond the required minimum set out by NFIP and revised the development review standards for the Flood Hazard Area Overlay District.

While the FEMA Flood Insurance Rate Maps indicate areas that are at risk of inundation by flood waters, the floodplain was mapped in 1983 and therefore may no longer accurately reflect the true risk of flooding to Berkshire. In addition, the maps do not adequately identify areas at risk of fluvial erosion. FEMA is currently in the process of updating the floodplain mapping in the Vermont. Initial discovery meetings for the Missisquoi Basin and the rest of Franklin County were held in 2017.

#### Fluvial Erosion in the River Corridor

Fluvial erosion is erosion caused by the lateral and vertical movement of streams and rivers. Fluvial erosion and landslides are becoming more common within the Northwestern region of Vermont.

Historic land uses along the river and its streams including floodplain encroachments and vegetative debris removal have increased the risk of erosion and landslides. Historically practices including armoring, dredging, gravel mining and channelization were common for the purpose of containing high flows and to protect infrastructure built in the historic floodplains, however this has generally

resulted in an increase in streams' power as the streams were made straighter and deeper creating direct effects on the rocks and vegetation that make up the channel boundary. The effects can be varied and may lead to channel instability and increased damages from flooding.

VT DEC river corridor maps have been developed to identify the areas along larger tributaries and rivers that are susceptible to stream channel adjustment which may lead to fluvial erosion. In Berkshire, VT DEC has mapped river corridors for the Missisquoi River, Pike River and Mineral Brook. For all other mapped streams with a drainage area greater than 0.5 miles as included in the Vermont Hydrography Dataset (VHD) the stream corridor is 50 feet from the top of the bank (see map 4.11).

In 2019, Berkshire incorporated river corridors into the Land Use and Development Regulations. These regulations limit development in the mapped river corridor area and within 100 feet of the top of the stream bank for all rivers and streams in Berkshire with a drainage area greater than 0.5 miles as defined by the VHD.

#### Promoting Hazard Resilient Measures

Limiting development within flood and river corridor areas will minimize risk and provide streams the opportunity to reestablish a stable, equilibrium condition. Maintaining vegetated buffers around waterways also helps to minimize risk to property and provides water quality benefits.

Berkshire has taken several measures since the 2015 Town Plan adoption to promote hazard resilience. In 2017, Berkshire adopted a local hazard mitigation plan (LHMP), copies can be found at the Berkshire Town Clerk's Office. This plan profiles the flood hazards in more detail and lays out an implementation plan that lists specific mitigation projects. In 2019, Berkshire updated its Land Use and Development Regulations. These updates included increasing flood hazard zone standards beyond the NFIP required minimum and adopting restrictions on development in the River Corridor consistent with VT DEC guidelines. Additionally, Berkshire maintains an updated Emergency Operation Plan (EOP) that details the steps to be taken in the case of a flood emergency.

The adoption of a LHMP and River Corridor guidelines make Berkshire eligible for the highest (17.5%) Emergency Relief and Assistance Fund (ERAF) state aid rate. This increases the Town's reimbursement rate to 92.5% from state and federal aid for losses eligible for public assistance funds after a federally-declared disaster.

The Town should continue to maintain the requirements set by the ERAF program to retain the 17.5% ERAF rate.

### Wildlife Habitat

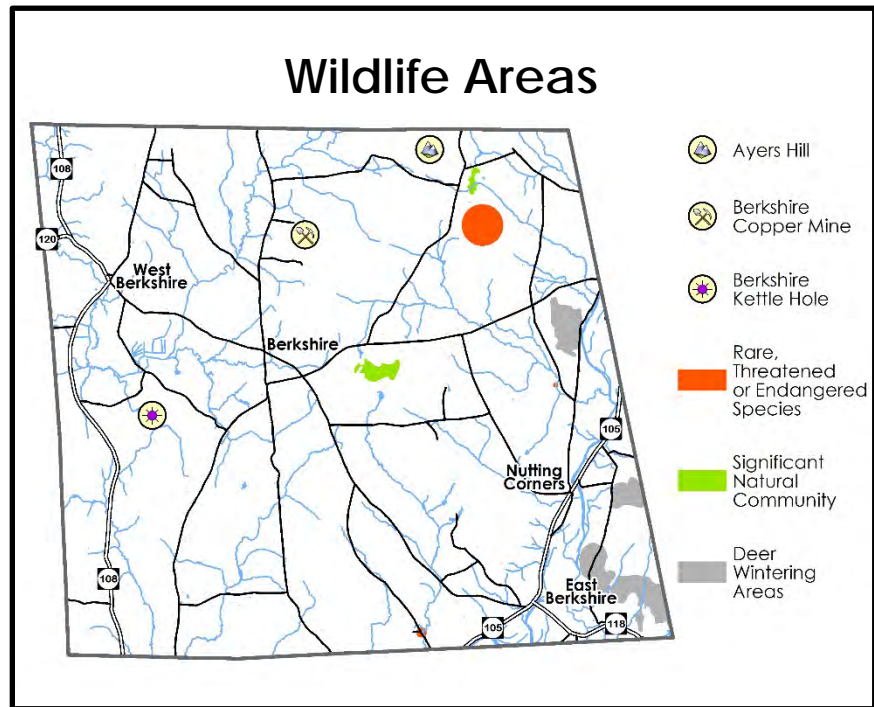
The diversity of existing land use in Berkshire, including open space, wetlands, and wooded areas, supports a variety of common plants and animals. There is no specific data on most of these species. However, ANR has mapped deer wintering yards, three of which have been identified in Berkshire (See Map 4.12). Deer populations rely on softwood shelters at lower elevations having southern

exposures to survive the severe winter climate and heavy snowfalls of this area. The amount of suitable habitat is limited, and is in danger of being further reduced by clear-cutting for forestry, agriculture, and development. Farmland abandonment and forest regrowth, on the other hand, could result in a future increase in deer populations.

Historically the ANR mapped black bear habitat and this information was used to understand important wildlife habitat areas. This information has been replaced with the development of Habitat Blocks by the VT Department of Fish and Wildlife. Maintaining large blocks of contiguous forest that can support large mammals is the primary action to be supported by municipalities to ensure these species continue to exist locally. By maintaining these habitat blocks it will ensure that the needs of large mammals are being met and subsequently support a host of other species. Map 9.3 displays existing forest blocks by size and provides additional information on forest habitat blocks.

The rivers and streams in Berkshire also provide habitat to fish, including brook trout, small mouth bass, and in the case of the Trout River, rainbow trout.

No threatened or endangered species are known with habitat in Berkshire, but as of 2020, four areas supporting rare species habitats and natural communities have been identified (Map 4.12). To prevent disturbance or illegal collection of these species, specific information on the species is withheld.



Map 4.12

### Unique and Fragile Areas

Unique or fragile areas are landscape features other than those already defined that have scientific and/or educational value. In Berkshire, these include three unique geologic features described as follows:

#### *Ayers Hill*

This is a singularly unique area of 400 acres on Ayers Hill where the volcanic lava flows and volcanic bombs of the Tibbit Hill formation are readily apparent. Currently, it is in private ownership and is in need of protection. This site is considered to be of state significance for its educational, scientific, and scenic value.

#### *Berkshire Copper Mine*

The Berkshire Copper Mine is a 10-acre site associated with the old copper mine that is now considered an important mineral collection area. It is also in private ownership and in need of protection. The site is considered to be of state significance because of its historical, educational, and scientific value.

#### *Berkshire Kettle Hole*

The Berkshire Kettle Hole is a well-preserved glacial feature, known as a kettle hole, which formed when a chunk of buried glacial ice melted and left a hollow or depression in the landscape. The Berkshire Kettle Hole is located on a three-acre site southwest of the hamlet of Berkshire. The kettle hole is in private ownership and in need of protection. As a glacial feature, it is considered locally significant.

Because of their significance, these areas should be protected from any type of development that would affect their character, value, and integrity. Controlled public access, in cooperation with private landowners, should be encouraged for educational and scientific pursuits.

The Town has not officially identified specific viewsheds as scenic resources. The Planning Commission recognizes that conducting a scenic resource inventory is a future action that can inform the next plan update. This inventory can inform opportunities such as road pull-offs to enjoy these resources and ways to protect them.

## **B) HISTORIC LEGACIES**

### *Historic Districts and Structures*

Berkshire contains four historic districts and 75 historic buildings and farms, as identified in a survey conducted by the Vermont Division for Historic Preservation in 1983. The four designated historic districts include the three hamlets-- the West

Berkshire Historic District, the East Berkshire Historic District, and the Berkshire Center Historic District-- as well as the Montgomery Road Historic District. Site listings, descriptions, photographs, and historic district maps are available in the survey report available at the Town Clerk's Office.

Currently, none of the historic buildings on the index for historic sites for Berkshire have been placed on the State Register of Historic Places. Selection is based upon the "quality of significance" of the building site or district in local, state, and national history, and often comes about through local nominations. Architectural and/or cultural significance, as well as the integrity of location, design, setting, materials, and workmanship, are also factors considered when selecting sites for inclusion in the state register. Properties of special merit may be nominated for inclusion in the National Register for Historic Places. Properties determined eligible for nomination to the National Register are automatically placed on the state register. Inclusion on these registers can result in some public financial support for restoration, preservation, and protection activities.

The Berkshire Historical Society conducts local research, assists in updating the sites and structures survey, and makes recommendations for historical register nominations. The Society gathered information about the history of Berkshire to include in a book. The book was published in 1994.

The Historical Society was responsible for initiating the restoration of the Town Hall. Based on their investigation, the Selectboard decided to seek funding for the project. They applied for and received a grant through the historical preservation grant program. Along with a bond measure and additional funds from an Accessibility Modifications Community Development Block Grant (CDBG), the project was fully funded. The Town Hall renovation was completed in 2007. The Town Offices as well as meeting space are currently located there.

### ***Archaeological Sites and Sensitive Areas***

Archaeological sites serve as tangible clues to the past and are important cultural resources for their historical, educational, and scientific value. They provide information about how people coped with changing environmental and cultural conditions, including changes in the climate, population stress, and the introduction of new technologies.

The archaeological record includes both prehistoric Native American sites and historic remnants of European settlement. Evidence of Native American settlement and activity is typically contained within upper soil layers, but may be deeply buried underneath floodplain deposits. The archaeological record also includes the ruins, materials, and evidence of life left behind by explorers, soldiers, and settlers of European descent that once passed through or settled in Berkshire.

The ruins and buried remains of 18th, 19th, and early 20th century buildings, structures, encampments, landscape features, garbage areas and other activity sites comprise Berkshire's historic archaeological heritage. Archaeological sites are often the only source of information for the longest part of human activity in Vermont.

Because these sites are not readily visible, archaeological sites are difficult to locate and may be unintentionally destroyed during construction and development; archaeological sites are being destroyed at an alarming rate throughout Vermont and New England. They are fragile, endangered, and nonrenewable. Once a site is disturbed, its value for scientific research is largely lost. Accordingly, archaeological sites and lands need to be considered in the planning process, and protected from the adverse impacts of growth and development.

Unfortunately, it is not known where most archaeological sites in Berkshire are located. Locating specific sites often requires a lot of historical research, and in the case of most prehistoric sites, field investigations, and surveys. The State's Division of Historic Preservation has identified archaeological "sensitive areas" in the Town based upon the results of past field investigations and research in nearby areas. Most prehistoric sites and many historic sites as well, are located near water, since water was a necessary resource and the focus of many activities. The Missisquoi River and its tributaries, and the Pike River are considered especially sensitive. It is important to note, however, that sites once located on waterways now often lie up to a 1000 feet away from present day watercourses because the location and shape of river channels have changed over time.

It is difficult to predict the location of these sites but once found they should be protected since they constitute essential links to the recent and distant past. Any activity within sensitive areas should be carefully monitored; and finds or artifacts uncovered in the course of development anywhere within the Town should be immediately reported to the State Archaeologist so that their location can be recorded and a determination can be made regarding their significance.

## GOALS AND POLICIES: THE SENSE OF PLACE

- GOAL 1:** To protect in good quality the abundant natural and historic resources in Berkshire.
- GOAL 2:** To support the continuation of agriculture and forestry, which contribute to the rural character and sense of place in Berkshire.
- GOAL 3:** To protect the citizens, property and economy of Berkshire and the quality of their rivers as natural and recreational resources by using sound planning practices within designated Flood Hazard Areas and river corridors.

### Policies:

- 1) Local climatic and weather conditions, and impacts on local air quality, should be considered in planning for suitable use of the land.
- 2) Regional, state, national, and international efforts to improve and protect environmental quality shall be supported at the local level.
- 3) Development shall be sited to avoid significant geologic features, and to permit future extraction of economically viable sand and gravel deposits.
- 4) New residential and commercial development in Berkshire is encouraged to implement stormwater mitigation strategies, otherwise known as Low Impact Development.
- 5) Intensive land development, including structures, shall be discouraged on slopes greater than 25% and as much vegetative cover as possible shall be maintained.
- 6) To maintain or improve the quality of land through the consideration of soil characteristics in determining its capability for development.
- 7) Development within agricultural and forested areas shall be discouraged on primary agricultural or forestry soils.
- 8) Any development activity that degrades surface and/or ground water quality shall be discouraged.
- 9) Streams, rivers, ponds, and wetlands shall be maintained in their natural

state, and be protected from pollution through appropriate health and land use regulations. Local regulations shall provide buffer areas to maintain the environmental, recreational, and scenic value of water courses, water bodies, and shorelines.

- 10) Development within close proximity of streams and rivers shall be compatible with the natural beauty of the area, shall protect existing vegetation, shall be set back sufficiently to prevent erosion along stream-banks or pollution from subsurface sewage disposal systems, and where possible shall retain visual and physical access to the water bodies.
- 11) Development shall be carefully sited in areas with a depth to ground water of two feet or less, or in ground water Source Protection Areas.
- 12) Fragile and sensitive resources, and endangered species, including but not limited to critical habitat, wetlands, and significant natural communities, shall be protected from adverse impacts.
- 13) Forestry and agricultural operations should be conducted in accordance with the Acceptable Management Practices and Required Agricultural Practices for maintaining water quality and to comply with the Vermont Water Quality Standards.
- 14) Prohibit land development resulting in the loss of wetland storage capacity or additions to the marsh areas of any substances which are likely to increase the concentration of materials beyond the assimilative capacities.
- 15) The public acquisition of land, development rights, or conservation easements shall be considered where appropriate to ensure long-term protection of particularly important critical areas and maintain open space.
- 16) Encourage the protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion.
- 17) Utilize River Corridors as defined by VT DEC to discourage future development in high risk areas for flooding or erosion hazards.
- 18) Maintain standards higher than the NFIP minimum for land development in the Special Flood Hazard Area and restrict uses to agriculture, recreational and open space in order to increase public safety and reduce future damages.
- 19) Incorporate mitigation measures when developing improvements or



expansion to municipal infrastructure.

- 20) Promote emergency planning for flood response.
- 21) Maintain the identified historic, cultural, and scenic resources, including the historic sites, landscape features, and archaeological sensitive areas.
- 22) Development, which would adversely affect historical resources, including destruction or alteration, isolation from or alteration of immediate surroundings, or the introduction of disharmonious visual, audible, or atmospheric elements, shall be discouraged.
- 23) Rehabilitation of significant historic sites and structures shall be encouraged; and adaptive use of historic structures shall be emphasized whenever it is economically feasible.
- 24) Public uses and/or ownership shall be sought to preserve historic sites and structures that are particularly significant to the community.
- 25) Promote the Current Use Program to better manage and conserve agricultural lands.
- 26) Conduct an inventory of forestland, natural resource features and existing development to aid in the evaluation of the current land use district's effectiveness in meeting the Town's goals.
- 27) Coordinate the preservation of forestland, agricultural land, and open space throughout the Town to create connected corridors of undeveloped land.

## A PLACE FOR A HOME



“East Franklin/Berkshire Townline” Photo By Arnold Byam

### A) EXISTING HOUSING STOCK

Housing in Berkshire is a mix of isolated, rural residences and farms and small, clustered settlements in the hamlets of West Berkshire, Berkshire Center, and East Berkshire. As of the 2017 American Community Survey, there were 651 total housing units, including 96 rented units, and an estimated 88 mobile homes. From 2000 to 2010 there was a 21.9% increase in year-round units, a rate that is similar with the surrounding communities and continues to slowly rise (Table 5.2). There are also 34 seasonal units, which comprise 5.2% of the total housing stock. The number of seasonal units decreased 53.3% from 2000 to 2010. Based on census data, Berkshire has fewer seasonal housing units than its neighboring communities, while Franklin and Montgomery, with high seasonal

A **housing unit** is defined as a house, apartment, mobile home or trailer, group of rooms or single room occupied as separate living quarters. Or if vacant, intended for occupancy as separate living quarters.

percentages due to Lake Carmi and Jay Peak, have fewer year-round units. The Planning Commission noted that the census data is under representing the number of seasonal dwellings and may not be taking into account all the hunting and summer camps in Town (Table 5.1).

**Table 5.1. Housing Units**

	1990		2000		2010		2017	
	Year Round	Seasonal	Year Round	Seasonal	Year Round	Seasonal	Year Round	Seasonal
Berkshire	439	35	520	30	634	14	596	34
Franklin	381	296	445	291	571	297	564	397
Enosburgh	1059	56	1,085	64	1209	62	1,128	85
Richford	901	67	965	52	1009	64	974	79
Montgomery	375	181	441	225	558	233	403	263
Franklin Co.	15,181	2,069	17,251	1,949	19,548	2,040	18,649	2,479

Source: Decennial U.S. Census 1990, 2000, 2010; U.S. American Community Survey 2013-2017

**Table 5.2. Change in Housing Units**

	% Change Year Round (90-00)	% Change Seasonal (90-00)	% Change Year Round (00-10)	% Change Seasonal (00-10)
Berkshire	18.5	-14.3	21.9	-53.3
Franklin	16.8	-1.7	28.3	2.1
Enosburgh	2.5	14.3	11.4	-3.1
Richford	7.1	-22.4	4.6	23.1
Montgomery	17.6	24.3	26.5	3.6
Franklin Co.	13.6	-5.8	13.3	4.7

Source: Decennial U.S. Census 1990, 2000, 2010

According to the U.S. Census, much of the growth in Berkshire’s housing stock has occurred recently, beginning between 1970 and 1980 when the housing stock increased by 42%.

**B) HOUSING PROJECTIONS**

Berkshire is expected to grow as a bedroom community to supply housing to workers in adjoining and nearby towns. Based on existing household sizes (roughly 2.87 persons per year-round housing unit according to the 2010 U.S. Census) and current population projections, Berkshire should need at least 104 new year-round housing units by 2030 to house the projected population.

The number of building permits in recent years has increased, but remained below pre-recession levels. From 2000-2007 Berkshire passed an average of 16 building permits for new housing per year. From 2008-2013 this number fell to an average of 4 new building permits per year. From 2013-2018, there was an average of 6 new building permits passed per year.

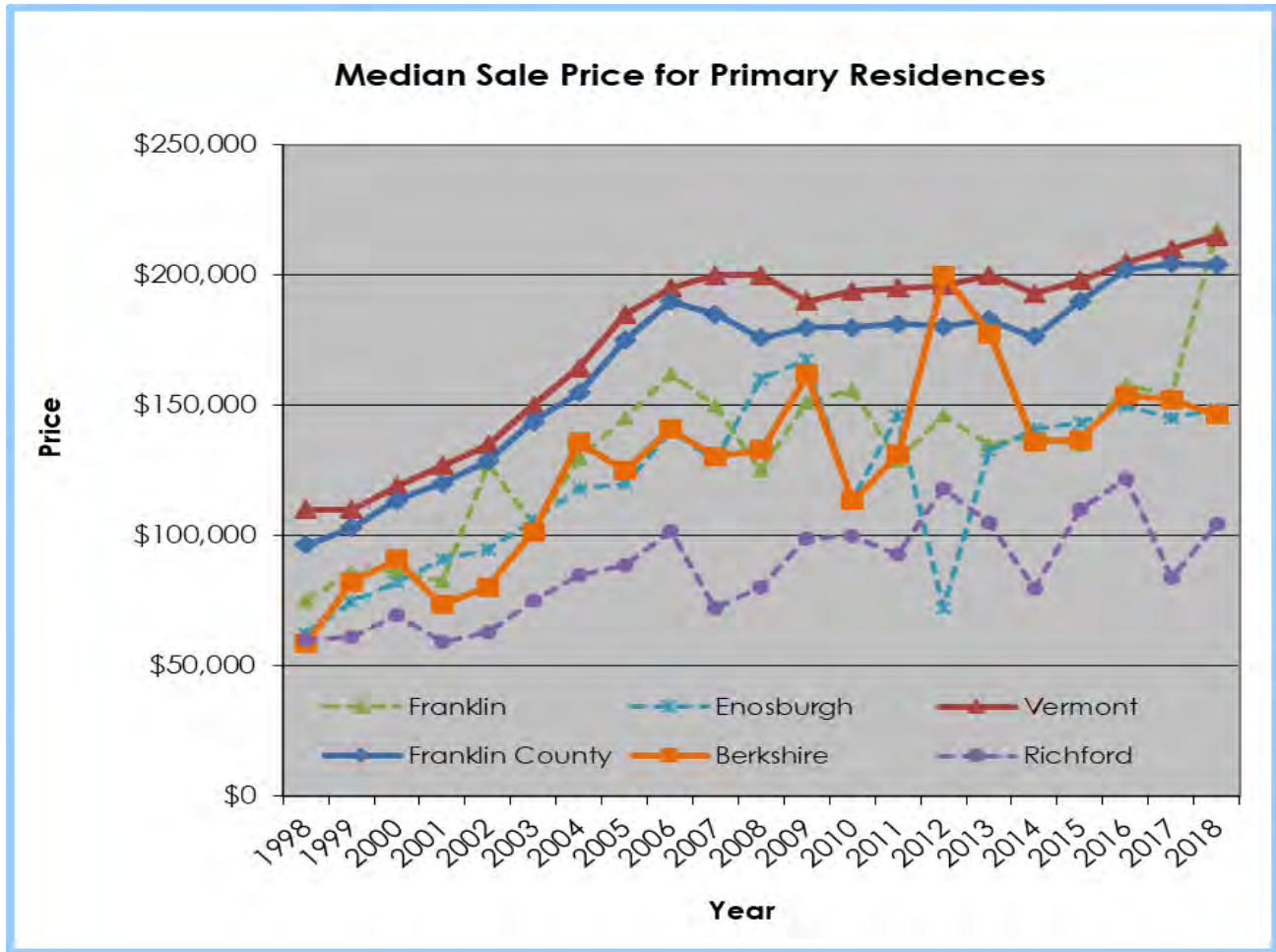
### **C) HOUSING CONDITIONS**

The condition of the Town's housing stock varies greatly, from older, decaying homes to brand new structures. Many of the older houses in Town are well built and provide relatively safe housing; a number have been restored to good condition. According to the 2013-2017 American Community Survey, 33.8% of all housing units in Berkshire were built before 1939. Another period of growth was from 1970-1999, when 37.8% of the housing stock was built. The condition of a home is directly related to the availability of funds to restore and maintain it. The Town should consider setting up a housing rehabilitation program, funded with state assistance (e.g., Vermont Community Development Program, or the Champlain Housing Trust Revolving Loan Fund), to improve the existing housing stock, particularly for lower and moderate income residents. Such programs have been successful in other communities in the state.

### **D) HOUSING COSTS AND AFFORDABILITY**

According to property transfer records, the median sale price of a primary residence from 2015-2018 was between \$137,000 and \$154,000. The number of housing units sold each year has also increased from an average of 7.4 units from 2009-2013 to an average of 15.6 units from 2014-2018. In general, average median sale prices seem to be rising over the last 20 years, however because of the small number of primary residences sold each year, year to year fluctuations in median sale price are most likely not meaningful (Figure 5.1). Housing sale prices in communities around St. Albans and within and around Chittenden County are much higher than those in Berkshire and the adjacent municipalities. The housing market began to level off statewide in 2006 and 2007, and even more so when a recession hit in 2008. The housing market is expected to remain stable in Vermont.

Figure 5.1



Safe, adequate housing is inarguably one of our most basic needs. It is important to ensure that adequate housing is not the luxury of a select few. Instead, a variety of housing types (in equally various price ranges) needs to be promoted to foster a diverse community, which is not economically exclusive. Housing which is affordable for first-time buyers, senior citizens (often on fixed incomes), and lower income residents is especially important in this regard.

To define affordable housing, the state has determined that households earning 80% of the median household income should pay no more than 30% of their income on housing. This definition is used as an indicator for the availability of affordable housing in a community. Homeownership housing costs include not only the mortgage, but taxes and insurance. In the case of rental units, the cost is defined as rent plus utilities. According to the 2013-2017 American Community Survey, the median household income in the town of Berkshire was \$53,182. Low income households are those in which income is less than 80% of the median or \$42,546. In excess of 35% of the households are considered “low-income” in Berkshire (Table 5.3).

Income	% of Households
Less than \$34,999	26.2
\$35,000 to \$49,999	16.1
\$50,000 to \$99,999	34.0
\$100,00+	20.6

Source: U.S. Census American Community Survey 2013-2017

Using the state definition of affordable housing outlined above, Table 5.4 and 5.5 illustrate maximum affordable mortgages and rents in Berkshire with the median sale price for a primary residence and median rent based on spending no more than 30% of household income on housing. By comparing the available income for homeownership for the median income and 80% of the median income to the median sale price for primary dwellings, you can identify if there is an affordability gap for residents. This analysis computed for 2017 indicates that housing is

Percent of HH Median Income	County Median HH Income	30% of Income Per Month	Taxes & Insurance	Income Available for Housing per Month	Maximum Affordable Mortgage	Median Sale Price Primary Residences (2017)	Owner Affordability Gap
Median (100%)	\$62,214	\$1,555	\$414	\$1,141	\$226,103	\$204,500	\$21,603
Low (80%)	\$49,771	\$1,244	\$414	\$830	\$164,480	\$204,500	(\$40,020)
Very Low (50%)	\$31,107	\$778	\$414	\$364	\$72,044	\$204,500	(\$132,456)
Very Low (30%)	\$18,664	\$467	\$414	\$53	\$10,421	\$204,500	(\$194,079)

Data Source: Median Household Income (U.S. Census 2013-2017 ACS); Median Home Sale Price in Franklin County (Vermont Housing Data 2017); taxes and insurance (NRPC estimate); all other figures computed by NRPC (30-year mortgage and 4.5% interest rate).

affordable for those earning the median county income but for homeownership it is not affordable for lower earning households. Renters falling in the “low” income category are still able to find an affordable unit.

	Income Available for Housing per Month	Median Gross Rent	Rental Affordability Gap*
Median County HH Income (100%)	\$1,555	1,157.00	398.35
Low HH (80%)	\$1,244	1,157.00	87.28
Very Low (50%)	\$778	1,157.00	(379.33)
Data Source: Median Household Income and median gross rent (U.S. Census 2013-2017 ACS)			
*Note this does not include cost of utilities.			

There are no dedicated low-income or senior housing units within the Town of Berkshire. However, the adjacent communities of Richford and Enosburg Falls have several subsidized low-income and senior housing units. These communities are better suited for low-income and senior housing developments because of their proximity to services and walkable village centers. The Town should concentrate on providing

affordable housing opportunities to meet local community needs. Such efforts could include the housing rehabilitation program mentioned earlier, providing for some higher density and multiple housing unit development within the Town, and also participation in a local or regional community land trust, a cooperative effort between public and private interests. Funds, subsidies, or loan guarantees available through such programs as the USDA Rural Development, the Vermont Housing Finance Agency (VHFA), the state's Housing and Conservation Trust Fund (HCTF) and Community Development Block Grants (CDBG), are also intended to assist individuals and communities in meeting their affordable housing needs.

## GOALS AND POLICIES: A PLACE FOR A HOME

**GOAL 1:** To provide safe and affordable housing for all segments of the population.

**Policies:**

- 1) There should be a diversity of housing types and a choice between renting and ownership to meet the needs and preferences of Berkshire residents.
- 2) All primary housing, including both new construction and existing buildings, should be safe, sanitary, and energy efficient. All households should have a sufficient, safe water supply and means of sewage disposal.
- 3) All new residential construction should be designed and phased so as not to overburden local services and facilities, or negatively impact important natural resources, including primary agricultural land.
- 4) Where possible, the existing housing stock should be kept as housing and not be converted to other uses. The rehabilitation of existing housing units, particularly for the provision of affordable housing, should be encouraged.
- 5) Alternative housing finance arrangements and new ways of providing affordable housing should be supported.
- 6) Second or seasonal home development should be carefully evaluated to determine the potential for conversion to year-round housing, to evaluate associated impacts on municipal facilities and services, and housing affordability for permanent residents of the Town.



## EARNING A LIVING



Photo Credit: Diane McGarry

### A) BRINGING HOME THE PAYCHECK

Historically, the presence of deep, fertile soils and the lack of major topographic limitations have encouraged the agrarian trades (farming, forestry, and sugaring) in Berkshire. In the past, farming has provided a livelihood for many of the Town's residents; however, this employment sector has decreased in recent years. In 1980, 30% of workers were employed in agricultural jobs, while in 2017 only 7% worked in agricultural jobs. It is important to note that many in this industry sector are self-employed and therefore may be underrepresented by the census and state reporting. Other types of employment opportunities in Berkshire include manufacturing, retail trade, educational services, health services, and public administration.

Seventy percent of Berkshire's available workforce is classified as private wage and salaried workers, the largest category, and roughly 15% were self-employed. Most of the remaining worked at some level of government, from local to federal.

There has also been a shift in where people will travel for employment. In 2000, 82% of the employed population in Berkshire worked within the County and only 14% were commuting to Chittenden County for jobs (Table 6.1). According to 2017 Longitudinal Employment and Household Dynamics data, which reports worker location from unemployment insurance coverage by the employer, 62.0% of the employed population in Berkshire worked within Franklin County, while 19.8% worked within Chittenden County. Within the County, Enosburgh Town and Enosburgh Falls attracted the greatest number of Berkshire workers at 13.4%, while St. Albans City, St. Albans Town, Richford, and Swanton followed with 11.2, 10.6, 4.8, and 4.4% respectively.

Outside the County, Chittenden County draws 19.8% of Berkshire workers, with South Burlington, Colchester, Williston, and Essex pulling in 4.2, 3.4, 3.3, and 3.1% respectively. Compared to 2011, when 40% of the employed population commuted to Chittenden County, this suggests that more Berkshire residents are working within Franklin County.

**Table 6.1. Employment Destinations for Berkshire Residents**

	2000	2011	2017
Franklin County	82%	51%	62.0%
Chittenden County	14%	40%	19.8%

Source: U.S. Census 2000, Longitudinal Employment and Household Dynamics 2011 & 2017

**B) BUSINESS IN BERKSHIRE**

There are several types of industry (as defined by the VT Department of Labor) located within the Town of Berkshire. These industries employ a percentage of the Berkshire workforce, in addition to some workers in neighboring communities who commute to Berkshire. The Vermont Department of Labor reports that, as of 2018, there are 11 establishments or employers located in the Town, including construction, retail, and transportation industries (Figure 6.1). The number and type of industries located within the Town has not changed significantly over the last ten years but the number of jobs has increased over time.



Left: Aires-Hill Farm, Right: The Bed & Biscuit & Dirty Dogz Grooming

Figure 6.1



**Home Based Businesses**

Home based businesses are a major component of the local economy. Home businesses, or home occupations, are especially common in rural towns like Berkshire where many people work from their homes, either as a primary or supplemental source of income. The advent of telecommuting, home offices, and flexible job scheduling has made working from home even more prevalent. Improving access to high-speed internet and cell service will increase the viability of home based businesses.

**Agriculture**

The Town of Berkshire remains an important agricultural community in Franklin County despite a decline in farming as a source of employment over the last few decades. The total number of active farms in the Town has declined over the years, in part due to the federal government's five-year "Whole Herd Buy-out Program" that began in 1985, the discontinuation of the Northeast Dairy Compact in 2001, and the volatility of the price of milk. However, there are still 55 parcels of land used for farming totaling 12,472 acres remaining in Berkshire (2017 Grand List). These figures have both decreased significantly from 2000-2010, however the number of parcels has decreased much more significantly than the number of acres of farmland due to the



Top: Tractor at Pleasant Valley Farms (Photo Credit: Meg St. Pierre), Bottom: Lantz Vines at Sherwood Acres"

consolidation of farms. Since 2010 both the number of parcels and the number of acres have stabilized. National and international economic pressures affecting the price of milk and the viability of smaller farms continue to make farming increasingly difficult on Berkshire farms. As of 2020, Berkshire has 41 maple sugarbush operations with a total of 2,300 tapped acres. Most sugarbushes in Berkshire are small, with an average size of 56 acres, while the largest sugarbush is 360 acres. Other agricultural enterprises in the area include maple sugaring, beef production, goat farms, vegetable production, a vineyard, hemp production, beekeeping, and cheese making.

### ***Manufacturing and Service Industries***

The settlements of Berkshire, East Berkshire, and West Berkshire provide a minimum of goods and services, primarily gas and food. Based on local knowledge, commerce in the town consists of several beauty salons, a convenience store, a gas station, a snack bar, several auto-repair shops, a maple specialty shop, a dog kennel, a fuel oil distributor, a yoga and retreat center, an antiques store, and a real estate office. Additionally, there is a woodworking business as well as a plumbing and heating contractor and a saw mill. Town residents travel to the larger commercial centers of Enosburg Falls, Richford Village, St. Albans, and in some cases Burlington, for shopping and professional services.

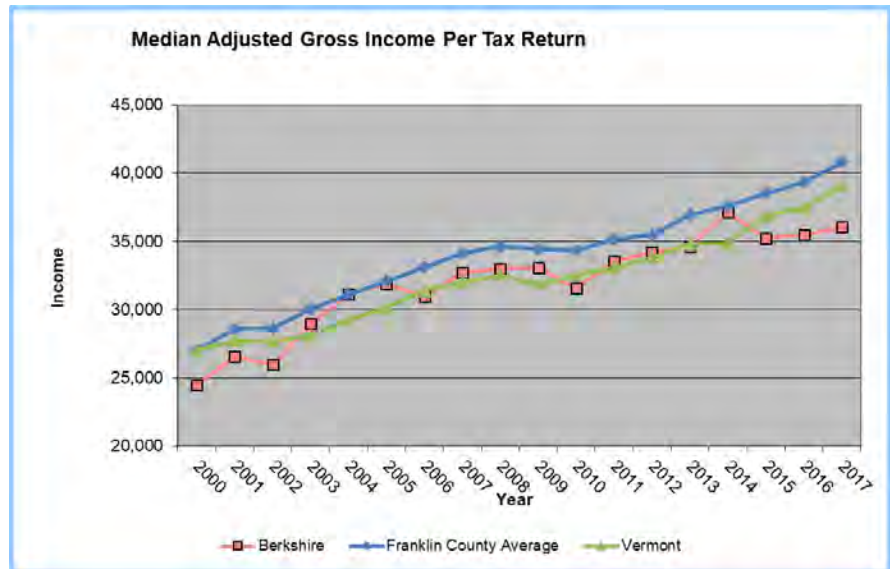


Top: Bates Family Maple, Middle: Tremblay Log Yard, Bottom: Lussier's Sawmill

### C) INCOME AND WAGES

Between 2000 and 2017, the median adjusted gross income (AGI) of Berkshire residents showed a 47% increase, from \$24,462 to \$36,077. The average annual increase during this time was approximately 2.4%. While the median AGI in Berkshire has risen over time it is farther from the Franklin County average than it was in 2000 (Figure 6.2).

Figure 6.2



Median adjusted gross income is an average based on individual tax returns and is therefore lower than household income reported by the U.S. Census (which may include more than one tax return). The 2017 median household income in Berkshire was \$53,182. This is below the median for the County and the State (\$62,214 and \$57,808 respectively).

**Table 6.2 Percent of individuals whose income in past 12 months was below poverty level.**

	1990	2000	2017
Berkshire	11.4%	13.6%	8.3%
Franklin County	-	9.0%	8.0%
Vermont	-	9.4%	11.40%

U.S. Census 1990, 2000, American Community Survey 2008-2012.

The 2017 U.S. Census American Community Survey indicates that the percent of individuals living below the poverty level has decreased since 2000 (Table 6.2). The

poverty level in Berkshire is currently lower than that of the State and about the same as that of the County.

### D) EDUCATION AND TRAINING

Many factors influence the attractiveness of a community to an employer looking to relocate, including education levels. It is important for a community to promote good access to education and training that lead to higher paying jobs. Locally, post-secondary and continuing educational programs are available through the Community College of Vermont (CCV) in St Albans, Northern

Vermont University- Johnson Campus in Johnson, and several colleges and universities in the Burlington area, including the University of Vermont. Vocational training is available through area high schools and the Cold Hollow Career Center. Other vocational training opportunities are provided through such publicly sponsored programs as Vermont Job Start and through private on-the-job training programs.

The 2017 Census indicated that of the population 25 years and older, 49% of Berkshire's residents held only a high school diploma. This is just above the County figure (37.3%) and that for the State (29.6%). The percentage of Berkshire residents with a bachelor's degree or higher was 14.4%, while Franklin County was 24.7%, and the State was 36.8%.

## **E) FUTURE ECONOMIC DEVELOPMENT**

Continued economic health for the Town of Berkshire lies in the maintenance of a viable agricultural industry, principally dairying, supplemented by other forms of agricultural activity and the provision of goods and services that support an agrarian economy. The Town should encourage any efforts that support its agricultural base, including the protection of primary agricultural soils and farmers' rights to farm; support of tax abatement programs, such as the Use Value Appraisal Program; and the possible diversification of agriculture, including the support of value-added enterprises.

At the same time, Berkshire residents are aware that agricultural employment has been in steady decline, and more people must commute elsewhere to work. Small commercial enterprises and light industry in appropriate locations would complement the agrarian economy if they were in keeping with the rural character of the Town and had no impact on the local environment.

The Town should encourage the development of home occupations, and small businesses in or near the existing Village centers. Berkshire should consider pursuing the VT Agency of Commerce and Community Development (ACCD) Village Center designations for the village centers of East Berkshire and West Berkshire to promote appropriate economic development in these areas. A Village Center designation would provide several benefits, including priority consideration for state grants and access to tax credits.

The Town recognizes that one particularly effective means to encourage the development of small businesses, while at the same time addressing residents expressed educational and environmental interests, is to continue to support high-speed (broadband) internet connectivity for residents and businesses in the Town. Broadband internet connections encourage and enable small and home-

based businesses, and enhance existing businesses in ways that current satellite connections cannot. To this end, the Town should move proactively to become involved with the various organizations working to bring internet connections to rural areas. This includes supporting and closely monitoring the statewide efforts to increase access to broadband connectivity.

Tourists, attracted by the beauty of Berkshire's agricultural landscape, may also play a greater role in the Town's economic future. Related development such as inns, bed and breakfasts, farmers markets, sugarhouses, vineyards, nurseries, craft shops, or eateries could add to the local economic base.

Berkshire at this time does not have the municipal services to support larger commercial enterprises and industry. It is anticipated that this type of development will be located in the nearby service areas of Richford and Enosburg Falls. For example, Richford has developed a small industrial park on Route 105 not far from the Berkshire town line that may provide employment opportunities for local residents.

## GOALS AND POLICIES: EARNING A LIVING

**GOAL 1:** Promote a balanced, diverse economic base, with a focus on locally owned enterprises.

**Policies:**

- 1) To encourage that agricultural and forest land be maintained for viable economic use, encourage value added business, promote locally grown products, and encourage the implementation of agricultural/forestry best management practices.
- 2) Diversification of the economic base, including the development of compatible businesses and light industry, and the promotion of home occupations should be encouraged.
- 3) Economic development should be pursued to provide maximum economic benefit with minimal environmental impact.
- 4) To promote opportunities for increased communications infrastructure, such as broadband internet access, cell phone service, DSL and the like while ensuring that infrastructure to develop these opportunities maintains the rural character and does not impact scenic resources.



## PROVIDING FOR THE PEOPLE



**Covid-19 Community Support from Pleasant Valley Farms**  
(Photo Credit: Meg St. Pierre)

### **A) MUNICIPAL GOVERNMENT**

The Berkshire Town Hall, built in 1899, is an important local landmark located in Berkshire Center. The Town Hall houses all municipal administrative and treasury services as well as being used for Selectboard meetings, community meetings, and voting. Berkshire employs a clerk, an assistant, auditors, zoning administrator and listers to take care of the daily administrative needs of the Town and maintain records. Until 2007, the Town Hall was not used for municipal offices. Its use was limited because the building's only heating source was a wood stove, it had no water service or fire protection systems, and was not ADA compliant. The town built a small office next to the Town Hall to serve as the municipal offices during this time; however, the Town quickly grew out of this space. In response, during 2005 and 2006, the Town Hall was restored with the use of funds from the Vermont Historic Preservation Program, the Vermont Community Development Program and a municipal bond. In 2007, the Town moved municipal offices back into the restored Town Hall and tore down the small office building. Space and facilities at the Town Hall are now more than adequate to serve the town for many years to come.



**Union Church, where the present Town Hall sits, from the 1890's (Photo Credit: Berkshire Historical Society).**



**Berkshire Town Hall Before Renovations (Photo credit: NRPC)**

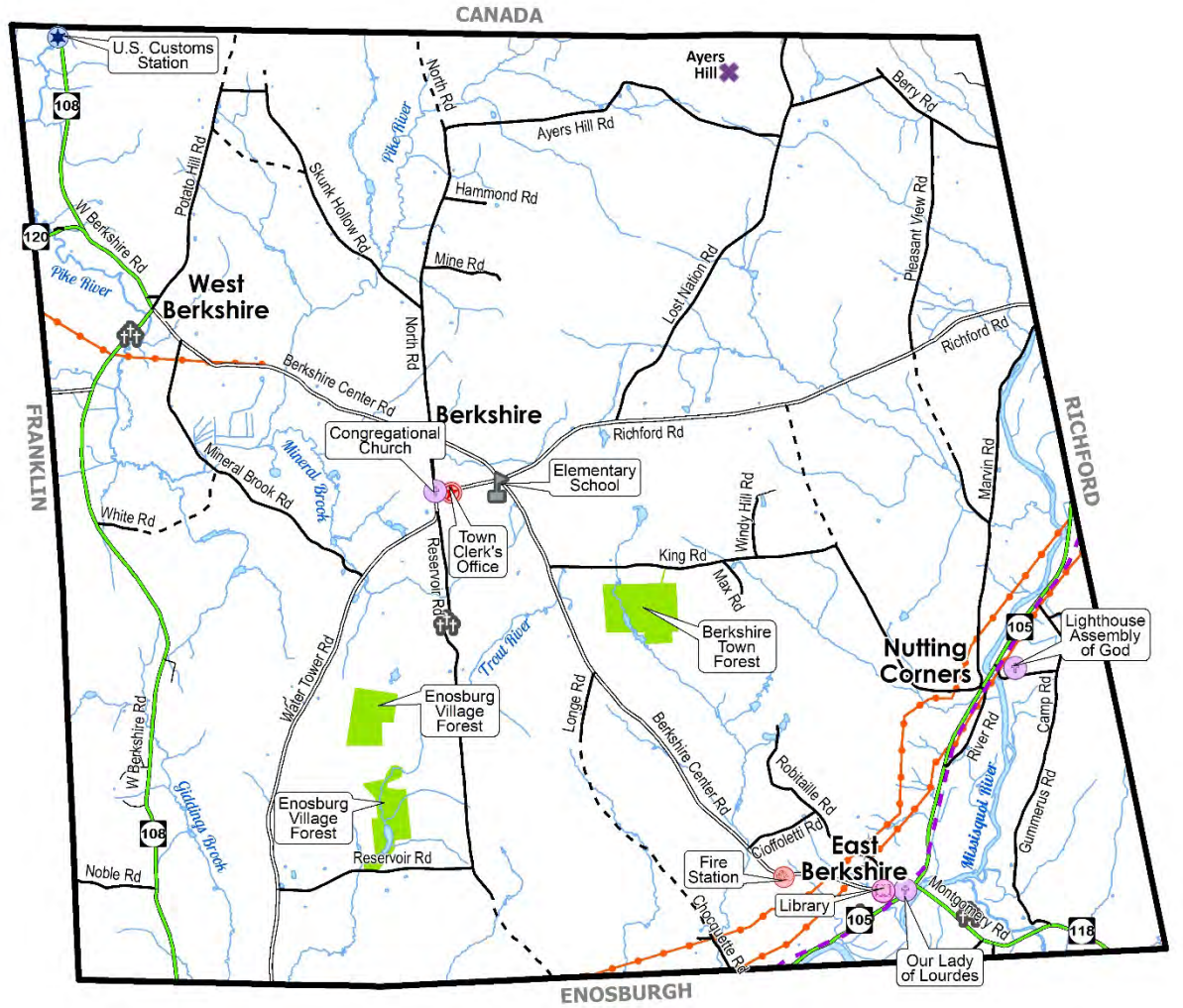
**Berkshire Town Hall during Preliminary Elections 2020 (Photo Credit: Shayna Sherwood)**



## **B) LIBRARY**

Berkshire currently has no public library. Residents are able to utilize libraries in the surrounding communities of Montgomery, Enosburgh, Franklin and Richford. From 1989 to 2017 Heather McKeown operated a state-recognized library out of her personal residence in East Berkshire. It had over 4,000 volumes but no set hours. Berkshire would support community opportunities to provide services akin to a Little Free Library or a public facility.

# PUBLIC FACILITIES & UTILITIES



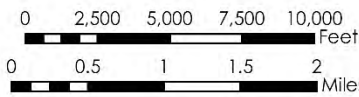
Vermont Coordinate System  
Transverse Mercator, NAD 83.  
For planning purposes only.

**Prepared by:**  
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February, 2020.

**Data Sources:** All map features  
derived from VGIS digital coverages.  
North arrow on map refers to Grid North.

**Location:** z:\gis\projects\county\  
franklin\berkshire\townplan2020

- Border Crossing
- Cemetery
- Church
- Fire Department
- Library
- Town Clerk
- School
- Summit



- LEGEND**
- State Highway
  - Class 2 Town Highway
  - Class 3 Town Highway
  - Class 4 Town Highway
  - Private Road
  - Missisquoi Valley Rail Trail
  - Electric Transmission Line
  - Town Boundary
  - Stream or Brook
  - Lake or Pond
  - Municipal Forest

Map 7.1

## C) EDUCATION

### *The School System*

The people of Berkshire have long enjoyed an effective school system. Students from Berkshire have historically performed well in high school, both in academics and in extra-curricular activities, and have gone on to be successful in their post-academic lives. Numerous reasons for such achievements include community support, teaching and staff quality, the intimacy of the school, and a sense of shared responsibility. In addition, there is commitment to set high goals and expectations among school personnel, parents, and community members.



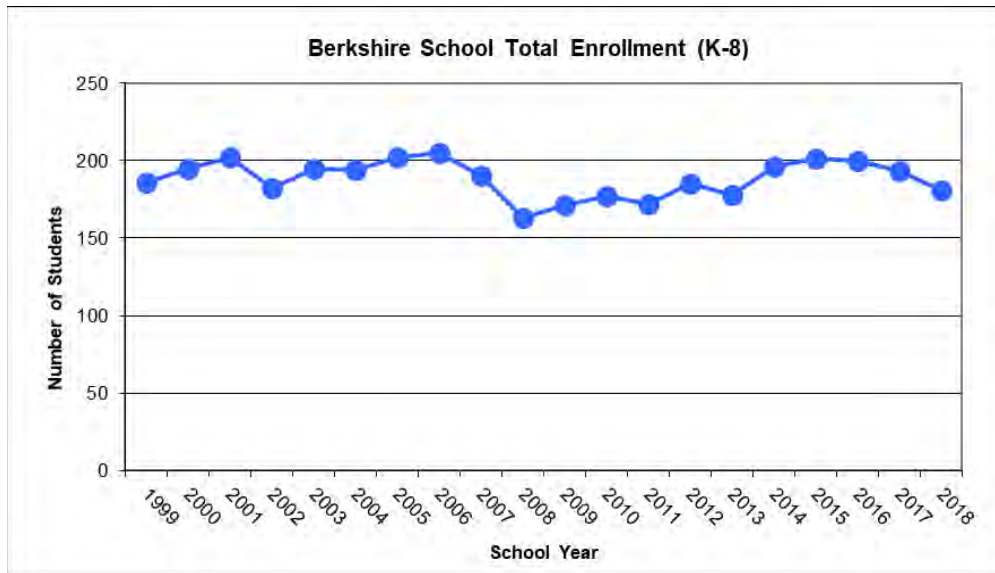
**Berkshire Elementary School**  
(Photo Credit: Tami Lantz)

Town residents consider the Berkshire Elementary School one of the community's most valuable assets. Built in 1969, the elementary school currently houses grades K-8 and as of the 2010-2011 school year, pre-K services are also available. In 2014 the school built a new gymnasium which then allowed the previous space to be converted into classrooms and other accommodations. Based on current enrollment levels, the school can readily handle the capacity of population. If larger class sizes (>30 students) become common across multiple grades then additional classroom space will be needed. School bus service is contracted. Berkshire secondary students are presently enrolled as tuition students primarily in the Richford and Enosburg Falls High Schools but may attend any high school through school choice.

### *Enrollment Trends and School Capacity*

As shown in Figure 7.1, enrollment at the Berkshire School has changed very little over the last 15 years. Enrollment during the 2018 school year was just 5 students less than in 1999. During approximately the same period (2000 to 2017), population is estimated to have increased by 323 people. This indicates that the population is aging and/or that families are having fewer children, as noted in Section II, which may lead to less growth in school enrollment. However, in recent years there have been some indication that new families are moving into Town, which may lead to growth in school enrollment. Fall registration for 2020 is holding strong at 208 students.

Figure 7.1



Other improvements at the school include providing computers and updating technology. There are now computers in every classroom with high-speed internet access. The purchase of updated equipment and training in its use has been supported by local and federal funding.

**Childcare**

Childcare can be a growing concern for existing and prospective families, including finding quality care and paying for its cost. High quality, available childcare is a critical component supporting a stable workforce. As of 2017 there were 135 children under the age of 6 in Berkshire; 45% of these children are in 2-parent families with both parents in the labor force and 29% are in a 1-parent family that is working (2013-2017 American Community Survey). Based on this data, the majority (74%) of young children have parents in the labor force and will likely need access to childcare services.

According to the Vermont Dept. of Children and Families in 2019, Berkshire has one registered childcare home and one licensed early childhood center at the school, currently serving 6 and 20 children respectively. Based on the 2017 estimate that there are 135 children under the age of 6 living in Berkshire, this exceeds local childcare capacity by a large margin. Additional at home childcare facilities are encouraged.

Given that the majority of residents commute outside Berkshire for employment, residents may utilize services located in the neighboring communities of

Enosburgh and Richford. Enosburgh has a total childcare capacity from registered home providers of 106 children and Richford has a total capacity for 39 children (Vermont Dept. of Children and Families, 2018). The 2013-2017 American Community Survey indicates that there are 107 and 160 children under the age of 6 with all parents in the household working in Enosburgh and Richford, respectively. If we combine the childcare capacities in Berkshire, Enosburgh, and Richford, there is an estimated 2.15 children under the age of 6 in need of childcare for every childcare spot. It should be noted that this estimate does not tie in the needs of children 6 and older who may need childcare. Data on other options, such as siblings, stay at home parents, family care providers, un-registered childcare homes or other opportunities, are not available.

## D) WATER SUPPLY

Most Berkshire residents and businesses get their water supply from on-site wells and springs. The community of East Berkshire is served the East Berkshire Fire District #1, which as of 2013 provided water to approximately 187 connections on the system. Users can include tenants in apartment buildings, private homes, and five businesses.

The existing source for this system from is a series of springs located in the Town of Enosburg that, through a common collection pipe, feed a concrete reservoir situated on a knoll southeast of the community at an elevation of 580 feet. The reservoir at the Treatment Plant has a capacity of 80,000 gallons.

In 2019, the East Berkshire Fire District received a grant and loan from USDA to upgrade the Treatment Plant. Additionally, the Fire District used USDA funds to install new transmission lines from the wells to the Treatment Plant, and new distribution lines from the Treatment Plant to customers in the Fire District.

This water supply system is surrounded by 50 acres of land around the springs owned by the First District to further protect the quality of the supply. This area is incorporated into the Source Protection Area for the public water supply (See Water Resources section). The Town of Enosburgh has agreed to a buffer zone around the spring to also protect the water quality.

The water system meets current demand except in times of prolonged drought. Any growth in the number of users of the Fire District will have to be accommodated through currently undiscovered water sources. The Fire District is planning to build a large, back-up water storage facility to serve as an emergency source of water in times of drought.

According to state ground water potential maps, the gravel deposits associated

with the recharge area between West Berkshire and Enosburg Falls hold the best possibility of yielding large volumes of water. Good ground water potential for a public water supply exists underneath the community of West Berkshire, and just west of Berkshire Center. Many local residents already draw from these areas. There is no ready need to develop these ground water areas for a public water system (a system that serves 10 or more users), but the Town should consider ground water protection measures to meet existing and future needs.

## **E) WASTE WATER TREATMENT**

Residents are served by private on-site sewage systems. There is no municipal sewage system in the town and no plan to develop one in the near future. Problems with failing septic systems and leach fields have been noted in East Berkshire on the west side of the Missisquoi River where in the past, poor soil conditions and closely spaced buildings have resulted in direct discharge from some individual systems into the river. In the late 1960's, it was recommended by a private consultant (Dubois & King) that the town consider installing approximately 4,600 feet of gravity sewer and a 10,000 gallon septic tank and leach field in East Berkshire, to be located just to the south of the community. The Town did not pursue this option due to the then high costs of the proposed facilities. It may be time to reconsider installing a community sewer system in East Berkshire in order to permit a limited amount of growth, including higher density, clustered residential, and commercial development near the existing population center.

The Town does recognize the need to ensure that septic systems are properly designed and installed to avoid septic system failure and water supply contamination. Individuals wanting to install a septic system, to work on their leach field, or to drill a well need to receive a Wastewater and Potable Water Supply Permit from the Vermont Department of Environmental Conservation (DEC). After July 1, 2007 new rules took effect which delegated the authority of permitting private on-site water supply and wastewater systems entirely to the State of Vermont rather than municipalities, unless a municipality applies for and is granted delegation. Berkshire has not sought delegation and therefore does not have authority to review or permit wastewater systems as was done prior to 2007. Any complaint or discovery of a failing septic system may be referred to the DEC by the local Health Officer.

## **F) SOLID WASTE DISPOSAL**

Berkshire has been a member of the Northwest Vermont Solid Waste Management District since its formation in January of 1988. The District has adopted a comprehensive Solid Waste Management Plan, which is in

compliance with the State Solid Waste Management Plan, and has been approved by ANR. The provisions of the District Plan, insofar as it is applicable to the Town of Berkshire, shall be considered the management plan component of the Town Plan. Residents must make their own arrangements with private haulers for trash and recycling pick-up or visit a nearby transfer station.

A Supervisor, appointed by the town's legislative body, represents each member town on the District Board. Berkshire does not currently have supervisor appointed by the Selectboard. Having a representative from Berkshire as part of future District activities is an asset for our Town and a new representative should be appointed.

Town residents are still concerned about the number of unregulated and inadequately located and maintained junkyards that have appeared around the Town in recent years. In response to this concern, the Planning Commission worked with the Selectboard to draft and adopt a Junkyard Ordinance. The ordinance will allow the town to successfully enforce junkyard violations and deter new accumulation of junk within the Town.

## **G) EMERGENCY AND MEDICAL SERVICE**

The Town of Berkshire maintains a volunteer fire department based north of East Berkshire. A three-bay station, built with federal revenue sharing funds, was completed in 1974. All dispatching is conducted out of central dispatch in St. Albans.

The Fire Department, made up about 10 to 20 volunteer members, answers an average of 30 calls per year, and participates in mutual aid agreements with neighboring communities. The Fire Department can usually meet the demand for service in town. However, more extensive services and equipment are available from Enosburg and Richford, if needed.

Law enforcement protection is provided by the State Police, barracked in St. Albans. It should also be noted that although no official contract exists with the Franklin County Sheriff's department, they will respond to a 911 call if they are in the area.

The Community Health Center in Enosburg Falls and the Richford Health Center provide care by general practitioners and pediatricians, as well as many other health-care services. Berkshire contributes funds to both Enosburgh and Richford to support ambulance services, which provide transportation to the nearest hospital, the Northwest Medical Center in St. Albans, 25 miles away. Other physicians, dentists, and optometrists maintain private practices in either of these



adjacent communities. Healthcare facilities are also considered adequate for the near future.

## H) COMMUNITY HEALTH

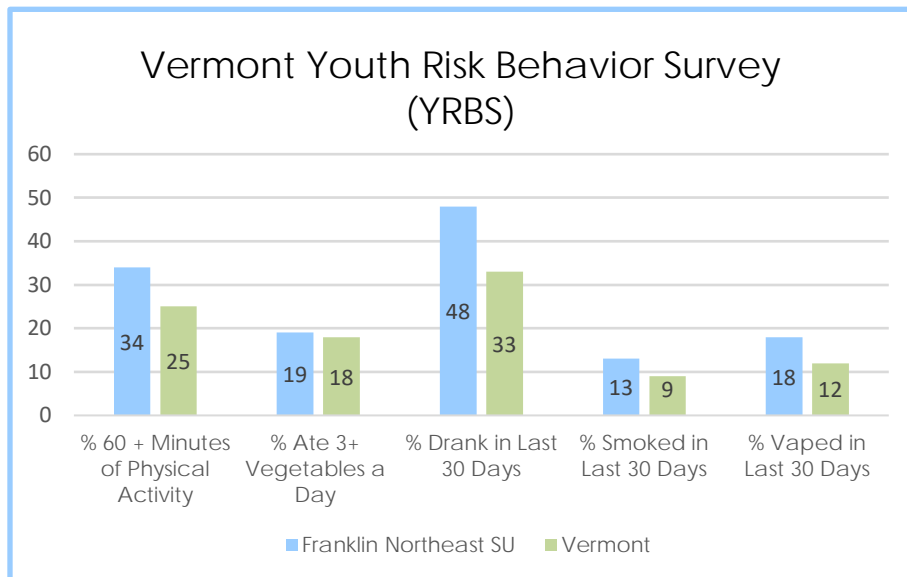
An individual’s health and wellbeing can be strongly influenced by where they live. Berkshire can support their residents’ ability to make healthy choices by influencing the way the community develops, including supporting recreation opportunities and access to healthy food. Healthy communities attract new residents and visitors, contributing to economic growth.

According to the Vermont Department of Health, 57% of all deaths in Franklin County are the result of three behaviors: no physical activity, poor diet, and tobacco use. The 2017 Youth Risk Behavior Survey (YRBS) provides insight into the health choice of high school students in the Franklin Northeast Supervisory Union. Only 34% of students exercised for 60 minutes or more each day and just 19% ate at least 3 vegetables a day. In terms of youth substance use, 48% of students reported drinking alcohol in the last 30 days, 13% reported smoking cigarettes in the last 30 days, and 18% reported vaping in the last 30 days.

Figure 7.2



Figure 7.3



Data Source: Vermont Youth Risk Behavior Survey, 2017

### ***Community Health Assets***

Berkshire has several important community health assets. In 2019, the Berkshire Elementary School received a Farm to School grant. As a result, nutrition and local food curriculum has been introduced in the classroom and the school has partnered with local farmers to include nutritious local food in school lunches. The school is also planning to plant an orchard on school property, further increasing access to healthy fruits.

Berkshire also has a wide variety of recreation opportunities including a walking path around Berkshire Elementary School and the Missisquoi Rail Trail. These recreation opportunities promote physical activity, contribute to a healthier community and attract visitors to Berkshire. For more information on recreation activities in Berkshire, see the Recreation section of the Plan.

There are several community health assets available to Berkshire residents in nearby towns. Richford has a local farmer's market from June to October. In addition, Berkshire residents can access various health services through the Northern Tier Center for Health (NOTCH) which has locations in both Enosburgh and Richford. The Town could explore various methods of ensuring residents are more aware of these types of resources, such as posting on a bulletin board in Berkshire or utilizing the Town website or social media profile to publish information.

### ***Barriers to Community Health***

While Berkshire has many community health assets, some barriers to physical activity and healthy food access remain. A recent Vermont Department of Health survey found that 13% of residents living in the St. Albans Health District, which includes Berkshire, rated their community as not safe for walking. This is the second highest rate in Vermont. Berkshire could consider traffic calming measures, supporting a Safe Routes to School program, and leading bike and pedestrian safety classes for Berkshire Elementary students as possible solutions to this issue.

Another barrier to physical activity is a lack of awareness of recreation opportunities in the Town. Neither the Missisquoi Rail Trail or the school woods path are clearly marked in Berkshire. The Town should consider partnering with the Recreation Committee to develop wayfinding signage for these sites.

Finally, a barrier community health is the lack of local healthy food access within the town. One source of local healthy produce are local farm stands. The Town should ensure that Town regulations support local farm stands. The Town should also provide healthy food options at Town events where food is served.

## I) RECREATION

Community recreation facilities in Berkshire include the playground and playing fields at the Berkshire Elementary School in Berkshire Center. The original facilities, funded through revenue sharing, were constructed in 1982, at a cost of \$18,000 to the Town.

Currently the facilities consist of a soccer field, a basketball court, a baseball field with dugouts, a backstop, bleachers, and a little league outfield fence, a batting cage, a play structure for climbing and sliding, a sand volleyball court, free standing swings, slides, and spring-based "animals", a climbing dome, a gazebo, a concession stand/storage building, and an equipment shed. Berkshire residents also have access to a woods walking trail located on school property. Additionally, the school district is currently fundraising to add a play structure for preschoolers. Facilities are open to the public when school is not in session, use of the equipment shed and concession stand require advance permission from the school.



Little League Game (Photo by Loren Doe)



Little League Team (Photo by Loren Doe)

### Recreation Committee

The Berkshire Recreation Committee is a volunteer group of Berkshire citizens who work to improve recreational programs and facilities for the Berkshire community.

The Recreation Committee raises revenue from annual fundraising and has received an annual appropriation of \$2,000 from the General fund since FY2008.

Funds raised and appropriated have been used to make many improvements to the playground and ball fields located near the school as well as aid in maintaining these facilities.

The work of the Recreation Committee continues to be completed, in large part, by a committed group of volunteer parents and citizens who value access to wholesome activities for skill building, physical fitness and just for fun. Many people, both committee members and others willing to help, have given freely of their time to help with these projects. Others have made significant monetary donations. The Town should work with the Recreation Committee to plan for future recreation activities and to promote existing opportunities.

### ***Trails and Other Recreation Opportunities***

Besides a cross-country ski trail system in the woods on school property, Berkshire residents have easy access to the Missisquoi Valley Rail Trail, an all-season recreational path along the former railroad right-of-way. The trail, which passes through East Berkshire north of the intersection of Routes 118 and 105, begins in St. Albans and links up with Canadian bike paths at the border in Richford. The Town also owns a 100-acre parcel of forested land, the Berkshire Town Forest, which could be developed for recreational and educational use. Town residents voted in late 2004 to retain this land in municipal ownership.

The Missisquoi Bearcat Snowmobile Club includes the towns of Richford, Enosburgh and Berkshire. In 2009, the club was responsible for maintaining 54.5 miles of trails that run through Berkshire and Richford. The three trails that occur in the Town of Berkshire are known as: VAST Rte 139, VAST Rte 7, and VAST Rte 7A.

VAST Rte 139 begins in Richford at a trail junction located on Hurtubise Island in the center of Richford Village. The trail runs north to the Canadian border and crosses Lost Nation Road, Berry Road, Mine Road, Hammond Road, Vt. Rte 118 in Berkshire Center, Water Tower Road, Reservoir Road, the Old Stagecoach Road, and joins VAST Rte 7A behind the Stanhope Farm on Water Tower Road. The Missisquoi Valley Rail Trail is also known as VAST 7.



**Birch Stand (Photo by Jere Levin)**

Funding for the building and maintenance of trails is provided by the Vermont Association of Snow Travelers (VAST) through local clubs. VAST is the statewide organization to which all of the local clubs belong. The Missisquoi Bearcat club maintains the section of VAST Rte 7 that travels through Richford and Berkshire.

VAST Rte 7A in Berkshire runs roughly from North Sheldon to the Rail Trail behind the Dairy Center.

With the exception of the Missisquoi Valley Rail Trail, the VAST trails in the Berkshire area exist thanks to the local landowners who grant permission to build trails and travel over the land only during snowmobile season. The snowmobile season runs from the third Monday in December to the middle of April each year. Each individual landowner agrees separately with the snowmobile club to build and maintain trails. The trails are then considered part of the Statewide Snowmobile Trail System (SSTS).

The Northern Forest Canoe Trail (NFCT) also provides a unique recreational opportunity in the region. The Trail connects lakes, rivers and streams from Canada into New England and New York State. The NFCT brings a variety of paddlers into the region. Supporting the recreation and tourism industries along the route is part of the mission of the NFCT.



Although traditionally much of the privately owned land in Berkshire has been open to local residents for hunting and fishing, the last decade has seen an increase in the posting of private land not only in Berkshire, but also statewide. New development should be designed to ensure continued public access to outdoor recreational opportunities in the Town.

Other organized recreational facilities, including golf courses, tennis courts, cross-country touring centers, and alpine ski resorts, are located in neighboring towns, and it is likely that more of these facilities will be developed in the future. Private facilities provide recreational opportunities for those who can afford it; they also serve to attract tourists and seasonal or second home development. The Town of Berkshire supports maintaining and enhancing recreational opportunities for Vermont residents and visitors.

## J) TRANSPORTATION

### Introduction

Berkshire residents, as most residents of rural towns, depend greatly on privately owned motor vehicles and the local road network to get around. Berkshire has a total of 63.8 miles of traveled roads within the Town, including 12.6 miles of state highway, and 51.2 miles of Town highway (Class II and Class III) (Table 6.1). There are also 9.2 miles of Class IV roads, including pent roads, within the Town.

State highways serve as connector routes to other towns and carry through traffic as well as local traffic. These highways are numbered, repaired, and maintained by the state. There are no Class I roads, which form extensions of state highway routes, in Berkshire. The Town receives state aid to assist in the maintenance of Class II and III roads, which must be negotiated on an annual basis. Class II roads are the most important town roads, and are intended to carry heavier traffic loads in and between towns. Class III roads serve more limited commuter traffic. All other roads in the Town are designated as Class IV roads, and are not required to be maintained year-round, as decided by the Selectboard.

<b>Table 7.1 Mileage Summary</b>	
<b>Town Highways:</b>	
Class I	0.00
Class II	15.65
Class III	35.56
Class IV	9.23
Trails	~7.44
Total	67.87
<b>State Highways:</b>	
Route 105	3.700
Route 108	6.905
Route 118	1.565
Route 120	0.389
Total	12.559
<b>Total Traveled Mileage (less Class IV &amp; trails):</b>	63.769
<b>Total Road Mileage:</b>	80.48
Source: Vermont Agency of Transportation, 2015	

### Condition of Roads and Bridges

The condition of paving along state highways in the community varies from poor to good. Road conditions on Rte 108 are poor in some sections, but it is not currently scheduled for rehabilitation. Rte 105 is in good condition in Berkshire, and there is no data on the condition of Rte 118. In terms of the state and town highway bridges Bridge No. 30, which crosses the Missisquoi River in East Berkshire and is considered a regional priority, was reconstructed in 2011 to repair the bridge and railings. A number of high priority culvert projects are identified in the Town’s Local Hazard Mitigation Plan.

There is concern over the increase in the amount of traffic on local roads in recent years, particularly with regard to heavy truck traffic near East Berkshire and weekend traffic on Richford Road and Berkshire Center Road (Town Highways 3 and 5), which serve through traffic between Canada and the Jay Peak ski area.

Road surface conditions are generally good, however some of the paved roads in Town are considered too narrow to safely carry both vehicular and bike traffic, which has also increased in the past few years. Speeding and the lack of directional and stop signs at major intersections also have been identified as problems.

In 2017 the average daily traffic count (AADT) on West Berkshire Road (from the intersection with VT 108 to the intersection with Water Tower Road) was 960. Richford Road had an AADT of 1000 and Berkshire Center Road (from the intersection with VT105 to the intersection with Richford Road) has an AADT of 720 (Table 7.2). The traffic numbers have increase since 2011 on all roads.

The town will continue to apply for federal and state highway grants to upgrade town highways and bridges as needed.

	2011	2014	2017
West Berkshire Road	840	890	960
Berkshire Center Road	630	630	720
Richford Road	820	820	1000
Data Source: Vermont Agency of Transportation 2017			

Regular maintenance continues to remain a priority.

**Class 4 Roads**

The Town of Berkshire, like many other towns, has a number of Class IV roads that are very infrequently traveled. In most instances, these roads served past economic industries that are no longer active. As a result, the roads have deteriorated or been blocked off. Unless officially discontinued, the Town still maintains the rights-of way and responsibilities of maintenance. Consideration should be given, therefore, to taking steps to declare portions of unused highways as legal trails, pursuant to 19 V.S.A. 535. As such, the Town retains ownership of the rights-of-way, but has no maintenance responsibilities. Reversion of Class IV roads to legal trails would not preclude their being used for land access; and, as legally designated trails, they might provide much needed rights-of-way for public recreational use.

Map 7.2 shows the presence of non-maintained roads including, unimproved/primitive roads that are bare earth roads and impassable/untraveled roads that are in primitive condition and have no public travel.

**Highway Department**

The Town currently has the following major pieces of equipment:

- 1984 Joh Deere Tractor with boom mower
- 1995 Dynaw Flatbed
- 1981 Ford 4100 Tractor

- 2007 International Dump Truck with plow
- 2012 International 7600 Dump Truck
- 2013 Maxim Utility Trailer 610
- 1999 Kobelco SK1151V Excavator
- 2015 John Deere 544K Loader
- 2017 International 7600 Dump Truck
- 2013 John Deere 7726P Grader

### ***What Lies Ahead?***

Recommendations for the future include updating road policies concerning maintenance (particularly of Class IV and development roads), construction standards for new roads (and sidewalks, if appropriate), and road reclassification. The Town should maintain a road improvement program (to be included within a capital budget for the Town) so that the Town will be eligible for funds, available on a competitive basis, from the Town Highway Aid Program. Technical assistance in these areas is available from the Agency of Transportation's Planning Division and Local Technical Assistance Program (LTAP).

Traffic patterns and road conditions may be influenced by changes in agricultural operations and types of industry in the Town. They should be a consideration in land use regulations as well as in future budget planning.

### ***Rail Service***

The railroads, once so important to the Berkshire community, have all but vanished from the Town. No state rail improvements are scheduled.

Presently the nearest rail service for freight is in Richford (Canadian Pacific) and St. Albans (New England Central). Amtrak passenger service is also available from St. Albans.

### ***Air and Bus Service***

Berkshire has no air service within the Town. The Franklin County Airport in Highgate supplies local air service. Larger interstate and international flights are available at the Burlington Airport, and at Mirabel and Trudeau airports in Montreal, Quebec.

Local passenger service is available from Green Mountain Transportation (GMT) on a transit network (vans, mini-buses) for residents of Franklin County with a shuttle service between St. Albans and Richford along Rte 105 that stops at the East Berkshire Mobil gas station. Rides can be coordinated by calling GMT. In addition, the service currently coordinates ride-share, Medicaid, and elderly transportation services.



### ***Carpooling and Park and Rides***

Given the rural nature of Berkshire and the reliance on automobile travel, carpooling should be encouraged to decrease the amount of greenhouse gasses released into the atmosphere, to conserve the use of oil and reduce maintenance costs on personal vehicles. One important component of any carpooling program is finding a suitable location where carpoolers can leave their vehicles.

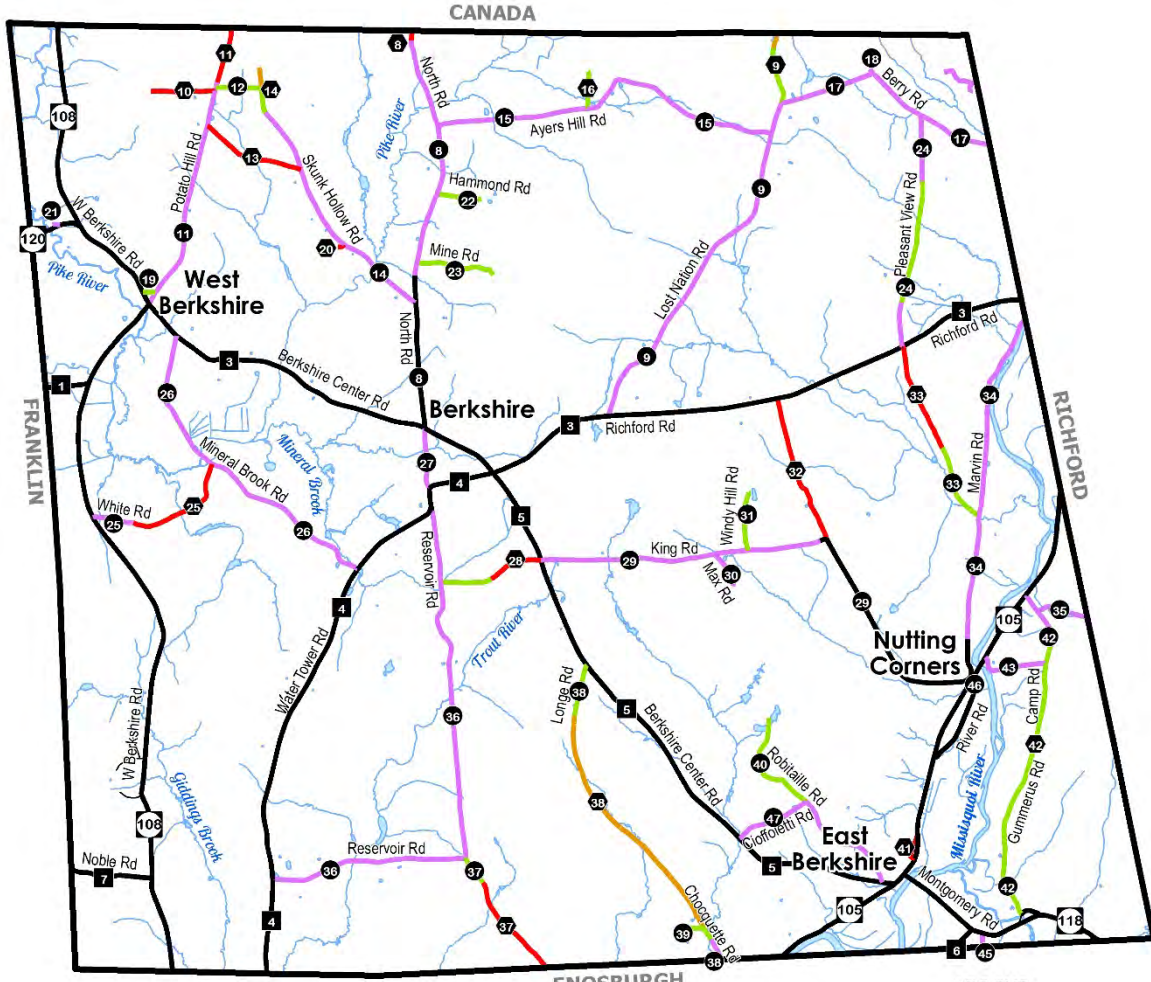
The closest formal carpool lot is the state park and ride facility along Rte 105 in Enosburgh along Route 105 that accommodates 56 vehicles. This is the only formal lot in northern Franklin County. The next closest lot is located in St. Albans on Route 104. The Planning Commission should encourage carpooling at the local park and ride by bringing awareness to the facility and the benefits of carpooling such as the State's Go Vermont program which provides registered carpoolers with a Guaranteed Ride Home program.

### ***Pedestrian and Recreation Paths***

Sidewalks in East and West Berkshire were torn up and not replaced when streets were widened and blacktopped. As a result, pedestrian traffic within these population centers has been redirected onto the roads. Roads in town also are being used increasingly by bicyclists and ATV users. Pedestrian and recreational use of local roads is becoming more and more of a safety hazard to motorists and others alike, given poor road conditions, greater motor vehicle traffic, and the tendency of drivers to exceed the speed limit on village and back roads. Biking, cross-country skiing, snowmobiling, hiking, horseback riding, etc. are available on the rail trail (Missisquoi Valley Rail Trail).

Reinstallation of sidewalks in Berkshire's hamlets should be considered. Moreover, the Town should consider providing designated areas (e.g., legal trails) for recreational use. Again, local police enforcement of traffic laws should be considered in order to more safely accommodate the multiple uses of Town roads.

# TRANSPORTATION MAP



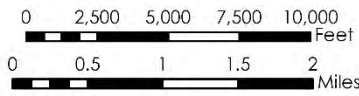
**LEGEND**

	State Highway
	Class 2 Town Highway
	Class 3 Town Highway
	Class 4 Town Highway
	Surfaced Road
	Gravel Road
	Soil or Graded & Drained Road
	Unimproved/Primitive Road
	Impassable/Untraveled Road
	Unknown Road Surface Type
	Town Boundary
	Stream or Brook
	Lake or Pond

Vermont Coordinate System  
Transverse Mercator, NAD 83.  
For planning purposes only.



**Prepared by:**  
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February, 2020.



**Data Sources:** All map features derived from VGIS digital coverages. North arrow on map refers to Grid North.

**Location:** z:\gis\projects\county\franklin\berkshire\townplan2020

Map 7.2

## GOALS AND POLICIES: PROVIDING FOR THE PEOPLE

- GOAL 1:** Make efficient use of public funds to maintain a sound fiscal balance.
- GOAL 2:** Ensure reasonable, functional and orderly development of all utilities, facilities, and services.
- GOAL 3:** Provide Town residents with the best possible education and childcare opportunities without overburdening the town's resources.
- GOAL 4:** Maintain and enhance recreational opportunities for Vermont residents and visitors.
- GOAL 5:** Provide and maintain a safe, economical, and functional transportation network for vehicular, pedestrian, and recreational use within the Town.
- GOAL 6:** Maintain and enhance community infrastructure and activities, both social and physical, which sustain and improve the health and well-being of all residents.

### Policies:

- 1) The rate of growth should not exceed the ability of the Town of Berkshire to provide facilities and services.
- 2) The development and provision of municipal facilities and services should be based upon a determination of existing need, a projection of reasonably expected population increase and economic growth, and upon the recognized limits of local finances and natural resources.
- 3) Capital investments, including the development or extension of infrastructure, should not be made to decrease the resource value of, or increase the development pressure on important agricultural land. Tax incentive programs, the acquisition of development rights and easements, and other methods of ensuring the continuation of agriculture should be encouraged.
- 4) The Town supports broadening access to educational, childcare, and vocational training opportunities.

- 5) The Town should continue to develop road policies for the construction, maintenance, and reclassification of town roads.
- 6) New construction or major reconstruction of roads and highways in the Town should identify the feasibility of accommodating all users by way of paths, sidewalks, or shoulders wide enough for use solely non-motorized means of transportation, when economically feasible or in the public interest.
- 7) Sidewalk or pedestrian facilities should be provided in populated areas, including the hamlets of East and West Berkshire, and alternative recreational paths for public use should be designated by the Town where appropriate.
- 8) Roads should not be extended into important resource areas, including critical areas, ground water source protection areas, and important agricultural lands.
- 9) All future roads, including culverts and ditching, that are to be taken over and/or maintained by the Town should be designed to standards approved by the Selectboard and should be appropriately marked.
- 10) Unnecessary "curb cuts" should be avoided, and appropriately, screened off-street parking should be provided for commercial and high-density residential development.
- 11) The Town should ensure that local regulations support local farm stands wherever possible.
- 12) The Town supports the Berkshire Elementary School's Farm to School Program.
- 13) The Town supports opportunities to collaborate with key regional partners to implement initiatives that reduce the stigma associated with substance misuse and mental health problems.

## ENHANCED ENERGY PLANNING

### A) ENHANCED ENERGY PLAN

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further local, regional, and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (90 x 50 goal), and the following:

- A. *Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);*
- B. *Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;*
- C. *Vermont's building efficiency goals under 10 V.S.A. § 581;*
- D. *State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and*
- E. *The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005.*

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Berkshire to achieve "substantial deference" instead of "due consideration" in Certificate of Public Good (CPG) proceedings for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that Berkshire will have a greater "say" in CPG proceedings before the Vermont Public Utility Commission about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and contain the following information:

- A. *An analysis of current energy resources, needs, scarcities, costs, and problems.*
- B. *Targets for future energy use and generation.*
- C. *"Pathways," or implementation actions, to help the municipality achieve the established targets.*
- D. *Mapping to help guide the conversation about the siting of renewables.*

## B) ENERGY RESOURCES, NEEDS, SCARCITIES, COSTS AND PROBLEMS

The following subsection reviews each sector of energy use (thermal, transportation, electricity) and electricity generation in Berkshire. Several different units of measurement are used in this section. Please refer to Table 8.13 for more information about unit conversions.

### *Thermal Energy*

Table 8.1 shows an estimate of current residential thermal energy demand in Berkshire, based on data from the American Community Survey (ACS 2011-2015). The data shows that 55.3% of household in in Berkshire depend on fuel oil as their primary source for home heating and 33.2% depend on wood. Wood includes both cord wood and wood pellets. Fuel oil and wood sources combined are estimated to be the primary heating source for 88.5% of homes in Berkshire. The remainder of homes heat primarily with propane. The nearest natural gas pipeline is located in Enosburg Falls and is not likely to be extended to Berkshire in the future.

<b>Fuel Source</b>	<b>Berkshire Households (ACS 2011-2015)</b>	<b>Berkshire % of Households</b>	<b>Berkshire - Households Square Footage Heated</b>	<b>Municipal Thermal Energy Use in British Thermal Units (BTUs) BTU (in Billions)</b>
Natural Gas	2	0.3%	3,808	0
Propane	46	7.9%	77,728	5
Electricity	0	0.0%	0	0
Fuel Oil	320	55.3%	557,184	33
Coal	0	0.0%	0	0
Wood	192	33.2%	356,416	21
Solar	0	0.0%	0	0
Other	19	3.3%	36,176	2
No Fuel	0	0.0%	0	0
<b>Total</b>	<b>579</b>	<b>100.0%</b>	<b>1,031,312</b>	<b>62</b>

Estimates for commercial and industrial thermal energy use are more difficult to calculate due to the lack of accurate information available. Table 8.2 provides an estimate of total commercial energy use (thermal and electricity). The estimate is based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 6 billion BTUs per year, is used as thermal energy for commercial uses.

<b>Table 8.2 - Current Berkshire Commercial Energy Use</b>			
	<b>Commercial Establishments in Berkshire (VT DOL)</b>	<b>Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)</b>	<b>Estimated Thermal Energy BTUs by Commercial Establishments in Berkshire/year (in Billions)</b>
Municipal Commercial Energy Use	8	0.725	6

**Electricity Use**

Table 8.3 shows 2017 electricity use in Berkshire per data available from Efficiency Vermont. Berkshire’s total electricity use has increased since 2015 from 9.2 million kWh in 2015 to about 9.5 million kWh per year in 2017. According to Efficiency Vermont, the average residential usage per household has decreased from 8,219 kWh per year to 8,134 kWh per year between 2015 and 2017. During the same period, overall commercial and industrial electricity usage increased from 4.2 million kWh to 4.5 million kWh. Berkshire’s average residential usage in 2017 was about 1200 kWh higher than the average residential kWh use in the region. Berkshire is served by two electric utilities. Vermont Electric Cooperative serves the majority of Town and the Village of Enosburg Falls Electric Department serves properties in the southwest part of Berkshire.

<b>Table 8.3 - Current Berkshire Electricity Use</b>		
<b>Use Sector</b>	<b>Current Electricity Use in Berkshire- 2017 (Efficiency Vermont) (kWh)</b>	<b>Current Electricity Use (in Billion BTUs)</b>
Residential	4,969,632	16.95
Commercial and Industrial	4,574,809	15.6
<b>Total</b>	<b>9,544,441</b>	<b>32.5</b>

<b>Table 8.4 – Current Berkshire Transportation Energy Use</b>	
<b>Transportation Data</b>	<b>Municipal Data</b>
Total # of Passenger Vehicles (ACS 2011-2015)	1,213
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	13,774,828
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
<b>Total Gallons Use per Year</b>	<b>740,582</b>
<b>Transportation BTUs (Billion)</b>	<b>89</b>
Average Cost per Gallon of Gasoline in 2016 (NRPC)	\$2.31
<b>Gasoline Cost per Year</b>	<b>\$1,710,745</b>

**Transportation**

Table 8.4 contains an estimate of transportation energy use in Berkshire. NRPC estimates that Berkshire residents drive personal vehicles approximately 13.7 million miles per year and spend about \$1.7 million on transportation fuel expenses per year. This calculation does not include expenses for commercially owned and operated vehicles.

It is difficult to track electric and hybrid vehicle registrations in Berkshire. This is because vehicle registrations with the Vermont Department of Motor Vehicles are based on zip codes and there are three zip codes that cover the Town of Berkshire. It is unknown how many electric

vehicles are currently registered in Berkshire.

<b>Table 8.5 – Existing Renewable Electricity Generation</b>		
<b>Generation Type</b>	<b>MW</b>	<b>MWh</b>
Solar	0.07	85.85
Wind	0.01	29.13
Hydro	0.00	0.00
Biomass	0.60	2454.55
Other	0.00	0.00
<b>Total Existing Generation</b>	<b>0.68</b>	<b>2569.53</b>

**Electricity Generation**

There is currently .68 MW of electricity generation capacity from renewable generation facilities located in Berkshire. This capacity results in approximately 2,569.53 MWh of electricity generation per year. The amount of electricity generation in Berkshire is roughly equal to the annual electricity use of about 383 households in Vermont based on information available from the U.S. Energy Information Administration (6696 kWh per VT household per year).

Table 8.5 organizes information about existing generation in Berkshire by type of facility. Map 8.3 shows the location of all electricity generators in Berkshire with a capacity greater than 15 kW. A full list of electricity generators in Berkshire can be found at the end of this section (Table 8.12).



Berkshire has relatively good access to electric transmission and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. The relatively good access to this type of infrastructure in Berkshire may make development of renewable energy facilities easier and more cost-effective than in other surrounding communities with more existing grid infrastructure.

Map 8.2 shows the electricity transmission and three-phase distribution infrastructure in Berkshire. The map shows a three-phase distribution line in the town along Richford Rd, King Rd. and VT Route 118. There is also a three-phase distribution line that serves West Berkshire. Two larger transmission lines exist parallel to VT Route 105 and another provides service to West Berkshire via Franklin. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

### **C) TARGETS FOR USE AND GENERATION**

The second required element of an enhanced energy plan is creation of targets for future energy use. Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and renewable electricity generation to meet the State of Vermont's 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan ([www.nrpcvt.com](http://www.nrpcvt.com)).

Regional targets for energy use and renewable electricity generation were disaggregated to create municipal targets. These municipal targets were also designed to ensure compliance with the Department of Public Service's Municipal Determination Standards. Tables 8.6, 8.7 and 8.8 show the targets for future energy use for Berkshire by sector (totals are cumulative).

One thermal target for Berkshire in 2050 is to have 88.9% of structures be heated by renewable energy sources. Much of this transition is likely to come from conversion to electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. Regionally, the target also relies on wood heating being a continued source of residential heating. However, Berkshire does not have a high target for new efficient wood heat systems. This is due primarily to the high proportion of existing households in Berkshire that already use wood heating systems. Although there is small target (4), Berkshire strongly encourages residents' conversion of existing wood heating systems to more advanced wood heating systems. Newer wood heating systems are more efficient and have less greenhouse gas emissions than

older wood heating systems. Table 8.6 also includes targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

<b>Table 8.6 - Thermal Targets</b>			
<b>Thermal Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	47.0%	60.8%	88.9%
New Efficient Wood Heat Systems (in units)	0	0	4
New Heat Pumps (in units)	69	158	295
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	25%	73%

The transportation energy targets for Berkshire are similarly ambitious. By 2050, almost 86.8% of transportation energy will need to come from renewable sources in order to meet the 90 x 50 goal. This will primarily be done through the conversion light-duty passenger vehicles from fossil fuels energy sources to electric energy. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. Biodiesel technology and infrastructure will certainly need to advance tremendously in coming years to meet this ambitious target.

<b>Table 8.7 - Transportation Targets</b>			
<b>Transportation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	5.3%	23.5%	86.8%
Electric Vehicles	106	795	1891
Biodiesel Vehicles	75	147	278

Targets for electricity use are complex to interpret. Electricity use in Berkshire is targeted to double by 2050 (Table 8.8). This increase in use will likely be driven by conversions to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels.<sup>1</sup>

<b>Table 8.8 - Electricity Targets</b>			
<b>Electricity Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Increased Efficiency and Conservation (BTUs)	25.2%	48.3%	100.7%

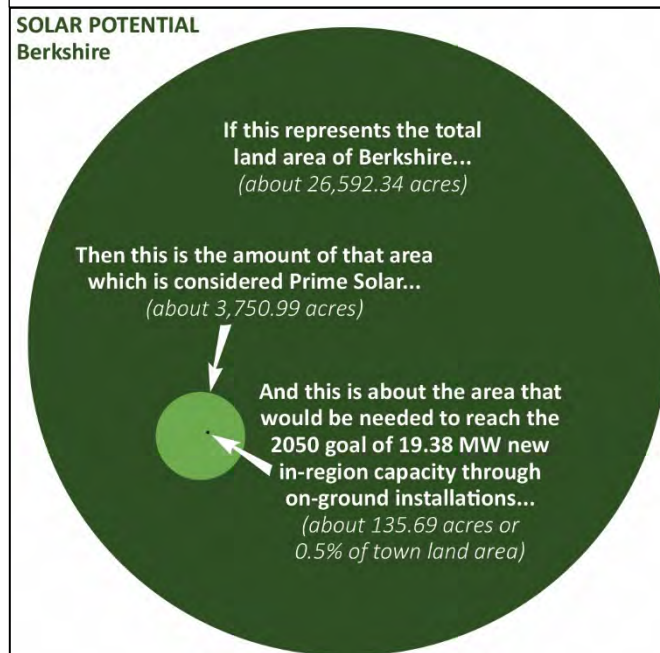
<sup>1</sup> Vermont Comprehensive Energy Plan - 2016, page 44.

Table 8.9 shows the electricity generation targets for new electricity generation in Berkshire in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (26,685.43 MWh) is about 10 times more than the current generation capacity (2569 MWh) within the Town of Berkshire.

<b>Table 8.9 – Renewable Electricity Generation Targets</b>			
<b>Renewable Generation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Total Renewable Generation Target (in MWh)	8,806.19	17,612.39	26,685.43

<b>Table 8.10 - Renewable Electricity Generation Potential</b>		
<b>Resource</b>	<b>MW</b>	<b>MWh</b>
Rooftop Solar	1	759
Ground-mounted Solar	1,056	1,294,707
Wind	22	67,567
Hydro	0.004	14
Biomass and Methane	0	0
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>1,078</b>	<b>1,363,047</b>

**Figure 8.1 - Ground Mounted Solar Potential**



Based on mapping and calculations completed by NRPC, Berkshire has sufficient land to meet the above electricity generation targets. Berkshire has access to the renewable electricity generation capacity outlined in Table 8.10. This estimate shows that Berkshire has considerably more potential for renewable electricity generation than what is needed to meet the renewable electricity generation targets in Table 8.9. This generation capacity was calculated using the “base” layers for solar and wind. For an explanation of what constitutes a “base” layer, please see the mapping subsection below.

Berkshire supports NRPC’s position regarding “commercial” and

“industrial” wind facilities. The NRPC Regional Plan finds that the construction of new “industrial” or “commercial” wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an “industrial” or “commercial” wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Berkshire encourages the use of these sources for electricity and thermal energy generation, especially on farms.

**D) TARGETS FOR USE AND GENERATION**

The third required element of an enhanced energy plan is the inclusion of maps that will provide guidance to the community and developers regarding the location of new renewable generation facilities. Berkshire has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Municipal Determination Standards, including access to energy resources and constraints to renewable development. All maps may be found at the end of this section.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable electricity

generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When an electricity generation facility is proposed, the presence of all natural resources constraints on site shall be verified as a part of the application.

### ***Mapping Methodology***

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass “potential” in Berkshire based on information provided by the Vermont Sustainable Jobs Fund. “Known” and “possible” constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable electricity generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table 8.11. The known constraints and possible constraints used to create the maps include constraints that are required per the Municipal Determination Standards from the Department of Public Service and regional constraints selected by NRPC.

### ***Solar and Wind***

The solar and wind maps show both “base” and “prime” areas. Base areas are areas with electricity generation potential, yet may contain possible constraints. Prime areas are areas that have electricity generation potential that do not contain known or possible constraints. Areas that do not contain electricity generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates abundant base and prime solar areas in Berkshire including several areas near transmission and distribution lines. The following preferred locations for solar generation facilities by the Town of Berkshire: rooftops, parking lots, and landfills. Brownfield sites located outside of the village areas of West Berkshire, Berkshire, and East Berkshire are also considered preferred locations.

Berkshire has a strong preference for solar facilities that have less than 5 MW in generation capacity. This preference is a reflection of the community’s

dedication to preserving the aesthetic and rural qualities of Berkshire by restricting the geographic size of solar facilities. In addition, Berkshire prefers that solar facilities greater than 149 kW in generation capacity to be sufficiently separated from other similarly sized solar facilities to “break up” the visual impact of two or more solar facilities located next to each other and to preserve Berkshire’s rural character. All solar facilities to be sited in Berkshire shall include proper screening.

There generally isn’t much land available in Berkshire that has base and prime wind resources. The small areas that do exist are generally concentrated in the central Berkshire along Hammond Road.

### ***Hydro and Biomass***

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays “base” and “prime” areas. However, these categories are not necessarily indicative of electricity generation potential. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide electricity generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites. Berkshire has one existing dam site that could be retrofitted to generate electricity, but redevelopment of the site, or the development of a new dam, is extremely unlikely due to Berkshire’s upland location and the extensive regulatory process involved in developing new dams.

## **E) CONCLUSION**

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Berkshire is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, affordable, and secure energy future.

## GOALS AND POLICIES: ENHANCED ENERGY PLAN

- GOAL 1:** Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
- GOAL 2:** Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- GOAL 3:** Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
- GOAL 4:** Focus growth within and adjacent to the villages.

### Policies:

- 1) Berkshire supports energy conservation efforts and the efficient use of energy across all sectors.
- 2) Berkshire supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
- 3) Berkshire supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from Berkshire to other parts of the region.
- 4) Berkshire supports the development and siting of renewable electricity generation resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of electricity generation in identified preferred locations shall be favored over the development of other sites.
- 5) Berkshire supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
- 6) Berkshire supports local farms and the local food system.

<b>Table 8.11 – Mapping Constraints</b>		
<b>Solar, Wind and Biomass Maps - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>Confirmed and unconfirmed vernal pools</b>	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
<b>River corridors</b>	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
<b>National wilderness areas</b>		VCGI
<b>FEMA Floodways</b>		VCGI/NRPC
<b>Class 1 and Class 2 Wetlands</b>		VCGI
<b>Designated Downtowns, Designated Growth Centers, and Designated Village Centers</b>	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas</b>	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain -500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>Ground and surface waters drinking protection areas</b>	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR



<p><b>Vermont Conservation Design Highest Priority Forest Blocks</b></p>	<p>The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)</p>	<p>ANR</p>
<p><b>Public water sources</b></p>	<p>A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.</p>	<p>ANR</p>
<p><b>Municipal Conservation Land Use Areas</b></p>	<p>Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. No areas identified in the Berkshire Town Plan were included in this category.</p>	<p>NRPC</p>
<p><b>Solar, Wind and Biomass Maps - Possible Constraints</b></p>		
<p><b>Constraint</b></p>	<p><b>Description</b></p>	<p><b>Source</b></p>
<p><b>Protected lands</b></p>	<p>This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements</p>	<p>VCGI</p>

	held by non-profit organizations.	
<b>Deer wintering areas</b>	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR
<b>Hydric soils</b>	Hydric soils as identified by the US Department of Agriculture.	VCGI
<b>Agricultural soils</b>	Local, statewide, and prime agricultural soils are considered.	VCGI
<b>Act 250 Agricultural Soil Mitigation Areas</b>	Sites conserved as a condition of an Act 250 permit.	VCGI
<b>Class 3 wetlands</b>	Class 3 wetlands in the region have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
<b>Municipal Conservation Land Use Areas</b>	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. No areas identified in the Berkshire Town Plan were included in this category.	NRPC
<b>Hydro Map - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>None</b>		
<b>Hydro Map - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>"303d" list of stressed waters</b>		ANR
<b>Impaired waters</b>		ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI

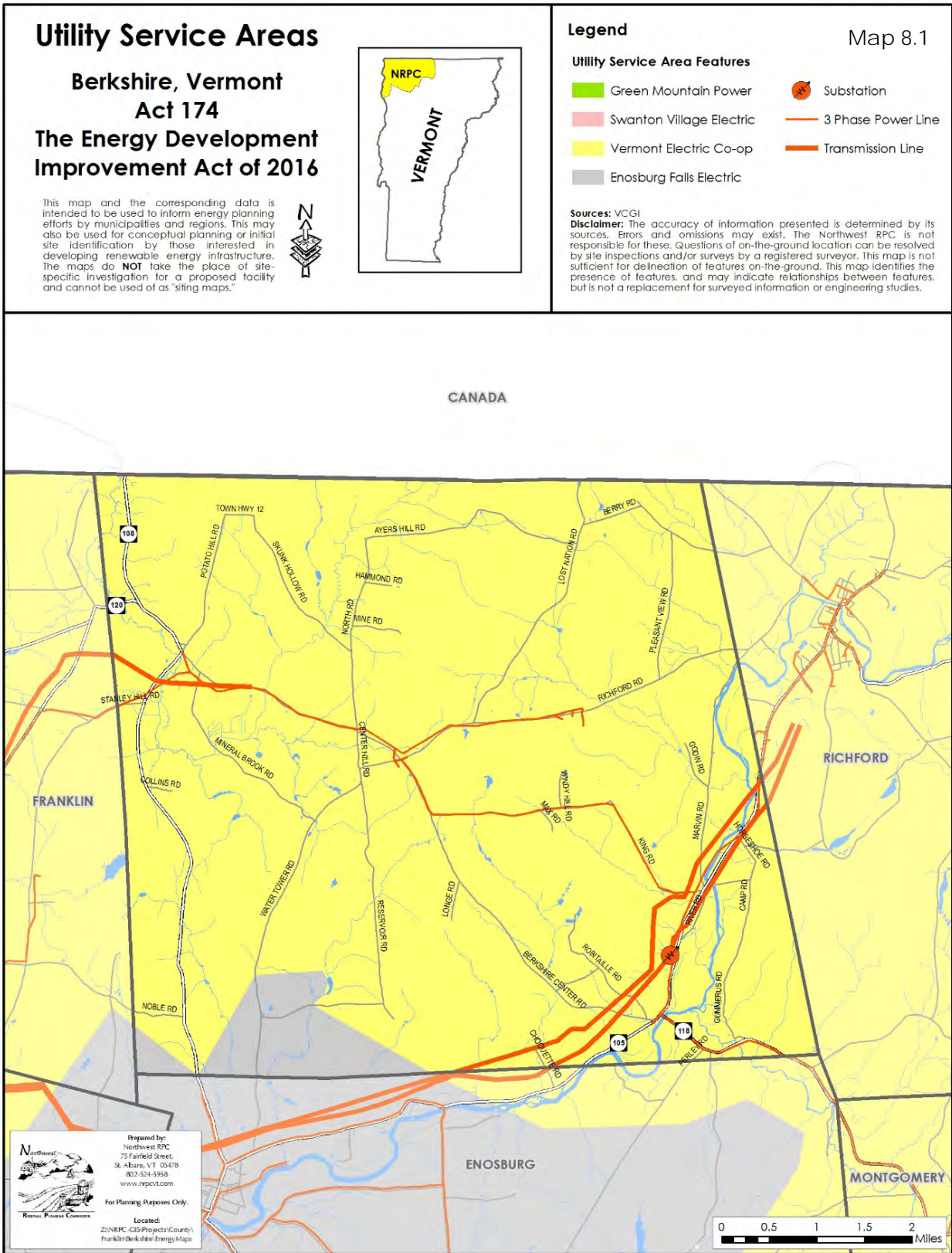
The date in Table 8.12 displays facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of Berkshire recognizes that some of the data in the table may be out of date or incorrect. The Town of Berkshire also recognizes that some identified facilities may no longer generate electricity.

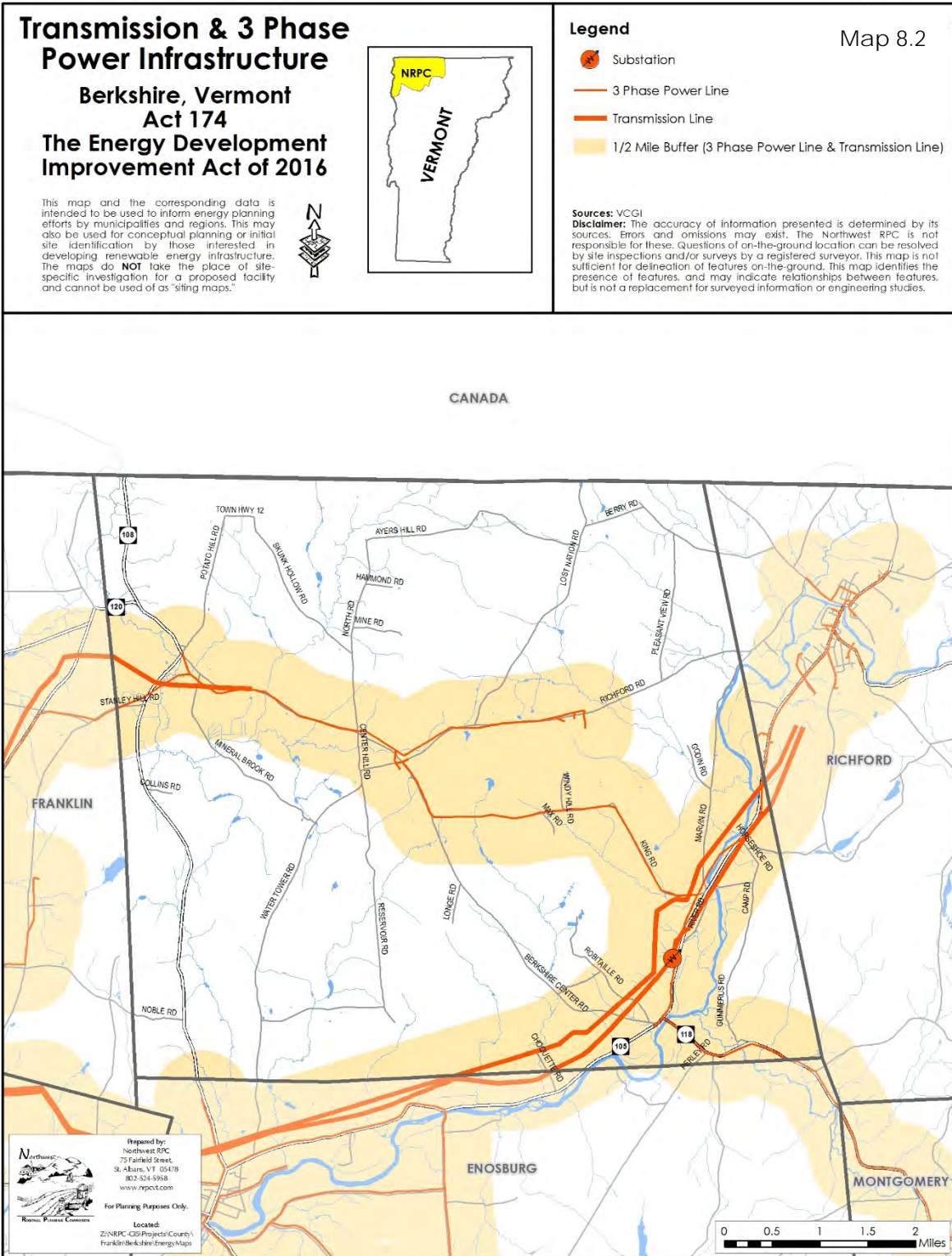
<b>Table 8.12 - Berkshire Electricity Generators (12.27.18)</b>							
<b>Category</b>	<b>Sub Category</b>	<b>Name</b>	<b>Address</b>	<b>CPG Number</b>	<b>Electricity Type</b>	<b>Utility</b>	<b>Capacity kW</b>
Solar	Roof-Mounted PV	Anthony Lussier	3440 Water Tower Rd	2687	Net Metered	Vermont Electric Coop	11.2
Biomass	Anaerobic Digester	Berkshire Cow Power	1954 Richford Road		SPEED	Green Mountain Power	600
Wind	Small Wind	Donald Hammond	281 Hammond Road	525	Net Metered	Vermont Electric Coop	9.5
Wind	Small Wind	Green Heron Farm	1 Magoon Road	386	Net Metered	Vermont Electric Coop	9.5
Solar	Ground-mounted PV	Jarrod Vaillancourt	1856 Reservoir Rd	3719	Net Metered	Vermont Electric Coop	7.5
Solar	Roof-Mounted PV	Jeffrey Hill Cook	227 Horse Shoe Rd	6206	Net Metered	Vermont Electric Coop	10
Solar	Roof-Mounted PV	John Chamberlain Jr.	4730 West Berkshire Rd		Net Metered	Vermont Electric Coop	8.9
Solar	Roof-Mounted PV	Kenneth Laplant	1179 Mineral Brook Rd	5909	Net Metered	Vermont Electric Coop	5
Solar	Roof-Mounted PV	Linda & Steven Sweelser	971 King Rd	5033	Net Metered	Vermont Electric Coop	10
Solar	Roof-Mounted PV	Jared & Trish Adams	1376 Berkshire Center Road	7295	Net Metered	Vermont Electric Coop	8.2

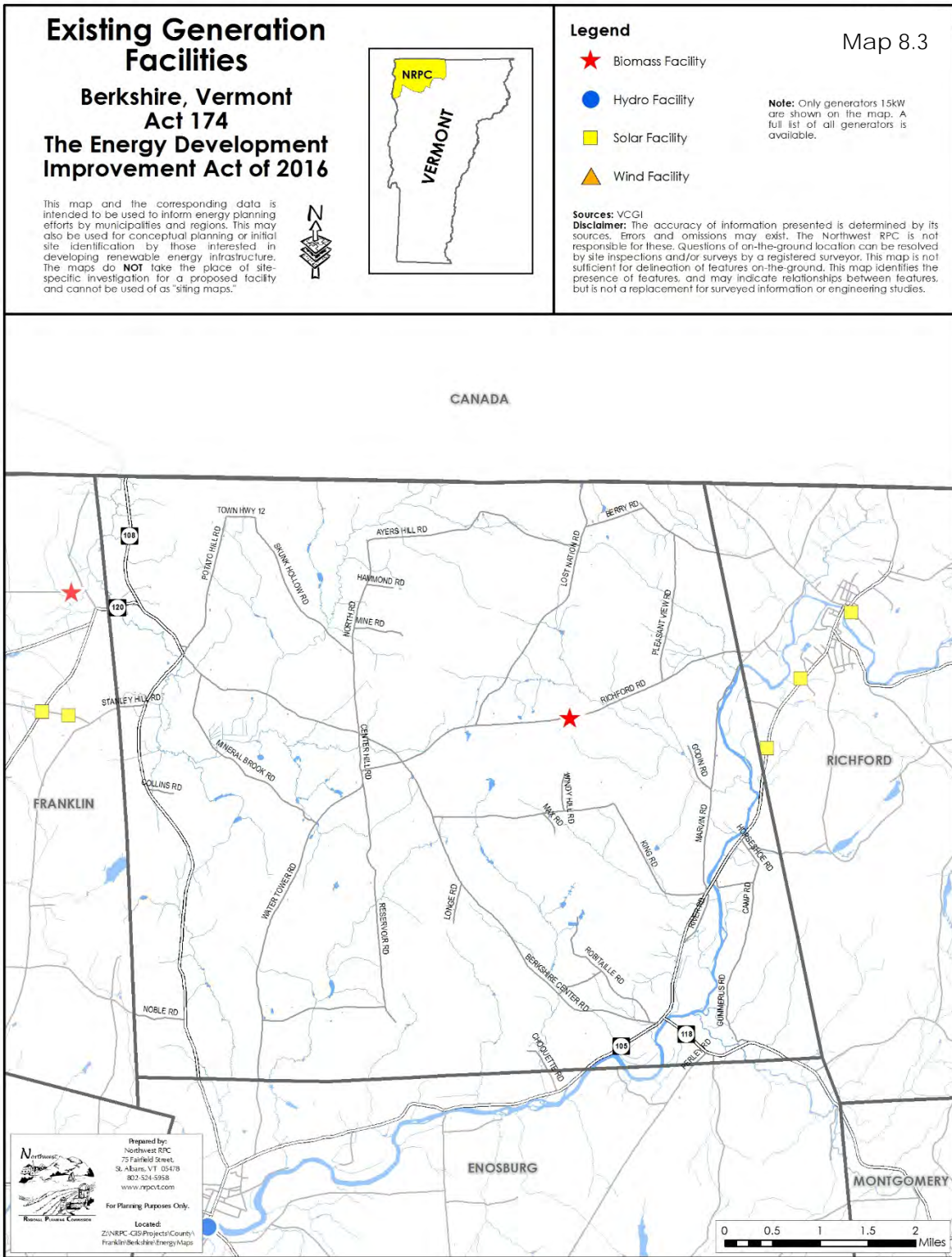
Solar	Roof-Mounted PV	Jason Bosley	18 Berkshire Estates	17-3250	Net Metered	Vermont Electric Coop	11.4
Solar	Ground-mounted PV	Shawn Teague	2066 West Berkshire Rd	18-2480	Net Metered	Vermont Electric Coop	15
Solar	Roof-Mounted PV	James Tipper	2153 Richford Road		Net Metered	Green Mountain Power	14.2
Solar	Ground-mounted PV	Enosburg Leach Estate Solar, LLC	Sampsonville Road	16-0051	Group Net Metered	Vermont Electric Coop	500
Solar	Ground-mounted PV	Carrie Hatch	347 Cioffoletti Road	18-0926	Net Metered	Vermont Electric Coop	6
Solar	Ground-mounted PV	Jennifer Kirkpatrick	1492 Ayers Hill Rd	18-0865	Net Metered	Vermont Electric Coop	10
Solar	Roof-Mounted PV	Scott Hansen	93 River Rd	17-4339	Net Metered	Vermont Electric Coop	7.6
Solar	Roof-Mounted PV	Ellen Ladd	410 Berry Road	17-4162	Net Metered	Vermont Electric Coop	7.6
Solar	Ground-mounted PV	Loren Doe	372 Gummerus Road	18-2194	Group Net Metered	Green Mountain Power	15
Solar	Ground-mounted PV	Mikeal Randall	1432 BERRY RD	18-2927	Net Metered	Vermont Electric Coop	12.6
Solar	Roof-Mounted PV	Timothy Malloy	2785 VT-105	18-2394	Net Metered	Vermont Electric Coop	3

Unit	Unit Type	British Thermal Units
Kilowatt	Kilowatt	3,412
Gasoline	Gallon	120,404
Ethanol	Gallon	84,714
Diesel Fuel	Gallon	137,571
Heating Oil	Gallon	137,571
Residual Fuel Oil	Gallon	149,690
LPG	Gallon	84,738
Kerosene	Gallon	135,000
Biodiesel	Gallon	127,595

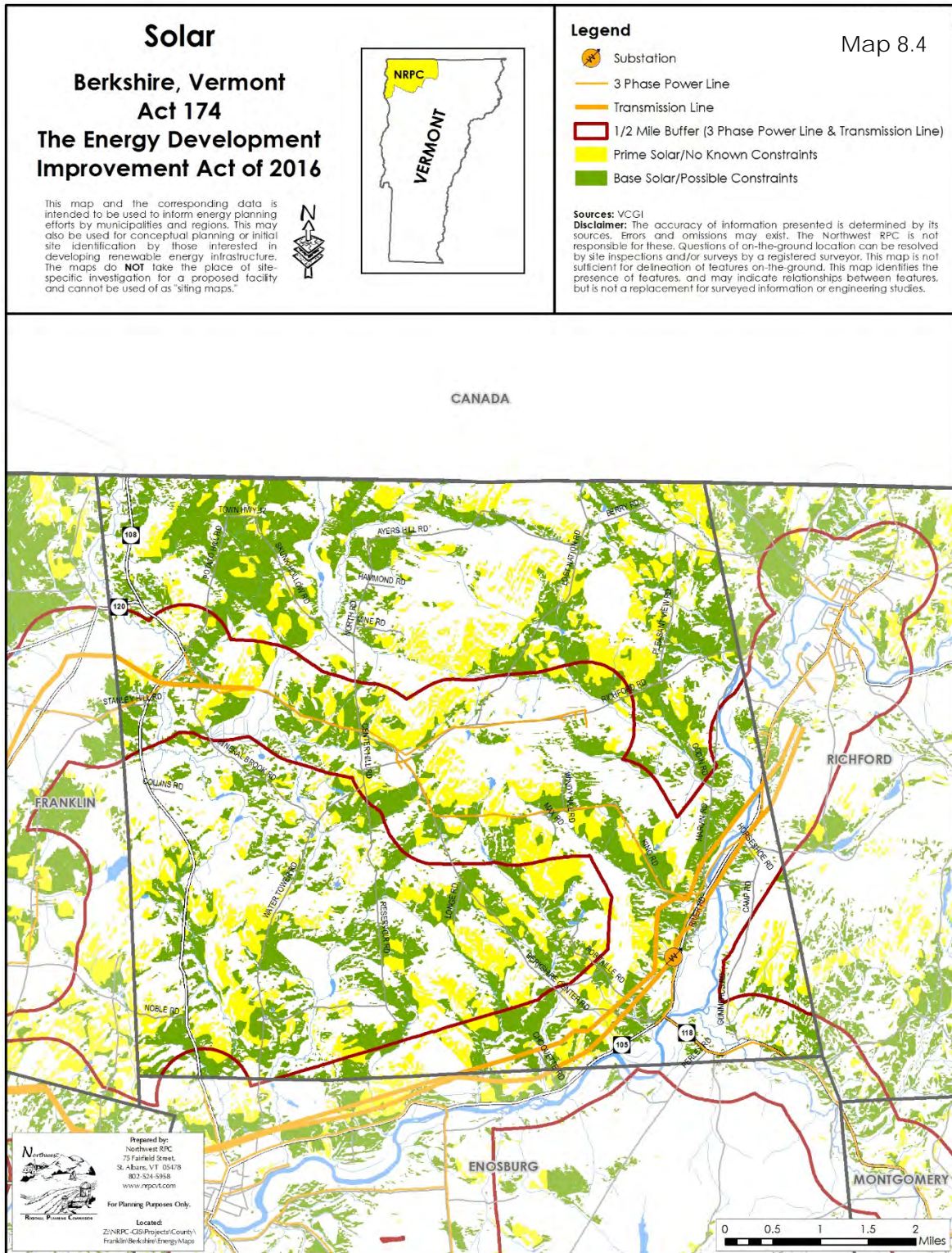
Wood Pellets	Ton	16,500,000
Cord Wood	Cord	20,000,000
Wood	Pounds	8,000
Natural Gas	Cubic Feet	103,200
Compressed Natural Gas	Pounds	20,160
Coal	Short Ton	19,490,000

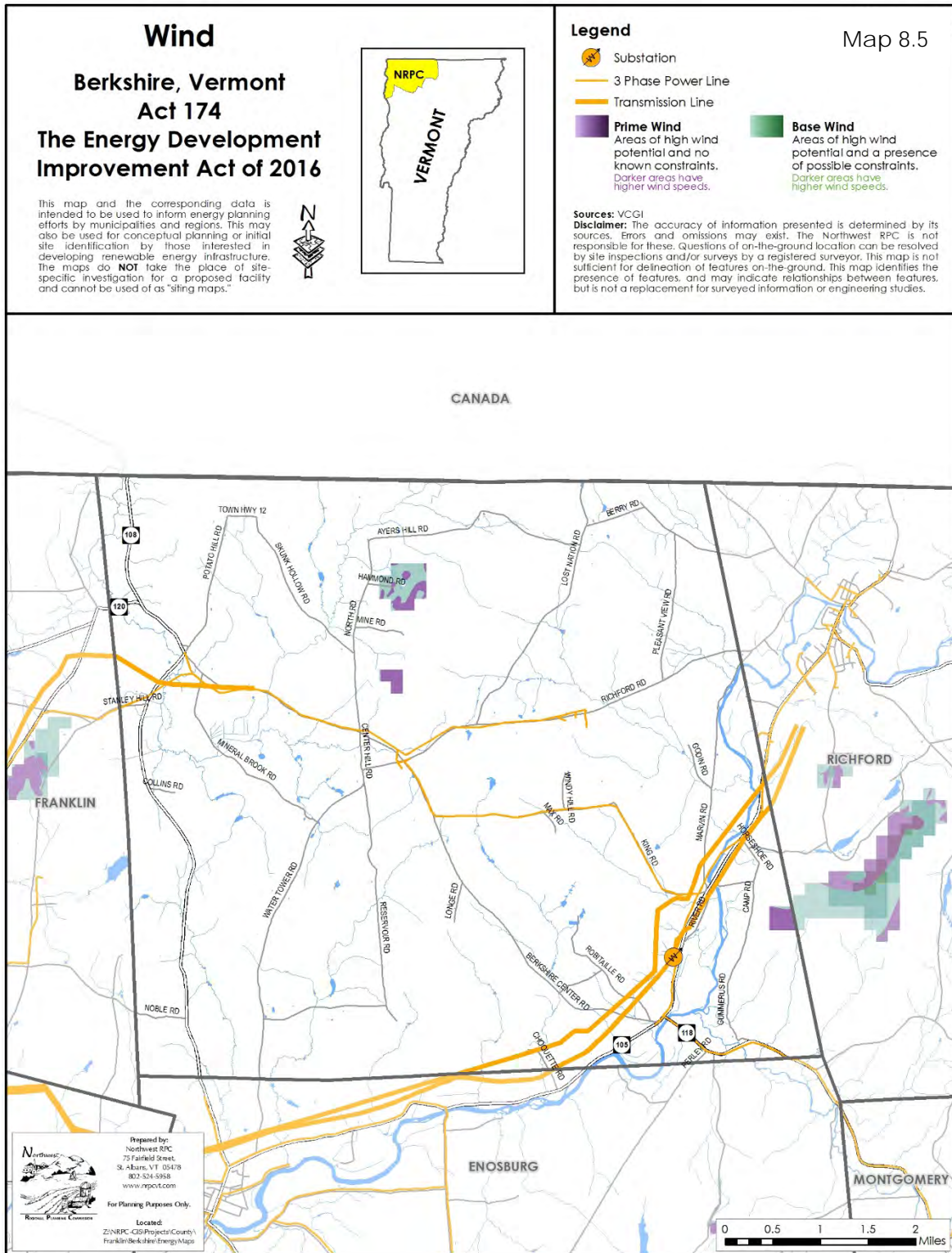


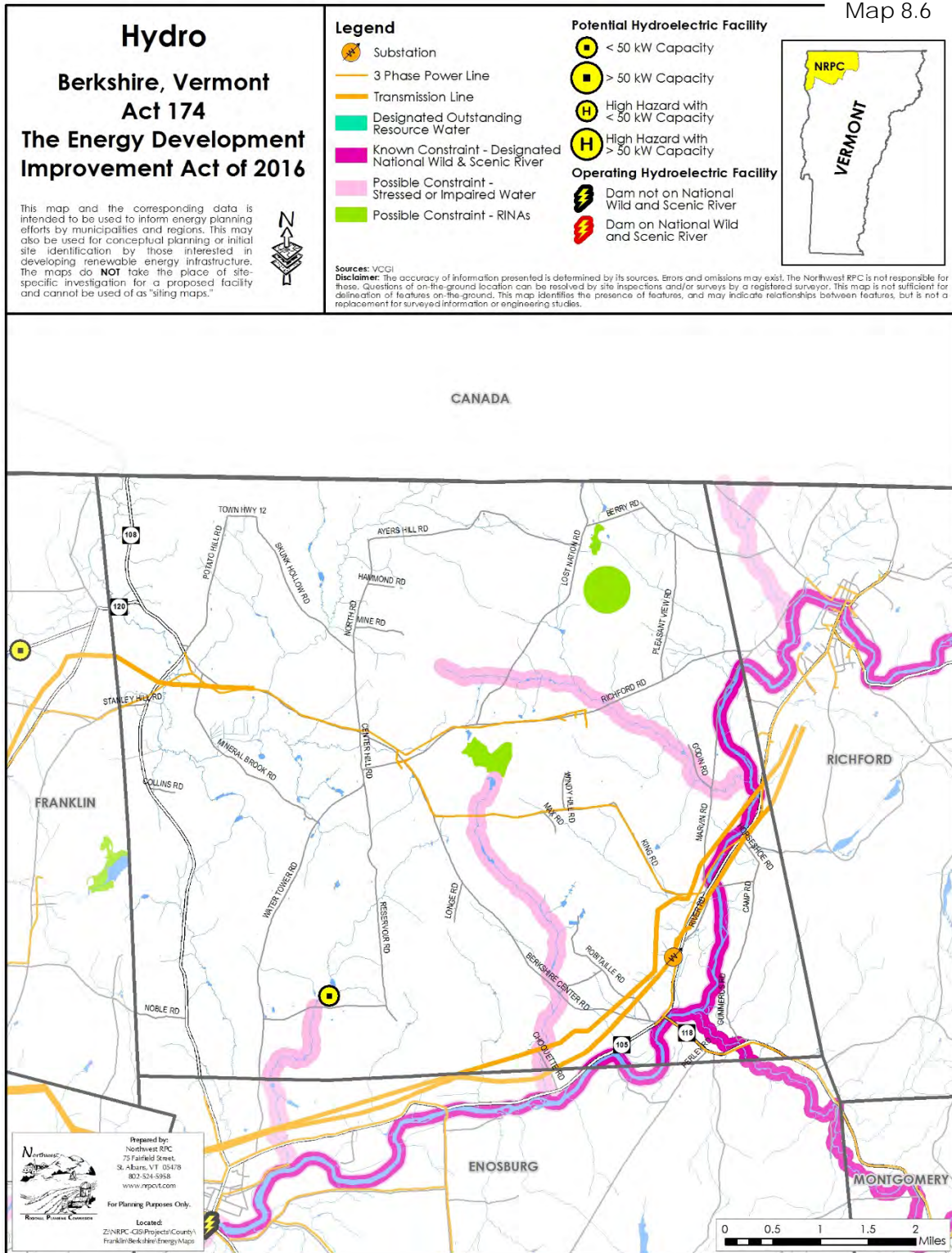


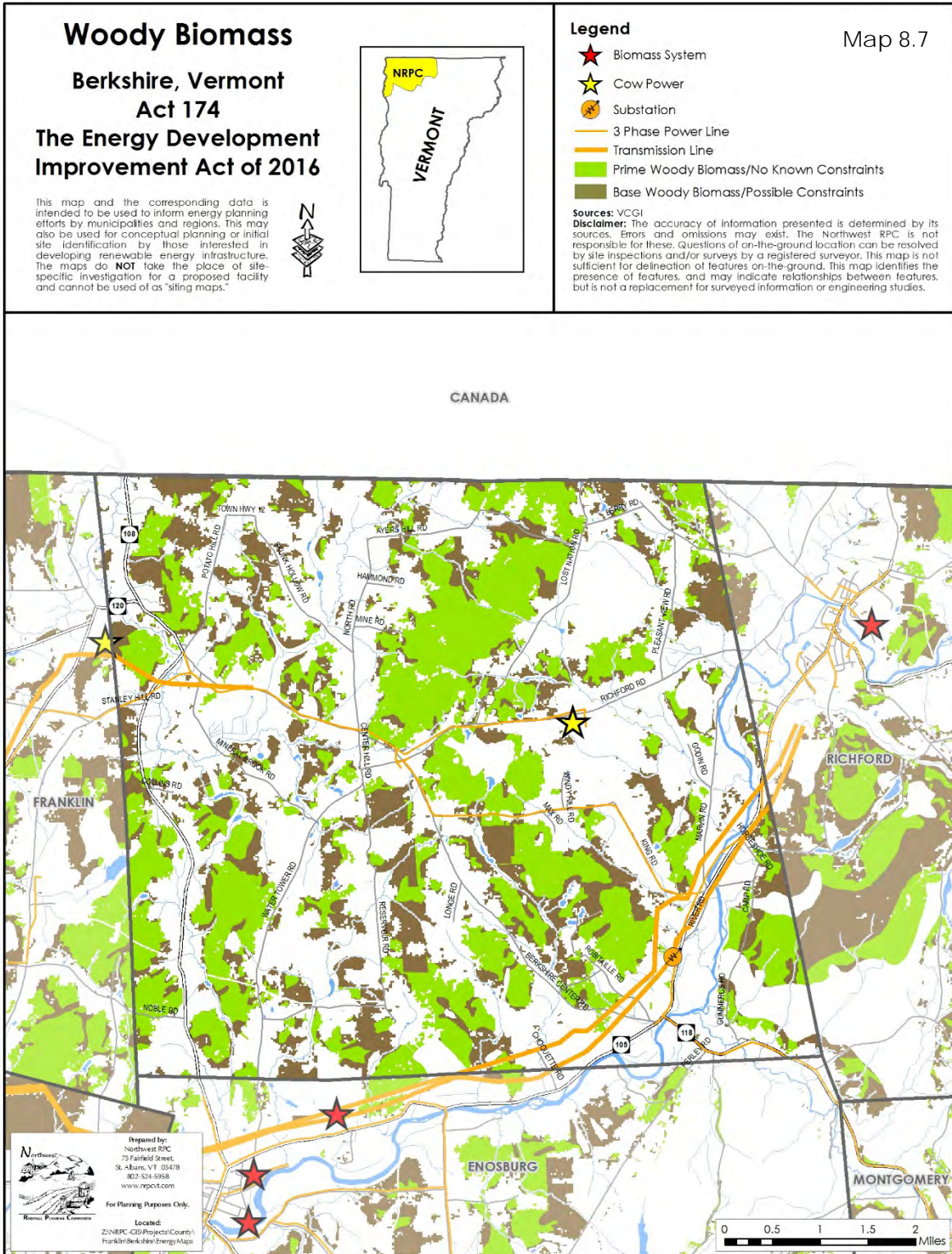












## ***“KEEPING IT RURAL” IN THE FUTURE***



**Photo Credit: Shayna Sherwood**

Earlier sections of this plan address the Town's history, natural and cultural resources, available community facilities and services, and past and anticipated trends in Berkshire's growth and development, all of which affect the way that land is used. The ultimate goal of this planning process is to be aware of past and existing land use, and project the future land requirements for the Town. Land use planning is not meant to stop development. If properly implemented, identifying suitable locations for development allows the community to provide for orderly growth while preserving its character. Land use planning gives the Town the opportunity to choose its future, provide a balance between the natural and built environment, and preserve the traditional settlement patterns, village centers, and rural landscapes that contribute to its identity and sense of place.

Many rural Vermont communities are faced with high growth and development pressures, including Berkshire. Residents of these communities are concerned that uncontrolled growth threatens the traditional landscape of compact village centers surrounded by open fields and wooded hillsides. While Berkshire retains much of its traditional agrarian landscape and agriculture remains vitally important to the community, new residential development is happening primarily outside the traditional village centers. Faced with the changing forces that growth presents, planners are challenged with maintaining the rural agricultural

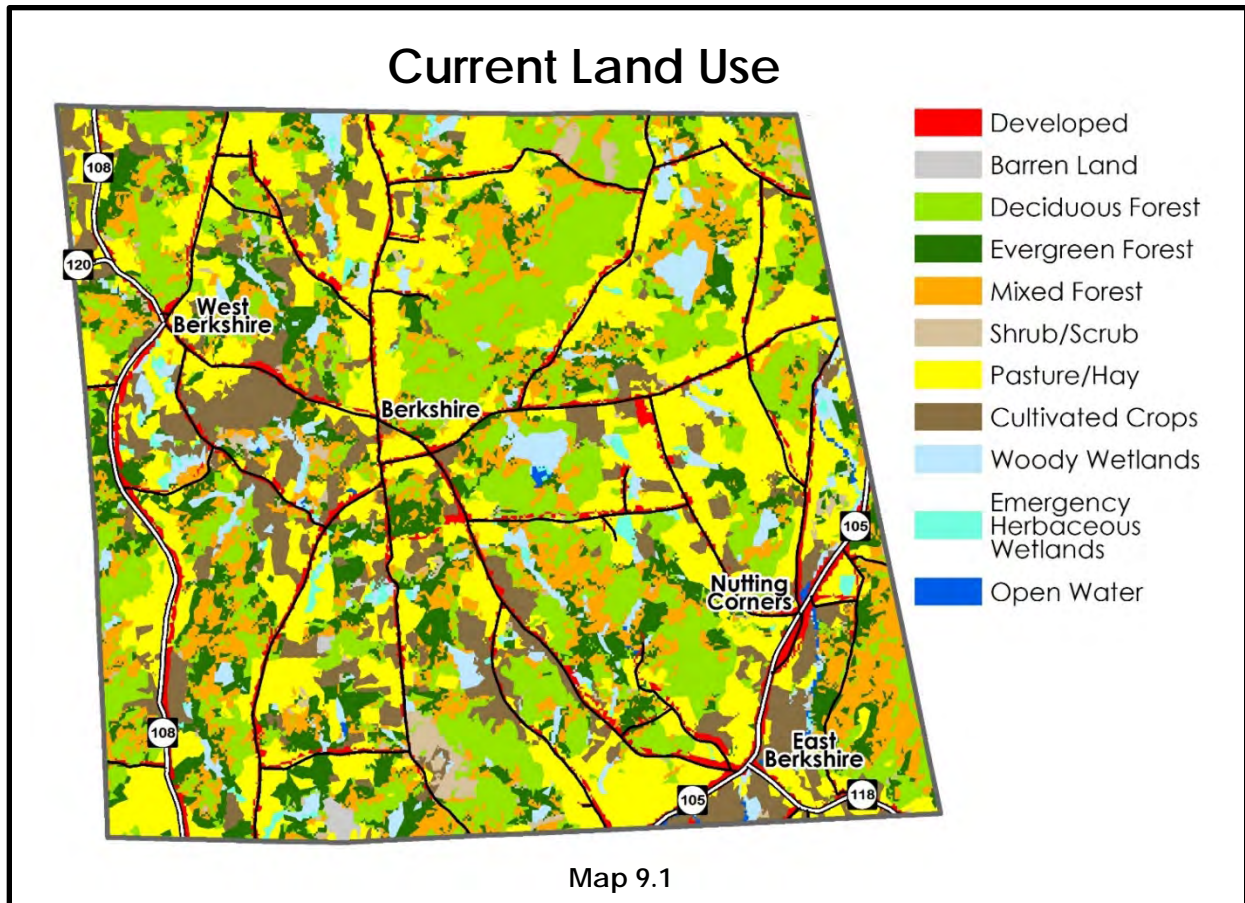
character and small village setting, while accepting and accommodating a fair share of residential development in the greater region.

Berkshire primarily uses zoning and subdivision regulations to manage growth. These regulations are adopted in the Berkshire Land Use and Development Regulations (2019). Zoning regulates the location, type, and density of development within a community through the delineation of zoning districts. Subdivision regulations control the pattern of development and the way land is divided up to accommodate land uses and supporting infrastructure such as roads and utilities. These regulations should be evaluated and updated on a regular basis in response to Town Plan updates. The Berkshire Land Use and Development Regulations divide the town into four (4) zoning districts, which are intended to guide the direction and placement of future growth within the Town of Berkshire. A discussion of current land use trends and associated development recommendations for each district is provided below. Implementing these recommendations will help the Town manage the location, amount, intensity, and character of land uses and timing of development relative to provision of community facilities and services.

## **A) LAND USE PATTERNS**

The Town of Berkshire exhibits a traditional agrarian landscape with agriculture and forestry a vitally important element of the community's character. Family dairy farms and rural homesteads are woven together with the foothills and forests of the Green Mountains, the historic villages of Berkshire Center, East Berkshire, and West Berkshire, and the views seen along the corridors of town highways to create a unique sense of place. Regionally, the Town's rural character aids in defining the more urban character of its neighboring communities of Enosburg Falls and Richford.

This section provides a description of the location and extent of existing land uses within Berkshire, including agricultural land, forested land, and land in residential, commercial, and industrial development (Map 9.1). This information is based upon field surveys and observations, conversations with local residents, and town records. To better understand how the Town is developing, aerial photography can be used to look at changes in land use over time and provide an important resource for land use planning; imagery is available for Berkshire for 2003, 2009 and 2018. The Planning Commission should review changes in land use over time to inform future bylaw updates on how the town is developing.



**Agricultural Land**

Dairy farming has remained vitally important to Berkshire's economy to the present day. Most of the primary agricultural land in Berkshire, including large tracts along Rte. 105 in the eastern half of Town and along major roads in the western half, is currently in production. However, some agricultural lands on roads leading northward from Enosburg Falls and East Berkshire have been given over to residential development.

There are 102 parcels in the Current Use Program located in Berkshire, which total 14,631 acres. The current use program allows the valuation and taxation of farm and forest land based on its remaining in agricultural or forest use instead of its value in the market place.

In recent years, there has been a trend towards consolidation of dairies, Berkshire is home to some of the largest dairies in Franklin County, and in the State. The largest dairy in Berkshire is estimated to have at least 3,000 head of cattle. The amount of land in agriculture has decreased at a rate slower than the decrease in the number of farmland parcels. The amount of land in agriculture according to the grand list decreased from approximately 17,500 acres in 1999 to 12,472 acres of land classified as farm acreage in 2017. In comparison, the number of

recorded farmland parcels decreased from 177 in 1987, to 88 in 1999, to 55 in 2017. According to the USDA Census of Agriculture, county-wide the number of farms decreased 5% from 2002 to 2017, while the average market value of farm products per far farm has increased 25%. This trend is the result of the consolidation of a larger number of small dairy farms into a smaller number of industrial-scale farms.

Land trust easements are an effective method used in Vermont to preserve agricultural land and provide financial compensation to the landowner. Individual landowners sell certain rights to their land to ensure their land will be kept for use as farmland, conservation, or recreation land in perpetuity. As of 2020 there were 2,118 acres of land with a Vermont Land Trust easement or covenant in Berkshire (Map 9.2)

It is important for the Town to consider and address the potential economic impacts of farm consolidation and the loss of family dairies. Maintaining agricultural working lands is of paramount importance to the Town, and supporting family dairies is crucial to achieving this goal. The Town can support and promote programs that assist farmers to keep their land in production, such as the land trusts, the current use program, state and federal subsidies and incentives, and local zoning controls. The Town supports the return of the American trend in homesteading, small family farms producing diversified crops and enhancing food security in the Vermont and the Northeast.



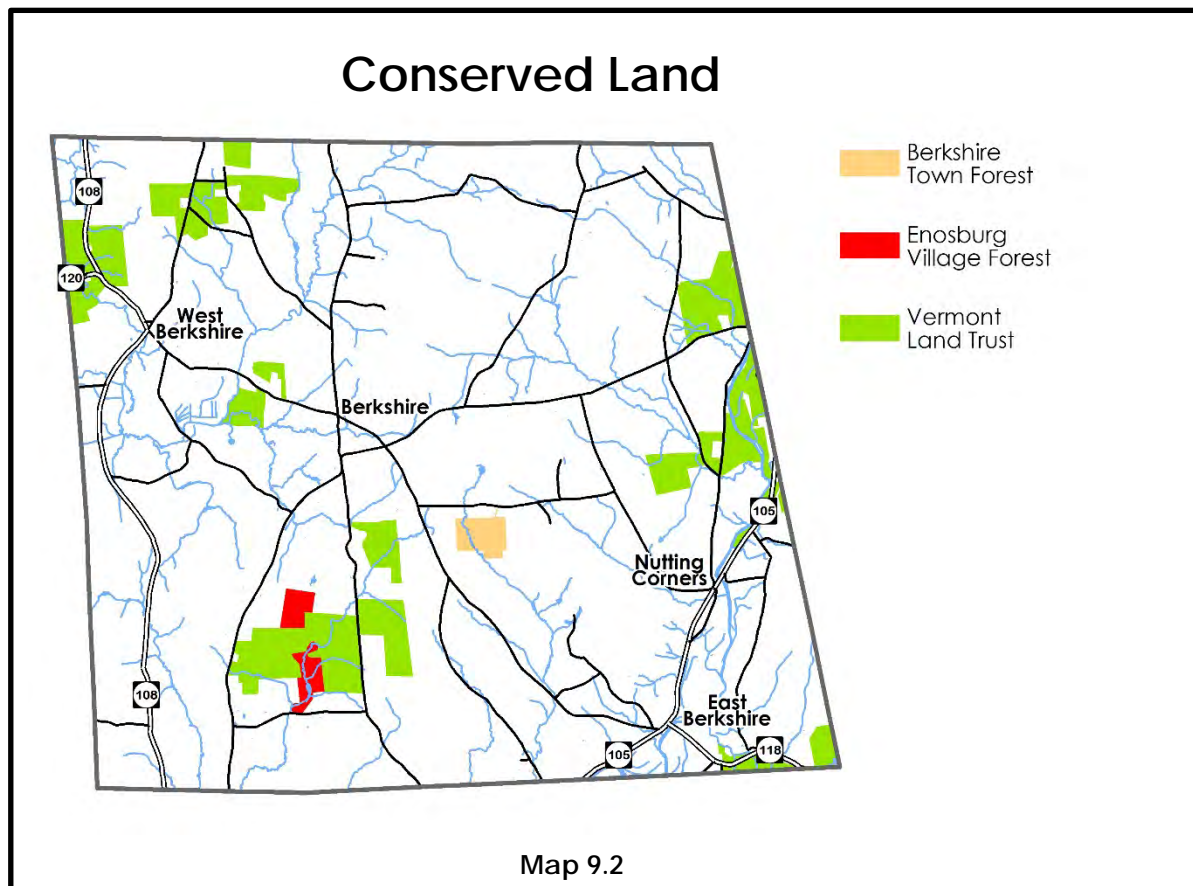
**Clockwise from upper left: Cows at Aires-Hill Farm, Fresh Cut Hay at Aires-Hill Farm, Homesteading, Grapes Growing at Lantz Wines.**



**Forest Land**

At one time, before clearing began for agriculture, Berkshire was covered by mature hardwood and softwood forests. As of 2003, forest or woodland made up roughly 40 percent of total land area in Berkshire. Most of this acreage is found on the ridges and hilltops of north central Berkshire, and on other areas of steep slope or wet soil scattered throughout the Town. Little of this land is suitable for higher density development.

All of the forested land in Berkshire, except for that in the Berkshire and Enosburgh Town forests, is privately owned (see Map 9.2 for location of Town forests). As noted earlier, many of the forested soils in Berkshire are considered highly productive (Type I and Type II) soils for forest growth, although timber stands would have to be properly nurtured and managed for commercial use. Many landowners now manage their woodlots on a much smaller scale for private use. All forestland owners are encouraged by the State to adopt Acceptable Management Practices (AMPS) for maintaining water quality, and a long-term forest management plan. At present, no management plan has been developed for the municipal forest.



There are several forestry operations in Town at present including two firewood processors, a woodworking shop, a procurement yard and a sawmill. There are also several maple sugaring operations in Berkshire that utilize its forests.

Berkshire forests provide wood for fuel and construction, and recreational opportunities for hikers. Maintaining large swaths of forests is especially important for both hunting and the maple sugar industry. Additionally, they also serve a number of important environmental functions, which include providing important wildlife habitat, preventing soil erosion in areas of steep slope, and maintaining surface and groundwater quality.

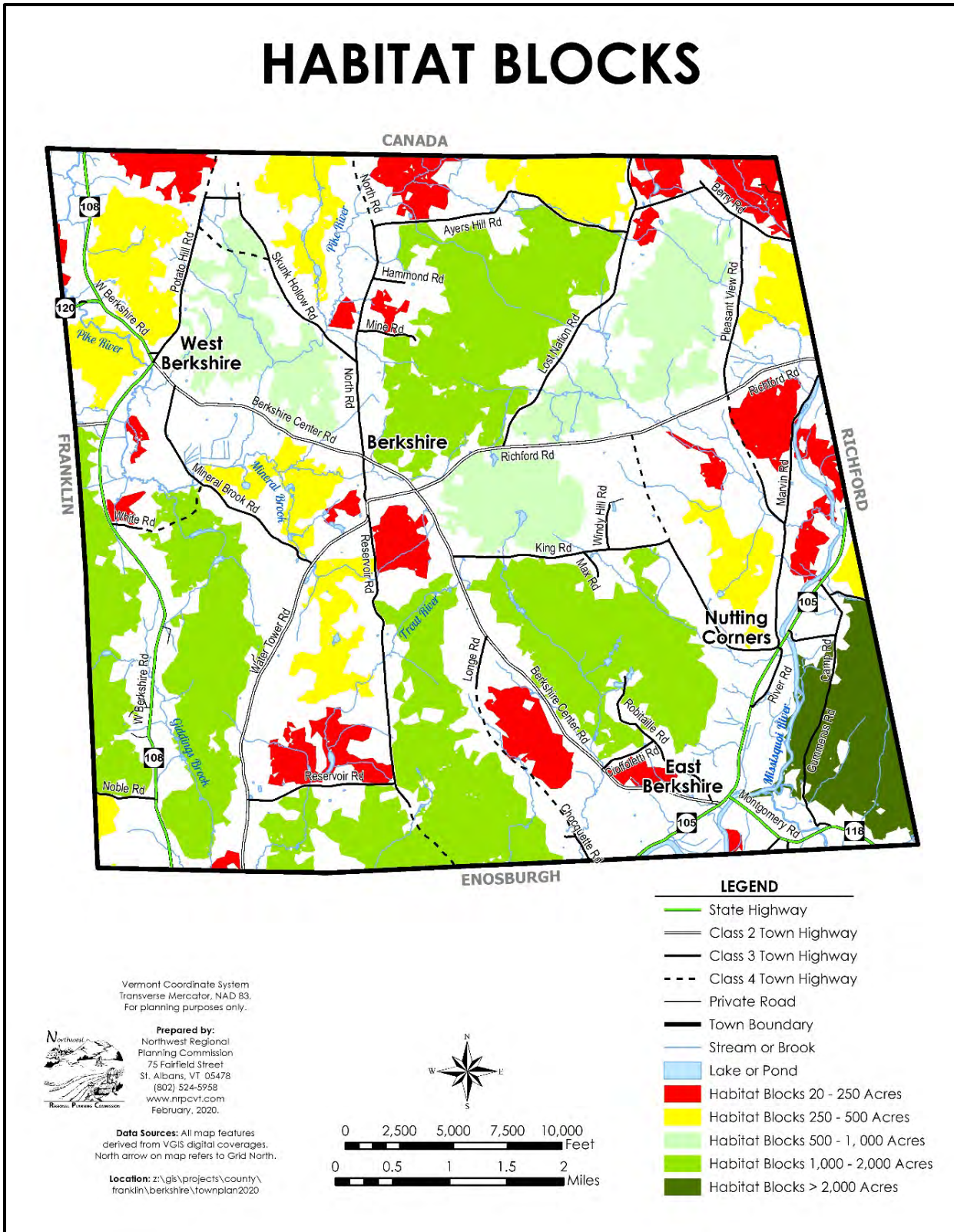
Large, unfragmented stretches of forest are especially important for preserving wildlife habitat and maintaining a working landscape for the forest industry. Such large tracts of undeveloped forestland, known as forest habitat blocks, can be fragmented by development when it infringes upon the boundaries of the forest, cuts a path through it, and breaks it up into smaller parcels that may be managed differently. Another important area of forest is habitat connectors which are land and water that link forest habitat blocks and enable wildlife to move from one forest habitat block to another. The forest areas which the state has identified as a priority for conservation are included in Map 9.3.

In 2017, Berkshire received a Municipal Planning Grant to update their development regulations. As part of this process, Berkshire examined creating a Forest District to preserve forest lands in the Town. However, the Town ultimately decided not to adopt this district. The general sentiment in Town is that given the lack of major infrastructure in Berkshire, there is not a need for another district to protect against development.

Given that the Town's forests and woodlands add to the diversity of the natural environment and local landscape, providing an appealing and necessary change from open fields and the built environment; long term management strategies and forest stewardship practices are needed to ensure the continued protection of existing forests and their economic benefits.

Map 9.3

# HABITAT BLOCKS



### **Residential Land**

Residential development is concentrated at the highest densities on relatively small lots (one acre or less) in Berkshire's three hamlets: West Berkshire, East Berkshire, and Berkshire Center. Of the three, East Berkshire is the largest. There is a growing trend, however, toward residential "strip development" (2 or more housing units per 1000 ft. of road frontage), particularly along roads leading northward from Enosburg Falls and East Berkshire. This type of rural residential development is increasingly common in many Vermont communities, and is in part determined by the need for road access and

"Strip development" means linear commercial development along a public highway that includes three or more of the following characteristics: broad road frontage, predominance of single-story buildings, limited reliance on shared highway access, lack of connection to any existing settlement except by highway, lack of connection to surrounding land uses except by highway, lack of coordination with surrounding land uses, and limited accessibility for pedestrians.

on-site systems, and the desire for more privacy. Lot sizes vary greatly, from newly created lots of an acre or less in the high-density zones to farmhouses sitting on large tracts of land (which are generally included with farms in the agricultural designation). This type of development; however, is often inefficient in its requirements for land and utilities, and is therefore more expensive to purchase, own, service, and maintain. It also limits access to hinterlands, and detracts from the traditional pattern of clustered settlement within hamlets and villages.

### **Commercial and Industrial Land**

There is very little commercial and industrial land in Berkshire. The commercial land that exists is located primarily in East Berkshire on relatively small lots. There are also a few lots in West Berkshire and Berkshire Center occupied by commercial enterprises. Berkshire is not yet afflicted with the commercial strip development that has begun to plague other communities, though the potential for such development exists, particularly on Rte. 105 coming from Richford.

It is expected that most commercial and industrial development will continue to be centered outside of Berkshire in the villages of Enosburg Falls and Richford. The need exists for limited commercial and possibly some light industrial development within the Town to diversify its economy and tax base. This type of development also should be clustered on suitable land near existing centers in order to prevent strip development and sprawl, and again, soil conditions in Berkshire, particularly in East Berkshire where most commercial development is likely to occur, are a limiting factor. Commercial development and renewable energy facilities should be screened from residential and other land uses.

### **Public and Semi-Public Land**

Roughly three percent of the land in Berkshire is in public or semi-public ownership,

and most of this is in the Berkshire Municipal Forest, and the Town's road network. Community buildings, including the town clerk's office, the town garage, the fire department, and the Berkshire Elementary School occupy little land. Small acreages of land should be identified near existing facilities to allow for future expansions. Much of the land within present ownership, such as the municipal forest and Class IV roads, could be developed and maintained for community educational and recreational use. As noted earlier, the Town also may want to consider the acquisition of land, development rights, or easements to protect its important resources.

## **B) WELLHEAD PROTECTION OVERLAY DISTRICT**

The Wellhead Protection Overlay District encompasses the Source Protection Areas for the East Berkshire Water Cooperative and the Enosburg Falls Water System (Map 9.4). The purpose of the District is to maintain or improve the quality of these water resources, including surface and ground waters, and to ensure that surface water bodies and corridors are protected and well-managed. Limited residential development should be allowed only as a conditional use.

## **C) RURAL LANDS DISTRICT**

The Rural Lands District encompasses the majority of land area in the Town of Berkshire, excluding the village centers, flood hazard areas, and source water protection areas (Map 9.4). The purpose of the Rural Lands District is to conserve the integrity and natural qualities of the agrarian tradition and rural open space for the betterment and future use of the community. The District will provide for rural residential development and compatible commercial establishments at a density the land can support without central water or sewage disposal and that maintains the forest and agricultural character of the Town.

### Agriculture, Forestry, and Forested Land

Retaining land in agriculture is critical to the continued vitality of farming in the Rural Lands District. Agricultural land is highly susceptible to development pressures as it often has soils well suited for development. The preservation of productive agricultural lands and primary agricultural soils need to be balanced with the need for some growth.

Forested land covers much of the Rural Lands District. Much of this land is unsuited for development because of poor soil and slope conditions and its importance for wildlife habitat. Many of Berkshire's forests are well-suited for use as small woodlots and low impact recreation, as well as some limited opportunities for larger scale forest industries. However, there are also wooded areas in Town that can provide a quiet, secluded setting for lower density residential development.

Wherever possible, new development in this area should be located at the outside of or at the edges of forest habitat blocks and habitat connectors to minimize forest fragmentation.

Important agricultural and forestry land in the Town should be identified using a "LESA" program. LESA, short for Land Evaluation and Site Assessment, is a method by which important agricultural and forestry land can be identified and earmarked for conservation or protection measures. This method takes into account economic factors related to production, and the intent and desires of the farmer, as well as soil suitability in determining the value of a particular farm or parcel to the community.

Agricultural and forestry land should be protected through owner participation in tax incentive programs (current use), the purchase of development rights/conservation easements, and appropriate development controls. The development of agricultural land, if necessary, should be located on wooded and scrub pasturelands that are in limited production and less critical to farming operations or at field edges. Development on agricultural and forested lands should be clustered to retain as much land as possible in production, forest, or open space.

#### Residential Development

Residential development, including seasonal home development, is expected to account for the majority of land demand in the near future, with the pressure for growth coming from Enosburg Falls, Richford, St. Albans, Canada, and to a limited extent, the Burlington area. While clustered, high-density residential development is encouraged in the Extended Village Districts, it is also expected that amount of residential development will continue in the Rural Lands District. Careful siting and layout of residential development will limit impacts on rural character, agricultural and forestry uses, wildlife habitat, and environmental sensitivities. Development shall avoid agricultural and forestry lands preserving them from fragmentation and conversion.

#### Home Business and Other Rural Commercial Development

Home businesses that maintain the working rural landscape of the Berkshire countryside are encouraged to continue as a significant part of the Rural Lands District. There is a place for other small commercial development in the Rural Lands District that fits the character of the area. It should be carefully reviewed to assure that the rural character of the area is maintained and there are no undue impacts on existing residential, agricultural, and forestry land uses. Zoning bylaws should allow some limited commercial uses only after conditional use and site plan review in the Rural Lands District. Appropriate landscaping and screening are important so that commercial uses blend in with the countryside.

### Light Industry and Earth Resource Extraction

There may be appropriate locations for light industry and earth resource extraction in the Rural Lands District. These potentially high-impact uses should be carefully designed to avoid adverse impacts to the local environment, adjacent land uses and community facilities and services. Zoning should allow light industry and earth resource extraction in the Rural Lands District only after conditional use and site plan review. The character of the area can often be maintained through vegetative buffers or screening, and other appropriate land use regulations. Sand and gravel pits in particular, should come under careful public review in order to avoid the many adverse impacts that are often associated with them. In particular, erosion, ground water protection, and site reclamation plans should be developed.

## **D) EXTENDED VILLAGE DISTRICT**

The purpose of the Extended Village Districts is to maintain and support the role of the villages as the focus of many social and economic activities in Berkshire and to provide for residential, commercial and other compatible development that serves the needs of the community (Map 9.4). Development should maintain the traditional density and overall social and physical character of the villages, including historic and scenic resources. It should also not exceed the capability of the lands, waters, services and facilities to accommodate such density. Continuing the mix of residences, civic and non-profit uses and commercial establishments is encouraged.

The Extended Village Districts currently lack any pedestrian amenities. East Berkshire, the largest of the 3 village areas, would benefit from sidewalks and crosswalks for a more pedestrian friendly streetscape. Zoning standards for East Berkshire should require pedestrian amenities and include standards for landscaping, parking, and signs. Off-street parking should be screened and located to the side or rear of a building and signs should be scaled and designed to complement the village character.

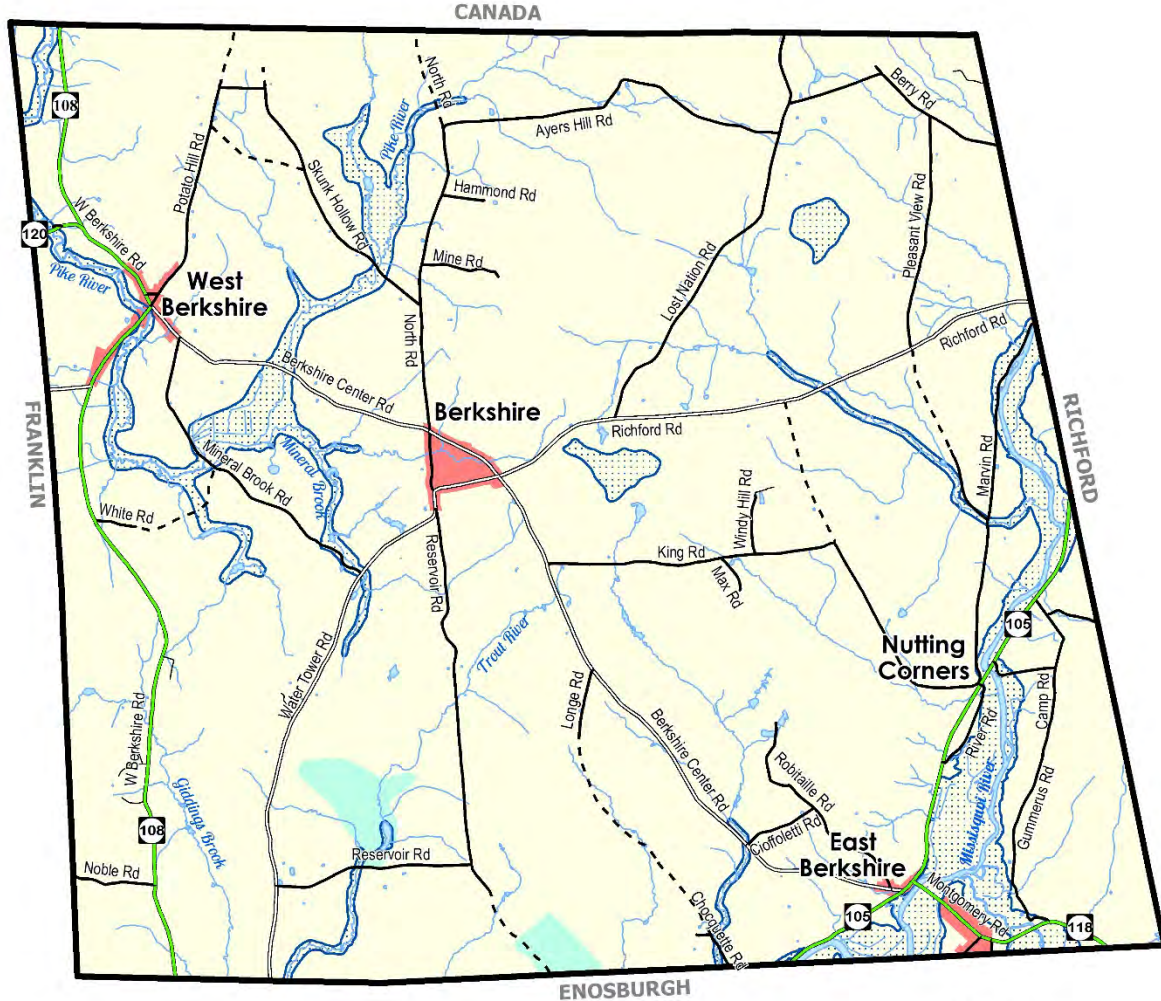
The desirability of locating higher density development near existing centers supports the need for a centralized sewer system in East Berkshire. In West Berkshire and Berkshire Center on the other hand, there are a few soils that can accommodate higher densities of development. In these areas, development should be designed and sited to protect local recharge areas and groundwater quality.

## **E) FLOOD HAZARD AREA OVERLAY DISTRICT**

Designation of this area is required for continued participation in the National Flood Insurance Program (NFIP) and is regulated under the Town's Flood Hazard Ordinance. Included are all areas in Berkshire identified as areas of special flood hazard on the National Flood Insurance maps and the River Corridors as published by the VT Agency of Natural Resources (Map 9.4). The purpose of the Overlay District is to encourage conservation and open space uses of flood hazard areas, prevent health and safety hazards, and to minimize property damage due to flooding.



# PROPOSED LAND USE



LEGEND	
	State Highway
	Class 2 Town Highway
	Class 3 Town Highway
	Class 4 Town Highway
	Private Road
	Town Boundary
	Stream or Brook
	Lake or Pond
	Extended Village District
	Rural Lands District
	Wellhead Protection District
	Flood Hazard Area Overlay District

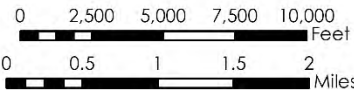
Vermont Coordinate System  
 Transverse Mercator, NAD 83.  
 For planning purposes only.



**Prepared by:**  
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 Planning Commission  
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 St. Albans, VT 05478  
 (802) 524-5958  
 www.nrpcvt.com  
 February, 2020.



**Data Sources:** All map features  
 derived from VGIS digital coverages.  
 North arrow on map refers to Grid North.



**Location:** z:\gis\projects\county\  
 franklin\berkshire\townplan2020

Map 9.4

## GOALS AND POLICIES: KEEPING IT RURAL IN THE FUTURE

**GOAL 1:** To maintain the rural, agricultural character of the Town of Berkshire, including the historic settlement pattern of small hamlets separated by rural countryside.

**GOAL 2:** To protect important natural resources and agricultural use of the land, while at the same time providing sufficient space in appropriate locations for residential, commercial, industrial development, and for community facilities.

### Policies:

- 1) The town encourages agricultural and forest land be maintained for viable economic use, encourages value added businesses, promotes locally grown products, and encourages the implementation of agricultural/forestry best management practices.
- 2) Forest fragmentation should be minimized through the Land Use and Development Regulations. This may include defining forest fragmentation and adoption of specific zoning standards.
- 3) Clustered development, including Conservation Subdivisions, shall be allowed only where feasible and appropriate in order to protect and maintain important farmland, forestland, and open space. Strip development shall be discouraged.
- 4) Only development incidental to agricultural production should occur on important agricultural lands. Good management practices, participation in tax incentive programs, and the acquisition of development rights or conservation easements to protect farm and forestland shall be encouraged.
- 5) Commercial, light industrial and intensive residential development shall be encouraged on suitable lands located in or immediately adjacent to existing population centers. Development should be designed to be in keeping with the character of the area, should not interfere with traffic flow, should provide adequate parking for employees and customers, and should provide landscaping, screening and/or buffers to minimize any adverse impacts on adjacent lands, important natural resources, or the community.
- 6) Community facilities and services should be provided in convenient and suitable locations for the safety, use, and enjoyment of local residents. New

utility lines should make use of existing corridors and rights-of-way wherever possible.

- 7) The town encourages agricultural and forestland be maintained for viable economic use, encourages value added businesses, promotes locally grown products, and encourages the implementation of agricultural/forestry best management practice.

## PLAN COMPATIBILITY



Photo Credit: Meg St. Pierre

### *Plan Coordination and Compatibility*

It has been readily demonstrated in the past that it is very difficult for a town to plan in isolation from its neighboring communities. The impacts of growth and development on the community and the environment often do not recognize, or may be intensified by, artificially drawn political boundaries. Battle lines are too often drawn when cooperation is needed instead. Act 200 encourages communities to work with each other and with the region and state in order to coordinate their planning programs. At the same time, it is necessary to recognize that each community is unique in its character, needs, and desires. Communication is an essential part of the planning process.

During the writing of this town plan, the Planning Commission reviewed the town plans of neighboring communities, which include Franklin, Enosburg Falls and Town, and Richford. The Planning Commission looked at the plans for compatibility with Berkshire's proposed land use map and discussed the status of any multi-town issues, such as traffic or water quality. A summary of this analysis is provided in Figure 10.1.

Berkshire planners should try to schedule periodic meetings with planners from neighboring commissions and the Town should maintain its representation on the Board of Regional Commissioners. State planning efforts can be tracked through direct contact with State agencies, through the Regional Commission, and through other statewide organizations such as the Vermont Planning Association.

### Figure 10.1 Land Use Compatibility with Adjacent Communities

Along the Berkshire/Franklin border, proposed land use is generally compatible. Berkshire's Rural Lands District abuts Franklin's similar Rural Residential/Agricultural District. The only area where land use plans differ is in East Franklin, where Franklin's Village District borders Berkshire's Rural Lands District. While the Village District allows more commercial uses and higher density development than the Rural District, there are no compatibility issues.

Along the Enosburg Falls/Berkshire border, proposed land use is generally compatible. Enosburg Falls' conservation, recreation, and low-density residential districts border Berkshire's Rural Lands District. One issue of note for both municipalities is the location of the back-up reservoir for the Enosburg Water System off Reservoir Road in Berkshire. Berkshire has adopted a Wellhead Protection Overlay District to protect this resource.

Along the Enosburgh Town/Berkshire border, proposed land use is generally compatible. Enosburgh's agricultural and rural residential zones abut Berkshire's Rural Lands District, while a source protection area is equally protected on both sides of the town line.

Along the Richford/Berkshire border, proposed land use is generally compatible. Richford's agricultural and conservation district abut Berkshire's Rural Lands District. The only exception is where Richford's commercial/industrial, commercial, and rural residential districts border Berkshire just after Route 105 passes into Richford. These heavier land uses have been sited well and have not presented any compatibility issues with Berkshire's Rural Lands District.

### **Compatibility with the Regional Plan**

Berkshire recognizes that it is part of a larger region and has considered the compatibility of its planning goals with that of the region. Berkshire's land use planning areas are similar to the proposed land use plan adopted by the Regional Planning Commission. The Regional Plan identifies Berkshire's village centers and

supports the continuation of historic village and hamlet centers through village center planning and designation efforts that preserve their traditional character. The Regional Plan also designates Berkshire's agricultural lands as an important resource, and further states that the best farmland in the region should be given the highest level of support for continued agricultural use.

## APPENDIX A. ONLINE PLANNING RESOURCES

The following is a list of internet resources that pertain to the community planning. Resources are identified by corresponding sections of the Town Plan. Included in this list are some mapping websites available to the public to allow viewing of information at a parcel, town or county level and many have a function for creating a printable map.

### The Sense of Place - Natural Resources & Environment

#### VT Agency of Natural Resources – Natural Resources Atlas,

<https://anr.vermont.gov/maps/nr-atlas>

The purpose of the **Natural Resources Atlas** is to provide geographic information about environmental features and sites that the Vermont Agency of Natural Resources manages, monitors, permits, or regulates.

In addition to standard map navigation tools, this site allows you to link from sites to documents where available, generate reports, export search results, import data, search, measure, mark-up, query map features, and print PDF maps.



#### VT Agency of Natural Resources – Biofinder,

<http://biofinder.vt.gov>

**BioFinder** is a map and database identifying Vermont's lands and waters supporting high priority ecosystems, natural communities, habitats, and species. The most comprehensive assessment of its kind in Vermont, BioFinder was developed by the Agency of Natural Resources and partners to further our collective stewardship and conservation efforts.

At its core, BioFinder is 21 overlapping data sets representing terrestrial and aquatic biological, ecological, and natural heritage data at various scales and aspects. A co-occurrence analysis then identified the locations of greatest overlap for priority ranking at the statewide scale. You can use the BioFinder Mapping Tool to explore the distribution and richness of Vermont's biodiversity and help secure Vermont's natural heritage for future generations.



#### USDA Natural Resources Conservation Service,

<http://websoilsurvey.nrcs.usda.gov>

To find out information about the type and quality of your soils you can use the Web Soil Survey (WSS), an online interactive map. Using the tools in the application you can select the area of interest (100,000 acres or less) and see a full list of the soil types and applicable land uses or limitations for the selected area based on soil properties.



#### **FLOOD READY** VT Agency of Natural Resources – Flood Ready,

<http://floodready.vermont.gov/>

Flood Ready provides information on floodplains and flood risk assessments for Vermont communities. It emphasizes the increasing risk of damaging floods in Vermont and encourages careful planning to avoid future damage. This site provides information on flooding costs and prevention, river corridors, and post disaster steps.

## The Sense of Place - Historic Legacies

**VT Division for Historic Preservation**, <https://accd.vermont.gov/historic-preservation>

All of the National Register, State Register and Historic Sites and Structures Survey materials are now digitized and available online here: [www.orc.vermont.gov](http://www.orc.vermont.gov). You don't need to get a username or password – just choose the town/county you want to research and the file types you want to look at, and then select “view scanned document”.

## Place for A Home

**VT Housing Data**, [www.housingdata.org](http://www.housingdata.org)

A central, searchable repository of **Vermont housing data** provided as a public resource. This site contains extensive housing data reports for Vermont — all its towns, villages, counties.



**Champlain Housing Trust**, <https://www.getahome.org/loans>

CHT Home Repair Loan Program provides a low-cost home repair loan program for homes in Chittenden, Franklin, and Grand Isle Counties.

**Vermont Community Development Program Implementation Grants**

<https://accd.vermont.gov/community-development/funding-incentives/vcdp>

Provides grant for projects in economic development, housing, public facilities and public services in support of community development or housing that will have direct benefit for persons of low and moderate income or address an urgent need.

## Earning A Living

**VT Dept. of Labor, Covered Employment and Wages**, [www.vtlmi.info/indnaics.htm](http://www.vtlmi.info/indnaics.htm)

## Providing for the People - Education

**VT Agency of Education**, <https://education.vermont.gov/data-and-reporting>

The agency collects data from Vermont's supervisory unions and school districts. In addition, the agency provides training to help school professionals provide this data.

## Providing for the People - Transportation

**Vermont Local Technical Assistance Program Center**,

<http://vermontlocalroads.org>

The Vermont Local Roads Program provides information, training and technical assistance to cities, towns and villages in Vermont. This is done through seminars and workshops, distribution of materials and technical assistance to fulfill service requests.



**Go Vermont**, [www.connectingcommuters.org](http://www.connectingcommuters.org)



**VERMONT**

7433).

Go Vermont is a resource for Vermonters who want to reduce the cost and environmental impact of driving. We offer free carpool matching and vanpool services, and statewide bus routes, as well as free Go! Vermont resources to help you promote more efficient travel options at work or at home. Call our Q/A hotline and a real person can answer your transportation questions (800-685-





**Green Mountain Transit, <https://ridegmt.com/>**

The Green Mountain Transit provides public transportation services in Washington County, Lamoille County, Franklin County, Grand Isle County, the Mad River Valley and the towns of Washington, Orange and Williamstown.

**VT Agency of Transportation, Online Map Center,**

<http://vtransmaps.vermont.gov/webmaps.htm>

This site contains several web-based maps such as park and ride lots, bridge and culvert information, and status of pending projects.

**Enhanced Energy Plan- Energy****Community Energy Dashboard, [www.vtenergyatlas.com](http://www.vtenergyatlas.com)**

The **Community Energy Dashboard** is your tool for identifying, analyzing, and visualizing existing and promising locations for renewable energy and energy efficiency projects.

**Efficiency Vermont, [www.encyvermont.com](http://www.encyvermont.com)**

Efficiency Vermont provides technical assistance, rebates, and other financial incentives to help Vermont households and businesses reduce their energy costs with energy-efficient equipment, lighting, and approaches to construction and major renovation.

**VECAN, [www.vecan.net](http://www.vecan.net)**

VECAN is a network of statewide Vermont organizations helping communities across the Green Mountain State to reduce energy costs and climate impacts through conservation, increased energy efficiency and conversion to renewable energy sources.

**General Links****Northwest Regional Planning Commission, <http://nrpcvt.com>**

The Northwest Regional Planning Commission (NRPC) is one of eleven commissions serving Vermont municipalities. NRPC operates under the Vermont Municipal and Regional Planning and Development Act and its adopted bylaws ([Title 24, Chapter 117, V.S.A.](#)). Our region is made up of 23 (19 towns, 3 incorporated villages, and 1 city) located in Franklin and Grand Isle Counties in northwestern Vermont. The Commission provides services to local municipalities, area non-profits and other regional organizations.

**Vermont Planning Information Center, <http://vpic.info>**

VPIC is a clearinghouse of information for planning commission, zoning boards, development review boards, and their staff and all others involved in land planning and regulation in Vermont. The resources on this page were created by collaboration among agencies and organizations that provide technical assistance and education to local land use officials in Vermont.



**Vermont Planning Information Center**

**Vermont State Statutes**, <http://legislature.vermont.gov/statutes/>

**Vermont League of Cities and Towns**, <http://resources.vlct.org>

The Vermont League of Cities and Towns (VLCT) is a nonprofit, nonpartisan organization that serves Vermont's municipal officials. VLCT provides educational workshops and consulting advice for municipal officials.

**VT Dept. of Housing and Community Development**, <https://accd.vermont.gov/community-development/resources-rules/publications>

This agency provides training, technical assistance and regulatory guidance as well as funding and incentives to businesses, individuals and municipalities.

## General Permitting

**VT Agency of Natural Resources - Permitting**, <https://anr.vermont.gov/planning/permitting>

The Agency of Natural Resources' three departments, Environmental Conservation (DEC), Fish and Wildlife (F&W), Forests, Parks and Recreation (FPR) have regulatory responsibility for a number of programs and oversee their associated permits. The majority of environmental permits are issued by the DEC.

**Permit Assistance** - The **Environmental Assistance Office** provides permit assistance through the Agency of Natural Resources' five regional offices and five satellite offices. The Permit Specialists are available in these offices to answer your questions about the permit process. <https://dec.vermont.gov/environmental-assistance>

**Natural Resources Board - Act 250**, <https://nrb.vermont.gov/>

The Act 250 program provides a public, quasi-judicial process for reviewing and managing the environmental, social and fiscal consequences of major subdivisions and developments in Vermont. The program is implemented through the 9 District Environmental Commissions.

**Public Service Board – Section 248**, <https://publicservice.vermont.gov/>

The Public Service Board is a quasi-judicial board that supervises the rates, quality of service, and overall financial management of Vermont's public utilities: cable television, electric, gas, telecommunications, water and large wastewater companies. It also reviews the environmental and economic impacts of energy purchases and facilities, the safety of hydroelectric dams, the financial aspects of nuclear plant decommissioning and radioactive waste storage, and the rates paid to independent power producers. The Board's mission is to ensure the provision of high quality public utility services in Vermont at minimum reasonable costs, measured over time periods consistent with the long-term public good of the state.

## LAND CONSERVATION & EVALUATION

**Vermont Land Trust (VLT)**, [www.vlt.org](http://www.vlt.org)

VLT's mission is to preserve land resources and promote responsible stewardship. As a statewide organization, VLT facilitates the implementation of permanent conservation easements to preserve farms, forests, wetlands, and other open space. Landowner or municipalities can contact VLT for assistance in land conservation projects.



**Vermont Current Use Program**, VT Dept. of Taxes, <https://tax.vermont.gov/property-owners/current-use>

Vermont's *Use Value Appraisal (UVA) Program* (also known as "Current Use") enables eligible private lands, where owners practice long-term forestry or agriculture, to be appraised based on

the property's value of production of wood or food rather than its residential or commercial development value. This legislation helps small scale farmers keep their land and maintain Vermont's rural character.

**Land Evaluation and Site Assessment (LESA),**

[www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/?cid=nrcs143\\_008438](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/?cid=nrcs143_008438)

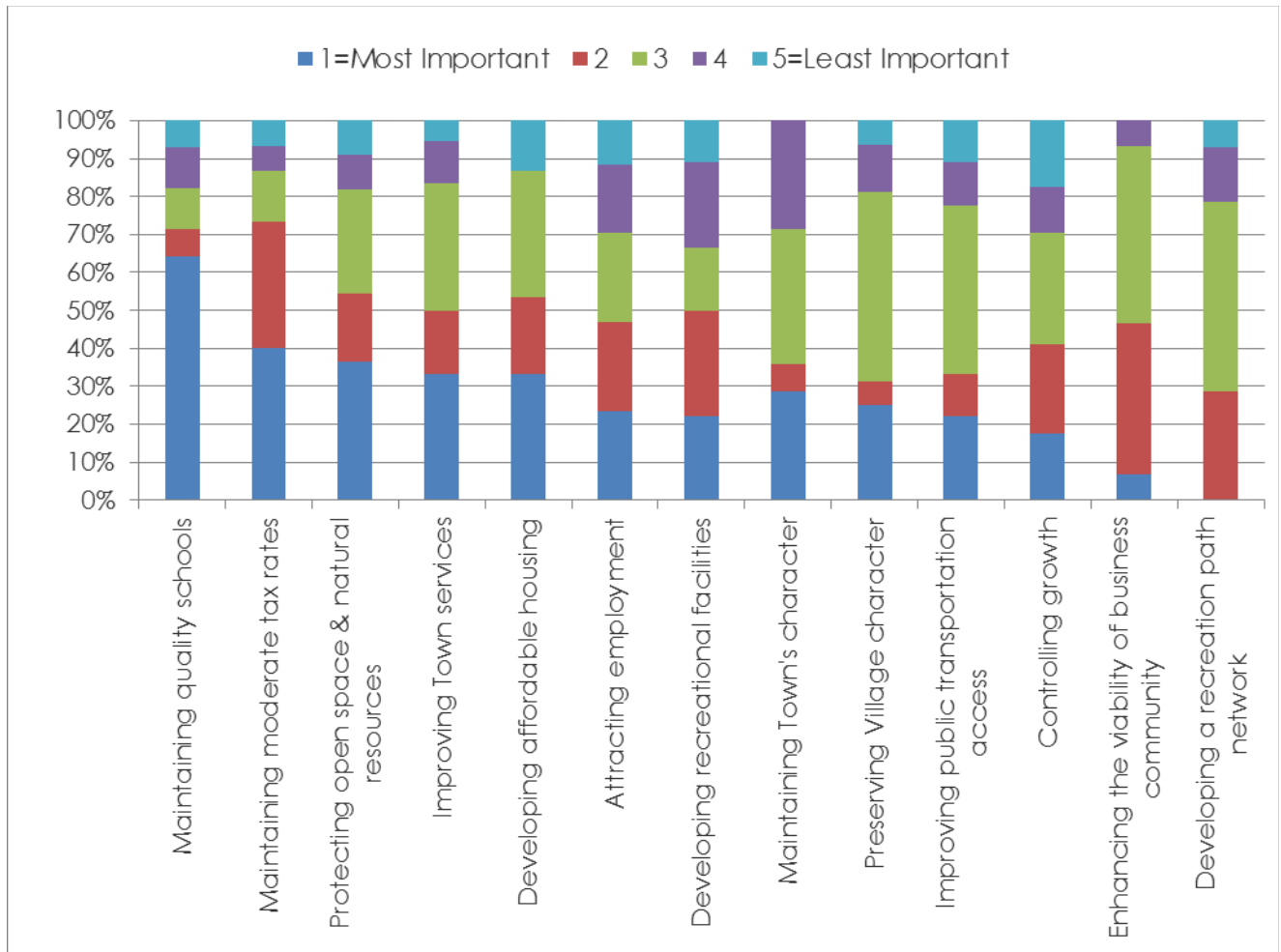
The LESA is procedure to evaluate and value land focused on identifying important agricultural land. This assessment was created by the U.S. Department of Agriculture's Natural Resources Conservation Service. The information can be used to inform land use or utility plans, develop land protection policies and permitting.

## APPENDIX B. COMMUNITY SURVEY 2014

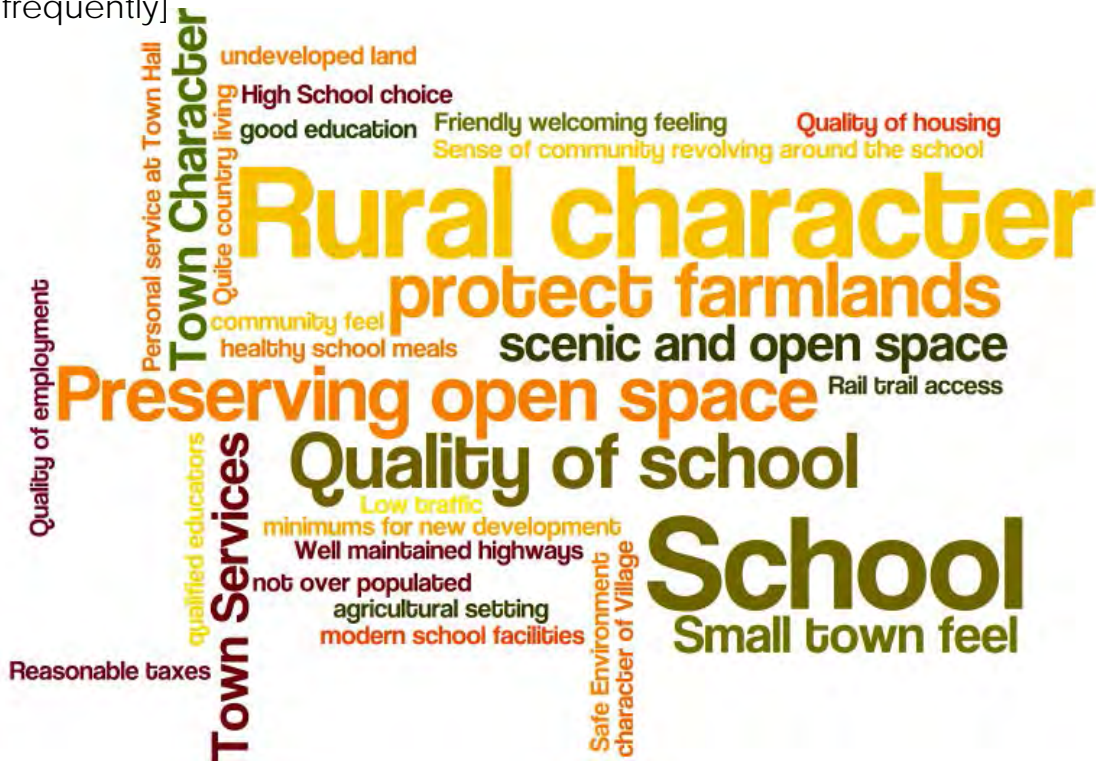
To gather feedback from the community at the start of the 2015 Town Plan update process, the Planning Commission conducted a community survey during the month of September 2014. The survey was disseminated through the Elementary School's weekly flyers for students, at the Town Office and word of mouth. The survey was made available to complete in paper or online from NRPC's website. Thirty-five surveys were completed during the month it was made available. Given the low number of responses, the survey does provide some insight into community opinions however the Planning Commission recognizes it is not a large enough sample to make broad generalizations on Berkshire's future.

### Survey Results

Question 1. What do you think are the five most important issues facing Berkshire in the next five years?



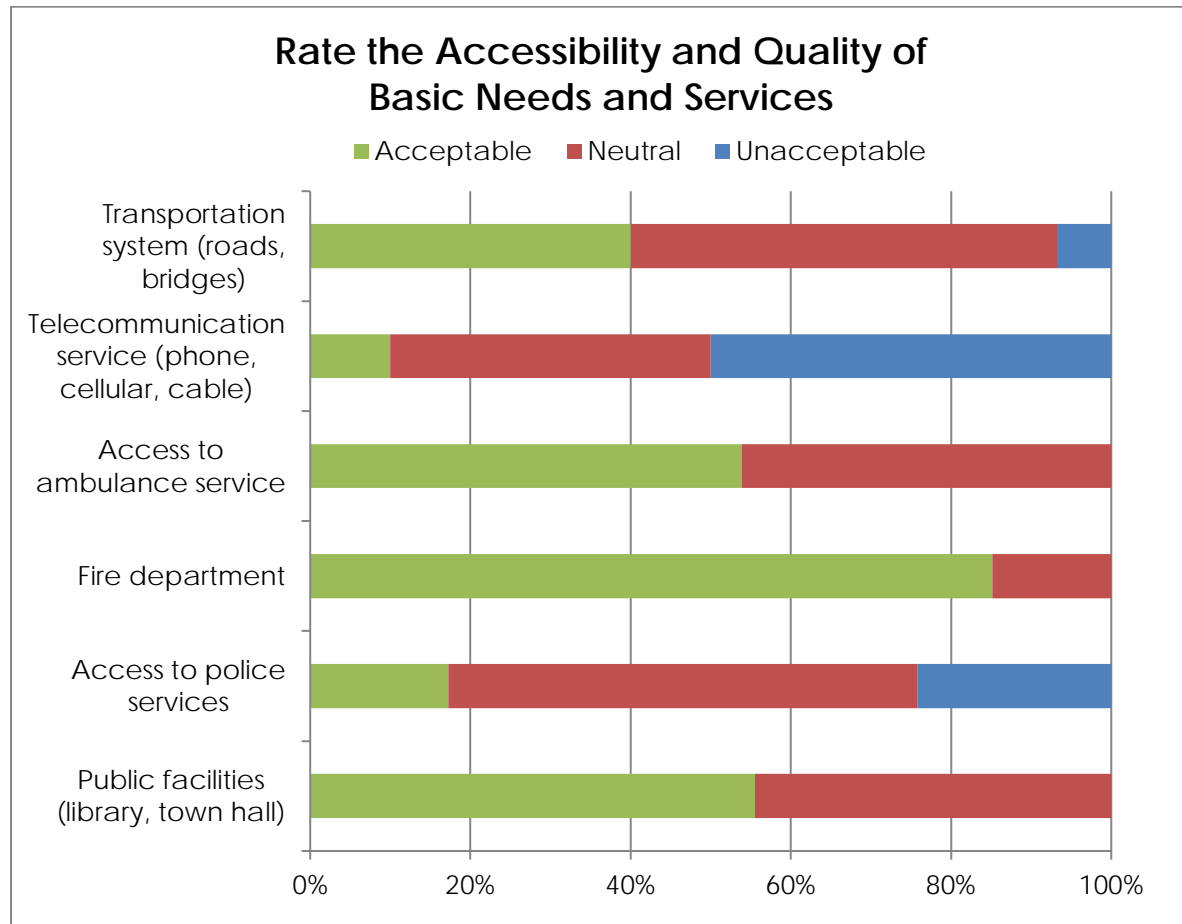
Question 2. List the top three things that you enjoy about Berkshire and do not want to change (28 responses). [The response to this question is shown in a 'wordle' or a word cloud that gives greater prominence to words that appear more frequently]



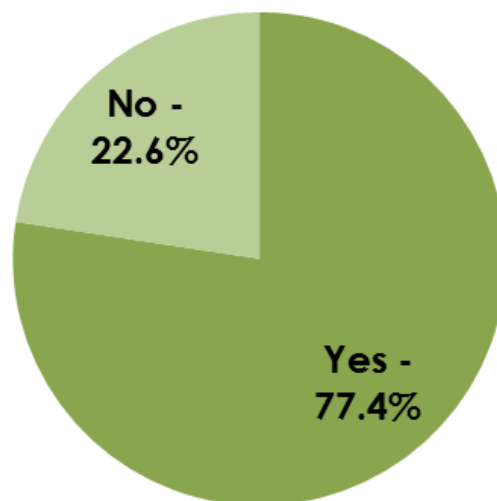
Question 3. List the top three things about Berkshire that you would like to change (23 responses). [The response to this question is shown in a 'wordle' or a word cloud that gives greater prominence to words that appear more frequently]



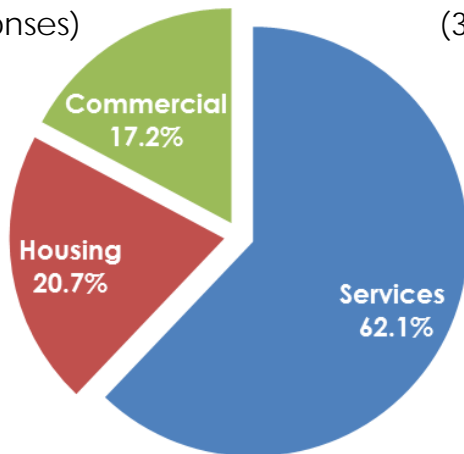
Question 4. The following questions relate to the accessibility and quality of basic needs and services. How would you rate our... (34 responses)



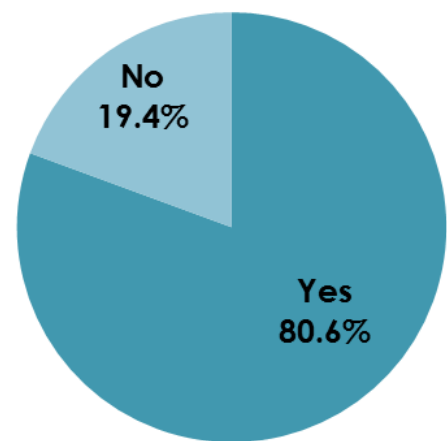
Question 5. Does Berkshire have an adequate supply of safe, healthy, and affordable housing that satisfies the living requirements of residents? (31 responses)



Question 6. Should the Village areas include more... (29 responses)

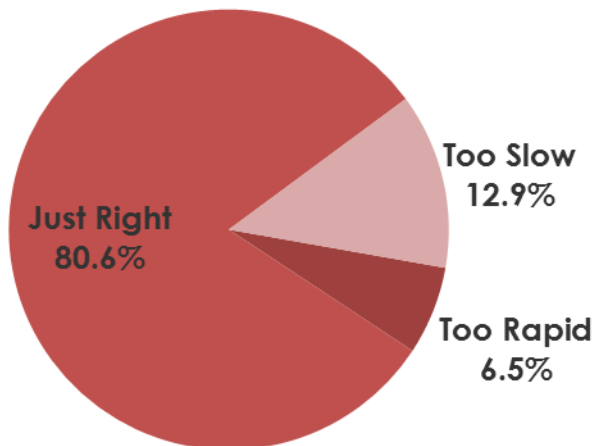


Question 7. Should historic preservation be a consideration? (31 responses)

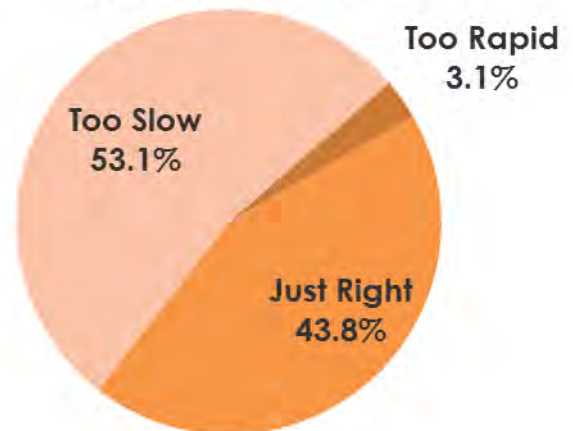


Question 8 & 9. Do you feel the rate of development has been... (31 responses)

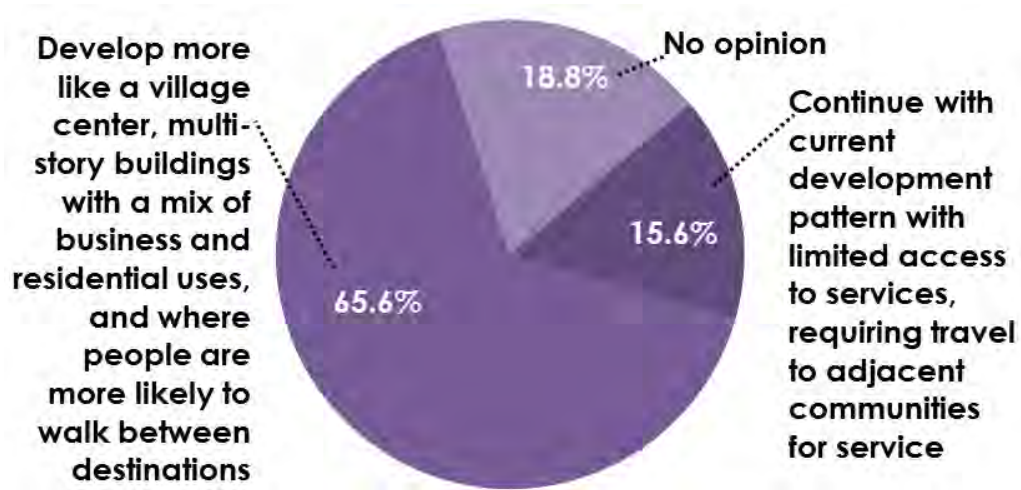
**RESIDENTIAL development**



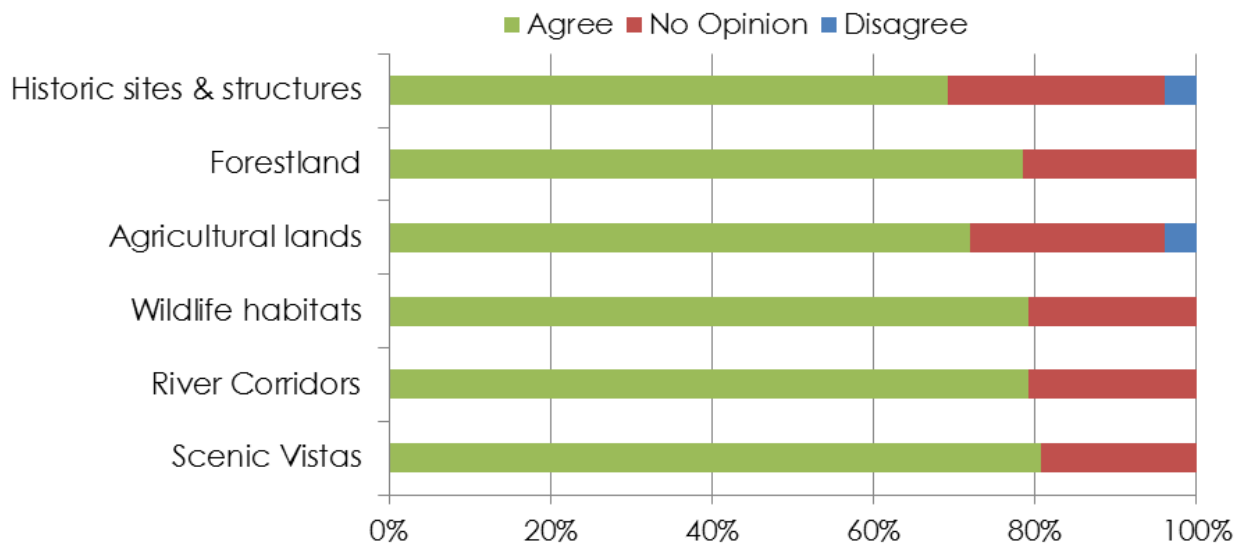
(32 responses)  
**COMMERCIAL development (stores, offices)**



Question 10. Would you rather see East Berkshire... (32 responses)



Question 11. In making regulatory decisions concerning development, the Town should make specific efforts to protect it's... (33 responses)





Question 12. What type of economic development would you like to see Berkshire encourage? (33 responses)

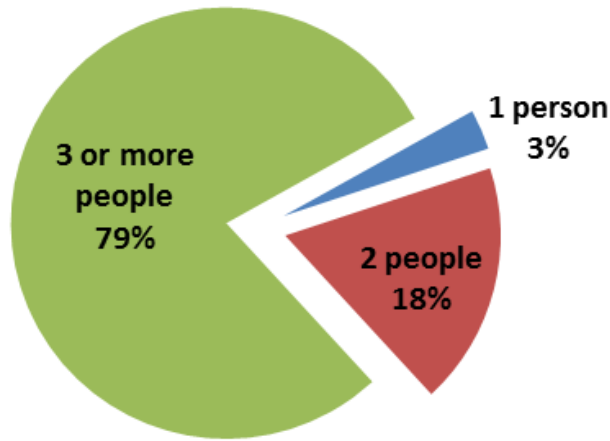


The following information provides a profile of the demographics of the survey respondents:

Number of years respondents' have lived in Berkshire (32 responses) [The response to this question is shown in a 'wordle' or a word cloud that gives greater prominence to words that appear more frequently]

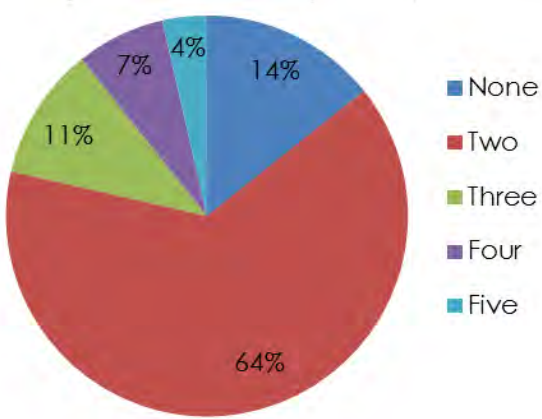


Number of people in respondents' household (33 responses)

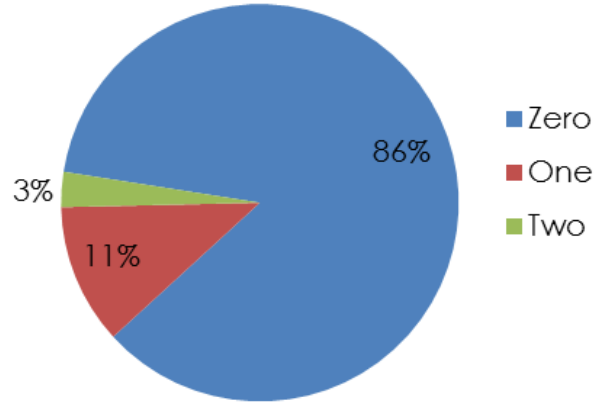


Number of respondents' household members that are....

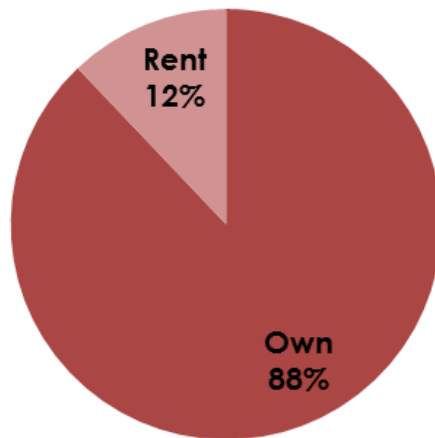
**Age 18 or younger**  
(28 responses)



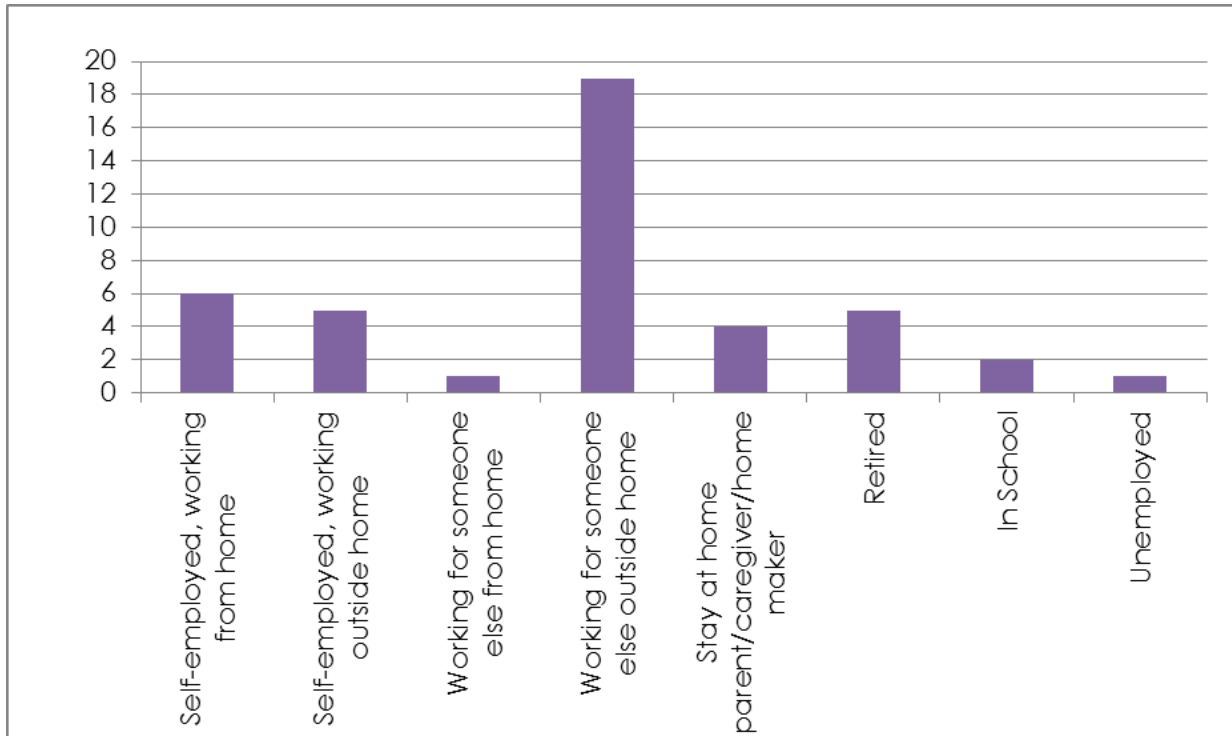
**Age 65 or older**  
(15 responses)



Homeownership among survey respondents' (33 responses).



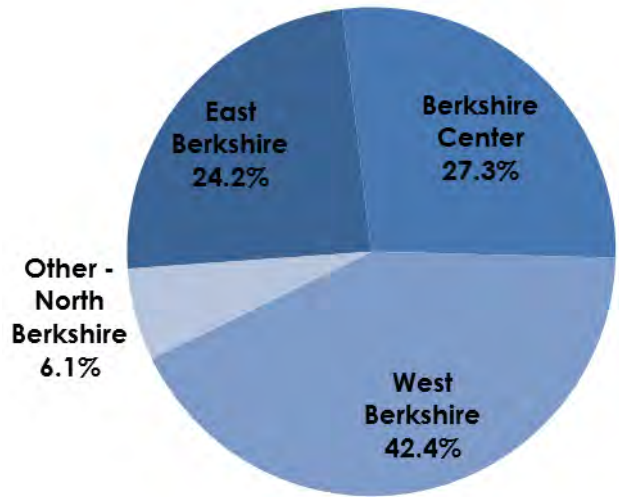
Status that best describes of at least one member of respondents' household (33 responses).



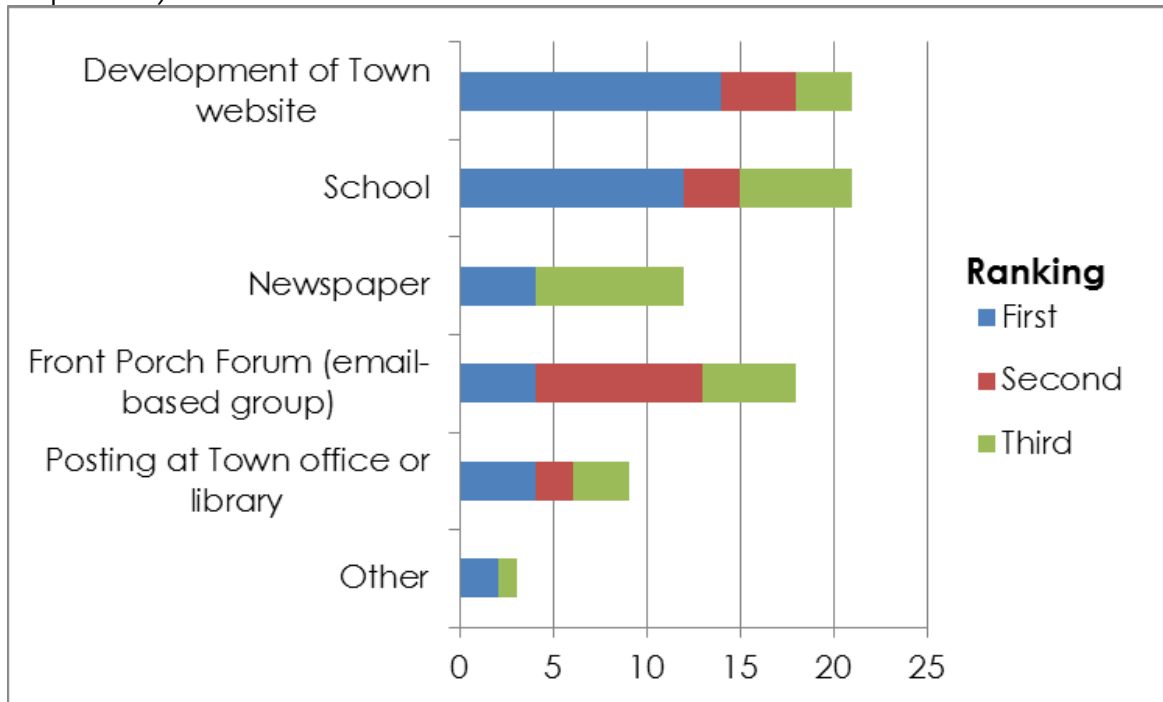
Location of employment for at least one person working outside of the respondents' home (26 responses). \*When provided, other included the Town of Jay and an employer based outside of the state of Vermont.



Location in town the respondents' reside (33 responses).



Respondents were asked how they would prefer to be informed of community events and meetings. The respondents' were asked to rank their top three (32 responses).



# Bakersfield Town Plan 2018



Adopted by the Bakersfield Select Board  
November 26, 2018

Bakersfield Select Board

Lance Lawyer  
Brian Westcom  
David Ovitt

Bakersfield Planning Commission

William Irwin, Co-Chair  
Ken Carter, Co-Chair  
Heather Jewitt  
Gary Foote

We wish to thank Taylor Newton of the Northwest Regional Planning Commission for assistance with data tables, and content to meet new planning requirements for economic development and hazard resiliency.

Special thanks also to Nancy Hunt for her work on the  
Historic and Archaeological Resource Chapter

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## Vision Statement

The purpose of this Town Plan is to ensure that future growth in Bakersfield be at a pace the town can assimilate, that the unique and essential character of Bakersfield remains intact, and that our valuable natural resources, such as wildlife, forests, wetlands and agricultural lands will be protected and preserved.

Bakersfield has experienced significant residential growth in the past twenty years while the commercial and economic sector has declined. This Town Plan is intended as a guide for reasonable and effective policies, procedures, and bylaws designed to guarantee that the rate and pattern of growth enhances the quality of life enjoyed by Bakersfield residents.



*Bakersfield is rich in historic resources, including this remarkably intact and preserved historic farmstead on the Fletcher line. It includes a farmhouse built circa 1800 with three mid 19<sup>th</sup> century barns and ice house that form a protected barnyard. Credit: Bakersfield Historical Society.*



# Chapter 1. Introduction

## Purpose

The purpose of a municipal plan is to help guide decision-makers to chart the future of a community. A plan is a town's vision for the future. It states related goals and objectives based upon a brief reflection of the past and an analysis of existing conditions. A plan is developed from an established planning program which has involved the public in a variety of ways. Through this collective effort the vision and recommendations have been developed with the best interests of the town as a whole in mind. In other words, a Town Plan is a calculated vision which is put together by the residents of the town.

This Town Plan will help Bakersfield control its future by providing it with the means to direct change. A Town Plan does that by providing the community with a plan of action, or blueprint, which shows a community what it will be like in the future. A Town Plan can help determine what things are going to stay the same and what things are going to change. It defines how those changes are going to happen, and how quickly, or slowly, they are going to take place. A Town Plan gives Bakersfield the power to guide change, and the pace at which change will occur, so that change does not control the town's future. If the recommendations of the plan are implemented, the quality of life in Bakersfield can be positively affected.

Bakersfield Town Officials engage in an ongoing planning program for additional reasons including:

- providing additional information and data to guide decision-makers in developing new policies;
- identifying areas where additional study is needed; and
- providing a foundation for amending the zoning and subdivision bylaws.

Policies within the municipal plan are based on an analysis of current conditions, the input of many residents, housing and population projections, and development trends in the town and the surrounding region. Though the goals and policies of this plan are long-term, it is expected that Bakersfield will re-examine them periodically and amend the Plan as needed and as required by law.

## Authority

The town of Bakersfield is authorized to prepare and adopt a Municipal Plan via Chapter 117, Title 24 of the VSA (Vermont Municipal and Regional Planning and Development Act). Section 4382 of the Act dictates what needs to be included in a plan. The intent of the law is to encourage a municipality to "engage in a continuing planning process that will further several stated goals." The Act further states that municipal plans shall be re-examined, updated, and re-adopted every five years. This process should be ongoing, whereby the Plan is continually reassessed and revised to meet the changing needs of the community. Consequently, there will

be future opportunities to review and amend the plan. Residents, community groups, or anyone with an interest in the town is encouraged to provide input into this ever-continuing process at any time.

**Overview of the Planning Program**

Planning and zoning in Bakersfield began with a first town plan in 1992. Zoning regulations were adopted in 1966 and updated in 1971, 1978, 1989 (interim), 1991 (interim), 1994, 2006 and 2009. These are intended to be "living" documents which have been, and will continue to be, updated many times to reflect the ever-changing conditions in Bakersfield. The 2014 Bakersfield Town Plan builds on the previous town plans and furthers the effort to maintain a strong, vibrant community.

The 2014 Bakersfield Town Plan is a result of a planning process initiated in the fall of 2006. The 2009 update was completed with assistance from the Northwest Regional Planning Commission and support from a Municipal Planning Grant awarded through the Vermont Department of Housing and Community Affairs. This planning process began with a survey of Bakersfield residents. More than 70 Bakersfield residents responded to the survey and provided the planning commission with valuable input on their goals and visions for the community. Residents were also invited to participate in two public forums, held in April 2007 and April 2008 to discuss updates to the Town Plan and Zoning Bylaws. Further input was also gathered by the Bylaw Review Committee. The 2014 Town Plan incorporates revisions brought to the Planning Commission’s attention over the five years since the 2009 Town Plan was adopted.

The town of Bakersfield continues to encourage public participation at all levels of the planning process. All Selectboard, Planning Commission and other town meetings are open to the public. Residents are encouraged to attend to offer input and voice their opinions.

**The Structure of the Plan**

The Bakersfield Town Plan is divided into chapters that address both the required elements of 24 V.S.A. Chapter 117 and other key areas of concern. Each chapter contains background information, including past trends, current status, and future needs intended to inform the town’s planning efforts. At the end of each chapter is a set of goals and policies that have been developed by the Planning Commission which are based on the available information and intended to move Bakersfield toward the Vision as highlighted at the beginning of this plan. For the purpose of this plan, the terms “goals” and “policies” are defined below:

**Goals** reflect the “desired future condition” – although some may not be attainable for many years;

**Policies** are the strategies to pursue in order to attain the goals.

The Town Plan also considers compatibility with the surrounding towns and the region as a whole, and concludes with an Implementation Chapter that makes recommendations and identifies specific actions for the town to take in the next five years and beyond.

## Chapter 2. Community Profile

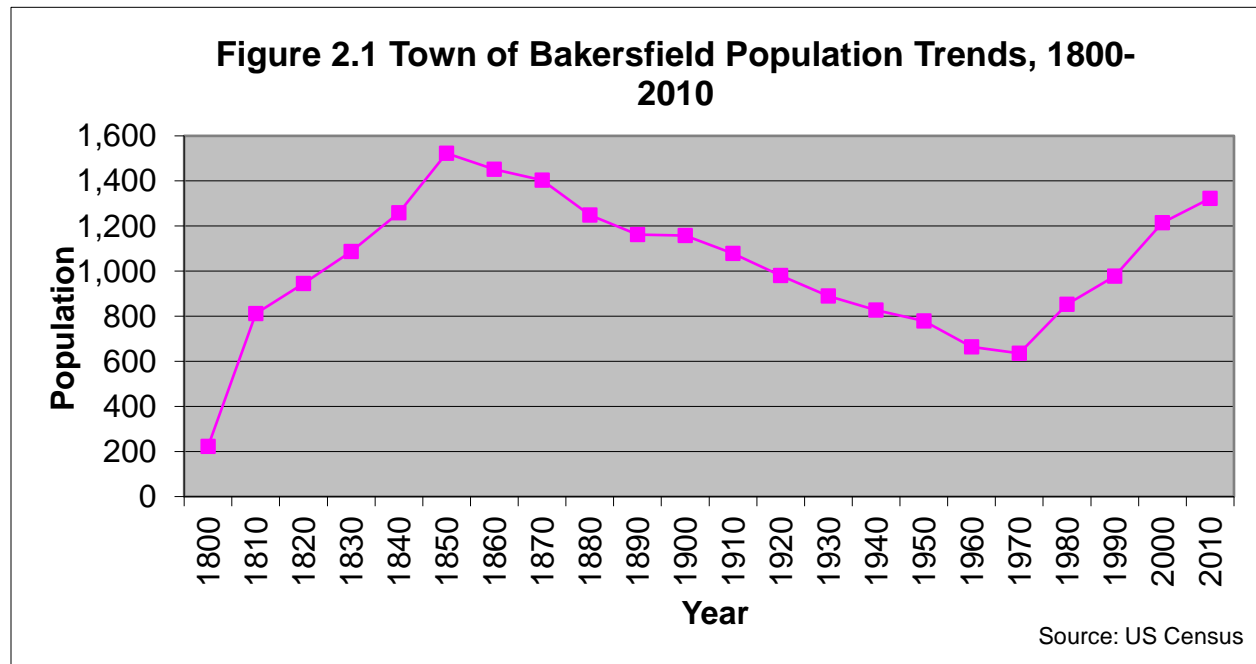
The Town of Bakersfield is located in Franklin County in the northwestern part of Vermont. Bakersfield shares borders with the towns of Fletcher, Fairfield, Enosburgh, Montgomery, Waterville and Belvidere (in Lamoille County). Bakersfield is within 20 miles of the City of St. Albans, the regional growth center, and approximately 40 miles from the City of Burlington, Vermont’s largest City.



### Population

The population of the Town of Bakersfield has fluctuated over the past two centuries (Figure 2.1). In the mid-1800s, the town hit its peak population with more than 1500 residents. Following this peak, the population steadily declined until reaching a turning point in the 1970s.

Like many other towns in the northwest region, the latter half of the 20<sup>th</sup> century brought significant growth to Bakersfield (Table 2.1). From 1980 to 1990, its population grew by 14.5 percent, and between 1990 and 2000 that increase jumped to 24 percent, nearly three times the rate of state growth (Table 2.2). The population continued to grow between 2000 and 2010 to a total of 1322.



<b>Table 2.1: Populations Trends for Bakersfield and its Surrounding Areas</b>					
	<b>Actual</b>				
	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>
State of Vermont	444,731	511,466	562,767	608,827	625,741
Franklin County	31,281	34,788	39,980	45,417	47,746
Bakersfield	635	852	977	1,215	1,322
Fletcher	456	626	941	1,179	1,277
Fairfield	1,285	1,493	1,680	1,800	1,891
Enosburg	1,918	2,070	2,535	2,788	2,781
Montgomery	651	681	823	992	1,201
St. Albans City	8,082	7,308	7,339	7,650	6,918
St. Albans Town	3,170	3,555	4,606	5,324	5,999
Lamoille County	13,309	16,767	19,735	23,233	24,475
Belvidere	189	218	228	294	348
Waterville	397	470	532	697	673
Data Source: U.S. Census					

<b>Table 2.2: Percent Change in Population for Bakersfield and its Surrounding Areas</b>				
	<b>1970-1980</b>	<b>1980-1990</b>	<b>1990-2000</b>	<b>2000-2010</b>
State of Vermont	15.0%	10.0%	8.2%	2.8%
Franklin County	11.2%	14.9%	13.6%	5.1%
Bakersfield	34.2%	14.7%	24.4%	8.8%
Fletcher	37.3%	50.3%	25.3%	8.3%
Fairfield	16.2%	12.5%	7.1%	5.1%
Enosburgh	7.9%	22.5%	10.0%	-0.3%
Montgomery	4.6%	20.9%	20.5%	21.1%
St. Albans City	-9.6%	0.4%	4.2%	-9.6%
St. Albans Town	12.1%	29.6%	15.6%	12.7%
Lamoille County	26.0%	17.7%	17.7%	5.3%
Belvidere	15.3%	4.6%	28.9%	18.4%
Waterville	18.4%	13.2%	31.0%	-3.4%
Data Source: U.S. Census				

Table 2.3: Percent Change in Number of Households, and Housing Units 1980-2000						
	Households			Housing Units		
	1980-1990	1990-2000	2000-2010	1980-1990	1990-2000	2000-2010
<b>Bakersfield</b>	29.2%	27.3%	12.8%	19.3%	21.5%	16.3%
<b>Franklin County</b>	23.7%	17.0%	10.4%	19.3%	11.3%	12.5%
<b>Vermont</b>	18.1%	14.2%	6.6%	21.5%	8.5%	9.6%
Data Source: US Census						

As the population of Bakersfield has increased, so too have the number of households and housing units (Table 2.3). The percent increase in the number of households and housing units for the Town is greater than the figures for the county and for the state. The rate of growth in the number of households and housing units has declined between 1980 and 2010. The average household size held relatively steady at in between 1990 (2.83 persons/household) and 2000 (2.77 persons/household). The average household size decreased in 2010 to 2.25 person/household. This reflects trends both county and statewide.

**Definitions:**  
**A Housing Unit** is a house, an apartment, a mobile home, a group of rooms, or a single room that serves as a separate living quarters.  
**A Household** is all the people who live in a housing unit.

Table 2.4: Age Structure Comparison in Bakersfield and its Surrounding Areas					
	Year	% of Pop < 18 yrs	% of Pop 18-64 yrs	% of Pop 65+ yrs	Median Age (yrs)
<b>Bakersfield</b>	<b>1980</b>	35	55	10	28.6
	<b>1990</b>	31	59	9	33
	<b>2000</b>	31	61	9	37.7
	<b>2010</b>	28.5	61.7	9.9	39.2
<b>Franklin County</b>	<b>1980</b>	33	56	11	28.9
	<b>1990</b>	29	60	11	31.7
	<b>2000</b>	28.1	60.9	11	35.7
	<b>2010</b>	27	61	12.2	38.9
<b>State of Vermont</b>	<b>1980</b>	28.4	60.2	11.4	29.4
	<b>1990</b>	25.9	62.3	11.8	33
	<b>2000</b>	24.2	63.1	12.7	37.7
	<b>2010</b>	24	61.5	14.5	41.5
Source: US Census					



**Age Distribution**

The median age in 2010 for the residents of Bakersfield was 39.2 years. This age is up from 37.7 in 2000 and 29.4 in 1980 (Table 2.4), but is comparable to the median age of Franklin County and Vermont residents, 38.9 years and 41.5 years, respectively. Bakersfield, Franklin County, and the state of Vermont have all seen an increase in their median ages since 1980. As in many towns in Vermont, the population of Bakersfield is aging. The percent of individuals under the age of eighteen has declined since 1980, while the percent of the population between the ages of eighteen and 64 has seen a slight increase. Bakersfield has actually seen the population of those older than 65 years remain steady since 1980.

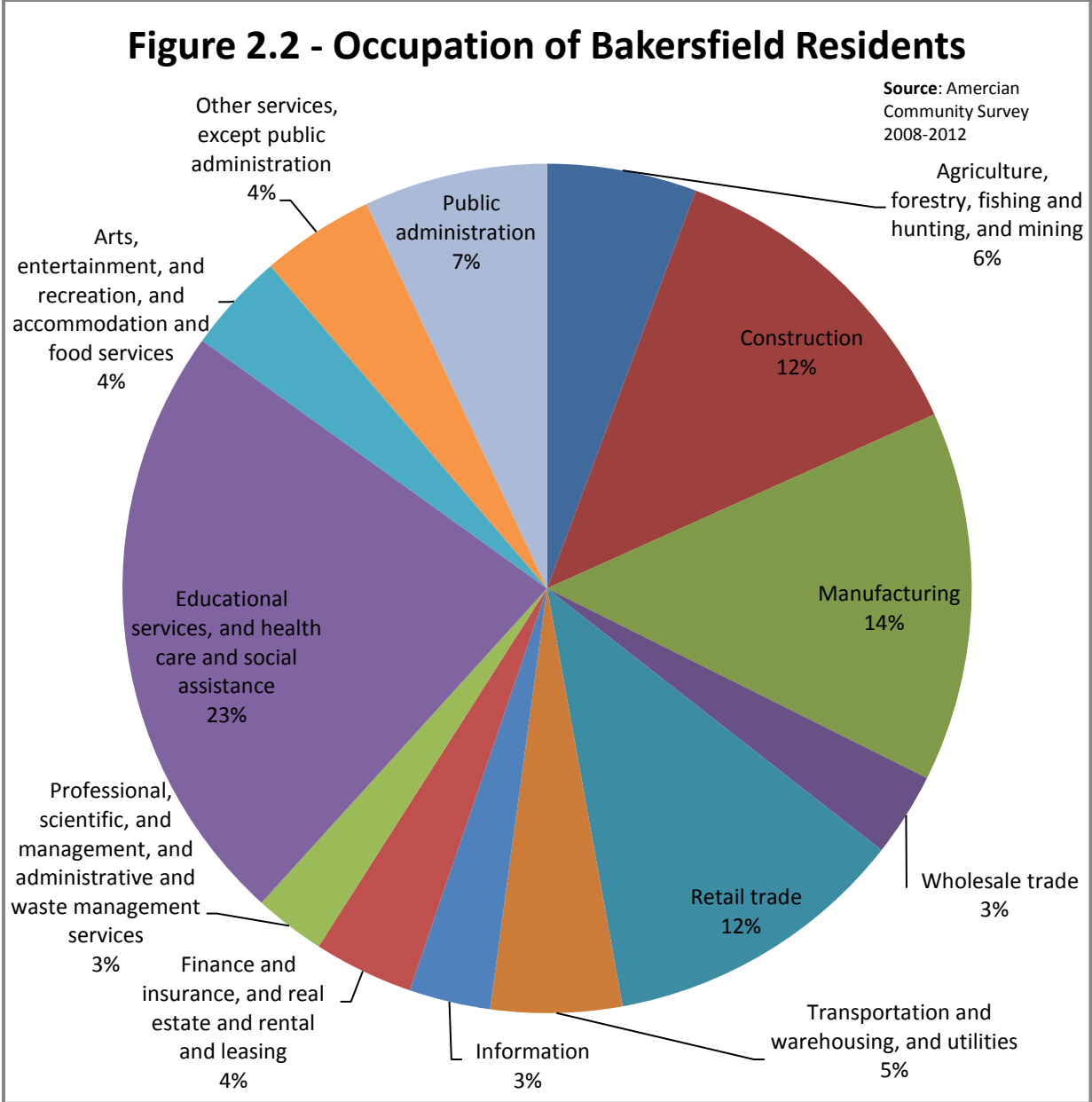
**Special Populations**

The US Census provides information about the number of people with various levels and types of disabilities. Data for disabled persons between the ages of 5 and 15 years old is no longer available for Bakersfield via the census, but was higher than previous county and state averages in the past (8.3 percent in 2000). Franklin County (5.1 percent) and the state of Vermont (5.8 percent) have lower percentages as of 2012 per the American Community Survey (Table 2.5). Bakersfield has a higher percentage of disabled persons over the age of 65 (42.2 percent) as compared with the County (41.1 percent) and the state (34.6 percent).

<b>Table 2.5: Percentage of Population by Age with Disability Status</b>			
	<b>5-15 years old</b>	<b>16-64 years old</b>	<b>65 and over</b>
Vermont	5.8%	11.0%	34.6%
Franklin County	5.1%	14.0%	41.1%
Bakersfield	Not Available	11.5%	42.2%
Source: 2008-2012 American Community Survey			

**Income and Economy**

Historically, the Bakersfield economy has relied heavily on agriculture, forestry and education. According to the 2012 American Community Survey, 716 Bakersfield residents age 18 and older are working. Of these, only 6 percent made their living through farm, forestry or mining occupations. (Figure 2.2). More than 23 percent of Bakersfield residents reported health care, education or social services. This represents a significant shift in the economy of Bakersfield and is expected to continue in the coming years.



The median household income for Bakersfield was slightly above the median household income for both Franklin County and for Vermont in 1989, but by 1999 had dropped to be slightly below and remains there as of 2012 (Table 2.6). The percent change in median household income in Bakersfield from 1999 to 2012 was significantly higher than that of Franklin County (62 percent as compared with 59 percent). Despite the fact that Bakersfield has a lower median income, the Town has a lower percentage of families with incomes below the poverty level (8.1 percent) as compared to the County (8.2 percent). The percentage of families in Bakersfield below the poverty line rose from 6.12 percent in 1999 to 8.1 percent in 2012.

<b>Table 2.6: Median Household Income and Percent Change &amp; Percent of Families Below Poverty Level</b>							
	<b>Median Household Income &amp; Percent Change</b>				<b>Poverty Level and Percent Change</b>		
	<b>1989</b>	<b>1999</b>	<b>2012</b>	<b>% change 1999-2012</b>	<b>% families below poverty level 1999</b>	<b>% families below poverty level 2012</b>	<b>% Increase</b>
<b>Bakersfield</b>	\$29,946	\$40,417	\$65,481	62%	6.12%	8.10%	1.98%
<b>Franklin County</b>	\$28,401	\$41,659	\$66,186	59%	7.00%	8.20%	1.20%
<b>Vermont</b>	\$29,792	\$40,856	\$69,033	69%	6.30%	7.30%	1.00%
Source: US Census of Population 1980-2000 and American Community Survey 2008-2012							

# Chapter 3. Historic and Archaeological Resources<sup>1</sup>

## Town History

The town of Bakersfield was originally chartered as Knowlton’s Gore in 1787. Approximately 10,000 acres of land were granted to Luke Knowlton, a land surveyor. Soon after the charter was signed by Governor Thomas Chittenden on January 25, 1791, Knowlton sold the land to Joseph Baker, a settler from a well-to-do family in Westboro, Massachusetts. In 1792, part of adjoining Fairfield and Smithfield lying to the south and west of the present-day village common and St. George Cemetery, respectively, were annexed to Bakersfield.

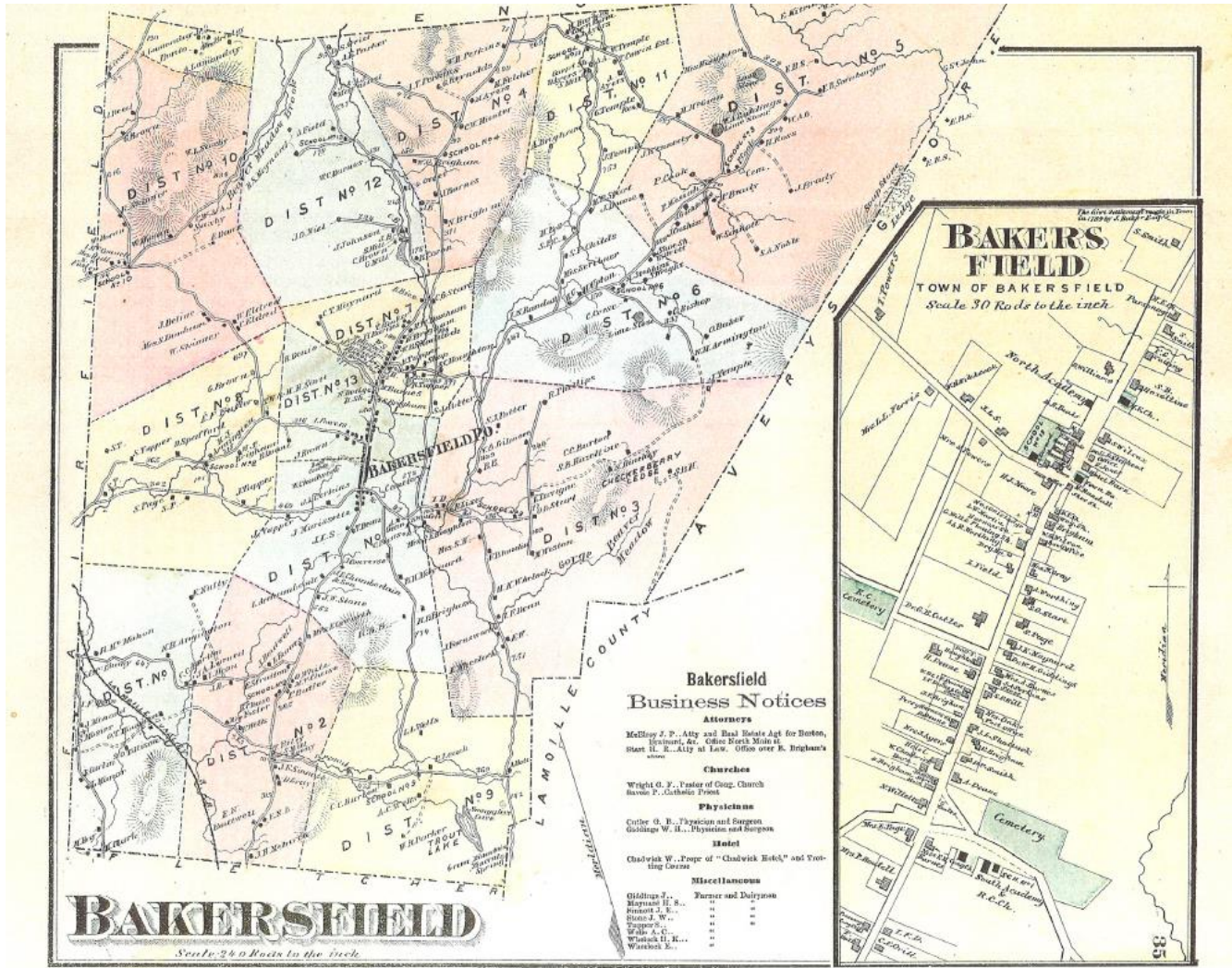
Between 1800 and 1850 the population of Bakersfield increased from 222 to an all time high of 1,523 inhabitants. By 1839, some of the early families who had emigrated from areas around Boston realized that their children and grandchildren needed more than the 8<sup>th</sup> grade education provided by the town’s 12 school districts if they were to succeed in the rapidly changing economy of the mid-19<sup>th</sup> century. Thirty-one townspeople contributed sums ranging from ten to seventy-five dollars to build South Academy (later St. George Church 1885-1977, and Bakersfield Historical Society 1997-present). The officers of the Bakersfield Academical Association hired Jacob Spaulding, a graduate of Dartmouth College, as the first headmaster/teacher (1840-1852). The catalogue of 1850 in the Historical Society’s collection lists 361 students from all over Vermont, New York, New England and Quebec, along with the houses where they took room and board for \$1.25 per week. Some of these Greek Revival houses with their continuous additions are still standing along Main Street today.

In 1844, the Methodists built a second academy, North Academy on a hill across the road from the Methodist Church (its frame structure deteriorated and was torn down years ago). They hired the Rev. H.J. Moore, a noted classical scholar from New York State as its principal. The two academies competed for excellence and established Bakersfield as an exceptional center for secondary education in northern Vermont in the mid-19<sup>th</sup> century. Meeting the demand for goods and services needed by the student population brought economic prosperity to an otherwise agricultural town. Two stages a day made round trips to St. Albans. The instructors and graduates who continued to live in Bakersfield enhanced the cultural environment of the community for years.

Even though Bakersfield experienced its first decline in population during and after the Civil War (1861-1865) the percentage of Irish and French Canadian residents was increasing. The drop in student enrollment at South Academy driven by the war and the availability of other secondary school opportunities in northern Vermont provided a place for the Roman Catholics to worship. Beginning in 1867 the Congregation of St. George bought South Academy floor by

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<sup>1</sup> Special thanks to Nancy Hunt for all of her work in compiling this chapter.



**Figure 3.1. This 1871 Beers Map shows the even distribution of the population in farms throughout the thirteen districts of Bakersfield and a concentration of residents in the village center.**

floor until they owned the whole building in 1885. In 1906 the parishioners had transformed the post and beam Greek Revival school house and belfry into the neo Gothic church that today is the home of the Bakersfield Historical Society. In 1865, the Congregation of St. George also purchased a burial ground, which continues today as the Catholic Cemetery in Bakersfield, located at the head of the Avenue (West Street). Figure 3.1 shows the development patterns, including the boundaries of Bakersfield’s 13 school districts, in 1871.

When Peter Bent Brigham died in 1877, leaving a bequest of \$30,000 for the improvement of education, the townspeople voted to build a high school instead of dividing the funds among the 13 school districts. Their decision was encouraged by Sarah Brigham Jacobs, his widowed sister, who purchased a tract of land in the village for the academy. The building was completed and dedicated in August 1879, with President Buckham of the University of Vermont and almost 1000 people in attendance. When Sarah Jacobs died in 1891, she left an

endowment of \$100,000 that strengthened the school’s financial resources as well as providing seven scholarships for graduates to attend the University of Vermont. The north wing, built in 1900, doubled the size of the building; it included a gymnasium for fitness training as well as four laboratories and classrooms to meet the needs of increased enrollment with an emphasis on scientific curriculum.

The completion of the St. Johnsbury and Lamoille County Railroad in 1877, with a depot only a few miles away in East Fairfield, provided convenient transportation for Brigham Academy students and their families, as well as access to larger markets across northern Vermont and beyond for local merchants, tradesmen and farmers.

By 1878 Bakersfield residents received messages and news over a telegraph line from East Fairfield to the home of Mrs. Bradley Brigham (site of the present library) because she had learned Morse code. In 1899 that line was replaced with a telephone line to a public phone in the J.A. Perkins Variety Store (now an apartment block on Main Street opposite the Avenue). Electrical power was available in the village in Bakersfield in 1924.

Bakersfield, in spite of a 43% decrease in resident population between 1870 and 1940, was a vibrant, self sufficient and prosperous community. The influx of students (as many as 160 in 1900) paid room and board in private homes, supported local stores and services, and entertained the townspeople with concerts, drama productions, athletic competitions, and literary publications. There were two venues for presentations and celebrations, one in the second floor auditorium of the Academy and the second, after 1909, on the second floor of the Town Hall for local gatherings. The latter had a curtain painted by C. Andrus for its stage. The town gave it to the Vermont Historical Society several years ago. There was a trotting park behind the Catholic cemetery where residents could train and race their horses. An elegant hearse carriage, now on display at the Shelburne Museum, was available to carry the deceased to a free burial plot in the village cemetery. It was stored in the rear of the Queen Anne style hearse house that had been built for it in 1890.

*The historic hearse house sits in the village cemetery, while its carriage is on display at the Shelburne Museum.*



Agriculture flourished throughout Bakersfield until the middle of the 20<sup>th</sup> century. The earliest farms were self sufficient sources of food including grains and livestock for family use with small surpluses to barter or sell. There was a saw and grist mill on Browns Pond in the north and a tannery. Until the War of 1812,

there was a market in Canada (Great Britain) for ship building timbers and potash salts, both by-products of clearing the land. Cattle, especially oxen were prevalent, for hauling carts and clearing land. By the mid 19<sup>th</sup> century when Bakersfield's population reached its peak, there were almost four times as many sheep as people. Farmers from earliest times boiled maple sap for sugar at first on arches in the woods and later in sugar houses.

It wasn't until after the Civil War (1861-1865) that farmers began specializing in dairy cattle. Child's agricultural census (1888) lists over 100 farms in Bakersfield with an average of 18 cows, which were distributed evenly throughout the town. Jersey cows were the preferred breed because of the high butterfat content for butter and cheese production. Resident laborers, tradesmen, farriers, blacksmiths, harness makers, cattle brokers, and doctors were readily available. Over time, many local businesses such as tanneries, creameries, slaughter houses, farm implement and feed stores provided the infrastructure needed for a strong agricultural economy.



***The Malone Farm in East Bakersfield includes an 1850 house on the left and a high bank dairy built in 1890 on the right. Horses pulled hay wagons piled high with loose hay up the ramp or wharf. Hay was packed into the sides of the loft and dropped down to the dairy cows in the ground floor stable below. Credit: Bakersfield Historical Society.***

A decline in agriculture accelerated during the 20<sup>th</sup> century due to technological change and state/federal regulations. The availability of electricity and gas-powered machinery in the 1930's, though extremely beneficial to the lifestyle of farmers, often brought financial challenges to the sustainability of Bakersfield's farms. Refrigerated storage elevators, rail cars and trucks required capitalization and centralized processing that in turn caused dependence on a commodity market for fluid milk.

Today, there are five dairy farms in Bakersfield, including one very large operation with a methane digester on the northern boundary with Enosburgh. There is a growing number of small farms engaged in livestock and local/organic food production. Many maple sugar producers process and market their own syrup. There are also three tree farms that raise and

sell Christmas trees. Increasingly, landowners with timber and open land not enrolled in current use are selling lots for development.

Except for loss by fire, many of the historic houses, public buildings, and barns in Bakersfield remain intact. The cultural dynamic, however, has changed dramatically in the last 50 years from a self-sufficient and vibrant community to that of a bedroom town. During the 1950's the dirt road to St. Albans was paved and became State Highway 36: Rte 108 was straightened and paved. By the end of the decade, a growing number of Bakersfield residents found better paying jobs at IBM in Essex and St. Albans as well as access to more goods and services. The completion of Interstate 89 to the Canadian border during the 1960's accelerated the daily exodus from the town.

In 1967 the town voted not to make the state-mandated improvements to Brigham Academy and it was closed as a high school. The academy building has been vacant since the new K-8 school was built in 1987. The flow of students that had formerly brought prosperity and vitality to the village reversed course and left each week day for Enosburg, BFA in St. Albans or Essex.

Elise Wells in her history of Bakersfield (1976, pp 120-121) noted how "the automobile has changed many things... The cars whisk people off to work every morning... People used to sit on their porches to see their neighbors. Now, they look out at the forests and mountains behind their houses and have outdoor cookouts and picnics... There are two general stores where once there were five, but you can buy many things you never could before and at fairer prices... The town had two doctors. Now townsfolk go to the two hospitals in St. Albans..."

Even though the population has doubled since the 1970's, commercial activity in the village is limited, mostly to support commuters and weekend recreation. There are two convenience stores with limited takeout, one of which has gas pumps, two car repair shops, and a sales and service business for recreational vehicles.

Most community activities are focused on fund raising and take place in the school cafeteria/gymnasium. The town meeting luncheon and bereavement receptions are held in the Historical Society building. For many years the fire department has sponsored Homeland Days in September with a parade down Main Street that is followed by a chicken barbecue, musical entertainment, cow plop, and games on the B Brigham lawn. In 2009, the town sponsored Bakersfield's own 4<sup>th</sup> of July celebration with activities on the village green, street dancing and fireworks by the town garage. This continues today, and Homeland Days was merged with the 4<sup>th</sup> of July in 2015.

Most of the population growth since the 1970's has occurred in the rural areas of town especially to the north and east of the village. The improved highways that enabled long time Bakersfield residents to leave the town for better jobs, goods and services also provided urban dwellers in Chittenden County and beyond greater access to former farms and large tracts of woodland at a relatively low cost. Increasingly, due to recent price increases, landowners with timber and open land not enrolled in current use are selling lots for development.

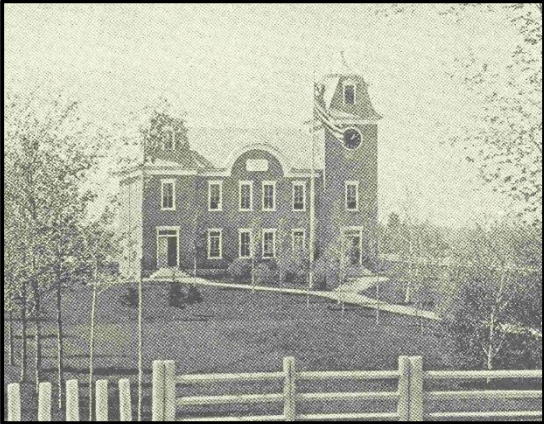


**Historic Resources**

Historical cultural and archaeological resources are irreplaceable and provide a sense of continuity between the past and the present and help us identify who we are. It is important to preserve and promote these resources whenever possible.

The Bakersfield Historical Society was established in 1997 as a 501(c)(3) non-profit cultural and educational organization dedicated to community awareness and the preservation of Bakersfield’s heritage. A grant from the Vermont Museum and Gallery Alliance guided the organization in developing a collection management policy to properly conserve its extensive archive relating to the people, places, things and events in Bakersfield. The Historical Society has the only existing comprehensive collection of Brigham Academy catalogues, programs, photographs, and literary publications. They reveal the quality and extent of the academy’s curriculum and student activities including athletics, plays and musicals. The building is open on a regular basis from May to October or by appointment. The Board of Directors meets monthly to plan programs and exhibits that have included participation in the Vermont History Expo. It publishes four newsletters a year and depends upon memberships, donations and fundraisers to maintain its building for community use.

There are over 100 public buildings, houses and barns in the town of Bakersfield that are listed on the Vermont State Register of Historic Structures (as conducted in 1985). So far, two of these are listed on the National Register of Historic Places and one nomination is pending.



***The Brigham Academy as it was constructed in 1879. Credit: Bakersfield Historical Society.***

*Brigham Academy (1995).* The Brigham Academy Restoration Plan, completed in 1995, found that the building continues to be structurally sound and with proper renovation would be appropriate for educational and community services, or potentially elderly housing. So far, the clock/bell tower has been repaired and the roof replaced with grants from the Preservation Trust of Vermont/Vermont Division of Historic Preservation and the Vermont Housing and Conservation Board (VHCB), respectively. In 2003, voters approved the Brigham Academy agreement at a warned joint meeting of the Bakersfield Town and School district to renovate 75 percent of the building for school use and 25 percent for town use. The VHCB holds an easement to retain the front lawn of the Academy building as an open space including its alley of maple trees. A Municipal Planning Grant from the Vermont Agency of Commerce and Community Development was used in 2012 to assess the Academy Building for future renovation. The architectural firm conducting the assessment reported the foundation and other infrastructure were sound enough for complete or partial renovation of the

building for future uses. In 2013, the Board of the Bakersfield Elementary and Middle School voted to sell its share of the Academy to the Town. Execution of this sale was completed in September 2014.

*South Academy/St. George's Church (2001).* Saving the South Academy/St. George's Church from demolition was the first project of the Bakersfield Historical Society. Taxpayers provided \$10,000 as seed money so that funds could be raised through grants (Preservation Trust of Vermont, Vermont Division of Historic Preservation, and the Vermont State Legislature via the Cultural Facilities Coalition) as well as a capital campaign to repair the hand-hewn post and beam structure and bell tower, replace the roof and chimney, upgrade the lighting and electrical systems, install a kitchen as well as a code compliant bathroom and handicapped ramp. The masonry on the main building still needs to be repaired and the newer bricks on the 1906 addition need to be replaced.

*Hearse House (nomination pending).* The Hearse House, owned by the Town and maintained by the Bakersfield Cemetery Commission, has been nominated by the UVM Historic Preservation Program for inclusion in the National Register of Historic Places. Reportedly it is a unique funerary structure; its elegant hearse carriage that was stored in the rear is on display at the Shelburne Museum. Currently its windows are broken and the beam between the front rooms and the rear garage needs to be replaced. The Cemetery Commission uses the space for storage of cemetery benches and urns; the mower is stored in the rear. One year high school students painted it as a Community Service project.

Other significant sites: Residents and visitors entering Bakersfield from the South on Rte 108 are welcomed to Bakersfield at the Fletcher line by an historic farm stead (see frontispiece). Two other barns reveal changes in agricultural technology that took place during the 19<sup>th</sup> and 20<sup>th</sup> centuries. Old Stage Road on the east is an ancient road that continues up Kings Hill past stone foundations to the District 9 School House.

A concentration of mostly historic village houses begins with the Daniel Dean place across from Larry's Tree Farm and continues north to the landmark federal brick houses at the four corners. To the east is a row of public buildings: Town Hall (1909) with its paneled and tin-clad interior, Congregational Church (1845) and South Academy (1840; remodeled 1906)/Bakersfield Historical Society. This road continues out to East Bakersfield and the historic Malone farm (1850, 1890). Cook Cemetery and more.

Main Street continues north on Rte. 108 past the village cemetery/hearse house/village common, the iconic Brigham Academy building (1879/1900) with its deep lawn and alley of maple trees. Across Main St. to the east is the town library (1950) as well as a row of mostly historic and well maintained private houses on both sides of the street. The Methodist Church (1854) and the Hazeltine house (1800) mark the northern end of the historic village, yet a keen eye will spot other houses on the Vermont State Register on the east side of the road until its

end at the Albert Brigham house at the fork. There are many historic farm houses, including two stone houses, the site of the former Johnson saw mill and more on the Joyal and Witchcat roads. There are many historic farms and barns along Egypt and Lawyer roads as well.

There are many other historic buildings and landmarks in Bakersfield not included on the historic register. Smaller landscape features that often go unnoticed are increasingly considered of historic value and importance. These include old barns and outbuildings; stone walls, corner stones, markers, and “witness trees;” and old apple orchards and lilac bushes planted around former homesteads, and clumps of orange day lilies. These features say as much about the region’s rural and agricultural heritage as many of its more readily recognized historic landmarks, but are often disturbed, removed or demolished without any thought. Recognizing the need for more public education, the Vermont Department of Forests, Parks and Recreation in 1994 published *Stonewalls and Cellarholes: a Guide for Landowners on Historic Features and Landscapes in Vermont’s Forests*.

In 1990 a study conducted by UVM’s historic preservation program found that incremental changes over time, including cumulative alterations to historic structures, and the abandonment, deterioration and demolition of outbuildings and barns, had a profound impact on historic character and significance. They noted that the removal of agricultural buildings in particular suggested the failure to connect the preservation of buildings with the preservation of rural and community character. In Bakersfield, many historic homes and farms are under private ownership. There is currently little incentive or financial assistance to encourage the preservation of these structures. The Vermont Division of Historic Preservation does offer grants of up to \$10,000 for the restoration and repair of historic agricultural buildings.

In 2011, Bakersfield was granted Village Center designation by the Vermont Department of Housing and Community Affairs. This gives the Town and residents access to tax credits for various improvements in the village center.

**Archaeological Resources**

Archaeological resources provide evidence of human habitation dating from prehistoric times. A number of important archaeological sites have been found in Northwest Vermont. These include evidence of several types of prehistoric habitation and use, including villages, hunting and fishing camps, trails and trade networks, and burial grounds. Other archaeological sites include remnants of historic settlement and use, such as old foundations and cellar holes; quarry, mill, kiln and foundry sites, and unmarked cemeteries and roads. Although these sites are often buried and no longer visible on the land, they are nevertheless important for the story they tell of the collective past of the area.

The Division for Historic Preservation maintains listings of known archaeological sites within the state, which is made available on a “need to know” basis in order to protect their integrity. As of 1995, 312 recorded archaeological sites were identified in Franklin County. This figure likely represents only a small fraction of all significant sites in the region, since intensive investigation of site locations has not been undertaken. Archaeological sites are protected under state and

federal law, including Act 250, the Vermont Historic Preservation Act (22 VSA, Chapter 14), and under Section 106 of the National Historic Preservation Act.

For planning purposes the Division has identified more broadly defined “sensitive areas,” using modeling based on known site conditions, in which archaeological sites are known or expected to occur. These include a 200 foot buffer along all major rivers and tributaries in the region, particularly in the vicinity of major confluences, and the Lake Champlain shoreland, which is considered highly sensitive. Development in known or anticipated sensitive areas should be reviewed with particular attention given to the possibility of buried sites. Vermont’s Archaeological Heritage, prepared for the Division of Historic Preservation in 1988, estimates that most of Vermont’s archaeological sites have not yet been found. A Predictive Model, developed by the State Agency of Transportation, has greatly improved the ability to predict where historic and prehistoric sites are likely to be found.



*The former District No. 9 schoolhouse is evidence of the settlement that was once in the King’s Hill area. Credit: Nancy Hunt*

In Bakersfield, the Kings Hill area in the southeastern portion of town has a notable number of cellar holes and stone foundations along Stage Coach Road and at the junction with Kings Hill Road. These sites provide intact archaeological evidence of a 19<sup>th</sup> century community that is described on 1857 Wallings Wall map and 1871 Beers Atlas. This area includes the high fieldstone wall of the C. Bessey stage coach inn and the foundation of Betsey and Timothy Carroll’s farmstead (Betsey Carroll’s papers are in the Vermont Historical Society Collection). In this same vicinity, the District No. 9 schoolhouse still stands intact, and serves as a camp to a local forester. On

Kings Hill Road is the complete farmstead in fieldstone foundations of Lucien Wells including farmhouse, barn, silo, and a well.

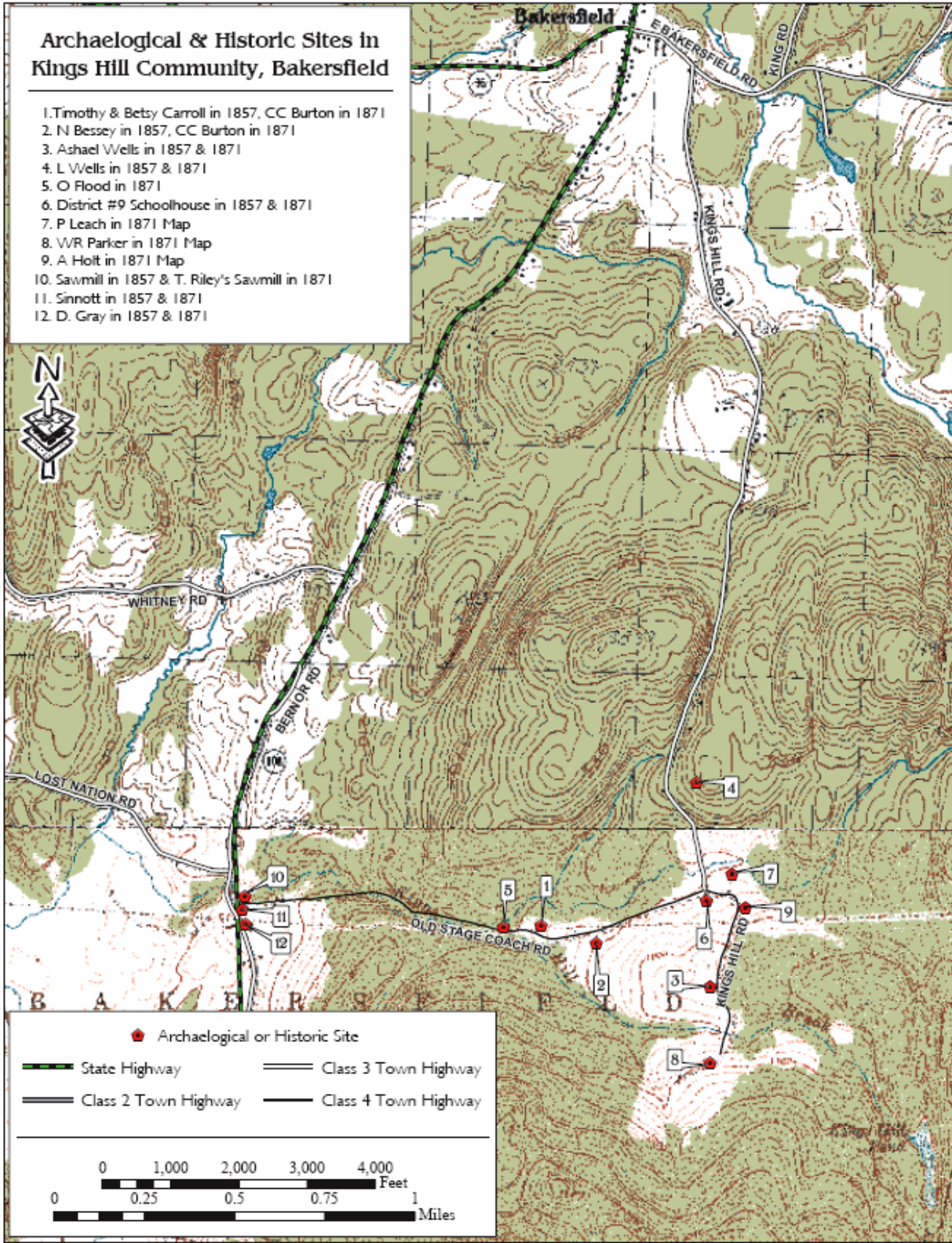
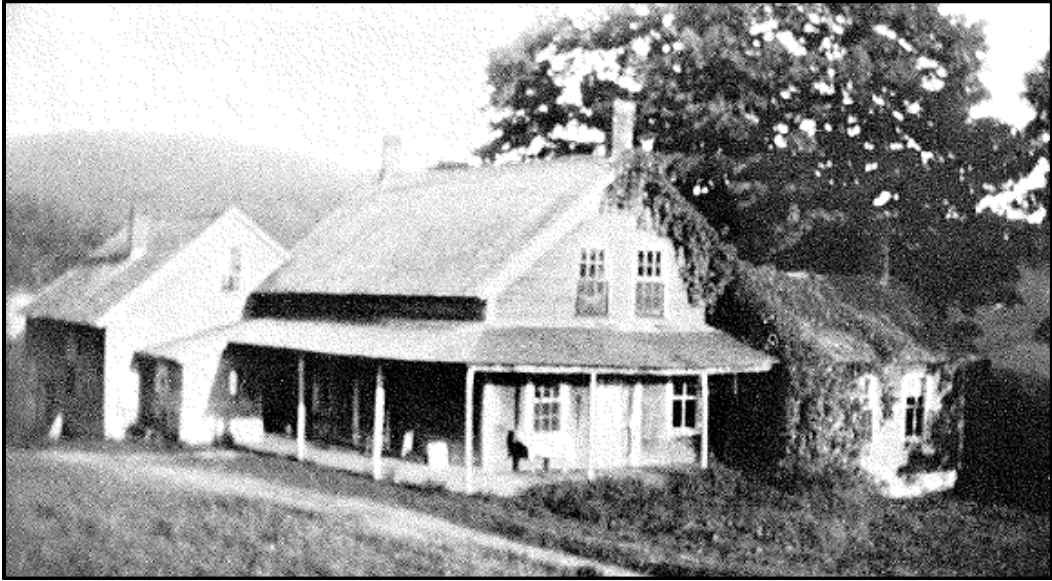


Figure 3.2. Archaeological and Historic Sites in the King's Hill Area.

There are also anecdotal accounts of cellar holes and other artifacts in the area of East Bakersfield and Sornborger Place, but they are not as significant as the Kings Hill area. The Sornborger papers are available in the “Special Collections” at the University of Vermont.



*Evidence of the Wells farmstead built ca. 1845 and burned in 1934 can still be found in the King’s Hill area. Credit: Bakersfield Historical Society*

**Goals:**

- To preserve important historic and archaeological resources in Bakersfield
- To recognize and respect Bakersfield’s rich history in decisions regarding land use and development

**Policies:**

- Protect sites of archaeological and/or historical significance
- Encourage the adaptive reuse of the Brigham Academy and other historic buildings to meet the needs of the Bakersfield community.
- Encourage efforts to secure grants and raise funds for the preservation of historic and archaeological resources
- Identify sites of potential archaeological and/or historical significance, and produce a document and map that locates and describes these sites
- Encourage appropriate design and land use compatible with the historic character of the village
- Encourage the planting of trees in the schoolyard and parks, and throughout the town.

## Chapter 4. Utilities, Facilities and Services

Facilities and services are provided by a municipality for the benefit of its residents and are supported by the community as a shared responsibility. In a small, rural community such as Bakersfield, the ability to provide a broad range of municipal services is limited. However, with continued growth and development there is increasing demand for these services. To address this demand, the town plan includes a goal of establishing public policies that balance development with the town's ability to provide services. These policies may include managing the timing of development so that town services can keep pace.

### Municipal Utilities and Services

#### ***Municipal Water***

Bakersfield has a municipal water system, under the jurisdiction of Fire District #1, located on Kings Hill southeast of the village. There is a 120,000-gallon concrete reservoir located northwest of the village. Access to the municipal water system is limited to the village. In order to continue to meet demand, the Fire District identified a need for an additional well and pump for the water system. In 2007, the Fire District raised their rates in order to cover the cost of this upgrade. It is the goal of the Fire District to ensure a safe and unchlorinated water supply.

The Bakersfield Zoning Bylaws designate a protective zone, the “Aquifer Overlay District” around the source of the municipal drinking water supply. This zone is consistent with the source water protection area identified by the state of Vermont Drinking Water Supply Division. No new construction is permitted in this district in order to protect the quality of the community drinking water.



***The Methodist Church (1854), a well-preserved historic building, is at risk because it lacks sufficient land for a septic system as well as space for parking.  
Credit: Nancy Hunt***

#### ***Sewage***

There is no municipal sewer system in Bakersfield and disposal is handled through individual septic systems. Presently there are no plans for a municipal sewer plant due to the expense and the population size in Bakersfield.

Sewage disposal is an issue for the town hall, historical society, and Congregational Church. In 2002, the historical society upgraded the septic system on property owned by the school. The lack of sewage disposal facilities has been and continues to be an impediment to appropriate commercial development, such as restaurants, in the village district. As technologies improve, the town of Bakersfield should continue to explore

opportunities for shared wastewater systems within the village core.

**Solid Waste Management**

Bakersfield is a member of the Northwest Vermont Solid Waste Management District (NWSWD), which has a regional solid waste management plan and a certified regional facility. The Northwest Solid Waste District sponsors many activities such as “special collections” (bulky items, scrap metal, and tires) and Household Hazardous Waste (HHW) collections (oil based paints, solvents, cleaners, pesticides, and other chemicals that would be harmful to the environment if not handled properly). The district operates a drop off site at the old fire station every Saturday morning.

One goal of the District is to make solid waste disposal as convenient as possible for residents so that compliance with the regulations are high. By making pick up and drop off of garbage easy and recycling virtually free (there is currently a \$1.00 handling charge), there should be less incentive to dump or burn garbage illegally. The special collection of bulky and hazardous materials keeps these materials out of the waste stream and disposed of properly. The state of Vermont has set a goal of reducing the amount of waste needing disposal by 50 percent. In order to help meet this goal, the district has adopted regulations making it mandatory in district towns to separate certain recyclable materials from waste going to landfills.

**Fire Protection and Emergency Rescue**

Bakersfield is served by a volunteer fire department that includes a First Response Program. There are approximately 28 volunteer members who serve on the fire department, including first responders. The equipment consists of a 1997 Pumper, a 2012 Pumper and a 2006 Rescue SUV. The 2012 pumper and the 2006 rescue SUV are recent replacements for much older vehicles. Thanks to federal and state grants, the department was able to upgrade personal protection gear including SCBA air pack devices in 2005. In order to continue to meet the needs of the Bakersfield community, the Fire Department purchased the former Sticks and Stuff Building near the Brigham Academy. Using mostly volunteer help, the Department renovated it to provide a building large enough to accommodate bigger modern fire engines including the 2012 pumper.

The town of Bakersfield has an agreement with Enosburgh Ambulance Services for emergency response service. Bakersfield has a Rapid Response Plan to help organize the town in case of an emergency. The Rapid Response Plan contains basic emergency preparedness essential for responding to local emergencies. It includes critical phone numbers, contact persons, and critical facilities. The town of Bakersfield is also a member of the Franklin County Mutual Aid Agreement. This is a formal agreement among the municipalities and emergency first responders within Franklin County to lend resource assistance across jurisdictional boundaries when required; either by an emergency that exceeds local resources or a disaster. The Agreement helps the town achieve compliance with the National Incident Management System (NIMS) strategy. In 2010, the Town received federal money to install a permanent generator at the Elementary School. That building now serves as a designated emergency shelter in case of a



crisis. Bakersfield is served by Northwestern Medical Center in St. Albans City. Many residents also use the walk-in emergency clinics operated by NOTCH in Enosburgh and St. Albans.

**Police Protection**

The Vermont State Police (VSP) is the primary law enforcement agency responsible for public safety in Bakersfield. As in many rural communities, the level of police protection is a concern in Bakersfield. Because of the limited service, response times can be long.

**Telecommunications**

Access to telecommunication services, including high speed internet and cellular phone service are important not only to the quality of life for residents of Bakersfield, but for economic development as well. Under Governor Jim Douglas and current Governor Peter Shumlin, Vermont is pursuing a course to provide universal cellular and broadband coverage throughout the state. Such advances in telecommunication technology have the potential to significantly impact the local economy in rural communities such as Bakersfield, as they allow more residents to telecommute and may enable more people to live further and further from population centers. The Town must determine if there are planning and zoning ramifications for antenna towers and other telecommunications infrastructure. Guidance to site towers where community interests for historic and aesthetic preservation should be considered

**Municipal Facilities**

The public facilities of Bakersfield include the Bakersfield Elementary and Middle School, the presently empty Brigham Academy and its front lawn, the Town Hall, the Volunteer Fire Department garage, the town garage, cemeteries, and two recreational fields. Within the village are also a post office, a church, the HF Brigham Memorial Library, and the Bakersfield Historical Society building (Figure 4.1).

**Town Hall**

The Bakersfield Town Hall was constructed in 1909. The building provides office space for the Town Clerk, Treasurer, Listers, and Zoning Administrator, and has a community meeting space. The second floor of the town hall has an auditorium, stage and kitchen and has served as the town teen center. The stage had a painted curtain which is now at the Vermont Historical Society.



*The Town Hall is used each year for Town Meeting, when residents come together to vote and make important community decisions. Credit: Nancy Hunt*

**Town Garage**

The Bakersfield town garage houses the town’s road equipment, including three snow plows, three dump trucks, a 4x4 pick up truck, a Front End Loader, a Grader, and a bulldozer/15 ton excavator. The town

garage provides adequate facilities and no major improvements are planned for this facility. The relocation of the town fire department to the renovated Sticks and Stuff building provided the Town additional storage space when it was transferred from the Fire Department to the Town.

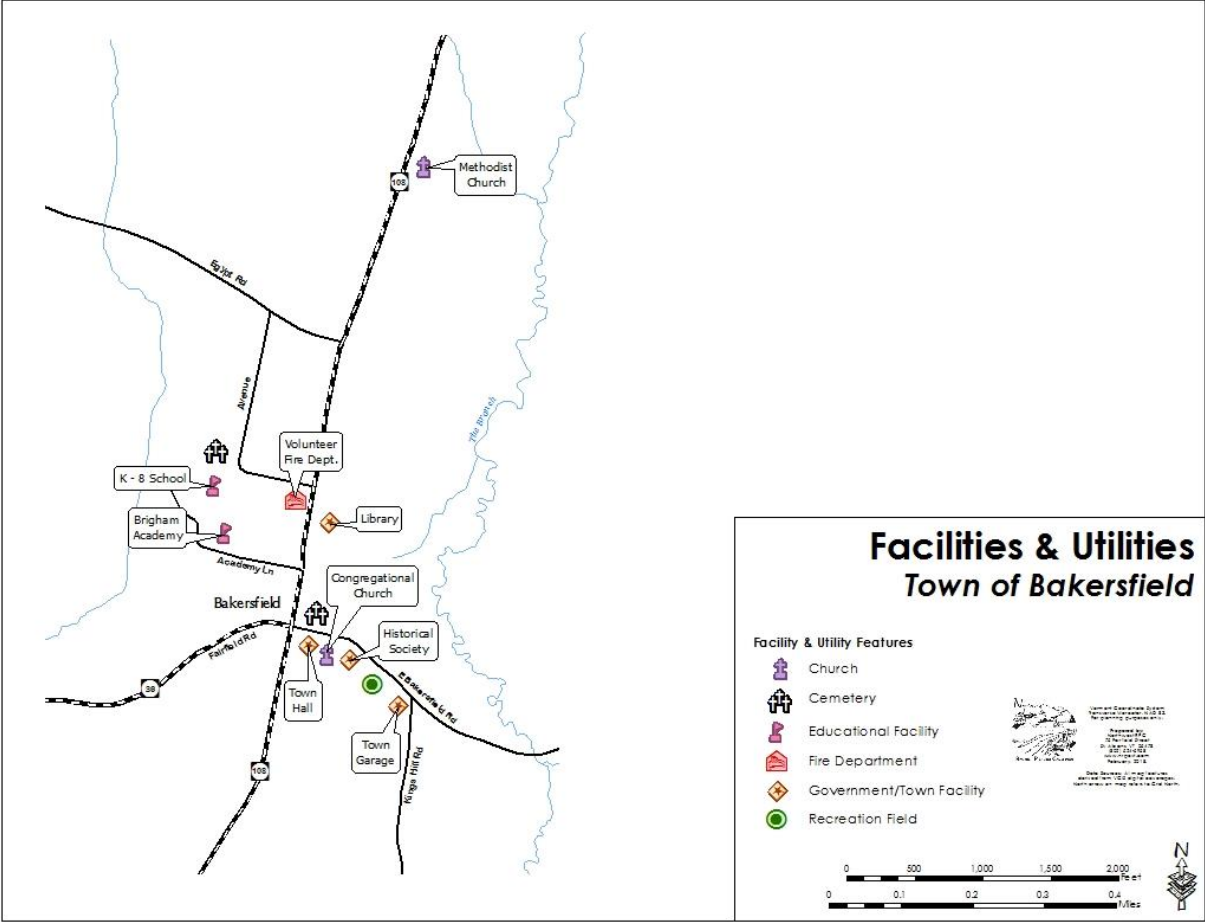


Figure 4.1 Municipal Facilities and Utilities

**Brigham Academy**

The Brigham Academy, though vacant for the past 20 years, has the potential to be a significant public asset. This building was under the ownership of the Bakersfield school district. A School Board vote in March 2013 required the Board to sell the building to the Town. That sale was completed September 15, 2014. Studies in 1995 and 2012 found the building to be structurally sound and noted the potential for adaptive reuse of the building as an educational facility, senior housing or for other community use. Under a current agreement with the Vermont Housing and Conservation Board, any rehabilitation of the building should provide for 75 percent school use and 25 percent community use, however it may be possible to renegotiate this agreement to allow for affordable or senior housing.

**H.F. Brigham Library**

The H.F. Brigham Library is located in the center of the village on the east side of Main Street across from the Brigham Academy. In 2013, the library hosted more than 70 events (children’s story time, book discussions, family movie nights and special speakers). The library had 2,715 visitors, (1,688 adults and 1,027 children) that year, too. Computer usage is a growing way to meet the library’s goals “to provide access to reliable information, to educate and entertain”.



**Recreation Facilities**

Currently, public outdoor recreational facilities available in Bakersfield are mostly limited to the recreation fields associated with the school. This includes a well-equipped little league field, soccer field, basketball court and a playground. These facilities represent the efforts of many volunteers in the community. The privately owned Bakersfield Country Club provides golfing facilities to the public.

Since their 2011 dedication, the Bakersfield Town Park and Community Trails have been steadily improved by the Bakersfield Conservation Commission. The Park is near the head of one of the trails and consists of several historic town buildings and a large picnic area adjacent to the town square across from the Town Hall. The space is now regularly used during the now annual Fourth of July celebration, especially for a robust horseshoe competition.

Currently there is no adequate indoor public space that is handicapped accessible and available throughout the week for townspeople for all ages. The school gymnasium with its kitchen facilities is used extensively on weekends for community events. The one handicapped bathroom is in the main part of the building and is not available.



*The Bakersfield Post Office is situated in the heart of the village.*



*The Bakersfield Historical Society provides a venue for a variety of community events throughout the year. Credit: Nancy Hunt.*

**US Post Office**

While it is not a municipal facility, the Bakersfield Post Office is an important asset for the village of Bakersfield and provides an informal meeting spot for members of the community to interact.

**Bakersfield Historical Society**

The Bakersfield Historical Society occupies the St. George’s Church, the oldest public building in Bakersfield. The building is open to the public on a regular basis from May to October and by appointment throughout the year. Although the Bakersfield Historical Society’s building is handicapped accessible with a bathroom and kitchen that is potentially available throughout the week, there is no public funding for its supervised use and maintenance. The Board of Directors, however, has made the facility available to the community whenever possible for bereavement luncheons, meetings, charitable events, school programs, the town meeting luncheon, as well as their own programs and fund raisers.

**Churches and Cemeteries**

The churches and cemeteries of Bakersfield are important resources for the town. The United Church of

Bakersfield and East Fairfield serves the congregations of one current and two former church buildings: the Congregational (1850) and Methodist (1854) churches in Bakersfield and the church in East Fairfield. The parishioners hold services in the Congregational Church Building on East Bakersfield Road. During 2013, the Methodist Church and the East Fairfield Church were sold. The former East Fairfield Church now is owned by that community and the former Methodist Church is owned by a private museum curator. In addition, the Congregational Church in Bakersfield is governed by its own board of trustees and manages its own endowment.

The Cemetery Commission manages the Maple Grove Cemetery and Park, a five acre burial ground in the center of the village that was deeded to the town in 1804. Residents at the time of their death are entitled to a free plot. Its maintenance budget is based on income from endowments and gifts. While the cemetery provides green space in the center of the village, it does not serve as a true village commons because its use is limited to activities approved by the Cemetery Commission. The war memorial, benches, and flower gardens are an asset to the village center. The cemetery commission currently uses the hearse house for storage, but the building is in need of repair.



*Local volunteers help to repair the cemetery stones with the help of the Vermont Old Cemetery Association.*

A second cemetery in the village is located at the west end of the Avenue. It is owned and operated by the Catholic diocese. A third cemetery is in East Bakersfield and is closed. It is maintained minimally by the town as required by state statute.

**Goals:**

- To provide municipal services and facilities that adequately protect the health, safety and welfare of the people of Bakersfield
- To provide for the physical safety of residents with high quality fire, emergency medical, and law enforcement services
- To promote communication of Bakersfield residents with each other and with a wider community
- To provide code- compliant interior spaces that support community activities

**Policies:**

- Look ahead and predict the town’s future needs in regard to public facilities and services based on patterns of growth and development
- Consider other growth control measures, including development of a capital budget, a yearly limit on the maximum number of building permits, and phasing of building construction, to reduce the impact of development on municipal services
- Identify equipment and facilities that need to be upgraded and develop methods of financing the replacements.
- Evaluate the extension of municipal services based on system adequacy and fiscal feasibility
- Explore opportunities to coordinate in the provision of septic services for buildings within the village core
- Consider if and when a municipal wastewater system would be appropriate and cost effective to service the village area

- Ensure that the municipal water system continues to provide adequate, healthy, clean drinking water for village residents and that the water supply remains public and is not privatized
- Identify and pursue opportunities for funding to enhance police protection in Bakersfield
- Continue to recruit and train volunteers for fire and emergency services
- Consider opportunities for the adaptive reuse of historic buildings
- Provide adequate recreational facilities to meet the needs of community residents
- Encourage intergenerational programs that promote healthful living
- Restore the Brigham Academy building to serve as a multi-purpose municipal facility for education, senior/affordable housing, recreation, and/or other community use
- Ensure that designated emergency shelters are accessible and properly equipped.
- Continue to provide library services that meet the needs of the community
- Support efforts to educate residents about solid waste disposal options, currently available through NWSWD, in order to reduce junk and hazardous materials from being disposed of improperly
- Prohibit the unregulated storage of junk cars and other waste on properties in Bakersfield and require clean-up of existing sites
- Consider the establishment of a transfer station for processing junk vehicles for transportation to a local, permitted junkyard
- Encourage the Selectboard to adopt municipal ordinances to enforce the clean up of junkyards and other “quality of life” issues, such as farm animals in the village, noise pollution, etc.
- Support the enhancement of the telecommunications network when such facilities do not have significant adverse health, environmental or scenic impacts
- Establish and maintain a website that provides information on Bakersfield town governance and a calendar of town activities
- Support the retention of the US Post Office in the village

## Chapter 5. Transportation

Bakersfield lies approximately 14 miles east of Interstate 89 (Exit 19) and is easily accessible by VT Route 36. The village is bisected by VT Route 108, which provides a connection to Enosburg to the north and through Fletcher to Jeffersonville to the south. The spring, summer and fall of 2013 brought much needed upgrades to Route 108 between Jeffersonville and Bakersfield, making the southerly commute much more comfortable. As is the case with many rural communities, Bakersfield residents depend greatly on privately owned motor vehicles and the local road network for access to jobs, goods and services. Providing a safe and efficient transportation system that will meet the residents of Bakersfield now and into the future will require thoughtful planning. Such a system will provide a variety of transportation options beyond motor vehicles. In developing this plan, it is important to recognize that transportation is inter-related with many other sections of this plan, including land use, energy, recreation, and housing.

Table 5.1: Commuting Time to Work (1990 – 2012)												
	Bakersfield						Franklin County					
	1990		2000		2012		1990		2000		2012	
Minutes to Work	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
less than 10 minutes	58	12.8	54	9.8	31	4.6	4,344	25.1	4,604	22	4,208	18.2
10 – 14 minutes	35	7.7	22	4.0	17	2.5	2,441	14.1	2,691	13	2,822	12.2
15 – 19 minutes	33	7.3	45	8.2	58	8.6	2,259	13.0	2,304	11	2,533	11.0
20 – 29 minutes	77	17.0	142	25.8	154	22.9	2,228	12.9	3,122	15	3,341	14.5
30 – 44 minutes	104	22.9	127	23.0	177	26.3	3,660	21.1	4,925	23	5,722	24.8
Greater than 45 min.	147	32.4	161	29.2	235	35.0	2,404	13.9	3,678	15	4,461	19.3
Mean travel time to work	31 min		32.6 min		No Longer Available		21.6		25.6		No Longer Available	

Source: US Census of Population 1990 and 2000; American Community Survey 2008-2012

### Travel to Work

On average, workers in Bakersfield traveled 32.6 minutes to get to work in 2000 (Table 5.1). This figure was not collected in the 2010 Census. In 1990, it took 12% of workers (58 people) less

than 10 minutes to get to work. By 2012, this number decreased to 4.6% of workers (31 people). Meanwhile, the commute times longer than 20 minutes increased in Bakersfield. The most significant increase between 1990 and 2012 is seen in the 20-29 minutes interval. This category increased from 17% of workers (77 people) to 22.9% of workers (154 people). Commutes of over 45 minutes also increased by around 90 people between 1990 and 2012.

<b>Destination</b>	<b>Percent (%) of Bakersfield Workers - 2000</b>	<b>Percent (%) of Bakersfield Workers - 2011</b>
<b>Total Franklin County</b>	<b>65.10%</b>	<b>35.8%</b>
Bakersfield	19.30%	1.6%
St. Albans City	20.47%	10.0%
St. Albans Town	N/A	7.7%
Enosburg	8.22%	4.6%
Richford	2.01%	0.9%
Swanton	3.19%	1.6%
Other Franklin County	11.58%	9.4%
<b>Total Chittenden County</b>	<b>24.5%</b>	<b>39.9%</b>
Burlington	5.37%	10.0%
Essex	8.56%	6.3%
South Burlington	2.68%	6.2%
Williston	3.36%	5.3%
Other Chittenden County	4.53%	12.1%
<b>Total Lamoille County</b>	<b>7.89%</b>	<b>4.7%</b>
<b>Total Windsor County</b>	<b>N/A</b>	<b>4.0%</b>
Source: 2000 US Census and 2011 US Census "On the Map" Tool		

According to the 2000 Census, the majority of Bakersfield residents worked within Franklin County (Table 5.2). Per 2011 data, this has changed dramatically with only 35.8% of workers working in Franklin County. About 40% of workers in 2011 commuted to Chittenden County compared to almost 25% in 2000. The percentage of workers in Bakersfield has also dropped dramatically between 2000 and 2011 (19.3% to 1.6%).

In 2012, 76.2% of workers in Bakersfield drove to work alone using either a car, truck, or van (Table 5.3). This is near identical to the 2000 figure of 77%, yet higher than in 1990 (64%). The percentage of Bakersfield residents who worked at home dropped from 2000 to 2012 after remaining steady from 1990 to 2000. Only 5.2% of Bakersfield residents as of 2012 works from home. This is similar to the county-wide rate of 5.1% Carpooling is still not a habit for Bakersfield commuters. However, the percentage of carpooling commuters increased between 2000 and 2010. The reason for the low number of carpooling commuters is unknown. A possibility could be the lack of commercial establishments in town forces commuters to complete errand outside of town after work hours.

While the clustering of development helps decrease transportation costs, it is not the only answer. Most residents travel to Enosburg, Swanton, St Albans, or Chittenden County for



employment, entertainment, medical needs, or supplies. Car-pooling is beneficial for these residents not only because it conserves fuel, but also because it reduces wear and tear and maintenance costs on individual vehicles.

One important component of any car-pooling program is the provision of a location where car-poolers can leave their vehicles. Currently, there is only one formal designated "park and ride lot" in Northern Franklin County. The lot is located in Enosburg on VT Route 105 near the National Guard Armory.

Table 5.3: Transportation Type Used in Commuting to Work						
	Bakersfield			Franklin County		
	1990	2000	2012	1990	2000	2012
Percent who drove alone	64%	77%	76.2%	66.70%	73.30%	75.5%
Percent in carpools	23%	12%	14.4%	17.40%	16.50%	13.5%
Percent using public transportation	0%	0%	1.3%	0.60%	0.20%	0.4%
Percent who walked or biked	4%	2%	1.3%	0.70%	0.40%	4.1%
Percent using other means	0%	1%	1.7%	1.30%	0.30%	1.4%
Percent who worked at home	8%	8%	5.2%	7.30%	5.50%	5.1%

Source: US Census of Population 1990 and 2000 and American Community Survey 2008-2012

**Town Road System**

Vermont's local roads are classified according to their importance and general use. This classification system applies to all town highways, and is used to determine the amount of state highway assistance provided to each community. The Bakersfield road system is depicted on Figure 5.1.

Table 5.4 Road Mileage in Bakersfield	
<b>State/Federal Highways</b>	
U.S. Rt. 108	8.03
Vt. Rt. 36	2.51
<b>Town Highways</b>	
Class 1	0
Class 2	9.36
Class 3	31.81
Class 4	9.86

Table 5.4 shows the classification of roads in Bakersfield. Class 1 roads are those highways that are the responsibility of the town to maintain, while being extensions of the state highway system and carrying a state highway route number. Bakersfield currently has no Class 1 roads. The roads that are designated as Class 2 serve as important corridors between towns, and consequently carry a large volume of local and regional traffic. East Bakersfield Road and the Boston Post Road are both Class 2 roads.

Many of Bakersfield's roads are considered Class 3 roads. These roads are generally unpaved, but are passable year-round by standard passenger vehicles. Class 4 roads receive little or no maintenance and may be impassable during winter and "mud season."

The town of Bakersfield currently has an ATV Ordinance that allows ATVs on Class 3 and 4 Roads. ATVs are used primarily as recreation vehicles and not strictly for transportation, with much of the traffic coming from out of town drivers. Many farmers and maple producers use them for access to areas of their properties. Operation of ATVs on the roads of Bakersfield, however, should be allowed for Bakersfield residents only. Operators with a registered vehicle would be required to obtain a permit from the town clerk’s office for this privilege. Air and sound pollution would be greatly reduced on sunny weekends on our back roads.

The most direct route between Bakersfield and communities to the east, including Johnson, is the Waterville Mountain Road. However, during the winter months, this road becomes impassable. The decision of whether or not this road should remain open year-round will likely be an important issue for the town in next several years. While this may be desirable for Bakersfield residents working in Lamoille County, there is also concern that opening up this road will create additional development pressure in the mountainous sections of Bakersfield. Keeping the road open and maintained would also require additional coordination between the town of Bakersfield and the town of Waterville in regard to plowing and maintenance.

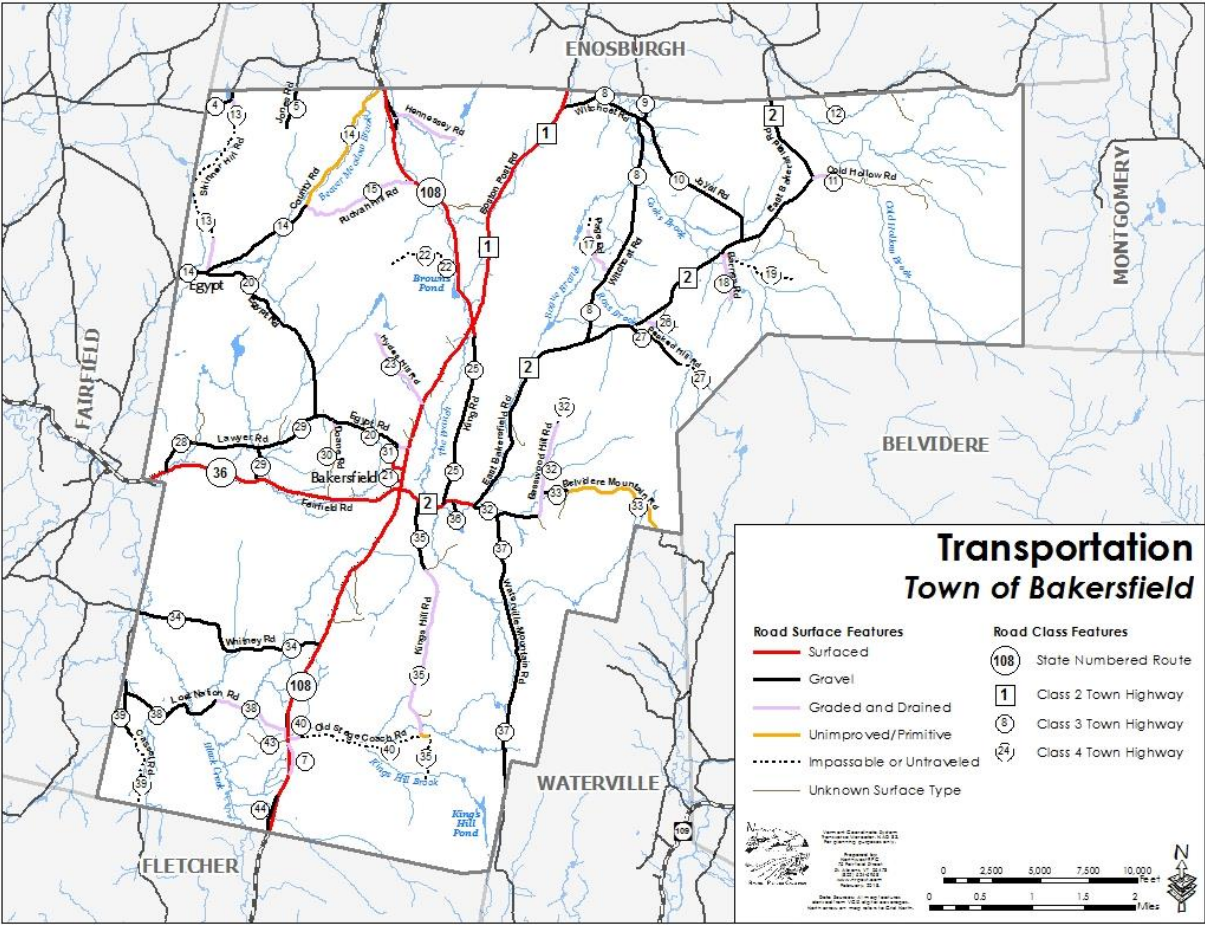


Figure 5.1. Bakersfield Transportation System Map

**Public Transportation**

The town of Bakersfield is not serviced by fixed public transit. The Northwest Vermont Public Transit Network (Network) offers public transit for Franklin County and Grand Isle County. The Network has established subscription service between Richford and St. Albans and a fixed route service known as the St. Albans City Loop. Elderly residents and those eligible for Medicaid may connect with subscription service by calling the Network.

Presently, the nearest rail service for freight is in Richford (Canadian Pacific). The nearest passenger rail service is Amtrak’s Vermonter which stops in St. Albans and travels south to New York City and Washington D.C with connections to Boston and other locations on the east coast. Travelling via rail to Montreal is possible on Amtrak’s Adirondack line. The closest station on this line is in the Plattsburg, NY area. The Chittenden County Transportation Authority (CCTA) offers regular bus service between Jeffersonville in Lamoille County and St. Albans to Burlington four times daily during the week. There is no weekend bus service on these routes.

Burlington International Airport, approximately 45 miles to the southwest, is the closest airport with national and international connections. Trudeau Airport is located about two hours to the north in Montreal, Quebec.

**Pedestrian and Bike Facilities**

A 2004 feasibility study looked at ways to improve safety and mobility for pedestrians in the village area and connect the school, town hall, post office and library with residences and businesses along VT 108. The proposed improvements to VT 108 sidewalks was a huge project with the southern end at Larry’s Tree Farm and the northern end stopping just short of the Methodist Church. In 2005, the town received a grant from the Vermont Agency of Transportation to design and construct 1,240 feet of sidewalk. In 2012, the sidewalks were completed and they consist of two segments: along VT 108 from the Brigham Library to East Bakersfield Road, and along the west side of VT 108 in front of Brigham Academy across from the library. The project includes sidewalk construction, curbing, crosswalks, landscaping as needed, and signs. Construction of these segments of the sidewalk was completed in 2011(. There are currently no specific bike trails or facilities available in Bakersfield. The Bakersfield Conservation Commission has created the Bakersfield Town Park adjacent to the Maple Grove Cemetery. The park has walking trails for recreational use. The Lamoille Valley Rail Trail is currently in the planning phase, however this is considered to be also a recreational resource, rather than a meaningful transportation option.

**Goals:**

- To provide and maintain a safe, convenient, cost-effective, and functional transportation network for vehicular, pedestrian, and recreational use within the town
- To promote public transit and carpooling and to provide commuter parking

**Policies:**

- Assure the town’s ability to provide public safety for any development by town regulation of all classes of roads, including access to private roads

- Maintain town roads according to a systematic review of condition and levels of use
- Reclassify Class 4 roads, which are not expected to serve public uses for motorized traffic, to legal trail status so that they may continue to be used for recreational uses and the right of way kept for future use
- Provide road signs, where necessary, for safety and traffic control purposes
- Assess the traffic impact of any new development on local roads before granting building or subdivision permits
- Limit road or driveway extension into important resource areas, including critical natural areas, wellhead protection areas, large blocks of intact forest, and important agricultural lands
- Design all future roads, including culverts and ditching, that are to be taken over and/or maintained by the town to standards approved by the Selectboard
- Maintain the scenic character of the town's rural byways
- Participate in the Northwest Regional Planning Commission's Transportation Advisory Committee (TAC)
- Encourage the expansion of the sidewalks within the village, including the current Bakersfield Sidewalk Project, to provide improved pedestrian access and safety
- Reduce the speed limit to 25 miles/hour within the Village District
- The Town should explore the possibility of changing the recreational ATV ordinance

# Chapter 6. Energy

## Enhanced Energy Plan

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further regional and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (90 x 50 goal), and the following:

- A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
- B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
- C. Vermont's building efficiency goals under 10 V.S.A. § 581;
- D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
- E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005; and

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Bakersfield to achieve “substantial deference” instead of “due consideration” in Certificate of Public Good (CPG) proceedings for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that Bakersfield will have a greater “say” in CPG proceedings before the Vermont Public Utilities Commission about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and contain the following information:

- A. An analysis of current energy resources, needs, scarcities, costs, and problems.
- B. Targets for future energy use and generation.
- C. “Pathways,” or implementation actions, to help the municipality achieve the established targets.
- D. Mapping to help guide the conversation about the siting of renewables.

This chapter will include the required analysis, targets, and mapping. The “pathways,” or actions, have been included at the end of this chapter instead of the Implementation Chapter.

## Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each sector of energy use (thermal, transportation, electricity) and generation in Bakersfield.

Thermal Energy

An estimate of current residential thermal energy demand in Bakersfield, based on data from the American Community Survey (ACS 2011-2015), is shown in Table 6.1. The data shows that 41.8% of households in Bakersfield depend on fuel oil for home heating. Fuel oil and wood sources are estimated to heat almost 88.2% of homes in Bakersfield. Despite the ACS data, it should be noted that there is no natural gas access in Bakersfield. The nearest natural gas pipeline is located in Enosburg Falls and is not likely to be extended to Bakersfield.

<b>Fuel Source</b>	<b>Bakersfield Households (ACS 2011-2015)</b>	<b>Bakersfield % of Households</b>	<b>Bakersfield - Households Square Footage Heated</b>	<b>Municipal BTU (in Billions)</b>
Natural Gas	2	0.4%	3,808	0
Propane	49	9.8%	82,736	5
Electricity	0	0.0%	0	0
Fuel Oil	209	41.8%	381,040	23
Coal	0	0.0%	0	0
Wood	232	46.4%	427,648	26
Solar	0	0.0%	0	0
Other	8	1.6%	15,232	1
No Fuel	0	0.0%	0	0
<b>Total</b>	<b>500</b>	<b>100.0%</b>	<b>910,464</b>	<b>55</b>

Estimates for commercial and industrial thermal energy use are more difficult to calculate due to the lack of accurate information available. An estimate of total commercial energy use (thermal and electricity) is provided in Table 6.2 and is based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 7 billion BTUs per year, is likely to be for thermal energy needs for commercial uses.

	<b>Commercial Establishments in Bakersfield (VT DOL)</b>	<b>Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)</b>	<b>Estimated Thermal Energy BTUs by Commercial Establishments in Bakersfield/year (in Billions)</b>
Municipal Commercial Energy Use	10	0.725	7

Electricity Use

An estimate of current electricity use in Bakersfield is shown in Table 6.3. This data is from 2016 and is available from Efficiency Vermont. Bakersfield electricity use has decreased since 2014 from 3.4 million kWh in 2014 to about 3.3 million kWh per year in 2016. According to Efficiency Vermont, the average residential usage per household has decreased from 7,793 kWh per year to 7,606 kWh per year between 2014 and 2016. Bakersfield’s average residential usage in 2016 was about 500 kWh higher than the average regional residential kWh use.

Bakersfield is served by three electric utilities. Green Mountain Power provides service to the southern and western parts of town on VT Route 36 and VT Route 108. This includes the village area. The Village of Enosburg Falls Electric Department provides service to the northern part of town. Vermont Electric Cooperative provides service to the most rural parts of eastern and western Bakersfield.

<b>Use Sector</b>	<b>Current Electricity Use in Bakersfield - 2016 (Efficiency Vermont) (kWh)</b>	<b>Current Electricity Use (in Billion BTUs)</b>
Residential	2,776,278	9.47
Commercial and Industrial	522,275	1.78
<b>Total</b>	<b>3,298,553</b>	<b>11.25</b>

<b>Transportation Data</b>	<b>Municipal Data</b>
Total # of Passenger Vehicles (ACS 2011-2015)	1,074
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	12,196,344
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
<b>Total Gallons Use per Year</b>	<b>655,717</b>
<b>Transportation BTUs (Billion)</b>	<b>79</b>
Average Cost per Gallon of Gasoline in 2016 (NRPC)	\$2.31
<b>Gasoline Cost per Year</b>	<b>\$1,514,707</b>

Transportation

Table 6.4 contains an estimate of transportation energy use in Bakersfield. It’s estimated that Bakersfield residents drive approximately 12.1 million miles per year and spend about \$1.5 million on transportation fuel expenses per year. This calculation does not include expenses for commercially owned and operated vehicles.

As of January 2016, data from the Vermont Department of Motor Vehicles notes that there are between 1 and 4 electric vehicles within the Bakersfield zip code (part of town is served by Enosburgh and East Fairfield Post Offices).

Electricity Generation

There is currently 550 kW of electricity generation capacity from renewable generation facilities located in Bakersfield. This capacity results in approximately

Table 6.5 – Existing Renewable Electricity Generation		
Generation Type	kW	kWh
Solar	140	171,700
Wind	10	42,920
Hydro	0.00	0.00
Biomass	400	1,636,370
Other	0.00	0.00
<b>Total Existing Generation</b>	<b>550</b>	<b>1,850,990</b>

1,851,00 kWh of electricity generation per year.

Most of this generation is from a biomass (cow power) facility located in Bakersfield. The amount of electricity generation is roughly equal to the annual electricity use of about 276 households of the 500 households in Bakersfield based on information available from the U.S. Energy Information Administration (6696 kWh per VT household per year).

Table 6.5 organizes information about existing generation in Bakersfield by type of facility. Map 6.3 shows the location of all electricity generators in Bakersfield with a capacity greater than 15 kW. A full list of energy generators in Bakersfield can be found at the end of this chapter (Table 6.12).

Bakersfield has extremely limited access to electric transmission and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. The lack of access to this type of infrastructure in Bakersfield may make development of renewable energy facilities harder and less cost-effective than in other surrounding communities with more existing grid infrastructure. Map 6.2 shows the electricity transmission and three-phase distribution infrastructure in Bakersfield. The map shows a single three-phase distribution line in the town on the border with Fairfield along VT Route 36. There may also be additional access to three-phase distribution lines in northeast Bakersfield along Boston Post Road, but data from the Village of Enosburg Falls Electric Department does not show this infrastructure. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

**Targets for Use and Generation**

The second required element of an enhanced energy plan is to create targets for future energy use. Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and generation to meet the State of Vermont’s 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan ([www.nrpcvt.com](http://www.nrpcvt.com)).

Tables 6.6, 6.7 and 6.8 show the targets for future energy use for Bakersfield by sector (totals are cumulative). These municipal targets are based on regional targets that have been disaggregated to the municipal level.



One thermal target for Bakersfield in 2050 is to have 88.4% of structures be heated by renewable sources. Much of this transition is likely to come in the form of electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. Regionally, the target also relies on wood heating being a continued source of residential heating. However, Bakersfield does not have a target for new efficient wood heat systems. This is due primarily to the high proportion of existing households in Bakersfield that already use wood heating systems. Although there is no target, Bakersfield strongly encourages the conversion of existing wood heating systems in Town to more advanced wood heating systems. Newer wood heating systems are more efficient and have less greenhouse gas emissions than older wood heating systems. There are also high targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

<b>Table 6.6 - Thermal Targets</b>			
<b>Thermal Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	46.7%	60.4%	88.4%
New Efficient Wood Heat Systems (in units)	0	0	0
New Heat Pumps (in units)	60	136	255
Percentage of municipal households to be weatherized	5%	41%	78%
Percentage of commercial establishments to be weatherized	25%	49%	73%

The transportation energy targets for Bakersfield are similarly ambitious. By 2050, almost 86.9% of transportation energy will need to come from renewable sources. This will primarily be done through conversion to electric vehicles from fossil fuel vehicles for light-duty, passenger vehicles. However, it will also mean conversion of heavy-duty vehicles (trucks) from diesel to biodiesel sources. Both electric vehicle and biodiesel technology will certainly need to advance considerably in order to meet this ambitious target. The targets in Table 6.7 may need to be adjusted in the future to reflect the greater need for heavy-duty vehicles in Bakersfield given the community’s rural roads and its geographic location as compared to electric vehicles.

<b>Table 6.7 - Transportation Targets</b>			
<b>Transportation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	5.3%	23.6%	86.9%
Electric Vehicles	94	704	1674
Biodiesel Vehicles	67	131	247

Targets for electricity use are more complex to interpret. Electricity use in Bakersfield is targeted to double by 2050 (Table 6.8). This increase in use will likely be driven by conversions

to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels.<sup>2</sup>

<b>Table 6.8 - Electricity Targets</b>			
<b>Electricity Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Increased Efficiency and Conservation (BTUs)	25.2%	48.3%	100.7%

Table 6.9 shows the electricity generation targets for new electricity generation in Bakersfield in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (12,961.62 MWh) is about 7 times more than the current generation capacity (1,850 MWh) within the Town of Bakersfield.

<b>Table 6.9 – Renewable Electricity Generation Targets</b>			
<b>Renewable Generation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Total Renewable Generation Target (in MWh)	4,262.48	8,524.97	12,916.62

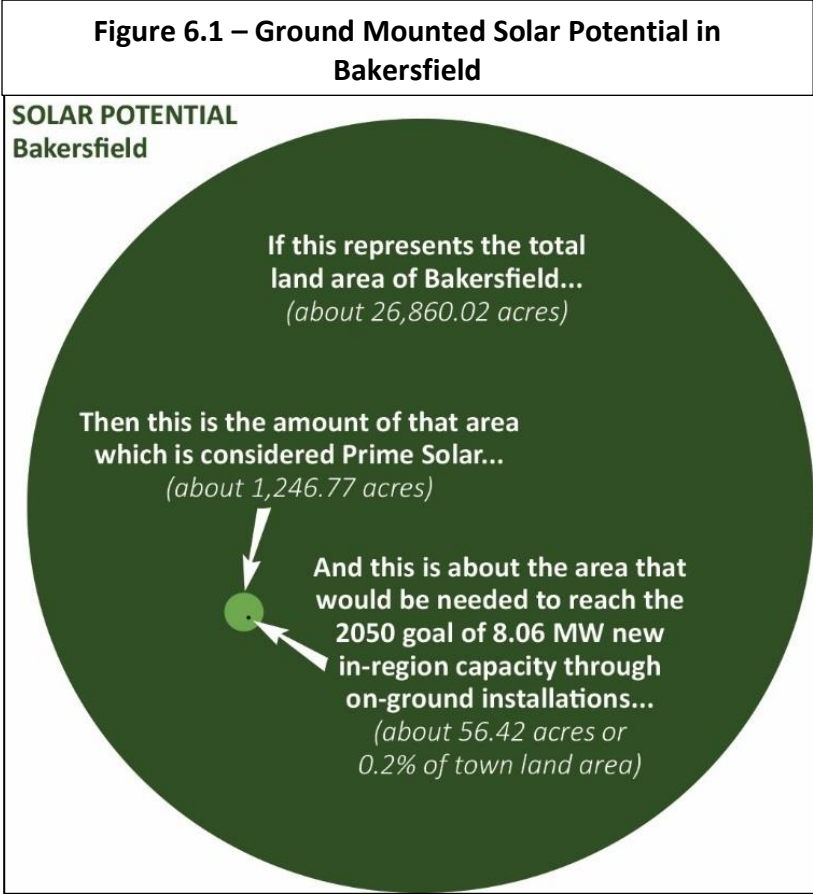
Bakersfield has sufficient land to meet the above generation targets based on mapping and calculations completed by NRPC. Bakersfield has access to the renewable electricity generation capacity outlined in Table 6.10. This estimate shows that Bakersfield has considerably more potential for renewable electricity generation than what is needed to meet the renewable electricity generation targets in Table 6.9. This generation capacity was calculated using the “base” layers for solar and wind. For an explanation of what constitutes a “base” layer, please see the mapping subsection below.

<b>Table 6.10 - Renewable Electricity Generation Potential</b>		
<b>Resource</b>	<b>MW</b>	<b>MWh</b>
Rooftop Solar	1	675
Ground-mounted Solar	288	352,686
Wind	160	490,652
Hydro	0.03	119
Biomass and Methane	0	0
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>448</b>	<b>844,132</b>

<sup>2</sup> Vermont Department of Public Service. “2016 Vermont Comprehensive Energy Plan.” 2016. p. 44.

Bakersfield supports NRPC’s position regarding “commercial” and “industrial” wind facilities. The NRPC Regional Plan finds that the construction of new “industrial” or “commercial” wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an

“industrial” or “commercial” wind facility).



Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Bakersfield encourages the use of these sources for electricity and thermal generation, especially on farms.

**Mapping Energy Resources and Constraints**

The third required element of an enhanced energy plan is the inclusion of maps that will provide guidance to the community and developers regarding the location of new renewable generation facilities.

Bakersfield has incorporated maps provided to them by NRPC. These maps show data as required by the Department of Public Service Determination Standards, including access to energy resources and constraints to renewable development, and are a required element of enhanced energy planning. All maps may be found in at the end of this chapter.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When a generation facility is proposed, the presence of all natural resources constraints on site shall be verified as a part of the application.

Mapping Methodology

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass “potential.”

“Known” and “possible” constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table 6.11. The known constraints and possible constraints used to create the maps include constraints that are required per the State Determination Standards from the Department of Public Service and regional constraints that were selected by NRPC. The Conservation District for Bakersfield was included as regional possible constraint.

Solar and Wind

The solar and wind maps show both “base” and “prime” areas. Base areas are areas with generation potential, yet may contain possible constraints. Prime areas are areas that have generation potential that do not contain known or possible constraints. Areas that do not contain generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general concentration of base and prime solar areas west of VT Route 108. The vicinity of Joyal Road and East Bakersfield Road also includes some base and prime areas. Bakersfield has identified the following preferred locations for solar generation facilities: rooftops, parking lots, and landfills. Brownfield sites located outside of the village are also considered preferred locations.

Bakersfield has a strong preference for solar facilities that have less than 5 MW in generation capacity. This preference is a reflection of the community’s dedication to preserving the aesthetic and rural qualities of Bakersfield by restricting the geographic size of solar facilities. In addition, Bakersfield prefers that solar facilities greater than 149 kW in generation capacity to be sufficiently separated from other similarly sized solar facilities to “break up” the visual impact of two or more solar facilities located next to each other. It is expected the most solar facilities proposed in Bakersfield in the future will be small enough to be net-metered projects due to the fact that the Town lacks three-phase electric distribution and electric transmission infrastructure.

All solar facilities to be sited in Bakersfield shall include proper screening. The Town of Bakersfield hopes to adopt a municipal solar screening ordinance in the near future.

There generally isn’t much land available in Bakersfield that has base and prime wind resources. The small areas that do exist are generally concentrated in the northwest and the northeast parts of Bakersfield.

Hydro and Biomass

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays “base” and “prime” areas. However, these categories are not necessarily indicative of generation. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites.

Bakersfield has two existing dam sites. The dams are both privately owned and are not currently generating electricity. One dam is located on The Branch and other dam is located on Bogue Brook.

**Conclusion**

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Bakersfield is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, affordable, and secure energy future.

**Goals**

- Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
- Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
- Focus growth within and adjacent to the village.

**Policies**

- Bakersfield supports energy conservation efforts and the efficient use of energy across all sectors.
- Bakersfield supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
- Bakersfield supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from Bakersfield to other parts of the region and considering access to public transit when reviewing Act 250 applications.

- Bakersfield supports the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of generation in identified preferred locations shall be favored over the development of other sites.
- Bakersfield supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
- Support local farms and the local food system.

### Implementation Actions

- Coordinate annually with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Bakersfield residents.
- Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.
- Determine if there is a need to create a municipal Energy Committee, appoint an Energy Coordinator, or provide greater funding and support to existing municipal boards to coordinate energy-related planning in Bakersfield and to educate residents about the goals of this plan.
- Conduct an energy audit of municipal and other public buildings to identify weatherization retrofits and incorporate the recommendations into the municipal capital budget.
- Promote and provide information about the GoVermont website (<https://www.connectingcommuters.org/>) which provides information citizens about ride share, vanpool, and park-and-ride options.
- Study the creation of public transit routes in Bakersfield.
- Plan for and install electric vehicle charging infrastructure on municipal property.
- Review municipal road standards to ensure that they reflect the “complete streets” principles as outlined by Vermont Agency of Transportation and Vermont Department of Health ([http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP\\_PA&N%20Complete\\_streets\\_guide\\_for\\_VT\\_communities.pdf](http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP_PA&N%20Complete_streets_guide_for_VT_communities.pdf)).
- Review local policies and ordinances to limit water services to those areas of town where additional development will not contribute to sprawl.
- Investigate the installation of a municipal solar and/or wind net-metering facilities to off-set municipal electric use.
- Investigate installation of a community-based renewable energy project.
- Provide firefighters with training in fighting fires on structures that have solar installed.
- Develop and adopted a municipal solar screening ordinance.
- Investigate the need for a municipal park and ride facility.

<b>Table 6.11 – Mapping Constraints</b>		
<b>Solar, Wind and Biomass Maps - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>Confirmed and unconfirmed vernal pools</b>	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
<b>River corridors</b>	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
<b>National wilderness areas</b>		VCGI
<b>FEMA Floodways</b>		VCGI/NRPC
<b>Class 1 and Class 2 Wetlands</b>		VCGI
<b>Designated Downtowns, Designated Growth Centers, and Designated Village Centers</b>	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas</b>	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain - 500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>Ground and surface waters drinking protection areas</b>	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
<b>Vermont Conservation Design Highest Priority Forest Blocks</b>	The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and	ANR

	aspect) on which plant and animal natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)	
<b>Public water sources</b>	A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
<b>Municipal Conservation Land Use Areas</b>	Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D.	NRPC
<b>Solar, Wind and Biomass Maps - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>Protected lands</b>	This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements held by non-profit organizations.	VCGI
<b>Deer wintering areas</b>	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR
<b>Hydric soils</b>	Hydric soils as identified by the US Department of Agriculture.	VCGI
<b>Agricultural soils</b>	Local, statewide, and prime agricultural soils are considered.	VCGI
<b>Act 250 Agricultural Soil Mitigation Areas</b>	Sites conserved as a condition of an Act 250 permit.	VCGI
<b>Class 3 wetlands</b>	Class 3 wetlands in the region have been identified have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR

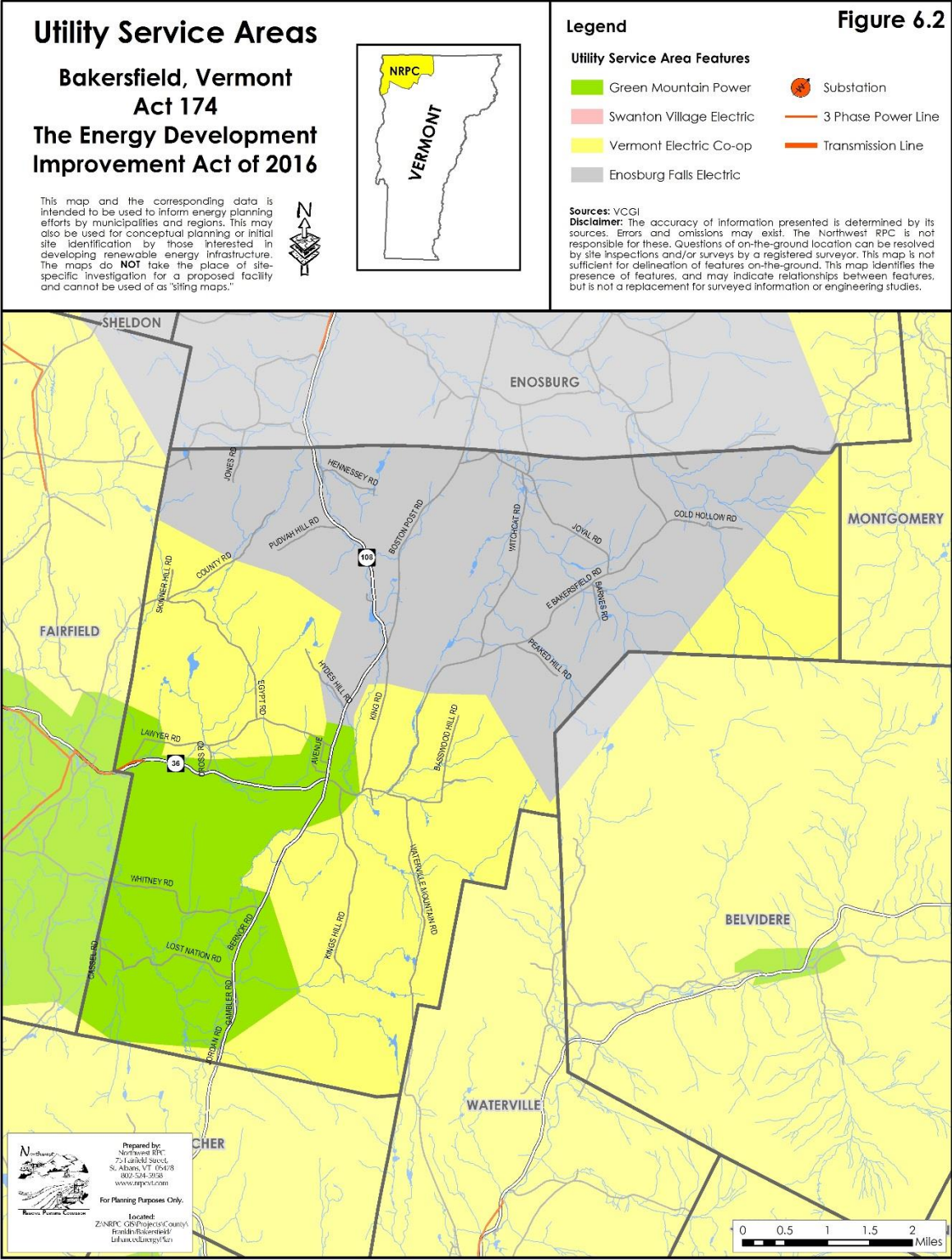


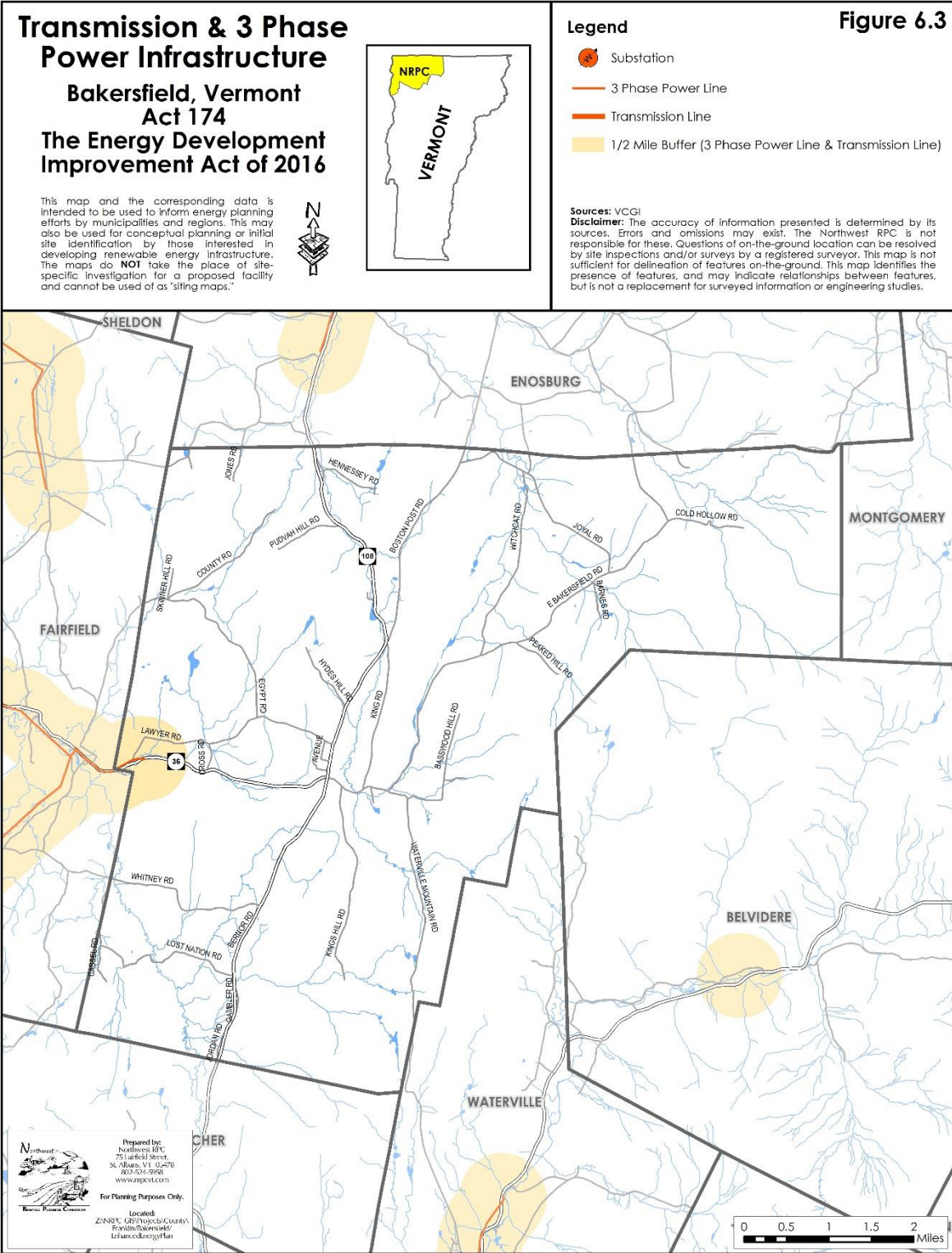
<b>Municipal Conservation Land Use Areas</b>	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D. The Conservation District as identified in the Bakersfield Town Plan was included in this category.	NRPC
<b>Hydro Map - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
None		
<b>Hydro Map - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>“303d” list of stressed waters</b>		ANR
<b>Impaired waters</b>		ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI

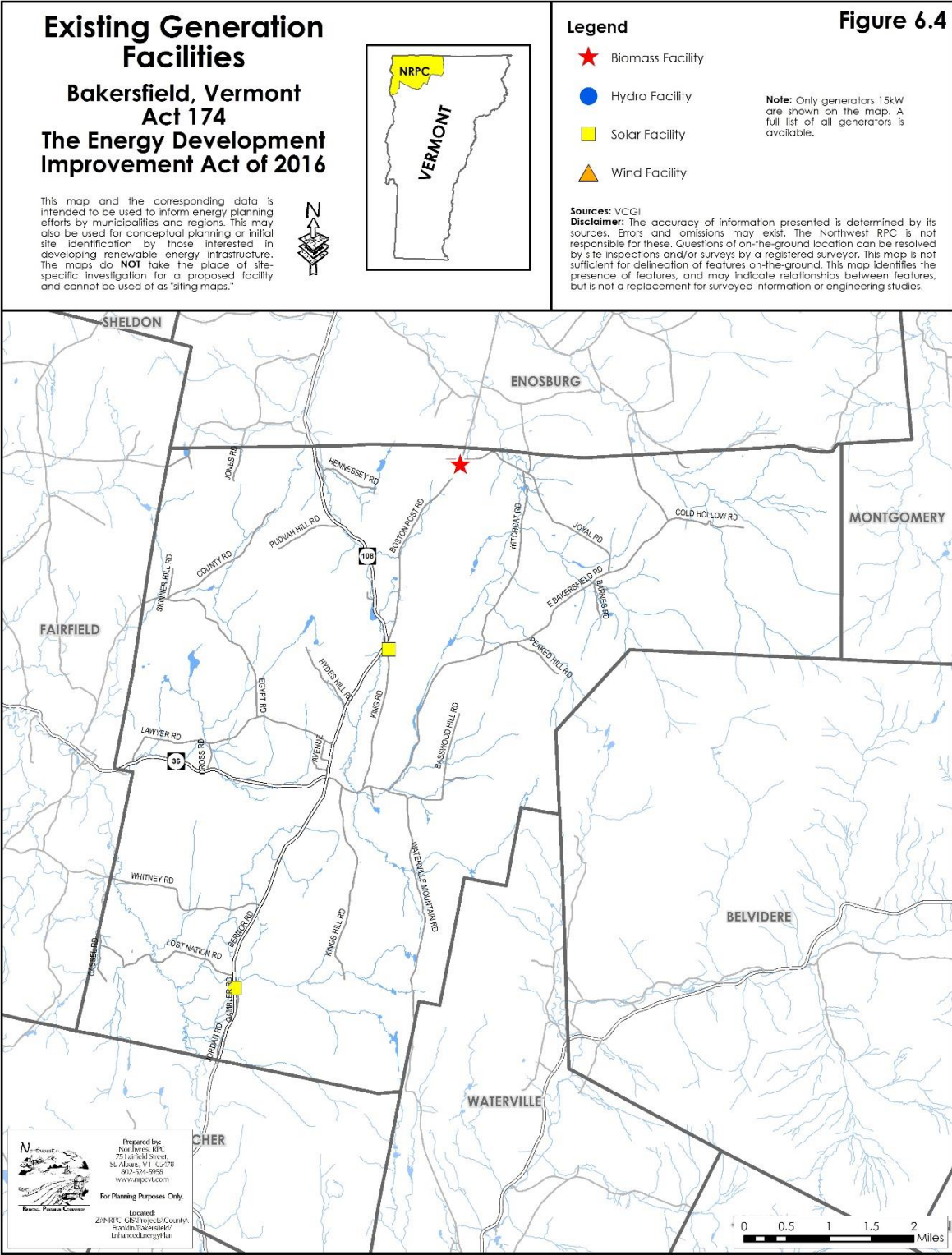
The data in Table 6.12 displays facilities that have a Certificate of Public Good from the Vermont Utility Commission to generate electricity. The Town of Bakersfield recognizes that some of the data in the table may be out of date or incorrect. The Town of Bakersfield also recognizes that some identified facilities may no longer generate electricity. For the most up-to-date information about renewable energy facilities in Bakersfield, please visit the Vermont Community Energy Dashboard (<https://www.vtenergydashboard.org/energy-atlas>).

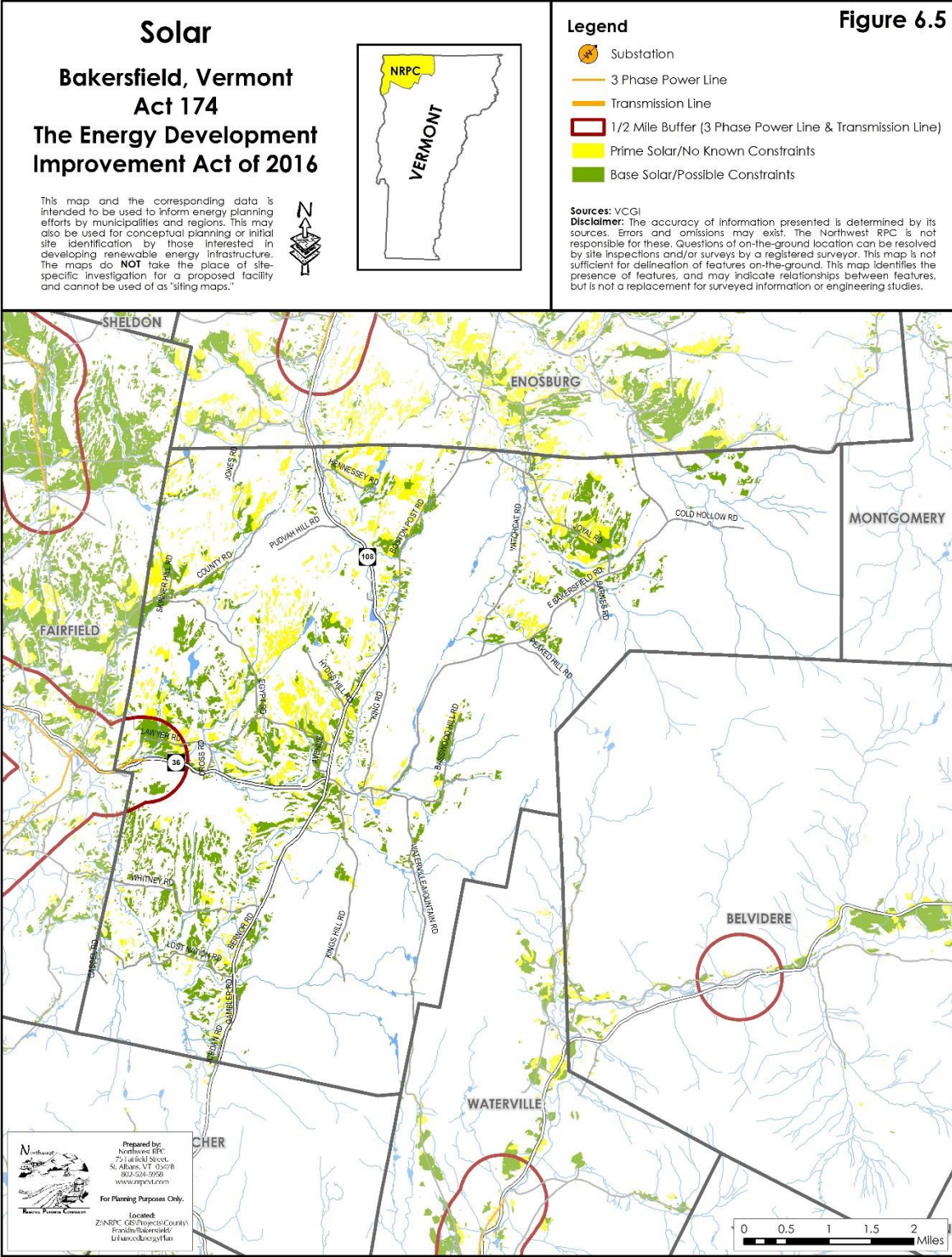
<b>Category</b>	<b>Sub Category</b>	<b>Capacity kW</b>
Biomass	Anaerobic Digester	400
Solar	Ground-mounted PV	7
Solar	Ground-mounted PV	8.9
Solar	Ground-mounted PV	5.9
Solar	Ground-mounted PV	15
Solar	Ground-mounted PV	6
Solar	Ground-mounted PV	15
Solar	Ground-mounted PV	11.4
Solar	Ground-mounted PV: Tracker	6.8
Solar	Roof-Mounted PV	5

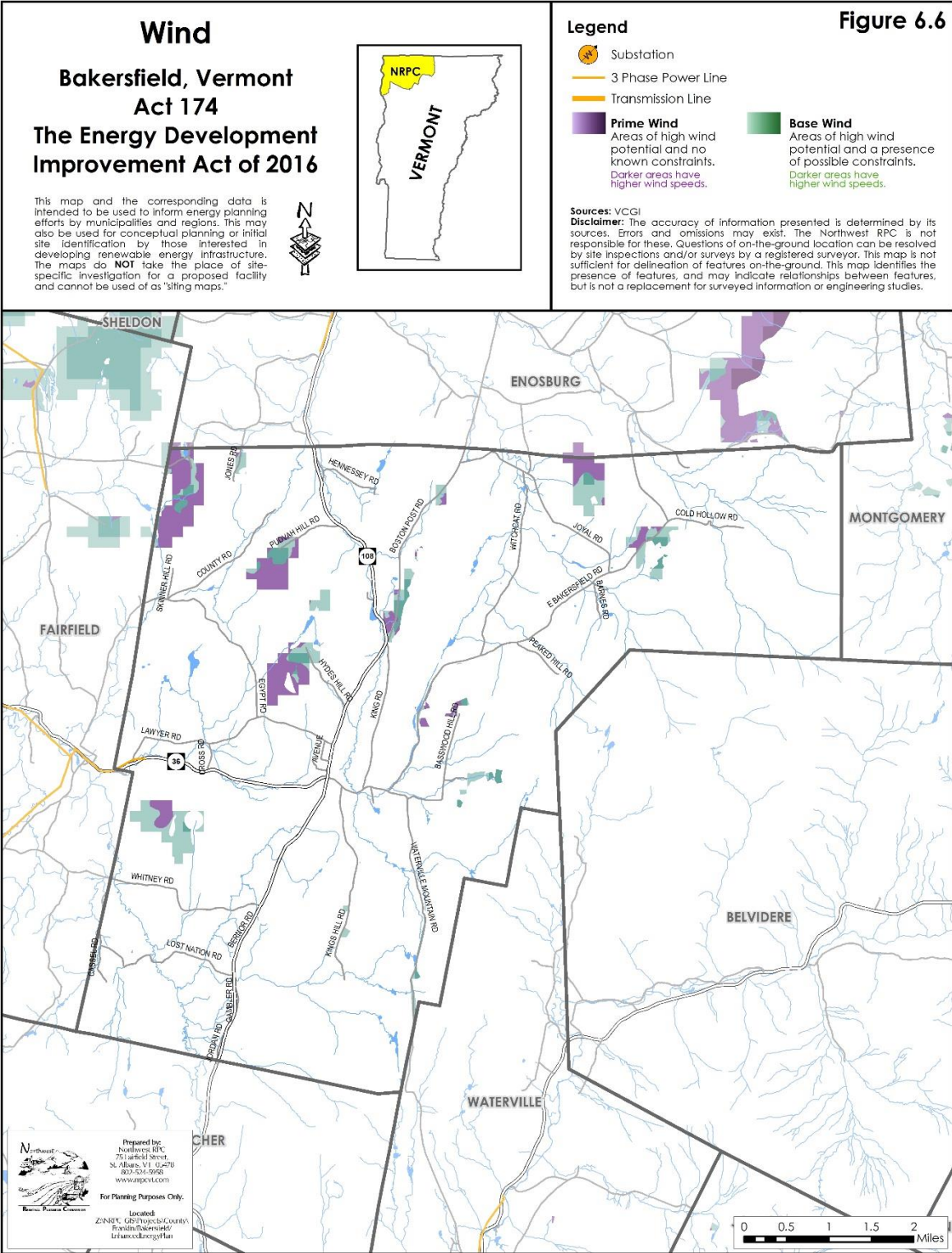
Solar	Roof-Mounted PV	5
Solar	Roof-Mounted PV	9.1
Solar	Roof-Mounted PV	7
Solar	Roof-Mounted PV	5.6
Solar	Roof-Mounted PV	6
Solar	Roof-Mounted PV	6.8
Solar	Roof-Mounted PV	6
Solar	Roof-Mounted PV	1.14
Solar	Roof-Mounted PV	3.8
Solar	Roof-Mounted PV	6
Solar	Roof-Mounted PV	7.25
Solar	Roof-Mounted PV	5
Solar	Roof-Mounted PV	5
Solar	Roof-Mounted PV	7.6
Solar	Roof-Mounted PV	9.2
Solar	Roof-Mounted PV	7.6
Solar	Roof-Mounted PV	10.4
Solar	Roof-Mounted PV	6
Wind	Small Wind	9.5
Wind	Small Wind	2

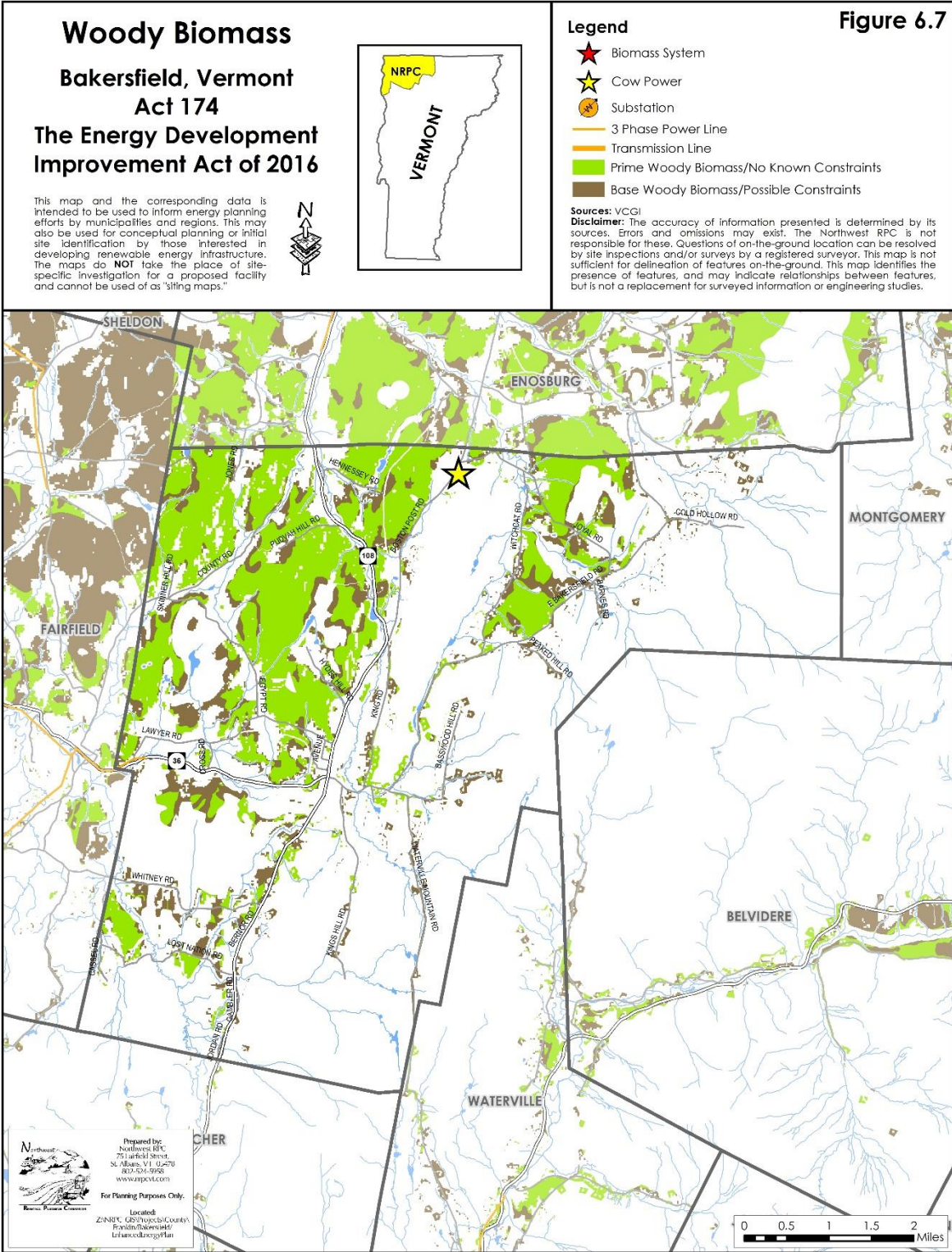




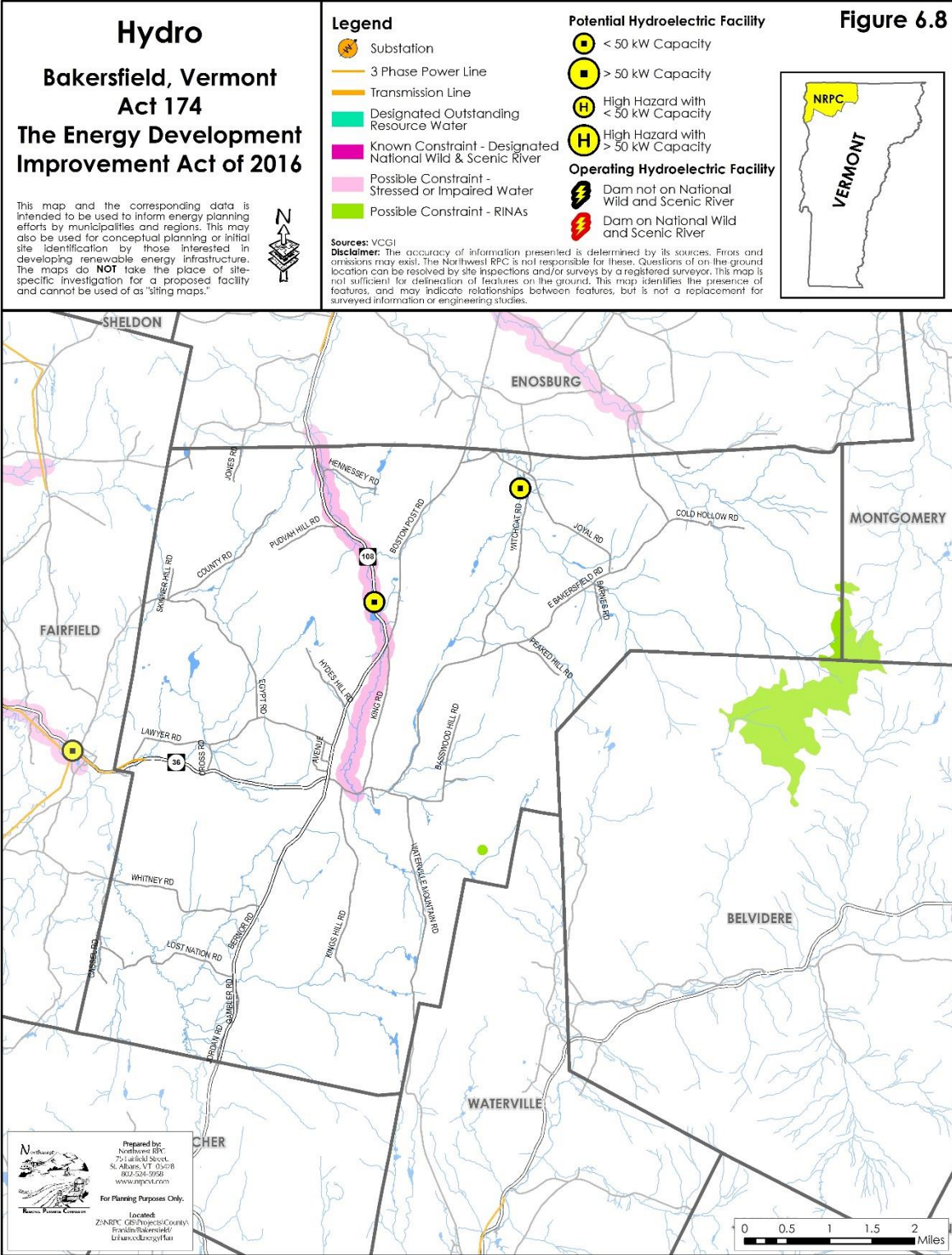












## Chapter 7. Education and Childcare

Caring for and educating our children is a high priority for the Town of Bakersfield. The town has a strong history as a center for academic excellence. Today, approximately 28% of Bakersfield’s population is below the age of 19 and providing a high quality education and safe and accessible facilities continues to be a priority for the community.

It is the towns’ responsibility and in its best interest to provide for the education of its school population without overcrowding, inefficient division of basic education facilities, or reduction in the quality of its educational programs. Through careful planning and growth management, the town can ensure that it is able to continue to provide high quality education to our children.

### Childcare Services

Bakersfield has become primarily a bedroom community to the surrounding towns and cities. Therefore, finding high quality and affordable childcare is a growing concern for existing and prospective families. A 2005 Legislative Report from the Vermont Child Care Advisory Board reports that the average cost for center-based care in Vermont is \$140.92 for infants and \$125.71 for preschoolers per week. Statewide, more than 27 percent of low-earning families spend more than one fifth of their income on childcare.



*Students load the bus at the Bakersfield Elementary School. Credit: Nancy Hunt.*

Many child development experts believe that children often do not have the maturity and self-care skills to be left unsupervised until the age of 12. The 2010 U.S. Census indicates that there were 280 children under the age of 14 currently living in Bakersfield at that time. According to state data, Bakersfield currently has two registered childcare homes and two childcare centers, with a total capacity of 56 children. Data on other childcare options, such as grandparents, siblings, stay at home parents, un-registered childcare homes or other opportunities is not available. Without additional data on the vacancy rates of childcare facilities, as well as the quality and affordability of these services, it is difficult to assess the availability of childcare in our community.

It is also important to note that the childcare industry can contribute to the local economy by creating jobs and supporting a stable workforce. The accessibility, affordability and quality of health care may affect a parent’s ability to enter and remain in the workforce and to be a productive employee.

**PreK-8 Education**

The Bakersfield Elementary School is on a site adjacent to the old Brigham Academy. Grades K-8 are given instruction in this building with the remaining grades enrolled at the high schools of neighboring municipalities.

The Bakersfield Elementary-Middle School is a wood frame structure. This construction was used to save money and time after the tragic fire that razed the K-4 elementary school in 1985. While the student population experienced in 1997 has diminished, the school has had to deal with space limitations. The school can accommodate approximately 165 students and has been at or near this capacity in recent years.

	<b>2010</b>
Under 5 years	80
5 to 9 years	95
10 to 14 years	105
Total	280
Source: 2010 US Census	

<b>Academic Year</b>	<b># Students Enrolled</b>
1997-1998	196
1998-1999	173
1999-2000	172
2000-2001	175
2001-2002	178
2002-2003	176
2003-2004	173
2004-2005	167
2005-2006	167
2006-2007	159
2007-2008	168
2008-2009	163
2009-2010	155
2010-2011	172
2011-2012	172
2012-2013	165
2013-2014	159

Source: VT Department of Education (<http://education.vermont.gov/data>)

There are no plans to expand the current school building. The wood construction doesn't allow for a second story on the building so any additions would have to be at ground level.

Furthermore, if the building were to be expanded it would need to come into compliance with current codes which would likely be difficult.

The school has been able to create some additional space to accommodate students. The principal’s office has been moved to the rear of the school to create a larger library area and there is a new all- purpose classroom used for art, meetings, and other academic activities. Overall, the building provides a safe and inviting environment for academic endeavors.

**High School Education**

Beginning in the ninth grade, Bakersfield students must choose to attend one of the surrounding area high schools. The majority of Bakersfield high school students choose to attend Enosburg High School, but students also attend BFA St. Albans, Essex, MVU, and BFA Fairfax (Table 7.4). Vocational education is offered at the Cold Hollow Center in Enosburg Falls, Northwest Technical Center at BFA St. Albans and the Voc Ed Center at Essex High School. These three facilities provide a wide range of programs for high school students and evening classes for adults as well. Tuition costs for area schools continue to rise, as does Bakersfield’s school tax rate.

**Home Schooling**

Bakersfield has 10 children being home schooled at this time (2013). These students are from 4 families in town.

**Other Educational Facilities**

The majority of colleges are located either in or around Burlington or in St. Albans. The Community College of Vermont (CCV) offers courses and degree programs in several locations including Winooski and St. Albans. The CCV is part of the Vermont State College System and has links to other higher education facilities around the state. The University of Vermont, St. Michael's College, and Champlain College are all located in the Burlington area. Johnson State College is located in Johnson in our neighboring county to the southeast.

<b>Table 7.3. Enrollment in area High Schools</b>	
<b>Academic Year</b>	<b># High School Students Enrolled</b>
1997-1998	83
1998-1999	92
1999-2000	95
2000-2001	78
2001-2002	75
2002-2003	65
2003-2004	65
2004-2005	73
2005-2006	86
2006-2007	92
2007-2008	84
2008-2009	87
2009-2010	81
2010-2011	77
2011-2012	75
2012-2013	71
2013-2014	70

Source: Northeast Franklin SU

Vermont Adult Learning located in St. Albans offers classes to help adults improve their math, writing, and reading skill. It also provides

a GED completion program. Vermont Adult Learning also has some satellite classes available in Swanton in Richford.

<b>Table 7.4. Attendance by High School with Tuition Rates</b>		
<b>High School</b>	<b># of Bakersfield Students Attending</b>	<b>Tuition Rate (2014/2015)</b>
Enosburg High School	40	\$14,940
BFA (St. Albans)	25	\$14,450
Essex	1	\$12,950
BFA Fairfax	1	\$11,825
Source: Northeast Franklin SU		

**Goals:**

- To provide exemplary educational services to the children of Bakersfield.
- To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of all Vermonters.
- To ensure that regulation of land development in Bakersfield does not negatively impact the availability of safe and affordable childcare

**Policies:**

- Establish fair and effective measures to control the pace and impact of development on educational services.
- Assess the need for and availability of childcare services in Bakersfield
- Support programs such as “Caring Communities,” the Teen Center, and “Success by Six..”

## Chapter 8. Natural Resources

Bakersfield is rich in natural resources, including high quality forestland, abundant water resources, and valuable agricultural soils. These resources contribute significantly to the town's rural and scenic character, provide opportunities for recreation, and support the local economy. According to a 2006 survey, 83 percent of surveyed residents felt that conserving natural resources was an important or very important planning goal. Through proper planning and management, Bakersfield can work to protect and conserve the valuable natural resources that make our community a unique and enjoyable place to live.

### Land Resources

The Town of Bakersfield spans two biophysical regions: the Champlain Valley and the Northern Green Mountains region (Thompson and Sorenson, 2000). The Town generally rises in elevation as you move from west to east, varying from under 600 feet to approximately 1940 feet.

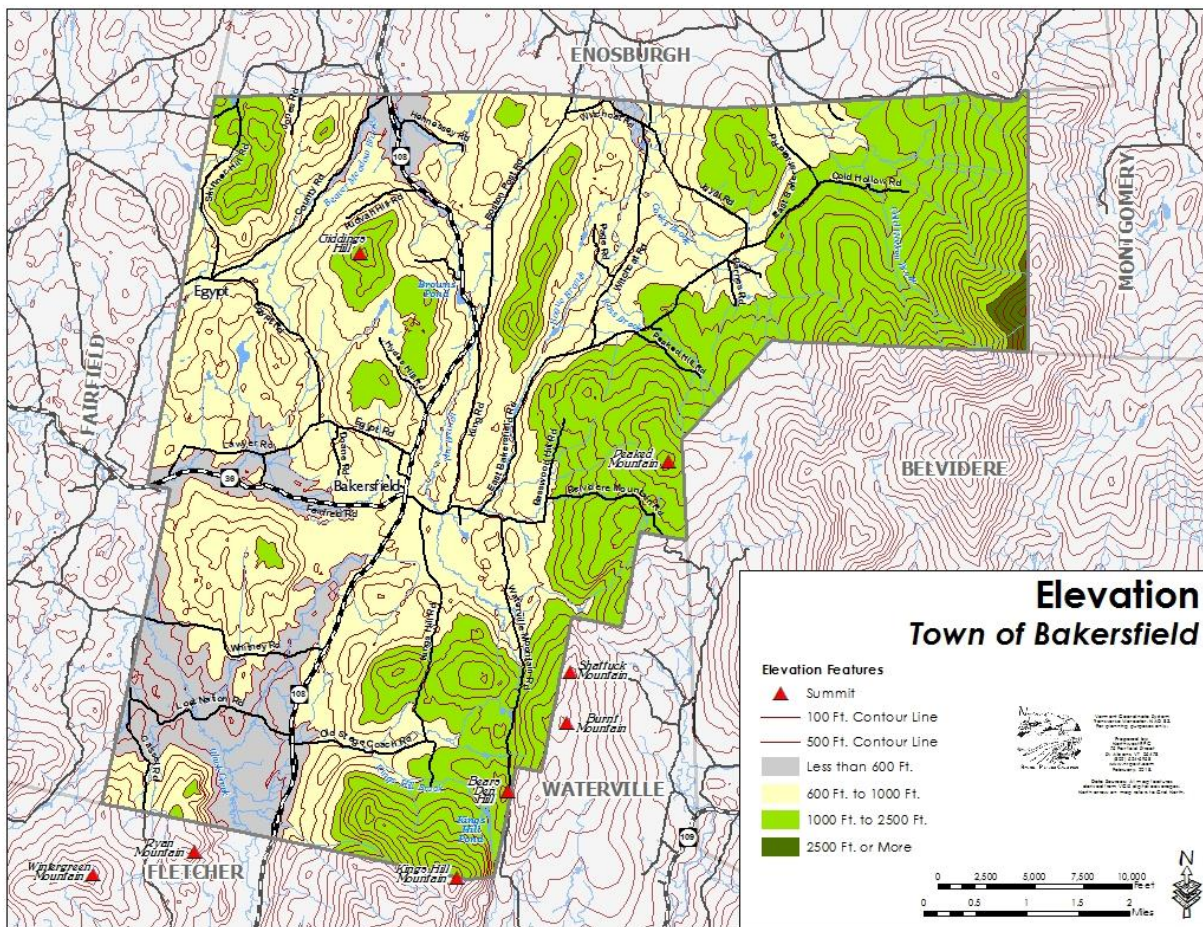


Figure 8.1 Elevation Change in Bakersfield

**High Elevations and Steep Slopes**

The high elevation areas of eastern Bakersfield include steep slopes, shallow soils, and exposed, fractured bedrock. These areas are largely forested and are not well-suited to development. The necessary cuts and slope stabilization for foundations, parking areas, road access and utilities are expensive and often, unless well-designed, unsafe. Development on steep slopes may also be at the expense of the Town, as the costs of road maintenance, runoff maintenance and sedimentation problems increase with pitch. School bus and fire service may also be difficult, expensive, unsafe or even impossible depending on weather conditions.

The Natural Resources Conservation Service (NRCS) provides general guidelines for assessing slope limitations as shown in Table 8.1. The slope of an area should be taken into account when deciding if the land is capable of supporting potential development.

**Table 8.1 Slope Classifications**

0-3%	generally suitable for most types of development but may require drainage
3-8%	most desirable for development because these areas generally have the least restrictions
8-15%	suitable for low-density development with particular attention given to erosion control, runoff, and septic design
15-25%	unsuitable for most types of development and septic systems, construction costly, erosion and runoff problems likely
>25%	all types of construction should be avoided, careful land management for other uses is needed

Development on steep slopes can create a number of environmental problems as it may upset the natural slope repose angle and increase stormwater runoff, erosion and the possibility of mass movement or slumping. Septic tank disposal fields located on slopes greater than 15 percent may result in partially treated effluent surfacing and seeping onto the downslope surface, causing health hazards and possible nutrient enrichment of surface water. Of the effluent that does remain under the shallow soil characteristic of steep slopes, much of it may flow laterally. This situation often results in groundwater contamination or the surfacing of effluent at outcrop or fragipan areas.

**Soils**

Soils are one of the most important environmental factors influencing the use of land in rural areas. Good, fertile soils represent a 10,000 year investment - a valuable and limited resource. Soils are classified on the basis of structure, form, composition, and suitability for various types of development. Within the context of land use planning, the characteristics that are of primary concern are bearing capacity, erodability, drainage, septic suitability and resource value. These characteristics tell us whether soils are capable of accommodating development, whether they are well-suited to agricultural or silvicultural uses, or whether they should be high priorities for conservation.

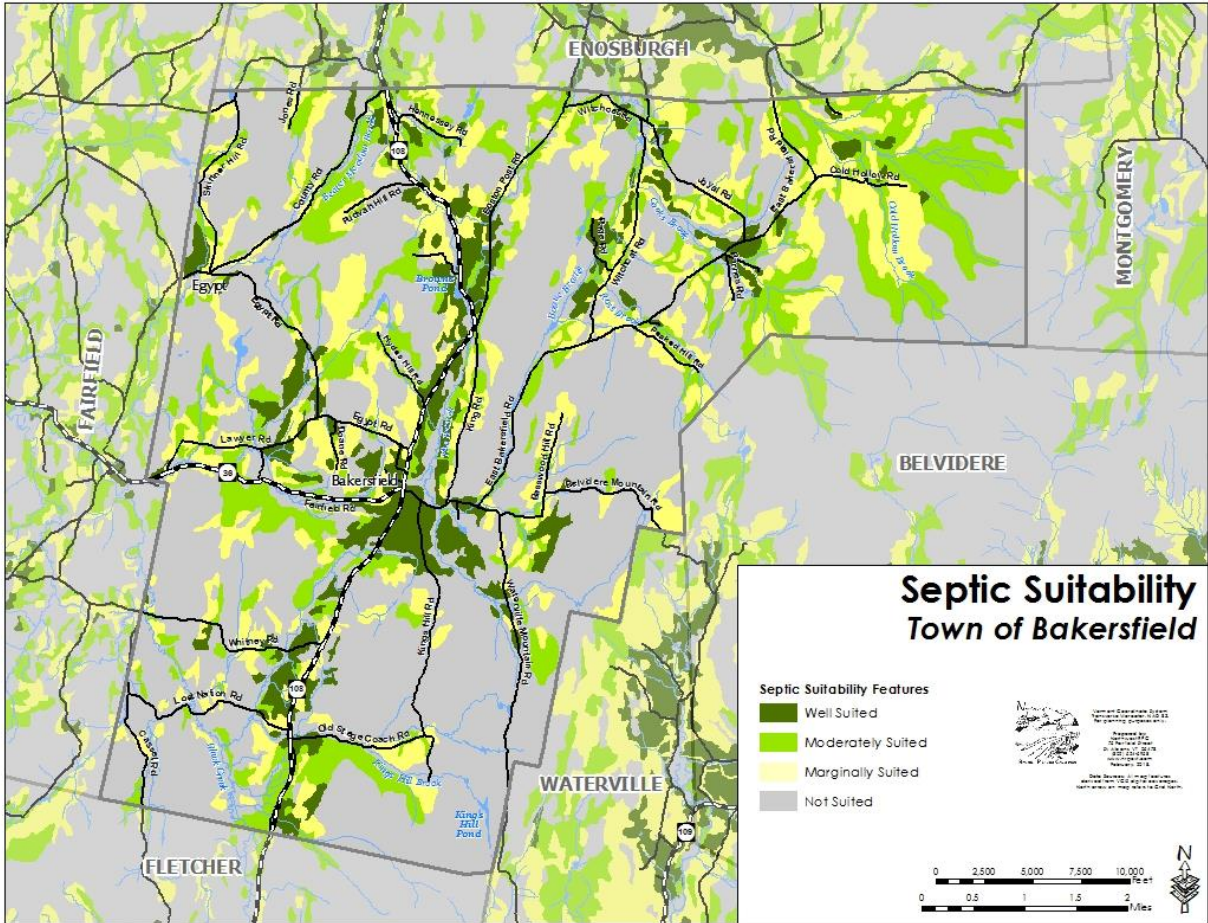
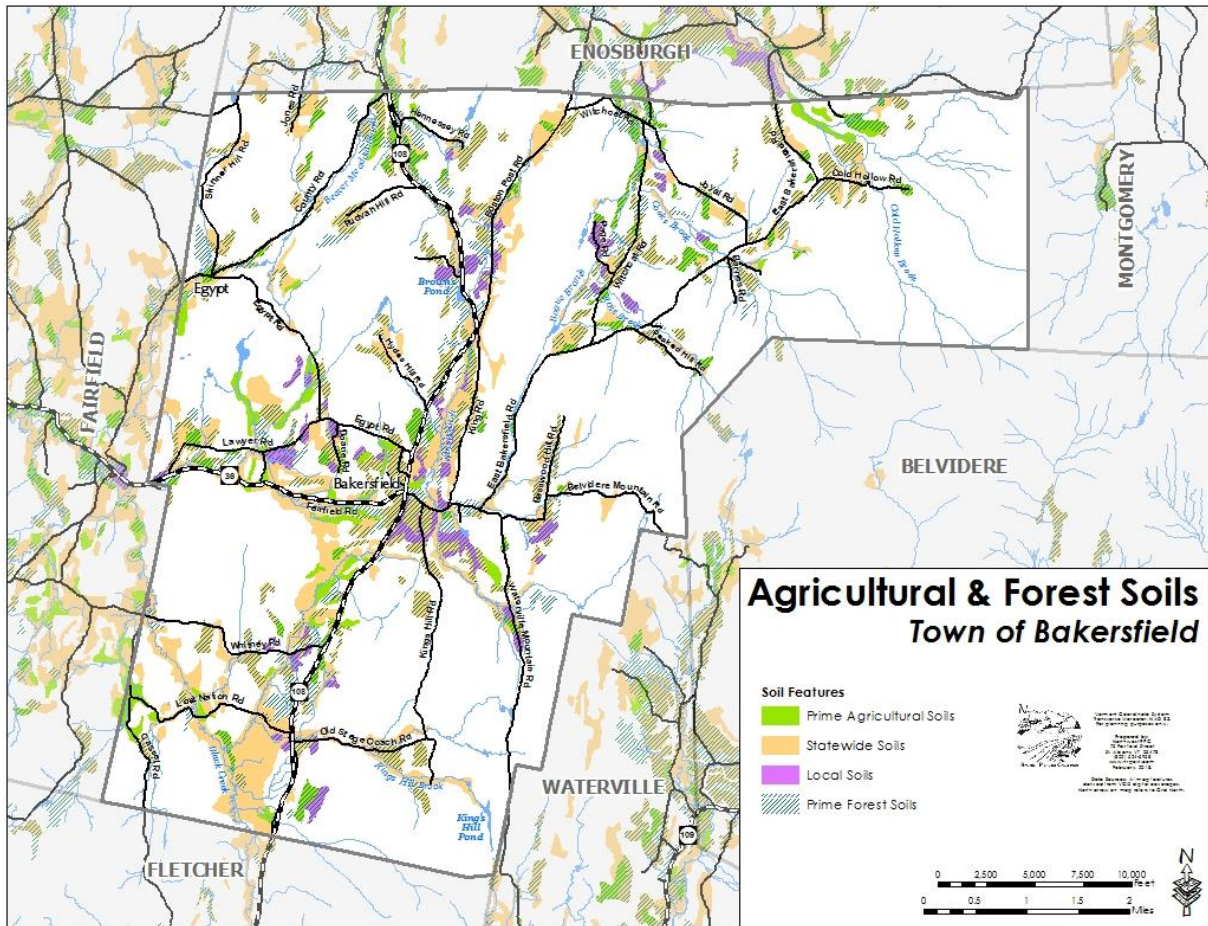


Figure 8.2 Bakersfield Soil Septic Suitability

The septic suitability of Bakersfield soils are shown in Figure 8.2.

The ability of soils to support agricultural and silvicultural (forestry) activities is also an important consideration in Bakersfield land use planning. Vermont’s agricultural soils have been identified by USDA/NRCS in the publication, “Farmland Classification Systems for Vermont Soils” (June 2006). Soils with values 1-7 are considered to have the characteristics needed to support agricultural uses and are shown on Figure 8.3. Soils with values 1-3 are considered “Prime soils” and are the most productive. Soils valued at 4-7 are considered to be of “statewide” importance. Soils in class 8 may be considered of local importance.





**Figure 8.3 Agricultural and Forestry Soils in Bakersfield**

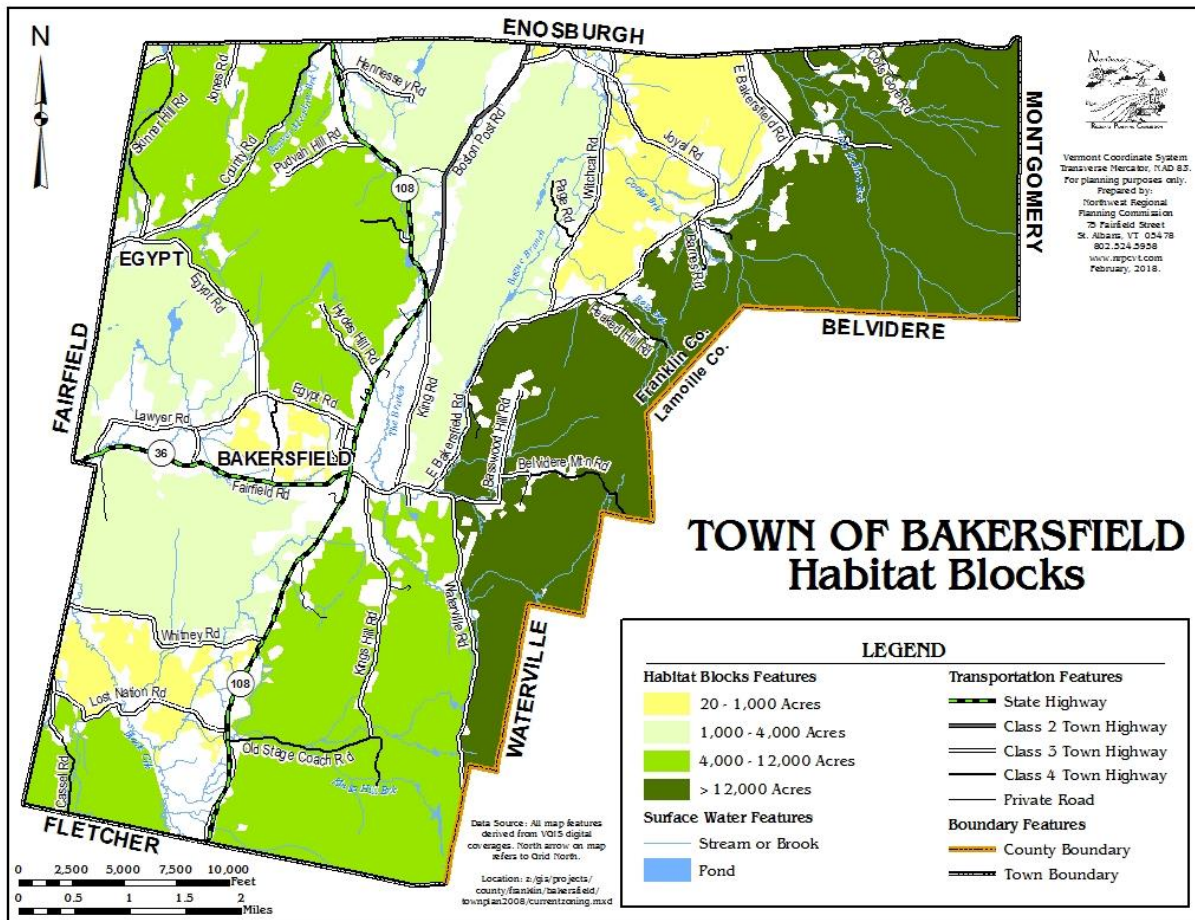
Local agriculture depends upon the availability of high quality soils, in sufficiently large, contiguous parcels (critical mass) to allow for economical hay and field crop production. Because of their physical qualities, however, these soils are often also considered the best suited for subdivision and development. The conversion of good farmland effectively takes it out of production over the long term, and reduces an already limited resource base. Given the importance of farming to the local, regional and state economies, farmland conversion and fragmentation are of particular concern in Bakersfield. Retaining sufficient acreage of primary agricultural soils in good condition for agricultural production is necessary for the continuation of farming our community. Keeping agricultural soils in agricultural use is one of the goals supported in this plan.

The NRCS has also identified “primary forestry soils,” important to sustain commercial forestry operations in the region, according to their relative productivity. Similar concerns exist regarding the development and fragmentation of these soils; however they tend to be more widely distributed, and less suited for intensive development. However, even low density development, including seasonal camps, may result in the fragmentation and degradation of productive forest land. Again, social and economic factors, as well as the sustainable management of the soils

resource base (e.g., through accepted management practices (AMPs) for silviculture, as defined by the state) should be considered in determining which tracts of forest land should be maintained long-term for commercial use.

**Forest Blocks and Habitat Connection**

Approximately 72 percent of Bakersfield is covered by forest (2002 Landstat data). Bakersfield’s forests provide habitat for many different kinds of wildlife, stabilize soils, absorb runoff, add to the scenic value of the landscape, and provide a living for Bakersfield residents who rely on logging or profits from their woodlots. Large, unfragmented stretches of forest in the eastern part of Bakersfield are critical habitat for mammal and bird species that require forest interior. Bakersfield’s forests are dominated by sugar maple, yellow birch, American beech, and hemlock. It is important to minimize forest fragmentation and promote the health, viability, and ecological function of forests in Bakersfield.



**Figure 8.4 Habitat Blocks in Bakersfield**

core habitat blocks by the Vermont Agency of Natural Resources. This essentially means that these are areas of contiguous forest that are unfragmented by roads, development, or agriculture that are critically important to protecting native species. The same habitat blocks have also been noted to be “highest priority connectivity blocks” in that they provide connection between the

largest core habitat blocks located in the state and New England region along the “spine” of the Green Mountains. These blocks also provide connection to the forests and lowlands in western Franklin County.

**Earth Extraction**

Earth resources, including sand and gravel deposits, are important natural resources particularly for their use in road maintenance and construction. However, it is important to recognize that these resources are finite and that the geologic processes that create them can take tens of thousands of years to occur. In Bakersfield, their use must be carefully balanced with the consequences of their extraction, and even then should be used only when high public benefit is in evidence. In 2014, the Town purchased land for a gravel pit and this should provide for the public needs for the foreseeable future. Other extractions in town, especially for commercial purposes should be restricted.

Improper or excessive resource extraction is extremely damaging to the natural and scenic resources of Bakersfield, with far-reaching implications for water quality and the archaeological and aesthetic resources of the region. Sand and gravel deposits often serve as important areas for aquifer recharge and filtration, so vital for high quality sources of drinking water. Disturbance of these areas results in a reduction of their natural ability to retain and filter groundwater, resulting in degraded water quality. On-site storage and disposal of materials at extraction sites can cause contamination of groundwater through the leaching of hazardous materials into the water table. Removal of top soils for sale may also have far-reaching impacts and should be discouraged.

Cultural resources are also at risk of degradation through improper earth resource extraction, including the accidental destruction of buried archaeological sites, and diminished scenic qualities which may negatively affect land values and opportunities for future use. Noise, dust, and increased traffic on roads near extraction sites can increase road maintenance costs and negatively impact the quality of life in Bakersfield.

To minimize negative impacts on the natural and cultural environment, a focus on appropriate site development that minimizes visual impact and reduces the risk of resource degradation should be coupled with post-operative attempts at proper mitigation and site reclamation. Prior to permitting extraction, the Bakersfield Planning Commission may require a plan for the rehabilitation of the site during and at the conclusion of extraction or processing activities and appropriate guarantees to allow for enforcement and to ensure rehabilitation at the operator’s expense.

**Water Resources**

The town of Bakersfield has rich water resources, including rivers and streams, wetlands, and groundwater resources (Figure 8.4). The town’s waters offer sustenance,

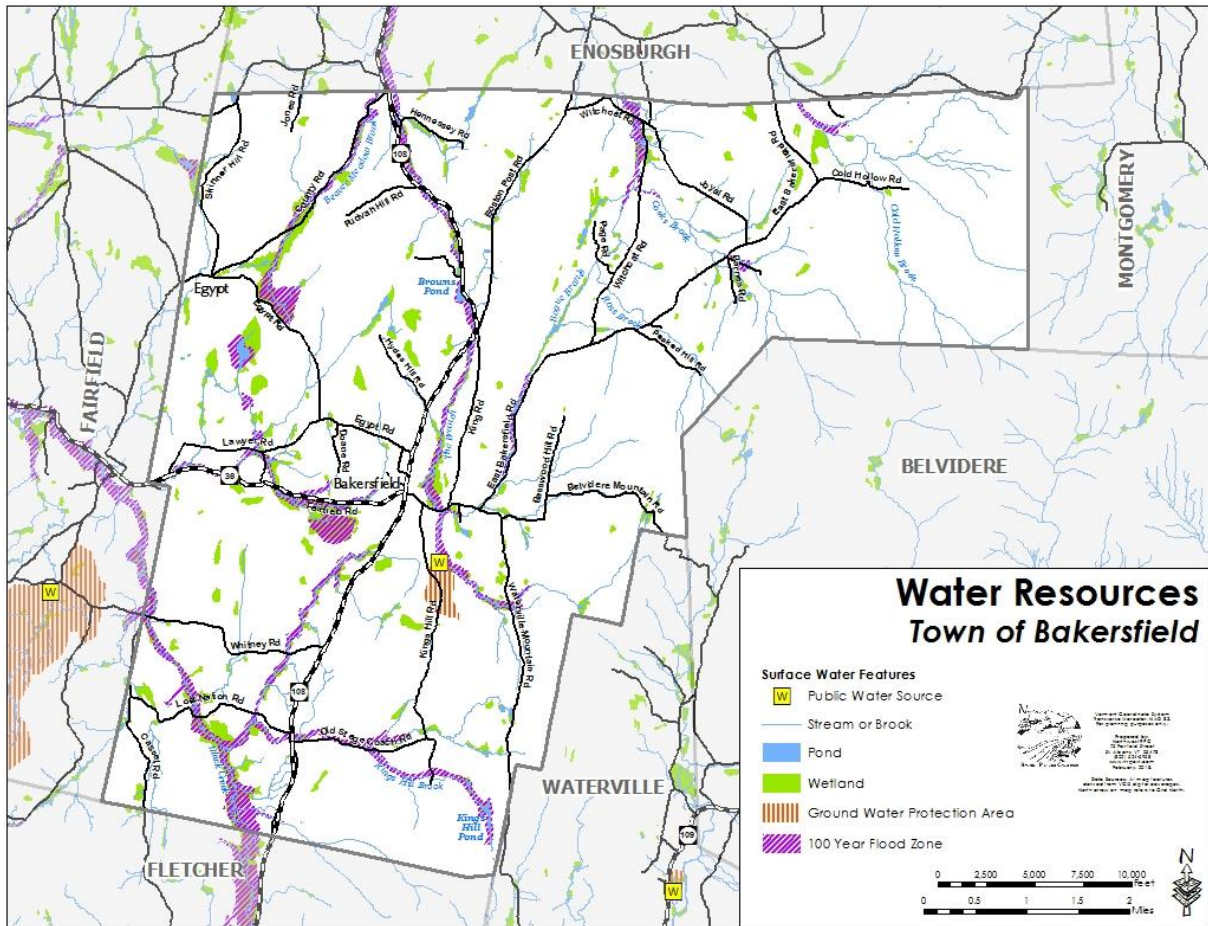


Figure 8.5 Bakersfield’s Water Resources

scenic beauty, ecological values, and recreational opportunities and are important to the social, economic and cultural character of the community.

**Surface Waters**

Bakersfield is situated within the watershed of the Missisquoi River. The Missisquoi Watershed encompasses much of northwestern Vermont and southern Quebec. All of this area drains into the Missisquoi River Basin and ultimately into Lake Champlain. This watershed has been identified as a high priority area for the Vermont Department of Environmental Conservation’s Clean and Clear Center due to its contribution to phosphorus runoff and the resulting water quality issues in northern Lake Champlain (VT DEC, Clean and Clear Work Plan, 2007).

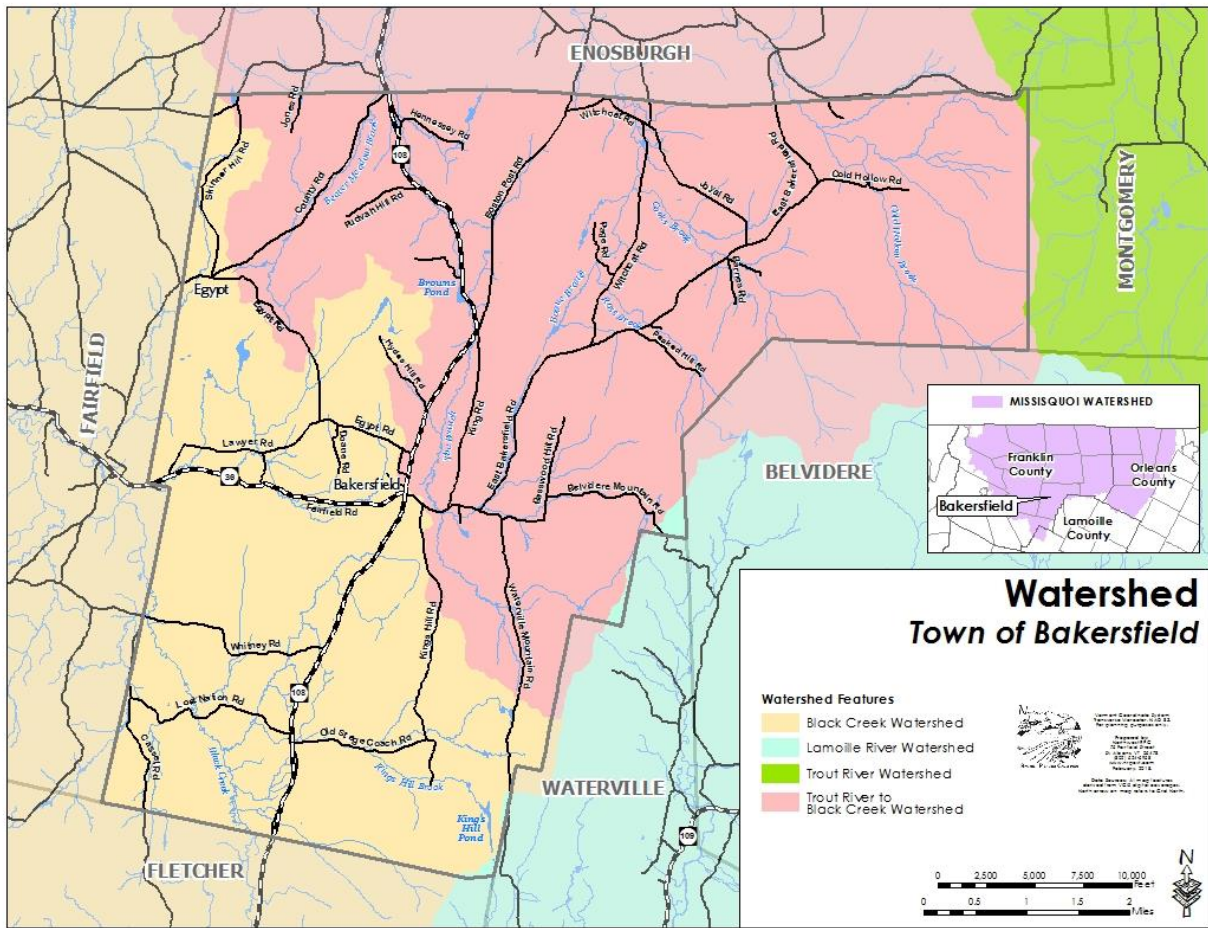


Figure 8.6 Subwatersheds within the Town of Bakersfield.

The two major subwatersheds in Bakersfield are the Black Creek and Tyler Branch subwatersheds (Figure 8.5). Flooding and erosion are major issues within these subwatersheds and have increased the risk of flooding and erosion hazards, particularly downstream in Enosburgh and Fairfield. Flooding in the winter of 1996 and August of 1998 led to a FEMA-declared disaster. The Northwest Regional Planning Commission estimates that there are seventeen (17) structures within the 100 and 500 year floodplain in Bakersfield.

Geomorphic assessments have been completed within the Black Creek and Tyler Branch watershed to determine the causes of flooding, erosion, and other water quality issues and to identify potential solutions. According to these studies, most streams in the Bakersfield portion of the Tyler Branch watershed have adequate buffers. Out of the 35 reaches or stream segments that were assessed, 32 reaches had wooded buffers that were at least 25 feet wide on at least 75 percent of the reach length. The three reaches with little or no buffer were all along The Branch, a tributary to the Tyler Branch, from the town boundary with Enosburgh upstream 1.5 miles. The stream reaches within the Black Creek subwatershed tended to have fewer riparian buffers. Three of the 13 reaches assessed had adequate buffers, three had little

or no buffer on 75 percent of their length, and the rest had little or no buffer on 25-75 percent of the stream reach. It will be the goal of Bakersfield planning to ensure that these and similar buffers are maintained and enhanced.

More in-depth studies have been conducted along The Branch. Seven reaches within Bakersfield tended to be stable and in good condition. The assessed reaches still have access to the floodplain, which allows the stream to dissipate energy during high flows. Several upper reaches are good candidates for conservation or protection because there is no significant development within the stream corridor. In-depth studies of this type for the Black Creek and Tyler Branch have not yet been completed.

One of the main concerns along the Black Creek is that the Lamoille Valley Rail Trail cuts off access to the floodplain. The State of Vermont and local partners have identified several sites where the rail embankment can be lowered to allow the stream to access the floodplain during high flow events. The two locations in Bakersfield are along Lost Nation Road and Route 108S. Implementation is expected to begin in early 2008.

Stormwater runoff from roads, roofs, driveways and other surfaces also degrades local water quality and exacerbates flooding. During rain events and snow melt, stormwater carries dirt, oil, debris and other pollutants from these surfaces into our waterways.

**Wetlands**

Wetlands are also important for the maintenance of water quality. The extensive biological activity of a wetland area enables the absorption and assimilation of nutrients and thus purifies to some extent the water that is discharged. These areas store large quantities of water during periods of high runoff and gradually release water during low flow periods. Therefore, the wetland regulates stream discharge both during low flow and peak flow. Loss of this storage capacity not only adversely affects stream behavior but also increases floods and reduces stream flow during crucial low flow periods. Wetlands also provide habitat for a wide variety of plants and animals, including a disproportionately high number of threatened or endangered species, compared to other ecosystem types.

**Groundwater**

Groundwater represents both a hazard and a resource. In areas where the seasonal high water table is 0-1.5 feet, there is unconfined groundwater at or near the surface for part of the year. These waters can be easily polluted by nutrients from septic tanks, agricultural practices, hazardous waste sites, pesticides, road salt and other sources (Vermont DEC, 2005). Once contaminated, these waters may present health hazards locally and cause pollution of surface waters should the groundwater contribute to stream flow or wetlands.

Many residents of Bakersfield depend upon springs and shallow wells for their water. Should septic systems, landfills or faulty sewer lines be located too close to a water supply, contamination may result. In an effort to protect the municipal water supply, Bakersfield has

adopted an aquifer overlay district, which is intended to discourage new development and maintain the high quality of drinking water for village residents.

In order to maintain supplies and access to clean and sufficient water for the Towns' residents, businesses and farms, new and novel uses of water, including the commercialization of water sources in the Town, will generally be discouraged. One issue of concern to some in Bakersfield is commercial extraction of water. Along with the restrictions permitted by the State of Vermont Department of Environmental Conservation and Act 199, Bakersfield may want to limit commercial groundwater extraction until a full assessment of the groundwater can be made for the Town by the State Geologist. Such an assessment would provide evidence about the quantity and quality of water required to support its residents and other purposes.

**Wildlife**

The Town of Bakersfield is host to abundant flora and fauna typical of the region. Bear, deer, moose, and small mammals occupy its fields and forests. Thorough surveys of rare and endangered plants and animals have not been conducted within the Town, but recent research has confirmed the presence of both a rare fern population and a nesting site for a rare bird that were previously known only from historic records (Vermont Nongame and Natural Heritage Program, personal communication). Osprey, which nest in the Fairfield Swamp just to the west, must surely venture into the skies over Bakersfield from time to time.

A heronry in the western part of Bakersfield has been monitored by state wildlife personnel for several years and is a protected area. Over the last five years, breeding bird populations have been monitored within the town for research for the Vermont Breeding Bird Atlas being conducted by the Vermont Center for Ecostudies, and at least 90 species of breeding birds have been documented. More than fifteen of Vermont's forty breeding reptiles and amphibians have been recorded within the town's boundaries (Vermont Reptile and Amphibian Atlas, Dr. J. Andrews, Middlebury College). Vernal pools, ponds, and other wetlands within the town provide critical breeding habitat for amphibians.

Invasive plant and animal species pose problems for our forests, wetlands, and waterways. So far, very little research has been done to inventory Bakersfield for the presence of invasive species.

Deer wintering areas provide critical habitat for whitetail deer. These areas of hemlock, spruce, fir, cedar, and pine forest provide shelter from deep snows, and also permit easier winter travel for deer and other species. The combination of elevation, vegetation, and solar aspect significantly increase the survival rates of deer populations. The U.S. Fish and Wildlife Service has targeted these areas for protection. These and other critical habitat areas are depicted in Figure 8.6.

Black bears prefer mountainous and forested landscapes just like those found on the slopes of the Green Mountains. Black bears have a significantly large home range and because of this, their survival rate decreases when larger areas are divided up into smaller units and into

isolated forestlands. When land is developed in scattered locations, the black bear habitat areas are decreased.

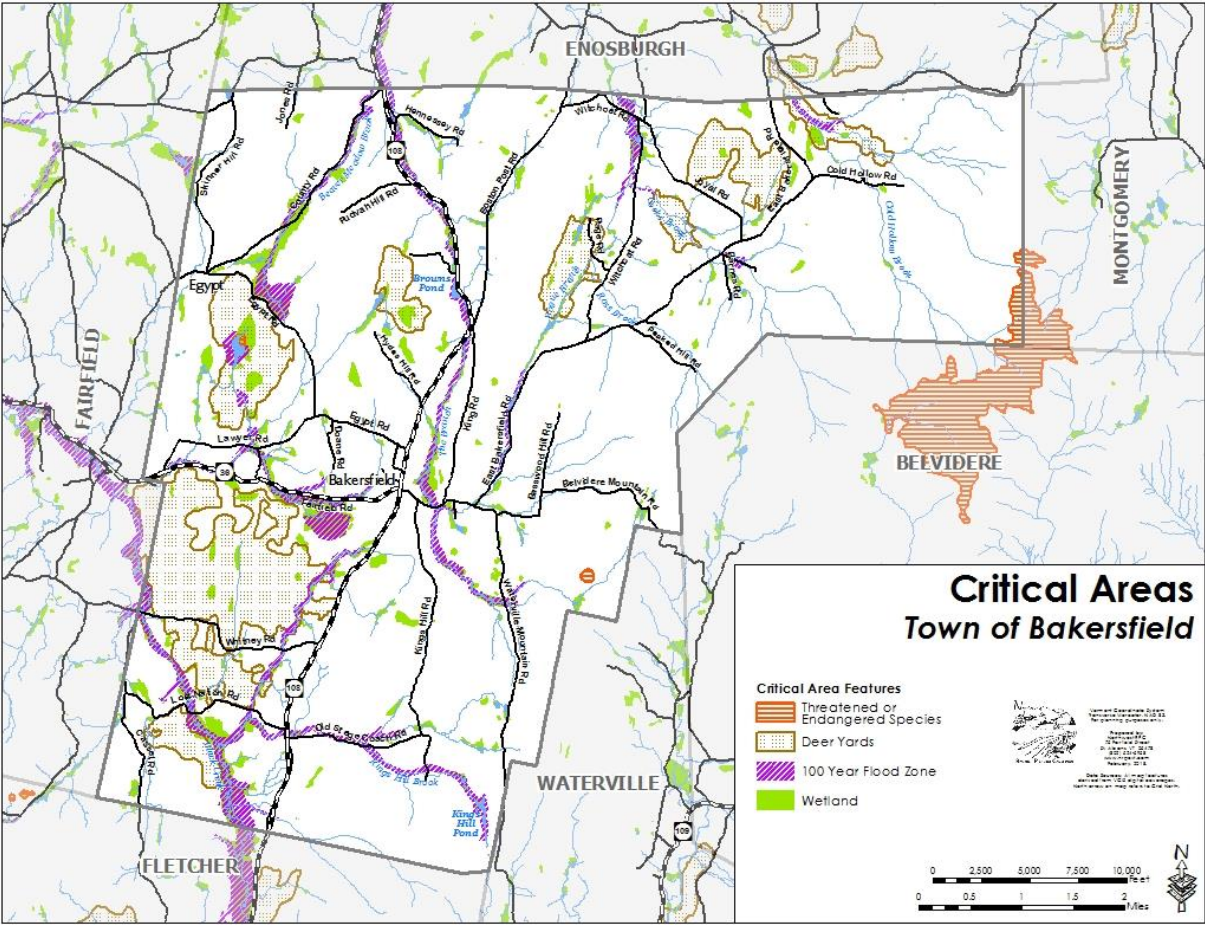


Figure 8.7 Critical Wildlife Areas in Bakersfield

**Scenic Resources**

The scenic beauty of Bakersfield is among our community’s greatest assets. Yet, despite the importance of scenic beauty to our community and sense of place, scenic and aesthetic concerns are often difficult to quantify, and can be challenging to incorporate into comprehensive planning endeavors. In order to protect these resources, the Town will need to identify these resources and encourage innovation in design and layout of development so that the visual impact can be minimized. The use of vegetative buffers and other screening methods will be encouraged to help reduce the visual impact of development in the Town. This includes the regulation of cellular and wind energy systems to the extent possible.

**Recreation**

The Town of Bakersfield is fortunate to have an abundance of open space and forestland available for recreational activities such as hunting, fishing, riding, and snow mobiling. Future development could reduce access and opportunity for these kinds of activities. Alternatively,



planned unit developments present an opportunity to create common resource land that can be set aside for recreation or other uses in perpetuity. Through the bylaws, the Town Planning Commission will support the maintenance of larger tracts of natural spaces.

**Goals:**

- To protect the natural integrity and quality of wetlands and watercourses, wildlife habitats, ground water and aquifers, populations of rare and endangered species, forests and all other irreplaceable natural resources
- To enhance environmental quality, preserve the character of Bakersfield, and protect its natural assets

**Policies:**

- Prohibit all land development on slopes greater than 25 percent and maintain vegetative cover
- Conduct development on slopes greater than 15 percent carefully in order to avoid environmental degradation and conditions that create health hazards
- Carefully control runoff and erosion should during all phases of construction
- Inventory the town for high quality wetlands and watercourses, wildlife habitats, ground water and aquifers, populations of rare and endangered species, forests and all other irreplaceable natural resources
- Restrict the density of development in these critical areas to levels that will have minimal impact
- Discourage development within ecologically sensitive areas including wetlands, steep slopes, and areas with shallow soils
- Protect groundwater resources by prohibiting development in those areas where the water table is less than 1.5 feet below the surface
- Permit development only in a manner that is safe to existing water supplies, both public and private
- Prohibit new construction within the Wellhead Protection Area, as designated by the Vermont DEC
- Minimize the impact of development on streams and floodplains to allow them to perform their natural functions
- Encourage the use of Low Impact Development (LID) strategies to treat stormwater on-site
- Promote the natural balance of the hydrologic regime by controlling excess runoff and maintaining natural water infiltration and storage capacities
- Encourage development within shoreline areas of streams, lakes or ponds that is compatible with the natural beauty of the area.
- Require sufficient setbacks to prevent erosion along streambanks or shorelands and pollution from subsurface sewage disposal systems, and to retain visual and physical access to the water bodies
- Prohibit land development resulting in the loss of wetland storage capacity
- Prohibit additions to wetlands of any substances that are likely to increase the concentration of materials beyond their assimilative capacities

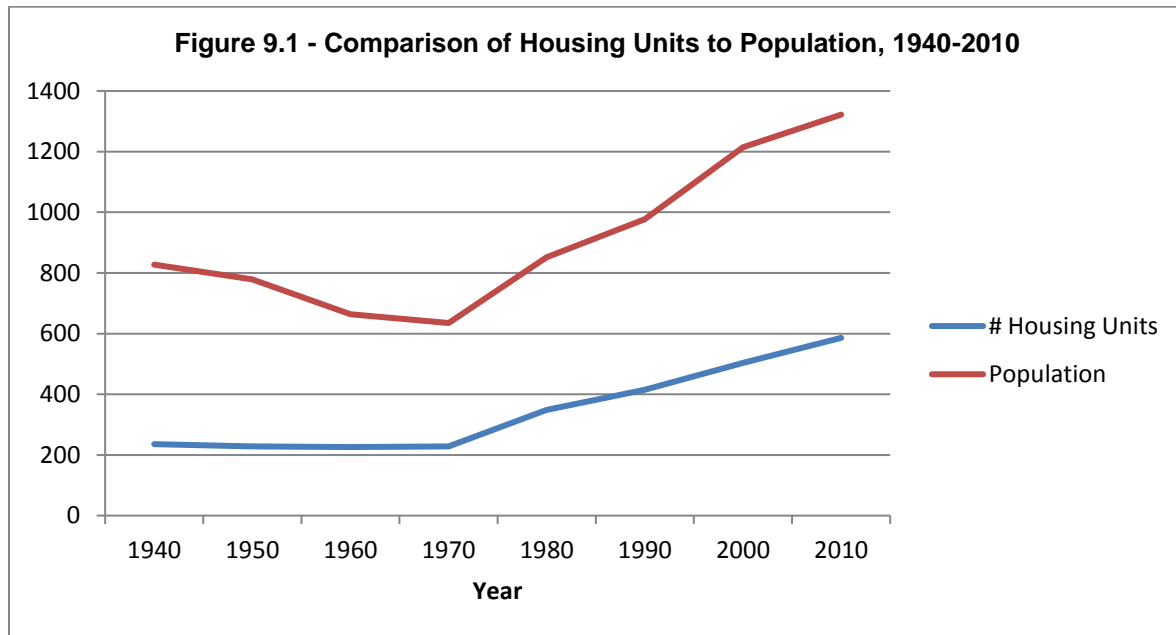
- Promote development in proximity to wetlands and streams that preserves their value for education, science, aesthetics and recreation
- Incorporate vegetated buffers from streams, rivers and ponds into Bakersfield’s zoning bylaws in order to better protect water quality
- Develop and utilize Fluvial Erosion Hazard Maps to minimize losses from flooding and erosion
- Develop a plan to establish a Town Forest

## Chapter 9. Housing

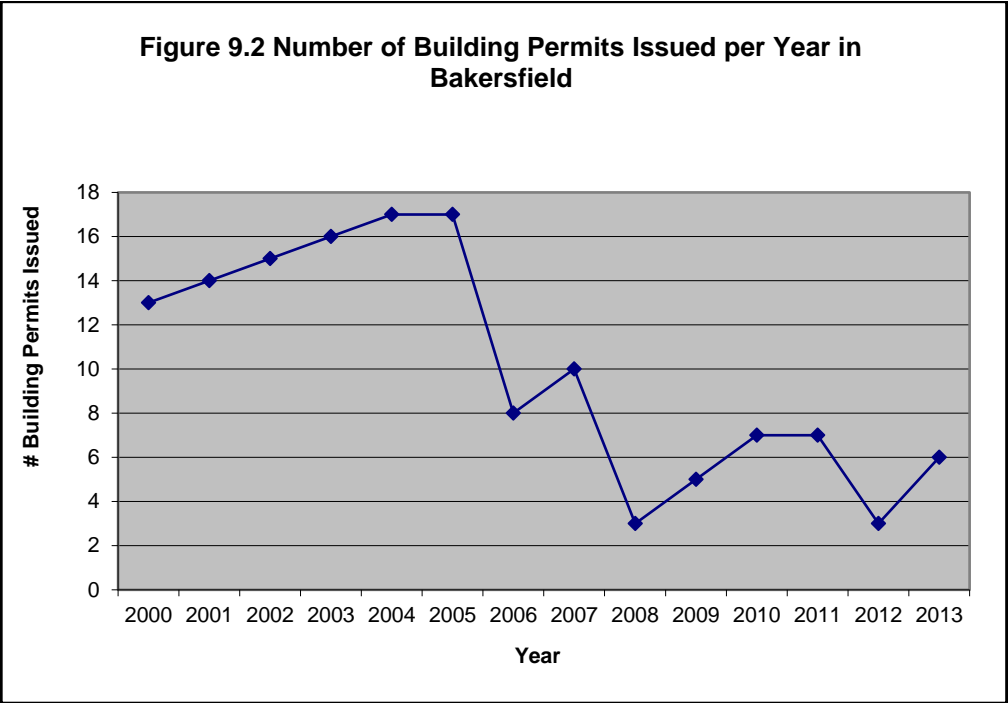
The function of this plan is to guide the writing and passage of regulations that will encourage reasonable and well-planned growth in Bakersfield. Planned residential development is a priority among the residents of Bakersfield. In a 2006 town survey by the Bakersfield Bylaw Advisory Committee, 37 out of 69 respondents expressed that the rate of residential development in town was “just right”. And that the existing controls on development should continue according to 31 out of 71 respondents. This plan aims to keep living and housing costs affordable in Bakersfield and to accommodate a rate of residential growth that will not exceed the town’s ability to provide adequate facilities and services.

### Housing Trends

The 2010 Census showed a total of 586 housing units in Bakersfield, an increase of over 150 percent since the 1970s. Of these units, 426 were owner-occupied, 69 were renter-occupied year-round housing, 67 were seasonal or recreational housing units, and 9 were vacant housing units. The rate of housing development has exceeded the rate of population increase (Figure 9.1). Total housing units increased by over 16 percent from 2000 to 2010, while population increased at a rate of only 8 percent.



The number of building permits for new houses issued per year has gradually increased between 2000 and 2005 (Figure 9.2). The number of permits for new housing in the last 3 years 2011 to 2013 was 14. The vast proportion of new housing in Bakersfield is year- round housing with vacation homes accounting for only a small percentage of new construction.

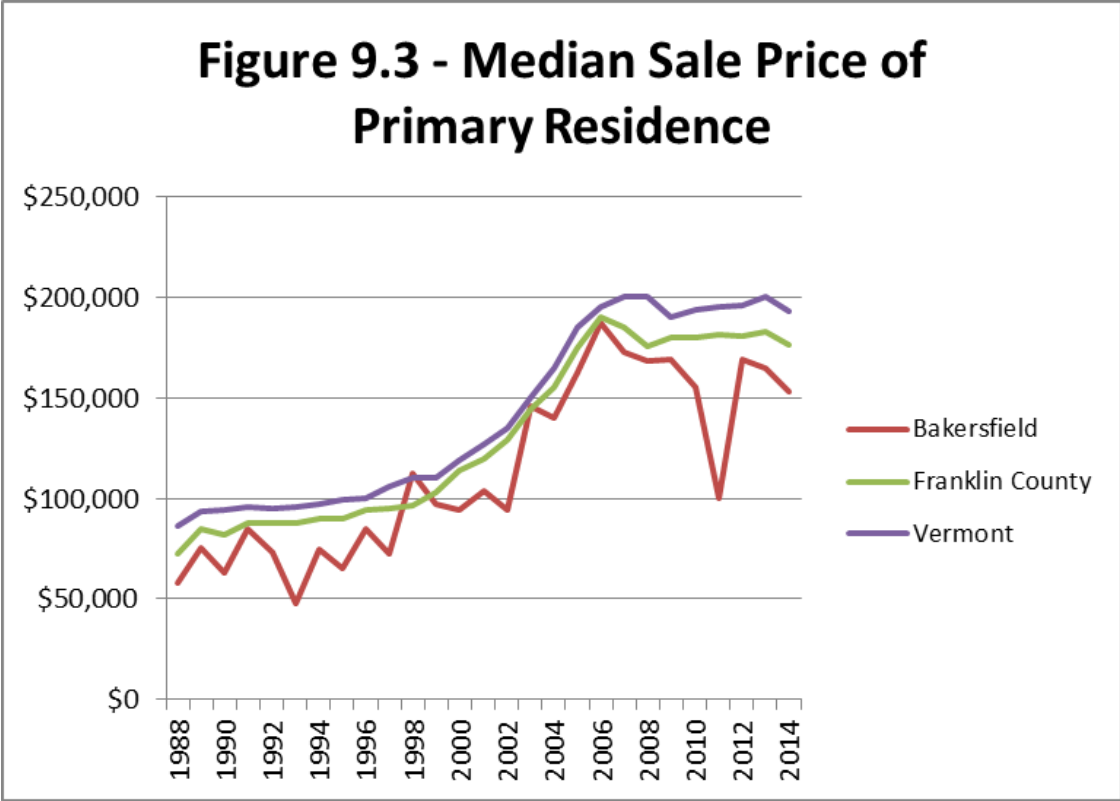


**Affordable Housing**

The demand for affordable housing is an important issue in many Vermont communities. In the 2006 survey of Bakersfield residents, 28 respondent out of 70 respondents, or 40% noted that support for affordable housing is an important or very important planning goal for the town.

High housing costs place a greater strain on lower income households than on households that are economically better off. Therefore, affordable housing initiatives generally emphasize the importance of providing affordable housing to households that are at or below the median income of the area.

The price of housing in Bakersfield has generally followed the regional and statewide trends (Figure 9.3). According to the Vermont Housing Data website in 2014, the median sale price of a primary residence in Bakersfield (\$153,250) was slightly below that of Franklin County (\$176,500) and the state as a whole (\$193,000). However, when compared with other local housing markets, including St. Albans Town (\$199,900), Fairfield (\$226,000), and Fletcher (\$164,750), Bakersfield appears to be a more affordable community in which to buy a home.



According to Vermont Statute, housing is considered affordable when a household earning not more than 80 percent of the county median income or the metropolitan statistical area’s median income, if it applies, pays no more than thirty percent of their income on housing.

All municipalities in Franklin County are deemed part of the Burlington-South Burlington Metropolitan Statistical Area by the U.S. Department of Housing and Urban Development. The figures for median income, however, do not paint an accurate picture for many of the municipalities within Franklin County, including Bakersfield. The median household income according to the 2009-2013 American Community Survey for the Burlington-South Burlington MSA was \$61,763, while it as \$56,240 in Franklin County. For this reason, the Northwest Regional Planning Commission uses the county median household income to compute affordability statistics.

Table 9.1 shows the affordability gap for Bakersfield, which is the difference between the maximum affordable mortgage and the median sale price for primary residences. 100 percent of the median income represents moderate-income households, 80 percent represents low-income households, 50 percent represents very low-income, and 30 percent represents very, very low-income households.

**Table 9.1: Homeownership Affordability in Bakersfield**

Percent of Franklin County Median Household Income	30% of Income		Taxes and Insurance	Income Available for Housing /Month	5% Down Payment	Maximum Affordable Mortgage	Median Sale Price for Primary Residences in Bakersfield (2014)	Affordability Gap	
	Per Year	Per Month							
100%	\$56,240	\$16,872	\$1,406	\$414	\$992	\$8,425	\$201,056.83	\$153,250	\$47,807
80%	\$44,992	\$13,498	\$1,125	\$414	\$711	\$8,425	\$141,675.49	\$153,250	-\$11,575
50%	\$28,120	\$8,436	\$703	\$414	\$289	\$8,425	\$52,603.48	\$153,250	-\$100,647
30%	\$16,872	\$5,062	\$422	\$414	\$8	\$8,425	-\$6,777.86	\$153,250	-\$160,028

Data Source: Median income based ACS 2009-2013 estimates; taxes and insurance are an estimate; median sale price for primary residences in Bakersfield was obtained from the Vermont Department of Taxes; all other figures computed by the NRPC. Maximum affordable mortgage rates include a 4% mortgage rate.

Moderate-income households can afford a mortgage with monthly payments that do not exceed 30 percent of their monthly income. In Franklin County, this equates to a mortgage of not more than \$191,000. This figure is higher than the 2001 median sale price for single-family dwellings of \$153,250 and therefore there is no affordability gap at the County median household income level. However, at 80% of the median household income level there is an affordability gap of negative \$11,575, which indicates that house at the median sale price in Bakersfield would be unaffordable. For those with an income below this level, owning a home at the median sale prices is even further beyond their reach.

**Senior Housing**

Currently, the town of Bakersfield does not have specific group housing for senior citizens. The 2010 US Census reported that 9.9 percent of Bakersfield residents were age 65 and over. The median age for Bakersfield residents has risen the last twenty years from (32.2 years in 1999, 35.2 years in 2000 and 39.2 years in 2010). The 2010 median age in Bakersfield is similar to the median age of Franklin County (38.9 years) and slightly lower than the state of Vermont (41.5 years). The town, county, and the state have all seen an increase in their median ages since 1970. Because the population is aging as a whole, steps need to be taken to ensure that there is adequate and affordable housing available for senior citizens. The Brigham Academy building has been identified as a potential location for senior housing.

**Planned Unit Developments**

One of the intents of this plan is to keep living and housing costs affordable in Bakersfield, and to provide for the growth of residential facilities without speculative development. Planned Unit Development (PUDs) have the potential to help Bakersfield attain its goals for land use and housing as they allow for the clustering of development, conserving rural countryside, protecting contiguous woodlands and the working landscape, and providing a more efficient and affordable means of housing development, especially as the population of Bakersfield ages.

The effect of major subdivisions on school facilities, town roads and other town facilities must be carefully considered. It is preferable to have these developments phased and conditions

should be set to ensure that the impacts on town services, neighbors, and community character are minimal.

**Goals:**

- To ensure the provision of adequate, safe and affordable housing for all income and age groups in an environment that is safe and visually attractive
- To promote new and renovated residential development that reinforces and reflects the traditional forms and historic patterns of residential community settlements and efficiently utilizes existing and planned infrastructure
- To encourage construction and renovation of housing that promotes energy efficiency

**Policies:**

- Promote innovative approaches to developing affordable housing, including planned unit developments
- Determine residential densities on the basis of topography, soil conditions, proximity to highways, cost of providing mandated public services, and conservation of natural resources, as well as capacity to meet Vermont Agency of Natural Resources requirements
- Conserve and protect the quality and vitality of existing residential neighborhoods or areas, and encourage the renovation of old and deteriorating dwellings
- Encourage siting of new housing development to preserve the greatest amount of open space and blend harmoniously with the surrounding landscape
- Allow the building of accessory apartments within or attached to single family residences in accordance with state law
- Support efforts that assist elderly and disabled residents who want to remain in their homes, and community-based health care systems that enable elderly and disabled people to remain in their communities
- To the extent possible, locate new housing for elderly and disabled residents in proximity to Bakersfield village and existing infrastructure and services, including consideration of the Brigham Academy building for this purpose.
- Promote the use of natural, non-toxic energy efficient materials in the renovation of existing and the construction of new housing

## Chapter 10. Land Use

In developing the land use plan for Bakersfield, it is important to recognize the many physical constraints to development. Steep slopes limit development in many areas of town, and nearly a third of the land (8,610 acres) has a slope greater than 20 percent. The town also has two small bodies of water, Brown’s and Kings Hill Ponds, with a total area of only 16 acres and 1057 acres of class 2 wetlands which account for almost 4 percent of its land area.

### Land Use and Development Trends

Currently, the highest concentration of residential development in Bakersfield lies within the village area. This is also the district where commercial development is considered to be most appropriate. The higher density development that exists within the village creates a strong sense of community and is an efficient use of land. The village also provides important public services including the Town Hall, Post Office, school, library, fire department and rescue service and historical society.

The village is an important asset and should be promoted and preserved by encouraging historic preservation, economic development, and the adaptive reuse of existing structures. The village sidewalk project, efforts to renovate the Brigham Academy, and other projects intended to maintain and improve the quality of life in Bakersfield village should be encouraged and supported through thoughtful land use decisions. Sprawling development patterns that fragment the landscape and detract from Bakersfield’s rural character should be discouraged.

Agriculture and forestry continue to be important components of the local culture and economy. It is important to remember that owners of farms and forests provide a public benefit by not developing their property, and cost the town little in terms of municipal services. From popular scenic vistas, to important wildlife habitat, these contributions to the well-being of the town cannot be overlooked.

The development of farms and forests for residential use is becoming more profitable for the individual land owners. This creates pressures for development. It is important that this development be guided by good land use planning in order to maintain the unique character of our community and ensure that local services are not overwhelmed.

The use of planned unit development (PUD) may provide a tool to enable Bakersfield to accommodate some residential development, while protecting the working landscape and open land. PUDs allow for a more flexible design approach and provide an opportunity for the planning commission to work with landowners and developers to create subdivisions that reflect the goals and values of Bakersfield, including clustered development, the provision of common land, and the protection of prime agricultural soils.



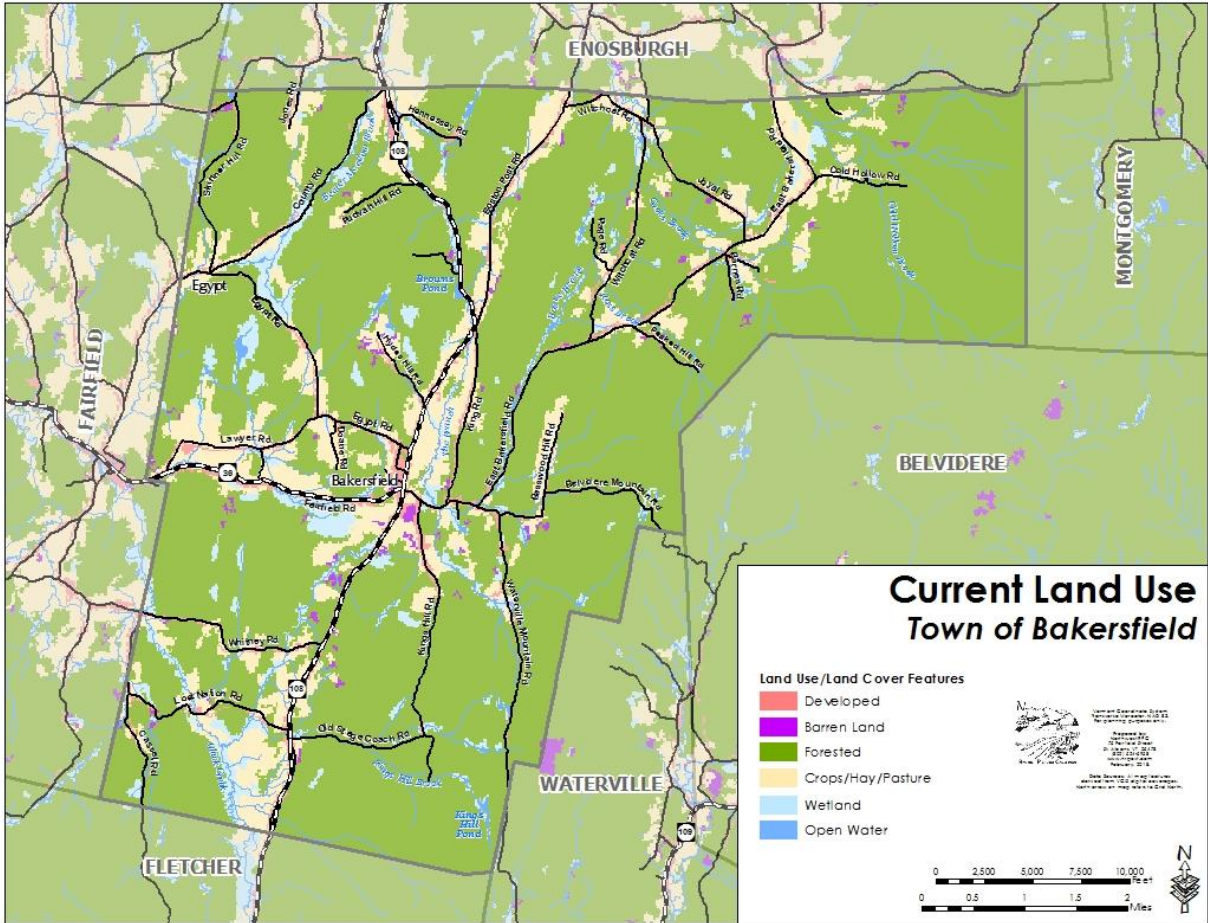


Figure 10.1 Bakersfield Current Land Use Map

**Future Land Use/Current Zoning Districts**

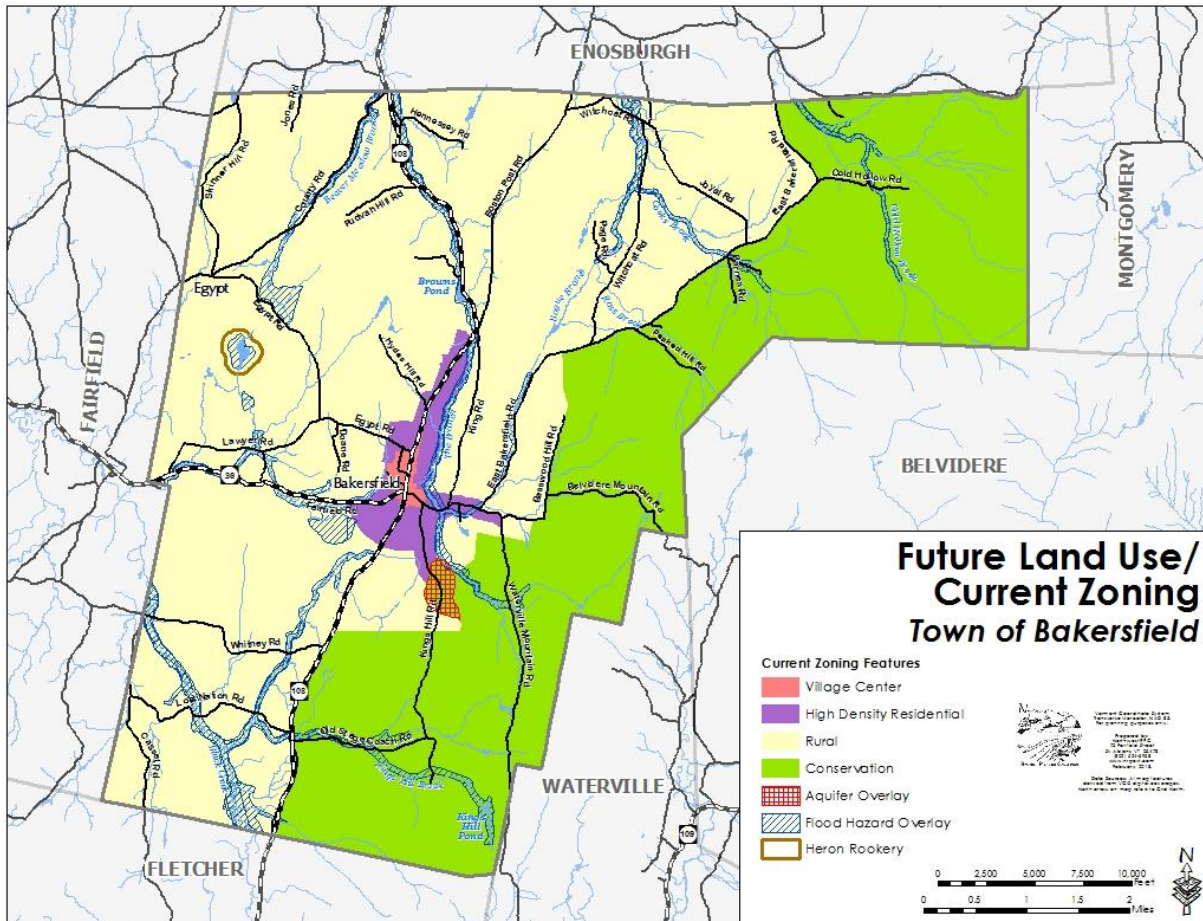
The town of Bakersfield currently divides its future land use map into the following zoning districts: Village, High Density Residential, Low Density Residential, Rural, Conservation, Watershed, Aquifer, and Flood Hazard (Figure 10.2). The purposes of these districts are summarized below and a complete description can be found in the town of Bakersfield Zoning Bylaws adopted in 2017. These districts represent both the existing and future land uses in the Town of Bakersfield.

**Village Center District.** The Village Center represents the historic center of Bakersfield. This district has a distinct historic character which features mixed residential, commercial and public uses in a historic village setting. Development in this district should protect and preserve existing historic resources, promote pedestrian access and maintain the village character, including its historic settlement pattern, scenic character and sense of community.

**High Density Residential District.** This district is comprised of the area around the village center where additional high-density development could be accommodated.

This district provides a transition between the compact development of the village center and the rural areas of Bakersfield. It is designed to allow a radial pattern of development around the village in an effort to discourage linear sprawl. Development in this district should complement and extend the character and traditional development pattern of the village core. Interconnected street networks and pedestrian access are encouraged in this district.

**Rural District.** It is intended that this district remain rural, agricultural and silvicultural. The preservation of farmland and prime agricultural soils is a major objective. Rural residential development and compatible rural uses, at a density the land can support are permitted. Clustered development that protects large, contiguous tracts of farmland or open space is appropriate in this district. Within the rural district, additional restrictions are included to protect an important Heron Rookery in northwestern Bakersfield, consistent with the requests of the Vermont Department of Fish and Wildlife.



**Figure 10.2 Bakersfield Future Land Use/Current Zoning**

**Conservation District.** This district is designated to protect the natural resources and scenic value of mainly forested lands that lack direct access to public roads, are important for wildlife and wildlife habitat, and which are poorly suited for development. Included are areas of high elevation, steep slopes and swamplands. Concern must be given to building on any slope greater than 15% because the soils in these areas tend to be thin and unstable, making them unsuitable for development. The Conservation District includes the watershed that provides Bakersfield’s municipal water supply and land uses that might reduce the water quality in this area are restricted. Only limited, low-density development is to be permitted in this district.

**Aquifer Overlay District.** The purpose of the Aquifer Overlay District is to protect the public health and safety by preserving and maintaining the community water source from incompatible development. No new construction is permitted within the Aquifer Overlay District.

**Flood Hazard Overlay District.** The purpose of the Flood Hazard Overlay District is to minimize and prevent the loss of life and property, the disruption of commerce, and the extraordinary costs that result from flooding and other flood-related hazards. Within this district, the design and construction of development should be accomplished in a manner that minimizes or eliminates the potential for flooding and loss or damage to life and property. Uses in the flood hazards areas shall be restricted to agriculture, conservation and outdoor recreation.

**Goals:**

- To maintain Bakersfield’s rural character and scenic resources through informed land use decisions
- To accommodate future growth in patterns, densities, and locations that respect traditional patterns of development, and that do not compromise the integrity of natural, historic and cultural resources
- To establish public policies that balance development with the town's ability to provide services
- To protect and promote the continuation of agriculture and forestry as integral components of Bakersfield’s local economy and culture through land use planning

**Policies:**

- Encourage low development densities where low levels of services are provided, and higher densities only where residences and businesses can be properly served
- Design clustered housing, including housing specifically designed to be affordable, to fit into the cultural, aesthetic, and natural resource landscape of Bakersfield
- Promote anti-sprawl initiatives as a measure to maintain the appropriate use of the town’s land resources
- Protect the vitality and importance of the village center by designating it as the primary focus for commerce, while simultaneously preserving its essential historic character and beauty

- Promote new development in areas of existing infrastructure (roads, power, and water) and discourage development in areas without existing infrastructure
- Discourage development in areas which are hazardous to human health and safety
- In subdivision review, encourage lot layouts that respect the natural features of the landscape and do not create long, narrow lots which contribute to sprawl and waste irreplaceable agricultural and silvicultural resources
- Protect prime recreational resources from incompatible land uses and protect scenic qualities of agricultural, forest and riparian lands from unnecessary despoliation
- Permit development only in a manner that is safe for existing drinking water supplies, both public and private
- Protect water quality by limiting development in Wellhead Protection Areas, wetlands, and along stream banks
- Protect river corridors by establishing a minimum setback or “buffer” between development and the streambank
- Promote environmentally sound construction practices, including control of runoff and erosion during all phases of construction and treatment of wastes off of steep slopes
- Protect scenic ridgelines by regulating their development, including the siting of cellular and wind towers
- Steer development away from areas where soils will not support it due to shallow depth to bedrock, instability, or high water table
- Prohibit land development on slopes greater than 25 percent, and maintain vegetative cover
- Conduct development on slopes greater than 15 percent carefully in order to avoid environmental degradation and conditions that create health hazards
- Protect public health, welfare, and safety by prohibiting development in the flood plain and continuing to participate in the National Flood Insurance Program (NFIP)
- Support and encourage participation in land preservation measures, such as those promoted by the Vermont Land Trust
- Maintain the character of existing neighborhoods in the village and avoid potential conflicts between incompatible land uses
- Conserve agriculturally productive lands by accommodating development in areas apart from most farming activity and from areas of prime agricultural soils
- Encourage sustainable agricultural and silvicultural practices to both protect the use of land and water resources, and to keep a working rural landscape based on a practice of stewardship
- Strongly encourage landscaping and site design that reduces adverse impacts of new development
- Protect and promote forestry as a valuable land use in Bakersfield through the creation of a town forest
- Promote alternative small farms which produce products such as cheese, yogurt, market garden, etc.
- Provide incentives for appropriate commercial growth in the village district

# Chapter 11. Economic Development

## Overview

The term “economy” for purposes of municipal planning refers to resources, production, jobs, income and activities in the town and region that contribute to the economic well-being of local residents, businesses and industries. Economic planning can assist in providing jobs commensurate with the skills and aims of local residents, a more balanced tax base to meet community needs, the protection of important economic resources, and the provision of services and products to support the local community. Poorly planned economic development can adversely affect the local environment, strain municipal services, cause dislocations of businesses and labor, and adversely impact community character.

Bakersfield’s local economy remains predominantly rural, agrarian, and resource based. Planning for other forms of economic development in small, relatively isolated communities such as Bakersfield, which have limited infrastructure to support business, retail and industrial growth, is a challenge; but such planning can help highlight local needs, strengths and opportunities.

## Local Employment Characteristics

Historically, the Bakersfield economy has relied heavily on agriculture, forestry and education. Today, the largest employment sector for Bakersfield residents are educational services, health care and social assistance, with retail trade, construction, and manufacturing.. Table 13.1 shows the industry sectors within which Bakersfield residents are employed.

<b>INDUSTRY</b>	<b>Percent of Total</b>
Civilian employed population 16 years and over	
Agriculture, forestry, fishing and hunting, and mining	5.70%
Construction	12.60%
Manufacturing	14.10%
Wholesale trade	3.20%
Retail trade	11.60%
Transportation and warehousing, and utilities	5.00%
Information	3.10%
Finance and insurance, and real estate and rental and leasing	3.80%
Professional, scientific, and management, and administrative and waste management services	2.70%
Educational services, and health care and social assistance	23.20%
Arts, entertainment, and recreation, and accommodation and food services	3.80%
Other services, except public administration	4.30%
Public administration	7.00%
Source: American Community Survey 2008-2012	

**Businesses in Bakersfield**

Agriculture continues to have a substantial presence in Bakersfield. This includes five dairy farms in Bakersfield and, as discussed in Chapter 3, there are a growing number of small farms engaged in livestock and local/organic food production. There are also several maple sugar producers that process and market their own syrup and X tree farms that raise and sell Christmas trees.

According to a 2012 report from the Vermont Department of Labor, there were 10 commercial establishments in Bakersfield and approximately 113 workers employed in the Town. There is one convenience/country store and a gas station/convenience store in addition to various other types of businesses.

**Table 11.2 Unemployment rates from 2009-2013 (not seasonally adjusted)**

	2009	2010	2011	2012	2013
Town of Bakersfield	6.4%	4.7%	3.9%	3.8%	3.3%
Franklin County	6.8%	6.4%	5.5%	4.7%	4.3%
Vermont	6.9%	6.4%	5.6%	5.0%	4.4%

**Source:** Vermont Department of Labor, Economic & Labor Market Information.

**Designated Village Center**

In June 2011, Bakersfield received “Village Center” designation from the State of Vermont for the area surrounding the village green (See Figure 11.1). This designation entitles those within the Village Center with certain benefits such as tax credits for façade improvements, tax credits for code compliance, and priority consideration for Municipal Planning Grants (MPG) and Community Development Block Grants (CDBG). The Town did receive a Municipal Planning Grant to plan for the redevelopment of Brigham Academy (discussed later), but there has been no other redevelopment associated with the designation program at present.

It is envisioned that designation as a Village Center will foster investment in the village area. This will in turn further the goals included in this plan, such as promoting a mix of development in the village and focusing any economic development within Bakersfield within the village. It will also help further state planning goals such as maintaining “historic settlement pattern of compact village and urban centers separated by rural countryside” and “provide a strong and diverse economy that provides satisfying and rewarding job opportunities and that maintains high environmental standards.”

In 2012, Bakersfield received a Municipal Planning Grant, to assess the structural integrity the currently vacant Brigham Academy building, to generate enthusiasm for finding a reuse of the Academy and to identify ways that the building could be reused. The Village Center designation definitively helped strengthen the Town’s grant application.

The Brigham Academy is the envisioned foundation of the Village Center The structure, currently undergoing sale from the school district to the Town, has high redevelopment potential. Future uses could include a space for small business incubation and classes for local entrepreneurs. The

Academy gymnasium could be used for exercise and fitness classes for the young and old. Other uses of the space within the Academy could include satellite offices for visits by health care providers including physicians, dentists, nurses, therapists, social workers and mental health counselors.

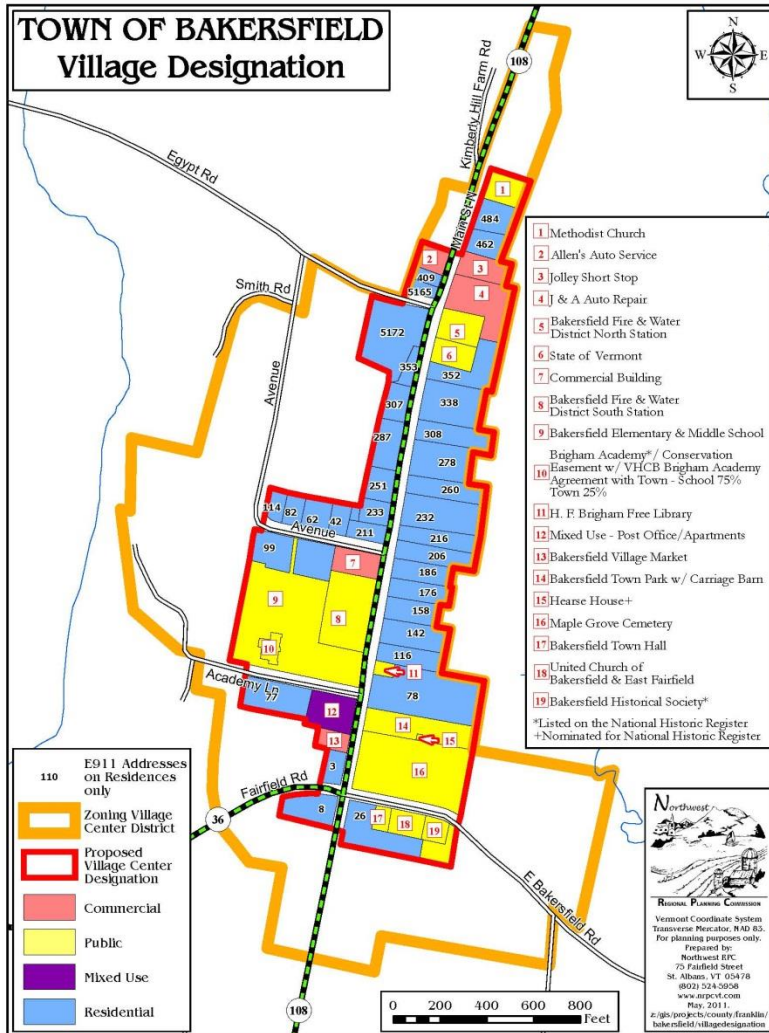


Figure 11.1: Village Designated Area

### Future Economic Development

Continued economic health for the Town of Bakersfield lies in the maintenance of viable agricultural soils to support all forms of agricultural activity and the provision of goods and services that support an agrarian economy. The Town should encourage efforts that support its agricultural base, including the protection of primary agricultural soils and farmers' rights to farm; support of tax abatement programs, such as the Use Value Appraisal Program, better known as Current Use.

However, Economic and Labor Market information trends show that agricultural employment has been in steady decline, and more people commute outside of the Town to work. To complement the rural character of the Town and agrarian economy, small commercial enterprises, home occupations and light industry, in appropriate locations, should be encouraged.

The Town recognizes that a particularly effective means to accomplish these goals would be to bring more reliable high-speed (broadband) internet connectivity and cellular service to residents and businesses throughout the Town. Broadband internet connections would encourage and enable small and home-based businesses, and enhance existing businesses in ways that current connections cannot.

Tourists, attracted by the beauty of the town’s agricultural landscape, may also play a greater role in the Town's economic future. Related development such as bed and breakfasts, farmers markets, craft shops, or eateries could add to the local economic base.

**Challenges to Economic Development**

The Town is faced with some challenges to local economic development. By working on these challenges, including sewer capacity, calming traffic, improving the safety of pedestrian activity, and encouraging improvements to telecommunication, the Town will encourage the continued development of a healthy economy in the village area. Many of these challenges are discussed in other chapters of the plan, but are referred to here as they relate to economic development.

*Sidewalks and paths.*

A safe pedestrian and bicycle environment in the Village will contribute to its economic vitality. Sidewalks completed in 2010 connect Brigham Academy and the school with the library and village park. Continued efforts to improve safe walking and biking could attract future development and encourage tourism. As new development occurs in these areas attention should be given to improving and adding new bike and pedestrian connections.

*Sewer Infrastructure.* A major barrier to attracting new business in Bakersfield is the lack of public sewage disposal facilities. At present, there is no plan to add public sewage disposal infrastructure in Bakersfield.

*Current Technology.* To be able to both serve the small businesses and provide for opportunities for working at home, businesses need reliable access to broadband and cellular service. Such advances in telecommunication technology have the potential to significantly impact the local economy as they make rural Bakersfield more attractive to home-based businesses, telecommuters, and other businesses that increasingly rely on broadband for their services. As technology evolves, Bakersfield should continue to work the public and private sectors to improve the local telecommunication infrastructure to ensure that residents have fast, reliable network connections.



**Local Economy Goals and Policies**

**Goals:**

- To promote and sustain the local agricultural and forestry economies;
- Encourage the development of appropriate and compatible industry and business in the town;
- Promote a balanced, diverse economic base, with a focus on locally owned enterprises that utilizes the local labor force;
- Promote a mix of new development in the designated village area, and focus a majority of any new commercial development within the village;
- Support and encourage low-impact, home-based businesses.

**Policies:**

- Maintain zoning bylaws to support the development of home businesses and home industries that fit with the rural character of the community.
- Support the maintenance of and/or upgrade to reliable telecommunications services that support existing, and attract commercial development, such as broadband internet and cell phone service.
- Provide infrastructure in appropriate areas for the retention and attraction of businesses that are consistent with the town’s character.
- Commercial and industrial development should not place an undue burden on the Town in terms of services and facilities required from their development and its associated impacts.
- Support agriculture and forestry related businesses, and protect productive agricultural and forestry lands from conversion to incompatible land uses.

## Chapter 12. All Hazards Resiliency

Hazard Mitigation is any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. Communities can engage in opportunities to identify mitigation strategies and measures during all phases of Emergency Management including Mitigation, Preparedness, Response and Recovery. Hazards may not be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe and identify local actions that can be taken to reduce the severity of the hazard.

Hazard Mitigation Strategies and Measures **alter** the hazard by eliminating or reducing the frequency of occurrence, **avert** the hazard by redirecting the impact by means of a structure or land treatment, **adapt** to the hazard by modifying structures or standards or **avoid** the hazard by stopping or limiting development and could include projects such as:

- Flood-proofing structures
- Tying down propane/fuel tanks in flood-prone areas
- Identifying & modifying high traffic incident locations and routes
- Ensuring adequate water supply
- Elevating structures or utilities above flood levels
- Identifying & upgrading undersized culverts
- Proactive land use planning for floodplains and other flood-prone areas
- Proper road maintenance and construction
- Ensuring critical facilities are safely located
- Buyout & relocation of structures in harm's way
- Establish & enforce appropriate building codes
- Public information

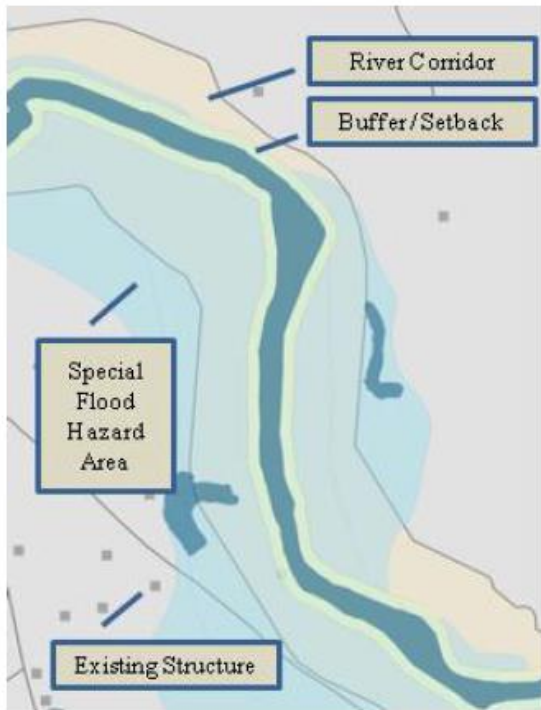
The Town of Bakersfield is actively engaged in hazard mitigation planning. The community is represented on the Local Emergency Planning Committee District 4 serving Franklin County and is a member of the Franklin County International Firefighters Mutual Aid Association. Additionally, the Town of Bakersfield is currently working to adopt a Local Hazard Mitigation Plan (LHMP). The draft LHMP evaluates potential risks to the community and the strategies that address those risks. The draft LHMP evaluated just those natural and human made hazards that are likely to affect the community. The following are a list of hazards that have high to moderate risk for the community, including:

- 
- Flooding
- Fluvial erosion/landslides
- High Winds
- Structure Fire
- Severe Winter Storm

This chapter focuses upon identifying and mitigating the most common hazards in Bakersfield. The chapters is particularly focused upon flooding and fluvial erosion to ensure compliance with 24 V.S.A §4382(a)(12).

**Flooding**

Flooding is a natural occurrence and happens when water rises and inundates the adjacent low-lying land. Residents of every town should be aware of the power inherent in a flood. Proper land use management should be used to ensure that critical floodplain areas are being used appropriately. Development within floodplains poses significant risks and should generally be avoided. River channels and floodplains function as a single hydrologic unit, periodically transferring floodwaters and sediment from one to the other. Appropriate uses of floodplains are those that can accommodate this cycle and allow for areas where the rivers can access the floodplain during high flows. Examples of uses that are appropriate to floodplains include agriculture, open space, and recreation.



**Figure 12.1** Depiction of the Special Flood Hazard Area, River Corridor and Riparian Buffers.

Bakersfield lies within the Tyler Branch and Black Creek subwatersheds of the Missisquoi River basin. The western side of Town drains into the Black Creek subwatershed which includes Black Creek, Elm Brook and Kings Hill Brook. The eastern side of Town drains north to the Tyler Branch and includes Beaver Meadow Brook, Bogue Branch, Cold Hollow Brook, Cooks Brook, Ross Brook, The Branch, and Tyler Branch. The headwaters of the Tyler Branch watershed are located in the Cold Hollow Mountains which form the eastern boundary of Bakersfield and are among the more rugged parts of the Missisquoi River basin.

Flood plains in Bakersfield follow along the brooks and creeks of undeveloped areas of forest lands and marshes and land that is in agricultural use. Summer or fall storms are more likely to be responsible for major flooding. Most flash flooding is caused by heavy rain from

thunderstorms. Smaller creeks and streams are particularly vulnerable to flash flooding. Black Creek, the Branch, Beaver Meadow Brook and their tributaries typically flood in the spring of each year, and during periods of concentrated rain events.

The nearest USGS stream gages for the study area are on the Missisquoi River at its outlet in Swanton downstream from Bakersfield and in East Berkshire. Based on the USGS data, several flood events greater than 25 year discharge have occurred over the last 20 years including the years 1992, 1997 and 1998. Based on interviews with landowners, there was a relatively large

flood that occurred in 2002 as well. The last serious flood occurred in November 1927 when dangerous flash flooding was recorded. There is no official record of loss of life. Numerous homes were inundated with rising waters, and many roads in Bakersfield and throughout the State were damaged.

A two day heavy rainfall event occurred on May 18<sup>th</sup> and 19<sup>th</sup>, 2006 compounding above normal rainfall conditions. Two day rain fall amounts of 3 to 5 inches were common in Franklin County with locally more than 6 inches along the western slopes of the Green Mountains and Cold Hollow Mountain. Widespread flooding occurred on the 19<sup>th</sup> and 20<sup>th</sup> resulting in numerous flooded roads as well as some road and culvert washouts.

On June 29, 2006 a series of thunderstorms and tropical like showers moved over the Bakersfield area during the evening and delivered heavy rainfall on already saturated soils. An unofficial weather spotter reported 3.30 inches of precipitation in 90 minutes. The end result was several flooded basements, a few flooded road culverts, some minor washouts on Route 108 through town and some minor washouts along Route 36 between Bakersfield and Fairfield. There was approximately \$20,000 in damages reported in the county.

Floods are a reminder to residents the power inherent in nature and are an urgent reminder of the need for proper management and appropriate use of critical floodplain areas. Development within floodplains poses significant risks and should generally be avoided. River channels and floodplains function as a single hydrologic unit, periodically transferring floodwaters and sediment from one to the other. Appropriate uses of floodplains are those that can accommodate this cycle. Examples of uses that are appropriate to floodplains include agriculture, open space and recreation.

One of the main concerns along the Black Creek is that the Lamoille Valley Rail Trail cuts off access to the floodplain. The State of Vermont and local partners have identified several sites where the rail embankment can be lowered to allow the stream to access the floodplain during high flow events. The two locations in Bakersfield are along TH38 (Lost Nation Road) and Route 108S. Implementation was expected to begin in early 2008.

The Federal Emergency Management Agency (FEMA) defines a floodplain as an area of land adjacent to rivers and streams that is subject to recurring inundation.

Development within floodplains can have many potentially damaging consequences, as construction may obstruct the natural flow of water or displace soil and raise base flood elevations.

Structures in Floodplain

The Federal Emergency Management Agency (FEMA) provides flood insurance under the National Flood Insurance Program (NFIP). In order for property owners to participate in the NFIP, FEMA requires that communities adopt flood hazard regulations. Owners of buildings within the designated special flood hazard areas (SFHA) are required to carry flood insurance in order to get a federally backed mortgage. The Town of Bakersfield has adopted land use regulations for flood hazard areas in order to protect the health, safety, and welfare of its

residents and to allow the community to participate in the National Flood Hazard Insurance Program. A GIS based overlay analysis was conducted by NRPC using Flood Insurance Rate map (FIRM) data with the Vermont E-911 address data of structure location. The results found that there are thirteen (13) structures within the 100 or 500 year flood plain in Bakersfield. Nine (9) are all-season single family units, one (1) mobile home, three (3) are seasonal single family units. There are no Tier II hazardous materials storage sites within the 100 or 500 year flood plain.

An important note: the existing Flood Insurance Rate Maps (FIRMs) are dated January 2, 1981 and the Flood Insurance Study was published in December 1979. While this information is the best available, the hydrology is dated and does not account for shifts in the river channel or the effects of development since 1979 in these areas. The FIRMs were digitized by the Northwest Regional Planning Commission in 1999 to assist in planning efforts and are used to determine approximate locations. The digital version is not used for regulatory rulings. The digital FIRM can be seen in Figure 8.4.

**Fluvial Erosion in the River Corridor.**

Fluvial erosion is erosion caused by the lateral and vertical movement of streams and rivers. Fluvial erosion and landslides are becoming more common within the Northwestern region of Vermont. The VT Department of Environmental Conservation recommends that the community identify *River Corridors*, or the area along the larger tributaries and rivers, that are susceptible to stream channel adjustment in order to reduce the risk of erosion damage. Historic land uses along the river and its streams including floodplain encroachments and vegetative debris removal have increased the risk of erosion and landslides. Such practices included armoring, dredging, gravel mining and channelization, for the purpose of containing high flows and to protect infrastructure built in the historic floodplains. This has resulted in an increase in the streams’ power and has direct effects on the rocks and vegetation that make up the channel boundary. The effects can be varied and may lead to channel instability and increased damages from flooding. Additionally, beaver activity along the western areas of the Tyler Branch watershed has contributed to increased sediment loads in the stream channel.

The Vermont Agency of Natural Resources has partnered with the Missisquoi River Basin Association and the Northwest Regional Planning Commission to conduct Phase 1 and Phase 2 Geomorphic Assessments of several stream reaches within the Tyler Branch watershed. From 2005 to 2008, Phase 2 Geomorphic Assessments were conducted on 20 stream reaches of the Tyler Branch main stem, the Branch, a major tributary of the Tyler Branch, Beaver Meadow Brook and Bogue Branch. The assessments used protocols developed by the Vermont River Management Program. By assessing underlying causes of channel instability and encouraging the stream’s return to equilibrium conditions, management efforts can be directed toward long-term solutions that reduce costs and reduce conflicts with ongoing stream processes. Phase 2 involves rapid field assessments on select reaches. A bridge and culvert survey was conducted in conjunction with this assessment for structures within the 20 reaches as well.

The results of assessments led to the development of a corridor protection plan (March 2009) that includes 100 foot setbacks for development. The information was also used to develop a draft fluvial erosion hazards (FEH) map to support flood hazard prevention, mitigation and recovery activities. The map depicts delineated river corridors that should be protected from encroachments thereby preserving channel stability. Impacts to stream dynamics that are not associated with development (including those from agriculture and forestry) are not addressed by setbacks, however. The Phase 2 Geomorphic Assessments identifies several potential mitigation projects that can be viewed in the associated study and the Bakersfield Draft Hazard Mitigation Plan.

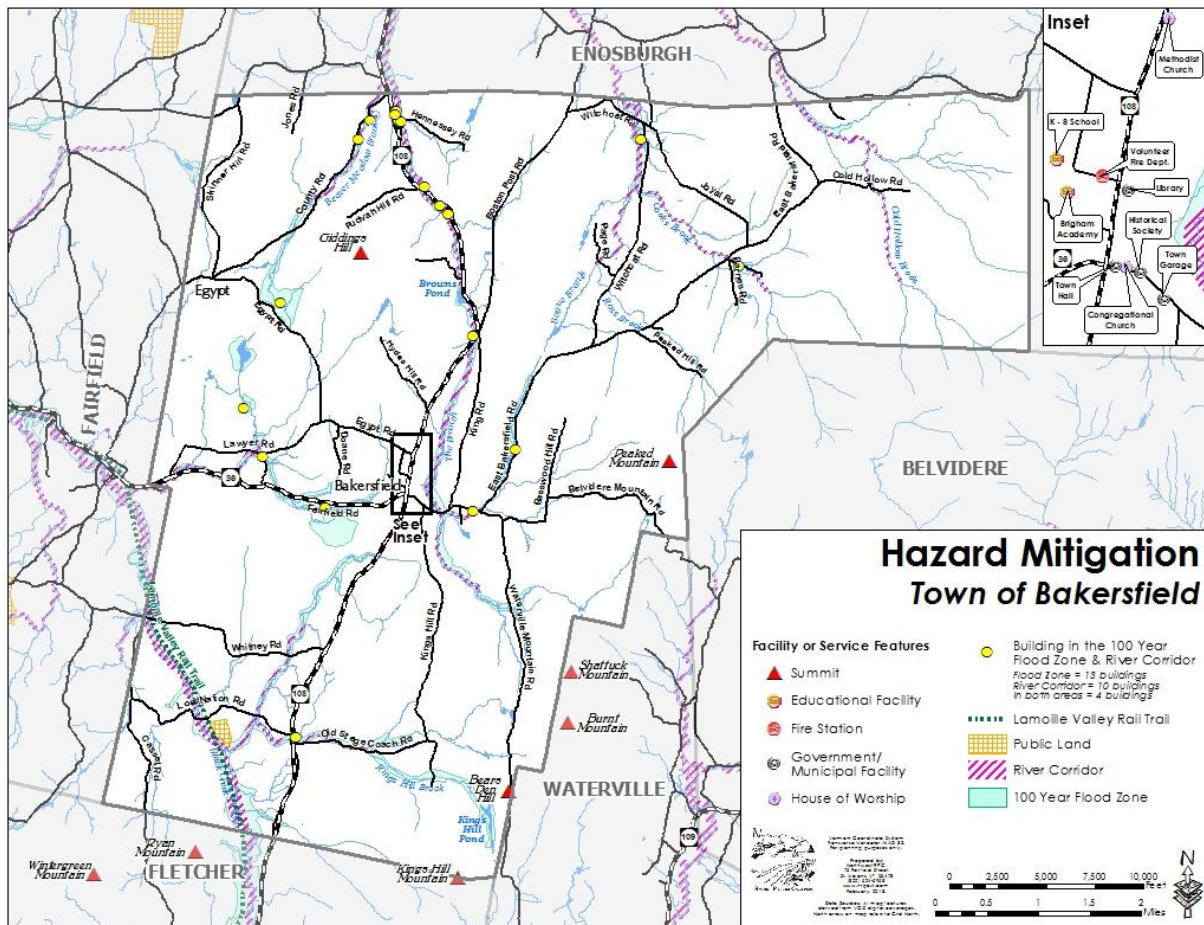


Figure 12.2 – Hazard Mitigation Map

**High Winds.**

High winds are a hazardous threat to the Town and most commonly accompany other storm events. Violent windstorms are possible in Bakersfield. The Town is far inland and is unlikely to receive a direct hit from a hurricane, however high winds and hail storms have occurred in Town as weakened tropical storms track near the region.

Power lines and trees are most vulnerable to high winds. Power outages may occur resulting in significant loss of business as well as threatening public safety. The Town has a limited ability in quickly restoring lost power caused by damaging high winds. Cleaning up debris following high wind events can be costly depending on the severity of the event.

High winds are common along the Cold Hollow Range on the eastern part of Town as well as along the Branch, Beaver Meadows Brook and Bogue Branch.

The estimated damage from a high wind event occurring to 10% of all structures in Town with 20% damage is \$6,968,414. The estimated cost does not include building contents, land values or damages to utilities. Impacts to future populations, residences, new buildings, critical facilities and infrastructure are anticipated to remain the same.

**Structure Fires.**

Structure fires can occur anywhere. The Town Fire Department receives an average of 6 structure fire calls per year. (2013 there were 5 structure fires and 6 wildland fires according the 2013 Report of the Fire Marshall. The Fire Department also provided assistance to other Towns through Franklin County Mutual Aid. The Fire Department actively upgrades its equipment through federal grant programs.

There are four fire ponds in Bakersfield. They are located on TH34 (Whitney Road), TH14 (County Road), TH42 (Ovitt Road) and TH38 (Lost Nation Road). There are also 10 fire hydrants.

In the village area of Bakersfield, structures that are relatively close raise the risk for multiple structure fire. The impact of this type of incident would primarily be on the commercial sector with a smaller impact on housing. Older historic buildings that lack fire alarms and sprinkler systems are greater at risk for damages.

Estimated loss due to fire damage on 6 structures annually using median home values is \$1,265,000 (using estimated single family home value of \$202,244 from draft Hazard Mitigation Plan). This loss estimate does not include building contents. Impacts to future populations, residences, new buildings, critical facilities and infrastructure are anticipated to lessen due to new building construction codes and standards which address fire safety.

**Winter Storm.**

Winter storms affect the entire Town and generally cause disruptions to public and private services. The primary impacts of a storm typically include the disruption to transportation networks, school closings and occasionally telecommunications and power outages. Vulnerable populations such as the elderly, those dependent on medical equipment and specialized health or physical care are at risk to winter storms. Also at risk are farms and associated structures and livestock. Barns can collapse due to heavy snow loads. Dairy cattle are susceptible to mastitis if they are unable to be milked.

Severe winter storms are accompanied by strong winds creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chill. Strong winds with these

intense storms and cold fronts can knock down trees, utility poles, and power lines. Extreme cold often accompanies a severe winter storm or is left in its wake. Prolonged exposure to the cold can cause frostbite or hypothermia and become life-threatening. Infants and elderly people are most susceptible. Severe winter storms can bring heavy accumulations of ice which can down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days while utility companies work to repair the extensive damage. Even small accumulations of ice may cause extreme hazards along roadways.

The Town's recent history has not recorded any loss of life due to the extreme winter weather. These random events are difficult to set a cost to repair or replace any of the structures or utilities affected. Impacts to future populations, residences, new buildings, critical facilities and infrastructure are anticipated to remain the same.

The Town is equipped to handle typical winter emergencies, including keeping roads open and repairing downed infrastructure. The town has access to private machinery, including bulldozers, plows, ATVs and snowmobiles, should they be needed in the

The National Climatic Data Center lists 194 snow and ice events for Franklin County between January 1, 1950 and October 31, 2009. A listing of the most severe winter storms can be seen in the draft Hazard Mitigation Plan. Below is a selection of the recent severe winter storms:

On January 6<sup>th</sup> 1998 a winter storm affected the Town and produced some flooding along streams. Snow turned to freezing rain and produced power outages into the area. This storm is referred to as the Ice Storm of 1998 (FEMA-1201-DR-VT), but the weather was more akin to a traditional winter storm than an ice storm. It is not known what the financial losses were to the Town as a result of the storm. Public Assistance funding was \$5,899,183

On February 14, 2007 a winter storm, referred to regionally as the "Valentine's Day Storm", blanketed most of New England. In Vermont, snow fell heavy at times from late morning through early evening before dissipating during the night. Snowfall rates of 2 to 4 inches per hour and brisk winds of 15 to 25 mph caused near whiteout conditions at times, along with considerable blowing and drifting snow, making roads nearly impassable. Temperatures in the single numbers combined with brisk winds created wind chill values of 10 degrees below zero or colder in Bakersfield.

During December 20-26, 2013 (DR-4163) a wide-spread low pressure system that brought snow and freezing rain through Ontario, Quebec, and Northern New England. These areas experienced an ice storm that brought wide-spread power outages. Many Towns throughout Franklin County, Vermont were affected by the ice storm. Vermont Electric Cooperative responded to over 60,000 customer outages during the week and estimated costs of restoring power at \$7,400,000. In Bakersfield, the highway department was active keeping roads open



and removing ice damaged trees and limbs from local roads. Many residents were without power for several days.

**Goals:**

- Encourage and foster an all hazards disaster resilient community.
- Reduce the loss of life and injuries that result from disasters.
- Reduce damages to public infrastructure resulting from all hazards events through hazard mitigation planning and project implementation.

**Policies:**

- Encourage and foster an all hazards disaster resilient community.
- Reduce the loss of life and injuries that result from disasters.
- Reduce damages to public infrastructure resulting from all hazards events through hazard mitigation planning and project implementation.
- Encourage flood emergency preparedness and response planning.
- Encourage the protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion.
- Continue to implement high priority projects identified in the Local Hazard Mitigation Plan
- Adopt annually the Local Emergency Operations Plan.
- Participate in the Franklin County Mutual Aid Agreement.
- Resiliency measures will be compatible with natural features, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forests, historic resources; character of neighborhoods; and the capacity of the community to implement them.
- Emergency Management, and the road crew to plan improved emergency response capacity (operations, training, equipment) during natural disasters.
- Evaluate the flood hazard regulations for opportunities to incorporate measures to increase public safety and reduce future damages.
- Consider adopting and implementing river corridors and buffers to discourage future development in high risk areas for flooding or erosion hazards.
- Explore participation in the FEMA Community Rating System (CRS) so as to secure a discount on flood insurance
- Incorporate mitigation measures when developing improvements or expansion to municipal infrastructure.
- Adopt and implement the most recent (currently 2013) VTrans Town Road and Bridge Standards, or stricter standards.

## Chapter 13. Implementation Plan

Throughout this Town Plan, goals and policies have been identified which are intended to move Bakersfield closer to the vision described in Chapter 1. There are a number of ways that towns can implement a town plan, including but not limited to:

- Plans and studies;
- Land Use Regulations, including zoning and subdivision regulations;
- Financial measures including capital expenditures for town facilities, use of town resources, tax policies, and grants; and
- Public education and outreach.

Furthering the goals and policies of the town plan is not only the responsibility of the Planning Commission or Selectboard, but of all town boards, employees, and citizens. A list of municipal roles and responsibilities is included as Appendix II of this Town Plan.

### Top Action Items

Over the next five years the Bakersfield Selectboard, Planning Commission and other groups are **strongly** recommended to take action to implement the following:

#### Selectboard

The Selectboard should:

- (1) Assist the Planning Commission in updating the zoning bylaws to reflect the goals and policies of the 2014 Bakersfield Town Plan.
- (2) Continue to work with and seek support from other agencies and organizations in the process of achieving the goals that were set forth in the Town Plan.
- (3) Seek opportunities for ongoing training and education.
- (4) Seek ongoing input into planning decisions.

#### Planning Commission

The Planning Commission should:

- (1) Take the lead in updating Zoning and Subdivision Ordinances to reflect the goals and policies of the 2018 Bakersfield Town Plan.
- (2) Continue to work with and seek support from other agencies and organizations in the process of achieving the goals that were set forth in the Town Plan.
- (3) Seek opportunities for ongoing training and education.
- (4) Seek ongoing input into planning decisions.
- (5) Investigate with the Select Board the splitting of the Planning Commission into a Planning Board and Development Review Board, with the dissolution of the Zoning Board of Adjustment.
- (6) Conduct an inventory of scenic view in Bakersfield and amend the bylaws to protect identified scenic views.
- (7) Implement the actions items listed in the Energy Chapter

## Chapter 14. Compatibility with Surrounding Towns

Land use patterns are shaped by many factors beyond the borders of a community, including the economy, the housing market, employment trends, transportation opportunities, energy costs, etc. In working to attain the desired land use patterns, it is important that planning efforts be coordinated across municipal boundaries. The Town of Bakersfield shares borders with the Towns of Fletcher, Fairfield, Enosburgh and Montgomery in Franklin County and the Towns of Belvidere and Waterville in Lamoille County. This chapter will provide a summary of the land use plans and regulations implemented by each of the communities and consider the compatibility of these efforts. While this will provide a snapshot in time, it is also important to seek opportunities for on-going coordination between communities and at the regional level to avoid potential conflicts and effectively work towards common goals.

### Compatibility with Fletcher

The Town of Fletcher borders Bakersfield to the south. Fletcher adopted its most recent town plan on September 19, 2005. The plan seeks to maintain the rural character of the community, to provide for orderly development that enhances the quality of life for Fletcher residents, and to require that all development be pursued with strict regard to the capacity of the land. From 2000-2010, Fletcher experienced similar population growth rates as compared with Bakersfield.

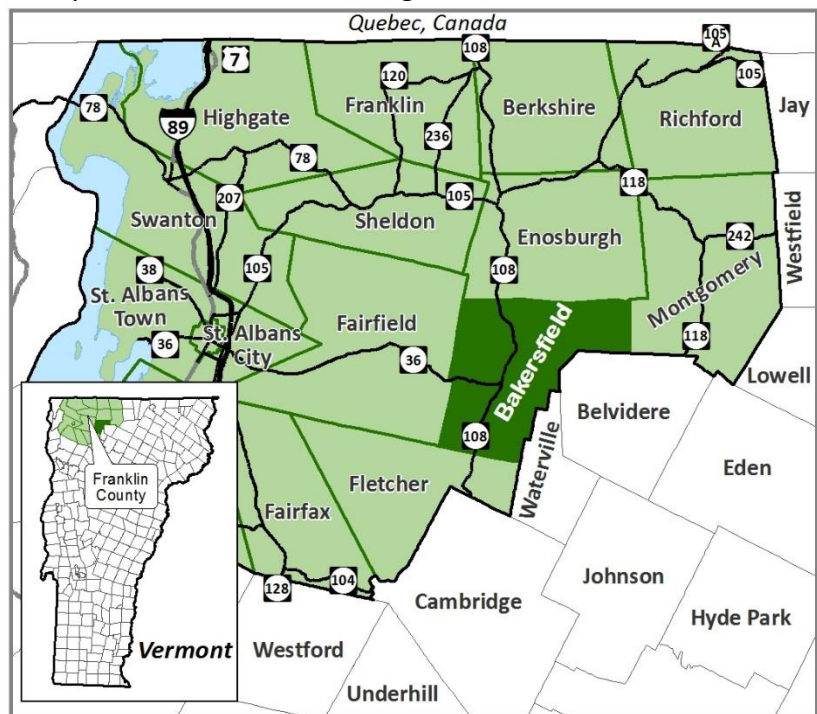


Figure 14.1 – Bakersfield Location Map

To regulate land use, Fletcher has adopted zoning and subdivision regulations. These regulations were most recently adopted October 24, 2002. Along its border with Bakersfield, to the west of route 108 is Fletcher’s forest district, which shares similar goals to Bakersfield’s conservation district and requires a similar density of development. To the east is Fletcher’s conservation district, which requires a density of one unit per 10 acres, similar to the density requirement in Bakersfield’s adjoining rural district. Along route 108, Fletcher has designated the rural residential/ag district, the purpose of which is “to provide for and protect residential, agricultural, forestry and compatible commercial and recreational uses.” While this district allows for a greater density of development (2 acres/unit) than the adjoining land in Bakersfield, this is not considered an incompatible use of land in this area.

**Compatibility with Fairfield**

To the west of Bakersfield, lies Fairfield. According to the town plan, adopted on December 14, 2009, “It is the primary and fundamental intention of Fairfield to remain a rural, agricultural town.” Fairfield is currently in the process of updating its town plan, including its Growth Management Plan. The current Growth Management Plan has established a cap of ten building permits issued per year, which serves to slow growth to a rate the community can accommodate.

Fairfield most recently revised its zoning and subdivision regulations on May 14, 2012. The town is divided into seven zoning districts: Agricultural/Rural Residential, Chester A. Arthur Scenic District, East Fairfield District, Fairfield Center District, Fairfield Swamp District, Lake District, and the Uplands District.

Bakersfield has designated the entire length of this boundary to be in the rural district. In Fairfield, the south side of route 36 is in the uplands district, in which agricultural and forestry uses and essential public services are the only permitted uses. Much of northern Fairfield is designated as agricultural/rural residential, which is intended to preserve rural character and protect agricultural resources while providing for residential, agricultural, forestry, and compatible commercial and recreational uses. Along the Chester A. Arthur Road, Fairfield has designated a scenic district which intersects the northwestern corner of Bakersfield. These land uses are compatible with the adjoining rural district in Bakersfield.

Along Route 36 is the area designated as the East Fairfield district, which provides for residential, commercial and other compatible development that serve the needs of the town and maintain the traditional, social and physical character of the village. Maintaining the vitality of East Fairfield village is consistent with the goals of the Bakersfield plan. By designating the area between East Fairfield village and Bakersfield village as rural, the town of Bakersfield seeks to limit the potential for strip development along route 36 and to maintain the two centers as distinct.

**Compatibility with Enosburgh**

Enosburgh lies to the north of Bakersfield. Enosburgh is currently in the process of updating their town plan. According to their most recent plan, adopted on August 19, 2013, the town of Enosburgh seeks to preserve its unique character, protect natural resources, promote agriculture and forestry, and provide employment opportunities and a high quality of life for residents.

Enosburgh most recently updated its zoning regulations on May 27, 2013. The town is divided into five zoning districts: Village of Enosburg Falls, Agricultural, Rural Residential, Conservation and Wellhead Protection. There are also three overlay districts: Natural Resources Overlay, Wetland Overlay, and Flood Hazard Overlay.

Along most of its border with Bakersfield, Enosburgh is designated as Rural Residential. The mountainous area to the east is within the Conservation Zone. These areas are compatible with the adjacent Rural and Conservation Districts in Bakersfield.

**Compatibility with Montgomery**

Bakersfield shares a short border to the east with Montgomery. This border is mountainous and sparsely populated. There are no roads connecting Bakersfield directly to Montgomery.

The Montgomery Town Plan, adopted on August 19, 2010, calls for preserving the town’s rural character, protecting its natural resources, and maintaining unique cultural resources including its two historic villages and six covered bridges.

Montgomery implements its land use policies through zoning regulations (most recently adopted on March 1, 2005) but does not have subdivision regulations. The area bordering Bakersfield is designated as the Conservation II district. This district requires a 20 acre minimum lot size and the only permitted uses are agriculture, forestry, water storage and reservoirs, and wildlife refuge. Camps are considered a conditional use in this district. These regulations are consistent with the adjoining conservation district in Bakersfield.

**Compatibility with Belvidere**

The Town of Belvidere is located in Lamoille County to the east of Bakersfield. The Town Plan was adopted on May 5, 2005. The goals of the Town Plan are to control growth to avoid undue tax burden on residents, to protect natural resources, to promote agriculture and forestry practices, and to ensure that land use decisions are made locally. The town of Belvidere does not have zoning or subdivision regulations, but does regulate development within the floodplain in accordance with the National Flood Insurance Program.

**Compatibility with Waterville**

Waterville is also located in Lamoille County to the east of Bakersfield. Like Belvidere, Waterville does not have zoning or subdivision regulations. They do have a town plan adopted originally on September 22, 2003 and revised on May 4, 2009. Goals of this plan include: “Keep Waterville small and rural in order to preserve the quality of life here” and “Encourage preservation of Waterville’s natural resources and scenic beauty, including water resources, open land, mountaintops and ridges, forest and agricultural land, trails and views.”

**Compatibility with Northwest Regional Plan**

The Town of Bakersfield is an active member of the Northwest Regional Planning Commission. Each of the municipalities in Franklin and Grand Isle Counties has representation on the Board of Commissioners. Bakersfield currently has two members regularly representing at Board meetings. The most recent Northwest Regional Plan was adopted on July 29, 2015 and was amended on June 28, 2017. The Bakersfield Town Plan will be reviewed by the Regional Planning Commission in order to ensure compatibility and receive regional confirmation and approval.

Based on this analysis, none of the goals, objectives or recommendations in the Bakersfield Town Plan will adversely affect the plans or development trends of the neighboring communities or the region. Bakersfield will continue to work with neighboring municipalities when implementing this plan.

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# Appendix I. Summary of Goals and Policies

## Historic and Archaeological Resources

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**Goals:**

- To preserve important historic and archaeological resources in Bakersfield
- To recognize and respect Bakersfield’s rich history in decisions regarding land use and development

**Policies:**

- Protect sites of archaeological and/or historical significance
- Encourage the adaptive reuse of the Brigham Academy and other historic buildings to meet the needs of the Bakersfield community.
- Encourage efforts to secure grants and raise funds for the preservation of historic and archaeological resources
- Identify sites of potential archaeological and/or historical significance, and produce a document and map that locates and describes these sites
- Encourage appropriate design and land use compatible with the historic character of the village
- Encourage the planting of trees in the schoolyard and parks, and throughout the town.

## Utilities, Facilities and Services

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**Goals:**

- To provide municipal services and facilities that adequately protect the health, safety and welfare of the people of Bakersfield
- To provide for the physical safety of residents with high quality fire, emergency medical, and law enforcement services
- To promote communication of Bakersfield residents with each other and with a wider community
- To provide code- compliant interior spaces that support community activities

**Policies:**

- Look ahead and predict the town’s future needs in regard to public facilities and services based on patterns of growth and development
- Consider other growth control measures, including development of a capital budget, a yearly limit on the maximum number of building permits, and phasing of building construction, to reduce the impact of development on municipal services
- Identify equipment and facilities that need to be upgraded and develop methods of financing the replacements.
- Evaluate the extension of municipal services based on system adequacy and fiscal feasibility
- Explore opportunities to coordinate in the provision of septic services for buildings within the village core

- Consider if and when a municipal wastewater system would be appropriate and cost effective to service the village area
- Ensure that the municipal water system continues to provide adequate, healthy, clean drinking water for village residents and that the water supply remains public and is not privatized
- Identify and pursue opportunities for funding to enhance police protection in Bakersfield
- Continue to recruit and train volunteers for fire and emergency services
- Consider opportunities for the adaptive reuse of historic buildings
- Provide adequate recreational facilities to meet the needs of community residents
- Encourage intergenerational programs that promote healthful living
- Restore the Brigham Academy building to serve as a multi-purpose municipal facility for education, senior/affordable housing, recreation, and/or other community use
- Ensure that designated emergency shelters are accessible and properly equipped.
- Continue to provide library services that meet the needs of the community
- Support efforts to educate residents about solid waste disposal options, currently available through NWSWD, in order to reduce junk and hazardous materials from being disposed of improperly
- Prohibit the unregulated storage of junk cars and other waste on properties in Bakersfield and require clean-up of existing sites
- Consider the establishment of a transfer station for processing junk vehicles for transportation to a local, permitted junkyard
- Encourage the Selectboard to adopt municipal ordinances to enforce the clean up of junkyards and other “quality of life” issues, such as farm animals in the village, noise pollution, etc.
- Support the enhancement of the telecommunications network when such facilities do not have significant adverse health, environmental or scenic impacts
- Establish and maintain a website that provides information on Bakersfield town governance and a calendar of town activities
- Support the retention of the US Post Office in the village

Transportation

**Goals:**

- To provide and maintain a safe, convenient, cost-effective, and functional transportation network for vehicular, pedestrian, and recreational use within the town
- To promote public transit and carpooling and to provide commuter parking

**Policies:**

- Assure the town’s ability to provide public safety for any development by town regulation of all classes of roads, including access to private roads
- Maintain town roads according to a systematic review of condition and levels of use

- Reclassify Class 4 roads, which are not expected to serve public uses for motorized traffic, to legal trail status so that they may continue to be used for recreational uses and the right of way kept for future use
- Provide road signs, where necessary, for safety and traffic control purposes
- Assess the traffic impact of any new development on local roads before granting building or subdivision permits
- Limit road or driveway extension into important resource areas, including critical natural areas, wellhead protection areas, large blocks of intact forest, and important agricultural lands
- Design all future roads, including culverts and ditching, that are to be taken over and/or maintained by the town to standards approved by the Selectboard
- Maintain the scenic character of the town’s rural byways
- Participate in the Northwest Regional Planning Commission’s Transportation Advisory Committee (TAC)
- Encourage the expansion of the sidewalks within the village, including the current Bakersfield Sidewalk Project, to provide improved pedestrian access and safety
- Reduce the speed limit to 25 miles/hour within the Village District
- The Town should explore the possibility of changing the recreational ATV ordinance

Energy

**Goals**

- Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
- Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
- Focus growth within and adjacent to the village.

**Policies**

- Bakersfield supports energy conservation efforts and the efficient use of energy across all sectors.
- Bakersfield supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
- Bakersfield supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from Bakersfield to other parts of the region and considering access to public transit when reviewing Act 250 applications.
- Bakersfield supports the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this

plan. Development of generation in identified preferred locations shall be favored over the development of other sites.

- Bakersfield supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
- Support local farms and the local food system.

Education and Childcare

**Goals:**

- To provide exemplary educational services to the children of Bakersfield.
- To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of all Vermonters.
- To ensure that regulation of land development in Bakersfield does not negatively impact the availability of safe and affordable childcare.

**Policies:**

- Establish fair and effective measures to control the pace and impact of development on educational services.
- Assess the need for and availability of childcare services in Bakersfield
- Support programs such as “Caring Communities,” the Teen Center, and “Success by Six”

Natural Resources

**Goals:**

- To protect the natural integrity and quality of wetlands and watercourses, wildlife habitats, ground water and aquifers, populations of rare and endangered species, forests and all other irreplaceable natural resources
- To enhance environmental quality, preserve the character of Bakersfield, and protect its natural assets

**Policies:**

- Prohibit all land development on slopes greater than 25 percent and maintain vegetative cover
- Conduct development on slopes greater than 15 percent carefully in order to avoid environmental degradation and conditions that create health hazards
- Carefully control runoff and erosion should during all phases of construction
- Inventory the town for high quality wetlands and watercourses, wildlife habitats, ground water and aquifers, populations of rare and endangered species, forests and all other irreplaceable natural resources
- Restrict the density of development in these critical areas to levels that will have minimal impact

- Discourage development within ecologically sensitive areas including wetlands, steep slopes, and areas with shallow soils
- Protect groundwater resources by prohibiting development in those areas where the water table is less than 1.5 feet below the surface
- Permit development only in a manner that is safe to existing water supplies, both public and private
- Prohibit new construction within the Wellhead Protection Area, as designated by the Vermont DEC
- Minimize the impact of development on streams and floodplains to allow them to perform their natural functions
- Encourage the use of Low Impact Development (LID) strategies to treat stormwater on-site
- Promote the natural balance of the hydrologic regime by controlling excess runoff and maintaining natural water infiltration and storage capacities
- Encourage development within shoreline areas of streams, lakes or ponds that is compatible with the natural beauty of the area.
- Require sufficient setbacks to prevent erosion along streambanks or shorelands and pollution from subsurface sewage disposal systems, and to retain visual and physical access to the water bodies
- Prohibit land development resulting in the loss of wetland storage capacity
- Prohibit additions to wetlands of any substances that are likely to increase the concentration of materials beyond their assimilative capacities
- Promote development in proximity to wetlands and streams that preserves their value for education, science, aesthetics and recreation
- Incorporate vegetated buffers from streams, rivers and ponds into Bakersfield’s zoning bylaws in order to better protect water quality
- Develop and utilize Fluvial Erosion Hazard Maps to minimize losses from flooding and erosion
- Develop a plan to establish a Town Forest

Housing

**Goals:**

- To ensure the provision of adequate, safe and affordable housing for all income and age groups in an environment that is safe and visually attractive
- To promote new and renovated residential development that reinforces and reflects the traditional forms and historic patterns of residential community settlements and efficiently utilizes existing and planned infrastructure
- To encourage construction and renovation of housing that promotes energy efficiency

**Policies:**

- Promote innovative approaches to developing affordable housing, including planned unit developments

- Determine residential densities on the basis of topography, soil conditions, proximity to highways, cost of providing mandated public services, and conservation of natural resources, as well as capacity to meet Vermont Agency of Natural Resources requirements
- Conserve and protect the quality and vitality of existing residential neighborhoods or areas, and encourage the renovation of old and deteriorating dwellings
- Encourage siting of new housing development to preserve the greatest amount of open space and blend harmoniously with the surrounding landscape
- Allow the building of accessory apartments within or attached to single family residences in accordance with state law
- Support efforts that assist elderly and disabled residents who want to remain in their homes, and community-based health care systems that enable elderly and disabled people to remain in their communities
- To the extent possible, locate new housing for elderly and disabled residents in proximity to Bakersfield village and existing infrastructure and services, including consideration of the Brigham Academy building for this purpose.
- Promote the use of natural, non-toxic energy efficient materials in the renovation of existing and the construction of new housing

Land Use

**Goals:**

- To maintain Bakersfield’s rural character and scenic resources through informed land use decisions
- To accommodate future growth in patterns, densities, and locations that respect traditional patterns of development, and that do not compromise the integrity of natural, historic and cultural resources
- To establish public policies that balance development with the town's ability to provide services
- To protect and promote the continuation of agriculture and forestry as integral component’s of Bakersfield’s local economy and culture through land use planning

**Policies:**

- Encourage low development densities where low levels of services are provided, and higher densities only where residences and businesses can be properly served
- Design clustered housing, including housing specifically designed to be affordable, to fit into the cultural, aesthetic, and natural resource landscape of Bakersfield
- Promote anti-sprawl initiatives as a measure to maintain the appropriate use of the town’s land resources
- Protect the vitality and importance of the village center by designating it as the primary focus for commerce, while simultaneously preserving its essential historic character and beauty
- Promote new development in areas of existing infrastructure (roads, power, and water) and discourage development in areas without existing infrastructure

- Discourage development in areas which are hazardous to human health and safety
- In subdivision review, encourage lot layouts that respect the natural features of the landscape and do not create long, narrow lots which contribute to sprawl and waste irreplaceable agricultural and silvicultural resources
- Protect prime recreational resources from incompatible land uses and protect scenic qualities of agricultural, forest and riparian lands from unnecessary despoliation
- Permit development only in a manner that is safe for existing drinking water supplies, both public and private
- Protect water quality by limiting development in Wellhead Protection Areas, wetlands, and along stream banks
- Protect river corridors by establishing a minimum setback or “buffer” between development and the streambank
- Promote environmentally sound construction practices, including control of runoff and erosion during all phases of construction and treatment of wastes off of steep slopes
- Protect scenic ridgelines by regulating their development, including the siting of cellular and wind towers
- Steer development away from areas where soils will not support it due to shallow depth to bedrock, instability, or high water table
- Prohibit land development on slopes greater than 25 percent, and maintain vegetative cover
- Conduct development on slopes greater than 15 percent carefully in order to avoid environmental degradation and conditions that create health hazards
- Protect public health, welfare, and safety by prohibiting development in the flood plain and continuing to participate in the National Flood Insurance Program (NFIP)
- Support and encourage participation in land preservation measures, such as those promoted by the Vermont Land Trust
- Maintain the character of existing neighborhoods in the village and avoid potential conflicts between incompatible land uses
- Conserve agriculturally productive lands by accommodating development in areas apart from most farming activity and from areas of prime agricultural soils
- Encourage sustainable agricultural and silvicultural practices to both protect the use of land and water resources, and to keep a working rural landscape based on a practice of stewardship
- Strongly encourage landscaping and site design that reduces adverse impacts of new development
- Protect and promote forestry as a valuable land use in Bakersfield through the creation of a town forest
- Promote alternative small farms which produce products such as cheese, yogurt, market garden, etc.
- Provide incentives for appropriate commercial growth in the village district

Economic Development

**Goals:**

- To promote and sustain the local agricultural and forestry economies;
- Encourage the development of appropriate and compatible industry and business in the town;
- Promote a balanced, diverse economic base, with a focus on locally owned enterprises that utilizes the local labor force;
- Promote a mix of new development in the designated village area, and focus a majority of any new commercial development within the village;
- Support and encourage low-impact, home-based businesses.

**Policies:**

- Maintain zoning bylaws to support the development of home businesses and home industries that fit with the rural character of the community.
- Support the maintenance of and/or upgrade to reliable telecommunications services that support existing, and attract commercial development, such as broadband internet and cell phone service.
- Provide infrastructure in appropriate areas for the retention and attraction of businesses that are consistent with the town’s character.
- Commercial and industrial development should not place an undue burden on the Town in terms of services and facilities required from their development and its associated impacts.
- Support agriculture and forestry related businesses, and protect productive agricultural and forestry lands from conversion to incompatible land uses.

**All Hazards Resiliency**

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**Goals:**

- Encourage and foster an all hazards disaster resilient community.
- Reduce the loss of life and injuries that result from disasters.
- Reduce damages to public infrastructure resulting from all hazards events through hazard mitigation planning and project implementation.

**Policies:**

- Encourage and foster an all hazards disaster resilient community.
- Reduce the loss of life and injuries that result from disasters.
- Reduce damages to public infrastructure resulting from all hazards events through hazard mitigation planning and project implementation.
- Encourage flood emergency preparedness and response planning.
- Encourage the protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion.
- Continue to implement high priority projects identified in the Local Hazard Mitigation Plan
- Adopt annually the Local Emergency Operations Plan.



- Participate in the Franklin County Mutual Aid Agreement.
- Resiliency measures will be compatible with natural features, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forests, historic resources; character of neighborhoods; and the capacity of the community to implement them.
- Emergency Management, and the road crew to plan improved emergency response capacity (operations, training, equipment) during natural disasters.
  - Evaluate the flood hazard regulations for opportunities to incorporate measures to increase public safety and reduce future damages.
  - Consider adopting and implementing river corridors and buffers to discourage future development in high risk areas for flooding or erosion hazards.
  - Explore participation in the FEMA Community Rating System (CRS) so as to secure a discount on flood insurance
  - Incorporate mitigation measures when developing improvements or expansion to municipal infrastructure.
  - Adopt and implement the most recent (currently 2013) VTrans Town Road and Bridge Standards, or stricter standards.

## Appendix II. Municipal Roles and Responsibilities

*Adapted from: <http://www.sec.state.vt.us/municipal/pubs/who'swho.html>*

**Agent to Convey Real Estate** (*appointed*) - Executes the deeds on behalf of the town. 24 V.S.A. § 1061

**Auditor** (*elected*) – Review and audit all town accounts and prepare the annual town report. Should be very detail oriented. Good writing skills are a plus. 17 V.S.A. § 2649

**Building Inspector and Deputy Inspector** (*appointed*) - Appointed only in towns that have adopted a building code. Performs inspections and enforces the local building code. 24 V.S.A. § 3102, 3103, 3108

**Cemetery Commissioner** (*elected*) – Responsible for the care and management of the town’s cemeteries. If no cemetery commissioners are elected the Selectboard fulfills this role. 18 V.S.A. § 5431 et seq

**Chairperson for Civil Defense** (*appointed*) - responsible for the organization, administration and operation of the local committee that is formed for emergency management in the town or city. The emergency management chairperson is under the direct control of the selectboard but may coordinate his or her emergency management efforts with neighboring towns and cities and with the state emergency management division, and with the federal government. 20 V.S.A. § 6

**Collector of Current Taxes** (*elected*) - Collects the taxes for the town. In many towns this function is performed by the Treasurer or Town Manager. Should be detail oriented and good with numbers. 17 V.S.A. § 2646(8)

**Collector of Delinquent Taxes** (*elected*) – Collects delinquent taxes for the town. Should be good with numbers and also able to work with people who are in difficult circumstances. Should also have thick skin. 17 V.S.A. § 2646(9)

**Constable** (*elected*) – In some towns the constable is the town’s local law enforcement officer, with all powers of search, seizure and arrest within the town. In other towns the constable only has the power to serve civil process, assist the health officer in the discharge of his or her duties, destroy unlicensed dogs, kill injured deer, remove disorderly people from town meeting, and, if the First Constable, to collect taxes, if no tax collector is elected. Should be good at de-escalating and resolving conflicts. 17 V.S.A. § 2646(7)

**Conservation Commission Members** (*appointed*) – Inventory the natural resources of a community and purchase and administer municipal lands for the purpose of conservation. 24 V.S.A. § 4502

**Fence Viewers** (*appointed*) - Three viewers are appointed by the selectboard each year. When called upon, they examine fences and other boundaries within the town. 24 V.S.A. § 871

**Grand Juror** (*elected*) – Helps to prosecute criminal offenses that occur in the town by giving information to state and local law enforcement. (Generally not a very active position.) 17 V.S.A. § 2646(10)

**Health Officer** (*appointed*) - Appointed by the Commissioner of Health to a 3-year term after recommendation by the town selectboard. Enforces the rules and regulations for the prevention and abatement of public health hazards. 18 V.S.A. § 601

**Inspectors of Lumber** (*appointed*) – Appointed upon request to examine, measure, and classify the quality of lumber, shingles and wood sold within the town. 24 V.S.A. § 871

**Inspector of Wiring** (*appointed*) – Inspects electrical wiring in buildings on request of the selectboard. 24 V.S.A. § 1033

**Listers** (*elected*) – Appraise property within the town for the purpose of property tax assessment. Should be able to be polite, yet firm, and not be oversensitive to criticism. 17 V.S.A. § 2646(5)

**Moderator** (*elected*) – Runs the Annual and Special Town/School Meeting. Should have a good sense of humor, be good at group process, and have experience following Roberts Rules of Order. 17 V.S.A. § 2646(1)

**Municipal manager** (*appointed*) - If the manager system has been adopted by the electorate, the town manager is the official administrator of local government and has general supervisor of the affairs of the town. 24 V.S.A. § 1232, 1233

**Patrolmen** (*elected*) – Patrols town highways under the direction of the selectboard – if the town so orders. (Generally not an active position.) 17 V.S.A. 2646(15)

**Planning Commissioners** (*appointed or elected*) - Appointed unless town votes to elect. Duties include preparing a municipal plan, making recommendations on matters of land development, conservation, and preservation, and participating in a regional planning program. Makes site plan and subdivision permit decisions unless there is a Development Review Board in town. Should have a good working knowledge of all aspects of the town and be able to listen to many sides of an issue. 24 V.S.A. § 4323

**Poundkeeper** (*appointed*) – Cares for the animals that are impounded within the town. 20 V.S.A. § 3381

**Regional Planning Commission Representative** (*appointed*) – Helps develop the regional plan and assess municipal land use plans. 24 V.S.A. § 4341 et seq.

**Road Commissioners** (*elected or appointed*) – Can be elected or appointed. Has no independent authority, but can assist the selectboard in overseeing town highways at the

request of the board. Should have experience with town highways and be a good communicator. 17 V.S.A. § 2646(16), 17 V.S.A. § 2651

**Selectboard members** (*elected*) – General supervision and control over town, enacts ordinances, regulations and policies for town, oversees town property and personnel, prepares, presents and manages budget, oversees roads, including laying out, discontinuing and reclassifying roads. Sits as local board of health, liquor control commission and sewer commission. Should know the town well, be able to understand all sides of complex issues, and have very thick skin. 17 V.S.A. § 2646(4); 17 V.S.A. § 2649

**Town Administrator** (*appointed*) - Hired by the selectboard, the town administrator, sometimes called the administrative assistant to the selectboard, assists the selectboard in managing the business of the town. The town administrator has no independent statutory authority. The scope of his or her duties is determined by the selectboard.

**Town Agent** (*elected*) – The town agent used to prosecute and defend suits. The selectboard now have that authority. Thus, the Town Agent’s duty consists merely of assisting when litigation is in progress at the request of the selectboard. (Generally not a very active position.) 17 V.S.A. § 2646(11)

**Town Clerk** (*elected*) — Records, preserves and certifies the public records of the town, issues dog, marriage, civil union and hunting and fishing licenses and motor vehicle renewals. Runs the local elections, serves as clerk of the Board of Civil Authority, and hears tax abatement requests and tax appeals. Should have the patience of a saint and be a good ambassador for the town. 17 V.S.A. § 2646(2)

**Town Energy Coordinator** (*appointed*) – Responsible for developing the town energy plan and conducting the town energy audit. 24 V.S.A. § 1131

**Town Forest Fire Warden** (*appointed*) - Appointed by the fire commissioner with the approval of the selectboard. Prevents forest fires in the town by enforcing the laws designed to prevent forest fires. 10 V.S.A. § 2641

**Town Services Officer** (*appointed*) - Appointed on or before April 15th of each year. Assists individuals within the town who require emergency food, fuel or shelter assistance when the Vermont Department of Social Welfare is not available. 33 V.S.A. § 2102 et seq.

**Town Treasurer** (*elected*) - Keeps the town and school’s accounts (unless a separate school treasurer is elected), invests money (with the approval of the legislative body,) keeps a record of the taxes voted and pays orders drawn on him or her. Should be very precise, detail oriented and good at math. 17 V.S.A. § 2646(3)

**Town Tree Warden** (*appointed*) - Plans and implements a shade tree preservation program for the purpose of shading and beautifying public places. Removes diseased, dying or dead trees which create a hazard to public safety or threaten the effectiveness of disease or insect control programs. 24 V.S.A. § 871

**Trustee of Public Funds** (*elected*) – Manages, invests and reports on real and personal property held in trust by the town. This includes cemetery trust funds. Should like investing money. 17 V.S.A. § 2646(12); 24 V.S.A. § 2431 et seq.

**Trustee of Public Money** (*elected*) – Oversees "United States Public Money" received under the Act of 1836 held by the town. (It is unlikely any Vermont town still has these funds.) 17 V.S.A. § 2646(13)

**Water Commissioners** (*elected or appointed*) –Water commissioners supervise the town’s water department by establishing water rates and all the rules and regulations for the control and operation of the department. Should be a good manager and detail oriented. 17 V.S.A. §2646(17), 17 V.S.A. § 2652

**Weighers of Coal** (*appointed*) – Serves as a referee over weights of contested loads of coal. 24 V.S.A. § 871

**Zoning administrator** (*appointed*) - Appointed by the planning commission with the approval of the selectboard. Approves or denies applications for zoning permits. Administers the municipal bylaws literally. Enforces regulations pertaining to the zoning ordinance. 24 V.S.A. § 4448

**Zoning board of adjustment or development review board members** (*appointed*) –Holds hearings and makes decisions on land use permit applications and appeals from decisions of the zoning administrator. 24 V.S.A. § 4460

# **North Hero Town Plan 2020**

**Adopted by the Voters of North Hero**

**March 3, 2020**

**Prepared by the North Hero Planning Commission**



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**PREAMBLE:**

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Before there can be zoning regulations, there must be a town plan. Before there can be a town plan, there must be some degree of understanding of the town's past and its present. Without this, any planning for the future would be without substance, subject to change for no other reason than somebody wanting to do something regardless of its impact on neighbor, community, environment or economy.

With the above in mind, the Planning Commission has written a North Hero Town Plan (hereinafter the "Town Plan"), taking into account State and Federal regulations and the needs, desires and concerns of the community expressed by its citizens.

The Commission has used the "Just and Prudent Man" theory in its deliberations: simply put, it means what a just and prudent man would do in a given situation. It has endured the test of time and courts of law.

**PREFACE:**

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**LEGISLATION AND PROCEDURES RELATING TO  
MUNICIPAL DEVELOPMENT PLANS**

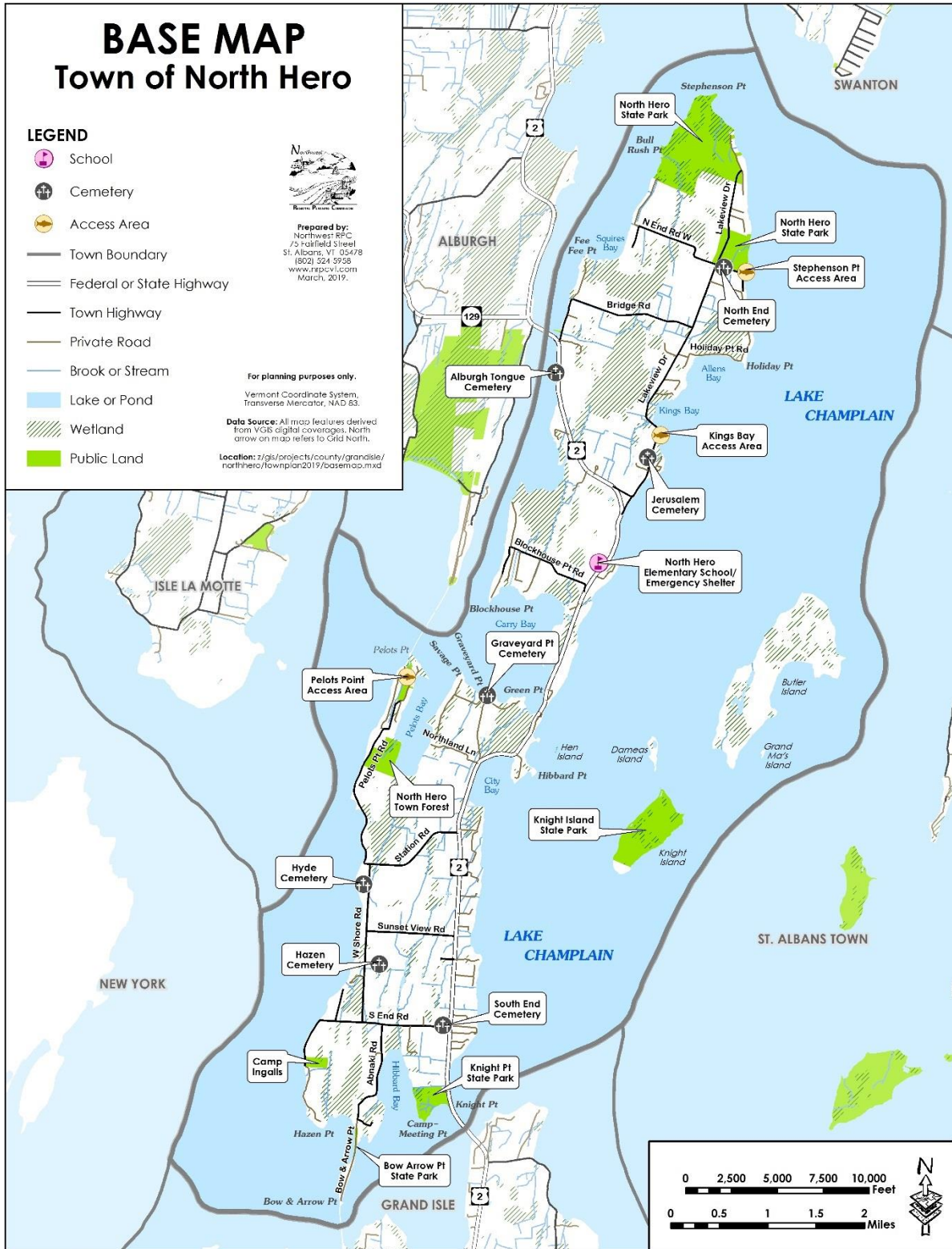
Under the Vermont Municipal and Regional Planning and Development Act, Title 24, Chapter 117 (hereinafter the "Act") a planning commission shall:

"Prepare a plan and amendments thereof for consideration by the legislative body and review any amendments thereof initiated by others as set forth in subchapter 5 of this chapter." 24 V.S.A § 4325(1).

This responsibility is important because the Act provides that "any municipality which has adopted and has in effect a plan and has created a planning commission under this chapter may implement the plan by adopting, amending, and enforcing any or all of the bylaws ... provided for in this chapter." 24 V.S.A. § 4401.

After the plan is submitted to the legislative body by the Planning Commission, the legislative body shall hold one or more public hearings not less than thirty or more than 120 days thereafter. 24 V.S.A § 4385(a). Should the legislative body decide to amend the Town Plan submitted by the Planning Commission, then not later than 15 days prior to the final public hearing the suggested amendment shall be submitted to the Planning Commission. 24 V.S.A. § 4385(b). After the final public hearing, the legislative body may adopt the Town Plan. 24 V.S.A § 4385(c).

Base Map



**I. THE NORTH HERO MUNICIPAL DEVELOPMENT PLAN**

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The Town Plan will provide a framework of goals and objectives to preserve the community and the environment and to allow the Town to regulate growth. A cooperative effort between all towns in the county will ensure attainment of our aspirations. This plan is believed to be in conformance with the plans and development trends of adjacent municipalities.

**A. PURPOSE OF THE TOWN PLAN**

The purpose of the Town Plan is to provide a statement that allows the Town to integrate and project future development through a rational process of planning, whereby we can understand and control our future. Thus, the people of North Hero should determine the nature and timing of any future development.

The planning and zoning must reflect the needs of the community. One need is to plan for growth. A further purpose of the Town Plan is to ensure that when growth occurs it does so on our terms, at the time and place and in the manner we prefer. The Town Plan is designed to give the Town guidance both for now and into the future.

**B. PLANNING PROCESS**

The Town of North Hero is engaged in a planning process led by the Planning Commission and set forth in this Town Plan, to guide community decision making and actions. A Town plan serves as a foundation for implementation devices such as the North Hero Development Regulations and capital planning. It also serves as an important function in the evaluation of major development under Vermont's Land Use and Development Law, Act 250.

North Hero first developed a town plan in 1973, which was then updated in 1978 and then not until 1993. North Hero began a consistent planning process with a 1998 plan update. Plan updates followed in 2003, 2009, 2015 and now in 2020.

Citizen participation is important in all levels of the planning process. North Hero takes special care in making sure opportunities for citizen involvement are advertised throughout plan updates and other planning projects.

**C. GOALS OF THE TOWN PLAN**

The goals and the objectives listed below define our Town Plan and the direction of North Hero planning. The goals were developed from an understanding of our history and the townspeople, from assessment of economic profiles and larger economic factors and from an acute appreciation of the surroundings.

1. To preserve the unique rural and small town character of North Hero.
2. To protect the quality of the environment and the lake.
3. To maintain the visual character and aesthetic setting of North Hero.
4. To maintain the community and to enhance the sense of community in North Hero.
5. To foster quality growth and controlled development in North Hero.
6. To engage in a continued, coordinated and comprehensive planning process and to encourage active citizen participation throughout the process.
7. To assure the safe and efficient use of both town and state utilities, facilities and infrastructure.
8. To maintain a comprehensive mapping system of North Hero.
9. To regularly review public and private incentives, grants, and other incentives as tools to promote Town goals and address local needs.
10. To promote safe, healthy and affordable housing located conveniently to employment, services, retail centers, and educational and recreational facilities as well as park and ride.
11. To promote increased awareness and use of renewable energy resources as well as the conservation of existing energy resources.
12. Encourage and foster an all hazards disaster resilient community where the loss of life, injuries and damages to public infrastructure that result from disasters are minimized.
13. To provide for the wise and efficient use of Vermont's natural resources and to facilitate the appropriate extraction of earth resources and the proper restoration and preservation of the aesthetic qualities of the area.
14. To ensure the availability of safe and affordable child care and to integrate child care issues into the planning process, including child care financing, infrastructure, business assistance for child care providers, and child care work force development.

**D. OBJECTIVES AND IMPLEMENTATION STRATEGIES OF THE TOWN PLAN**

- 1. **Community Life.** Activities consistent with our small town community including community life, recreation, and agriculture should be maintained and promoted.
  - a. Support existing farms and forests through the creation or diversification of new farming activities and the development of markets for local products.
  - b. Cooperate with state and federal agencies that seek to protect farms and natural areas.
  - c. Maintain compatibility of architectural design on additions to structures within the village.
  - d. Attract businesses that are compatible with the village setting that will draw people and activities together.
  
- 2. **Public Lands.** Promote town owned land and parks as high quality public resources.
  - a. Provide and maintain access to public buildings, land, waters and recreational opportunities.
  - b. Encourage use by the Townspeople.
  
- 3. **Planning as a Continual Process.** Maintain a continuing planning process.
  - a. Maintain an active ongoing planning process that addresses immediate concerns and seeks to reduce future problems through forward thinking.
  - b. Maintain town goals, policies, and objectives that further opportunities to obtain State and Federal grants.
  
- 4. **Open Space Preservation.** Increase the amount of land with no or limited development.
  - a. Study ways to mitigate the burden of property taxes on agricultural, forest and other open lands.
  - b. Support State sponsored tax programs that encourage preservation of open space.
  - c. Use the State and Town permit process to have appropriate lands set aside for open space.
  
- 5. **Historical Preservation.** Encourage the protection, preservation and maintenance of significant historical sites, structures, and development patterns within the village and town.
  
- 6. **Community Education.** Maintain a commitment to educational opportunities.
  - a. Make available educational services to all members of the community regardless of age.
  - b. Support educational programs and education related activities.
  - c. Plan for improvements or changing needs in educational facilities and programs through the Champlain Island Unified Union School District.

7. **Cultural Community.** In order to maintain the quality of life in North Hero, a sense of our cultural heritage should be fostered. See facilities and utilities map of North Hero (pg. 20).
  - a. Support the arts activities and organizational efforts.
  - b. Support groups who are currently preserving the cultural heritage of North Hero, such as the Historical Society, Library and Chamber of Commerce.
  
8. **Recreation.** Provide a variety of recreation programs and facilities directed towards children, adults and seniors.
  - a. Improve and develop Town facilities, picnic areas, hiking trails and activity fields at Camp Ingalls and Pelots Nature area which enrich the lives of our children, families and seniors through programs and activities.
  - b. Seek out cooperative efforts in providing recreation opportunities with other agencies and public government, including the YMCA, Island Arts, sportsmen, boating, bicycle and pedestrian groups, County and Town Recreation Committees, and State and Federal Agencies.
  - c. Encourage and support the re-activation of the North Hero State Park.
  - d. Create access to the lake for community members in the form of non-fishing boat ramps and a public beach.
  - e. Encourage pedestrians and bicyclists to use our town facilities and roadways with particular attention to access in the Village. Because of the narrow state highway right of way, bicycle and pedestrian access along the highway should be supported with additional signage, pavement markings and limited speed.
  - f. Support private land owners' efforts to preserve the lake for recreational use.
  
9. **Environmental Protection.** To identify, protect and preserve important natural and historic features and maintain and improve the quality of air, water, wildlife and land resources.
  - a. Critical natural resources including wildlife, wildlife habitats, the lake, the marshes and swamps and the shorelands shall be protected from ecological and scenic degradation and undue adverse impacts from development. See critical areas maps of North Hero (Pg. 28-29).
  - b. Review development proposals for compatibility with the land's natural features, the Town's natural resources, scenic features, historic and geological features, land capabilities, rural character, and impact on the lake.
  - c. Allow for appropriate uses and concentrations of development within each zoning district in accordance with district purpose statements.
  - d. Support the State of Vermont in its effort to adequately permit on-site water and wastewater systems.
  - e. Acquire donations, easements, or development rights in important natural resource areas for the Town, State, and/or an appropriate land conservation organization.

- f. Regulate natural resource extraction to ensure extraction does not have an undue adverse effect upon the environment or upon the surrounding homes and neighborhoods.

**10. Aesthetic Preservation.** Protect the scenic and unique rural island character of the Town.

- a. Protect access to local scenic resources including roads, waterways, views, and important landscape features.
- b. Encourage the maintenance of farmland, open land, and natural areas.

**11. Renewable Energy Resources.** The development of renewable resources shall be encouraged.

- a. Encourage energy conservation and an energy efficiency program in an effort to preserve natural resources and reduce costs.
- b. Encourage energy efficient construction design, including stands of trees and passive solar gain.
- c. Encourage the repair, restoration, or replacement of town structures with new, more energy efficient technologies.
- d. Support efforts to implement renewable energy, including incorporating renewable energy in all new construction of Town properties and the review of utilizing town properties and buildings, such as the maintenance building for renewable, particularly solar, installations.
- e. Pursue development of a solar facility at the transfer station.

**12. Economic Community.** Encourage the development of a diverse economic base.

- a. Promote recreational industry as an important economic resource for the Town and especially activity in the fall, winter, and spring.
- b. Encourage extension of use of State Parks in winter and greater numbers of activities and concessions in State Parks.
- c. Encourage the development and expansion of businesses and industries in appropriate locations to achieve maximum economic benefit with minimal environmental impact.
- d. Support a viable commercial recreation industry that encourages seasonal diversification and multiple uses.
- e. Support groups who are currently preserving the cultural heritage of North Hero.
- f. Encourage multiple and extended uses of existing recreational facilities.
- g. Promote and encourage the continuation of agriculture.
- h. Encourage a variety of different economic opportunities.
- i. Support the continued presence of marinas in the Town as a significant part of the local economic mix.
- j. Ensure regulation of land development in North Hero does not negatively impact the availability of safe and affordable childcare.



- k. Maintain village center designation status for the Village District and encourage businesses to take advantage of the various tax credits made available through this designation program.

**13. Housing.** Encourage an adequate supply of quality housing options for all segments of the population.

- a. Allow for multi-family dwellings where appropriate.
- b. Use Planned Unit Development ("PUD") to incentivize affordable housing.
- c. To see that new and rehabilitated housing meets minimum safety and sanitary standards.
- d. Encourage a balance of affordable housing as new units are developed.

**14. Settlement Patterns.** Encourage the development of land consistent with the Town's unique rural island character and physical landscape. See current land use/land cover map of North Hero (Pg. 38).

- a. Encourage planned unit developments.
- b. Encourage the historic New England Village settlement pattern in larger developments to minimize environmental impact in the Village District and other districts.
- c. Allow for commercial properties as part of planned unit developments.

**15. Rate of Growth.** Encourage growth at a rate that does not exceed or impair the Town's ability to provide quality services including schools and roads.

- a. Support volunteerism as the major source of many community services. If we are to remain a vibrant community, the whole community must concern itself with community services, and an important aspect of this is participation in community affairs.
- b. Consider future needs of the Town in relation to the school, library, cemeteries and other public facilities and services.
- c. Phase implementation of large development projects.
- d. Include consideration of revenues from developments such as a onetime initial assessment for start-up costs, thus relying on impact fees and property taxes to maintain Town services.
- e. Collaborate with the Selectboard on capital planning in accordance with state statute.

**16. Land Use.** Protect the historic integrity and character of the village area, and the unique rural island character townwide. See proposed land use map of North Hero (Pg. 42).

- a. Discourage commercial strip development.
- b. Manage development at a low-density along the Lake Champlain Shoreline to preserve the beautiful, pristine resource for future generations.
- c. Encourage clustered development outside the Shoreline District to facilitate the preservation of the rural countryside that characterizes North Hero.
- d. Changes made to pre-existing, non-complying structures should not increase the degree of non-compliance.

- e. Encourage marinas to allow public access to the lake.

**17. Planning Process.** Maintain a coordinated, comprehensive planning process and policy framework to guide municipal decisions.

- a. Pursue planning cooperation with other county towns.
- b. Participate as an active member of the Regional Planning Commission.
- c. Encourage citizen participation at all levels of the planning process.
- d. Consider the use of resources and the consequences of growth and development for the municipality, in addition to the larger region and the state.

**18. Transportation.** Provide an efficient, cost effective transportation network that meets the various needs of residents and visitors.

- a. Recognize US Route 2 as the main transportation corridor for North Hero and encourage a variety of transportation modes to include recreational users, commuters, freight, bicyclers, pedestrians, and agriculture vehicles with attention to safety and speed.
- b. Transportation patterns should enhance the quality of life and sense of community in North Hero.
- c. Bicycle traffic on Route 2 is increasing and opportunities to improve bicycle access and safety should be implemented when improvements are made on US Route 2.
- d. Implement the strategies of the 2017 Lake Champlain Byways Corridor Management Plan which include creating a gateway at the southern and north ends of the village and improving pedestrian connectivity within the village.
- e. Initiate a master plan that will address parking, pedestrian connectivity and traffic calming within the village.
- f. Assess ways to increase posted speed limit compliance within the village through enforcement and traffic calming techniques.
- g. Subdivisions along Route 2 should require limited access to Route 2 and zoning ordinances should be written to this standard.

**19. Flood Resiliency.** Encourage North Hero to become a flood resilient community.

- a. Avoid new development in any identified flood hazard, fluvial or lacustrine erosion, and river corridor protection areas. If new development is to be built in such areas, it should not exacerbate flooding and fluvial or lacustrine erosion.
- b. Encourage the protection and restoration of floodplains that attenuate and moderate flooding and fluvial or lacustrine erosion.
- c. Encourage flood emergency preparedness and response planning.

## II. UNDERSTANDING NORTH HERO

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As a Town we see our past in terms of the future. Two important traditions are strong. Although isolated, North Hero has always been part of a flow. We have been able to balance change with an ability to preserve continuity and values -a sense of community. From this sense of community, a second strong tradition of community action has been built. It is the dynamics of these two traditions that North Hero seeks to continue as a basis for planning our future development.

### A. OUR HISTORY

North Hero Islands are strategically located in Lake Champlain, which for centuries was an important link in the vast inland waterway from the Atlantic to the interior, both north and west. Samuel de Champlain, for whom the lake is named, claimed it for France in 1609 before the Dutch and Puritan settlements. Throughout the French and Indian Wars and then in the American Revolution, the Champlain Islands were fortified for defense of the waterway. The British manned a blockhouse in 1777, on what is now Blockhouse Point, which they retained for thirteen years after the Treaty of 1793 established the island as American territory.

North Hero has been valuable real estate since 1779 when the Green Mountain Boys petitioned Vermont Governor Chittenden for a grant of the two large Champlain islands as payment for military service. Ethan Allen was one of the petitioners and tradition tells us that he, with his "bashful and shy nature," named the Islands the Two Heroes in honor of himself and his brother, Ira. The Two Heroes were eventually called the South Island and the North Island, the latter consisting of the present Town of North Hero.

Settlement of North Hero was slow. Although the land had been divided into farm lots for the original grantees, many of them chose to sell off their rights or let them go to pay taxes. However, in 1783 when Jedediah Hyde surveyed the Two Heroes, he noted in his journal that several settlers had built houses.

Enos Wood was apparently the first to come. Among those settling here before 1790 were Nathan Hutchins, his son, Nathan Jr., John Knight, Nathan Hazen, Benjamin Butler, Jedediah Ladd and John Brownson. The United States Census for 1790 lists 31 families. The population grew to 54 families by the 1800 census.

The first Town meeting for North Hero was held on March 17, 1789. The South Cemetery was purchased from John Knight and Nathan Hazen for \$2.00 at the 1790 meeting. In 1793, the Town was divided into four school districts. The first school house was built around 1803. That year Jedediah Ladd built the first store, located south of the present stone courthouse, which served additionally as post office and jail.

In 1806 the first session of the Grand Isle County court was held in his establishment. The Grand Isle County Courthouse was built in 1824 and 1825. Constructed of "good Isle La Motte Marble" with walls 2 feet thick, it included a single jail cell and a single debtor cell.

During the next century, North Hero grew in cycles. After the 1830's, the population declined with the move to open the new Western Frontier. North Hero became "back east." After the Civil War, North Hero grew economically. With the advent of the railroad and the inter-island ferry service, growth accelerated. It was during this time that our island grew as a resort too.

During the mid-twentieth century, North Hero's population declined as it did in all rural areas. Most recently, as pressures of urban development and rapid transportation have increased, North Hero has begun to grow again.

The community of North Hero contains a significant collection of historic structures, as listed on the National and State Historic Register (one on the National and fifty-four on the State), ranging from stores, cabins, and barns to farm complexes. You can discover some of these places in the book *North Hero Then and Now* and by visiting the Town's historic society "The Hookenspoon".

**B. OUR RECENT HISTORY**

North Hero's recent history demonstrates growth through planned community action. The commitment of the Town's people in our projects and our way of looking at ourselves is an important part of this Town's Plan. Through projects, one can sense the importance of the involvement in the way the community develops.

Town commitment is shown in community action in projects like the building of the Town Hall starting in 1929. This helped to create a sense of community. Today the school and organizations like 4H are important elements of our community. Moves to preserve historical buildings are initiated as important reminders of our history. This sense of our past is shown by the Village Players Group. The focus of community activity around our beautiful library continues the tradition of community service.

The North Hero Volunteer Fire Department and Grand Isle Rescue also exemplify this tradition of community action. Started in 1947, the Fire Department represents commitment of time and service, which continues today. Gustave Oman started the department with a sign-up sheet in stores and within two years the department was building the first station with volunteer labor and had purchased its first fire truck. Time, community support and personal commitment provided support for this community venture.

**C. OUR PRESENT**

Today, volunteers continue to be a strong element of the community. Although they provide essential service, they also serve to focus an important sense of identity and purpose in the community.

North Hero continues to show vitality, not only in its economic growth but in growth of the quality of North Hero as a community. Community action, which involves our people, produced that quality that we wish to preserve as part of the growth process.

The scenic character of North Hero could best be described as quiet open farmland surrounded by attractive waterfront areas with spectacular mountain views. The Town itself, located on the crescent of City Bay, combines the best features of a typical Vermont village with the advantage of waterfront living.

North Hero is the only Shire Town in Vermont with no village green, perhaps because of our historical feeling of the importance of our lake. The buildings are attractive and consistent with the overall impression of peaceful rural charm, a commodity much in demand by summer visitors. As a result of this demand, the population of North Hero varies greatly with the season. Tourism and second home residences are attracted by the beauty of our lake and the pastoral setting and continue to be important in the growth of North Hero.

**D. OUR FUTURE**

The future of North Hero must preserve the quality of the rural, recreational character of the Town while allowing growth. It must preserve the quality of community, including the excellent services and facilities we now enjoy. Thus, Officers, Commissioners, and Directors of the Town should be involved in planning and consideration of future needs on a continual basis.

Most importantly, North Hero must protect the environment because it's the single most important factor in the quality of life. The quality of the lake must be considered in every aspect of planning and zoning. All growth must be compatible with preservation of lake quality. Although environmental quality can be compatible with growth, the quality of the environment must be preserved.

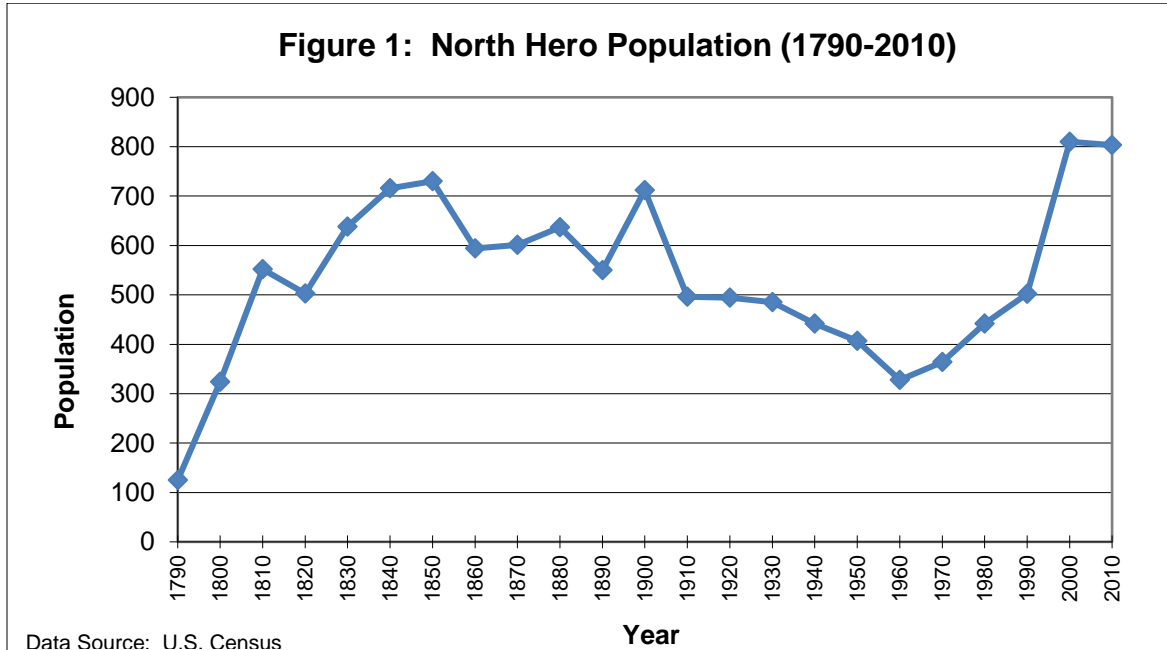
Also important is the maintenance of the Village Center. The character of our Town is defined, in part, by the Village. Although not all businesses are high profile, numerous small offices and enterprises collectively preserve the core of our Town. The dozens of people who work in or come daily to the Village preserve the economic dynamic of our Town. The Post Office and Courthouse, as well as the many small businesses in the village, are important in preserving our small town charm.

The future must rest on the quality that the townspeople of North Hero value strongly such as the quality of community, life, recreation, and the environment.

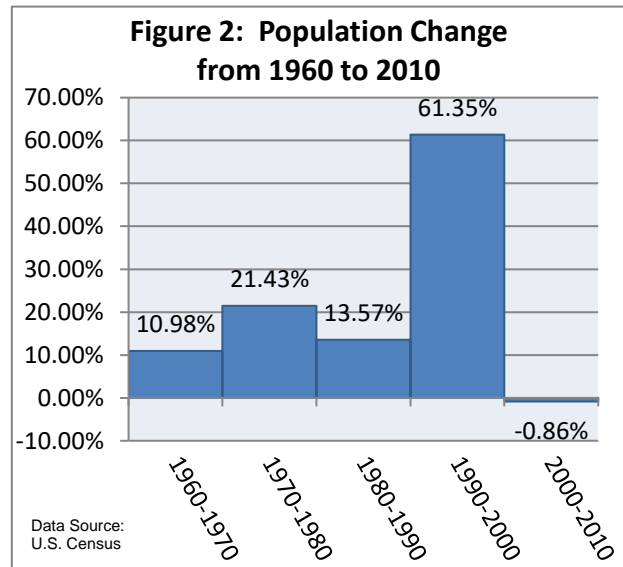
### III. TRENDS AFFECTING NORTH HERO

Many pressures affect North Hero. Planning must involve careful, continual consideration. While the pressures of development and recreation are clear, unanticipated pressures will occur. The Town Plan reflects our general concerns rather than specific ones.

#### A. GROWTH AND DEMOGRAPHICS



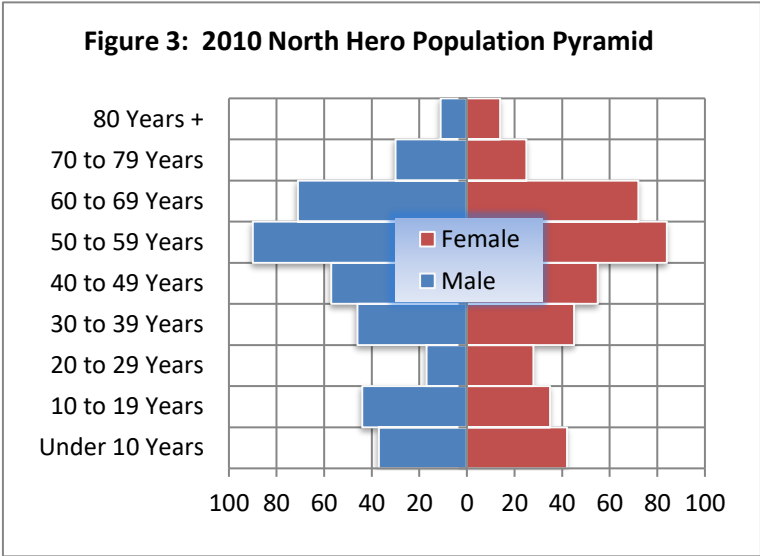
Historic U.S. Census reports show that the population in North Hero was just over 100 residents and growing at the turn of the 18<sup>th</sup> Century when the Census was first taken. It continued to grow until the mid 1800's, after which the town began a period of population decline until 1960 (Figure 1). Beginning in 1960, the Census shows that North Hero again had a growing population through the year 2000 when it reached 810 residents. From 2000 to 2010, the population decreased slightly by 7 people.



The next U.S. Census will be taken in 2020, after which updated population data for North Hero will be available. In the meantime, we have estimates and

projections. The 2013 to 2017 American Community Survey (ACS) estimate shows North Hero at a population of 968, much higher than the 2010 Census figure. The ACS figure is a five year estimate based on a small sample size, so it has a high margin of error. The Vermont Agency of Commerce and Community Development completed 2020 and 2030 population projections based on the 2010 Census figures taking into account migration patterns in the 2000's. These figures show North Hero's population increasing and then decreasing again at 827 in 2020 and 811 in 2030.

The median age in North Hero was 49.7 in 2010, up from 42.9 in 2000 (Figure 3). Recently, most of the growth has been in people in their 50's and 60's. By and large, this segment of the population is not having children. Conversely, the segment of the population of primary childbearing age is decreasing (Table 1).



<b>Table 1</b>			
<b>U.S. Census - North Hero Population Characteristics for year:</b>			
	<b>1990</b>	<b>2000</b>	<b>2010</b>
Total Population	502	810	803
24 years old and below	157	216	173
25 years to 44 years old	172	216	175
45 years to 59 years old	86	223	232
60 years old and above	101	155	223

Over half of North Hero's housing unit stock is made up of seasonal housing units. From 1980 to 2000, the percentage of seasonal housing units decreased, and then remained constant at 59% from 2000 to 2010 (Table 2). This may indicate that the conversion of seasonal units to year-round use is declining. The historic development pattern of small lots and dense seasonal homes along the lakefront presents challenges for year round conversion. Soil conditions in North Hero are often unable to accommodate the required increase in septic system capacity. In



addition, lot sizes are commonly too small to accommodate expansions to small seasonal cottages.

<b>Table 2</b>			
<b>North Hero Housing Unit Statistics</b>			
	<b>1990</b>	<b>2000</b>	<b>2010</b>
Total Housing Units	743	906	966
Owner Occupied YR Housing Units	138 (19%)	283 (31%)	316 (33%)
Renter Occupied YR Housing Units	35 (5%)	50 (6%)	33 (3%)
Seasonal Housing Units	523 (70%)	535 (59%)	573 (59%)
Data Source: U.S. Census			

**B. PLANNING CONCERNS**

North Hero believes that growth should be regulated. To continue to provide the quality of community, the Town must be able to develop and expand services to accommodate new townspeople. Our concerns include:

1. Increased use of services, especially volunteer services such as fire and rescue, town facilities and roads could make provision of these services difficult without proper planning.
2. Unregulated growth could adversely affect Town efforts to protect critical natural resources and the environment.
3. The growing senior population places unique demands for services that can be difficult to provide in the rural, small and somewhat isolated location of North Hero, including public transportation, senior housing, access to health services and senior focused leisure activities.

**C. PLANNING ELEMENTS**

**1. Education and Educational Facilities**

The North Hero Elementary School helps provide for the educational needs of our community. The Town maintains a K-6 elementary school and a pre-school within the North Hero School Building and offers school choice for students in grades 7-12.

The current North Hero Elementary School is utilized year round and has been a focus of education as well as recreation and municipal services to the entire population. The North Hero Town office is located within the school building with an adjoining conference room that provides a meeting place for several municipal boards. The school grounds are open to the public and include a basketball court, soccer field, multiple play structures, community garden and a groomed half mile walking path.

North Hero Elementary is able to offer a wide variety of activities and programs despite its small size through local support, volunteers and a grant funded after-school program. The curriculum is a grade level based, district-wide program coordinated through the Champlain Island Unified Union School District. In addition to the curriculum, the school offers a library, art, music, physical education, special education services, guidance services, counseling services and speech and language services.

The school district and the community work closely together to create a positive relationship. The community utilizes the building for large meetings, voting, community meals, and recreational activities. The school building is a designated distribution point for the Vermont Department of Health in the event of a county wide emergency. The elementary school's current capacity is 125 students, which is sufficient capacity to serve the school population into the future.

<b>Table 3</b>	
<b>Elementary School Population</b>	
Year	Elementary Population
2000-2001	74
2001-2002	65
2002-2003	66
2003-2004	61
2004-2005	75
2005-2006	70
2006-2007	68
2007-2008	48
2008-2009	52
2009-2010	58
2010-2011	59
2011-2012	57
2012-2013	53
2013-2014	53
2014-2015	57
2015-2016	68
2016-2017	57
2017-2018	65
Data Source: VT School Reports	

**2. Library**

The North Hero Library was first voted into existence in 1913 and was housed in different homes for many years. When the Community Hall was built, the Library was housed in the basement and remained there for approximately 40 years. In 1979, the Town voted to appropriate funds to restore the old school house for the Library, where it remains today. With beautiful windows and pressed metal ceiling, this building is a valuable historical building as well as an educational facility. The Library is administered by a Board of Trustees. This board is in charge of managing the use of the building, creating library policy, hiring a librarian, and insuring that library services remain relevant by offering the modern technologies expected in today's society. The library also strives to coordinate programs with the school librarian. The valuable services provided by the Library are essential to the Town.

### 3. Recreational Facilities

Recreation in the Town of North Hero is essential to our wellbeing, our sense of community and our economy. Recreational opportunities support local businesses, tourism, state and town parks and our Island economy. Recreational activities such as hiking, bicycling, boating, as well as summer sports, arts and nature camps, contribute to our personal health and the general cohesiveness of our town.

The Recreation Committee manages recreation programming in North Hero and is funded from the Town of North Hero, grants, and donations. The Town maintains two natural areas, Camp Ingalls, purchased in 1974, and Pelots Point Natural Area, which was deeded as Glebe land as part of the original land grant in 1779. Both were developed for educational and recreational purposes. Camp Ingalls and Butternut Hill are maintained jointly with The Lake Champlain Land Trust, The Nature Conservancy, and the Vermont Agency of Natural Resources. Both of these natural areas are extensive natural preserves; and include six miles of walking trails and nature preservation management activities, and interpretive activities. Pelots Point Natural Area includes 2 miles of wooded walking trails and hunting access from October to December.

There are also four (4) state parks in North Hero: Knight Point State Park, Knight Island, Bow and Arrow State Park and North Hero State Park, although North Hero State Park is not maintained and Bow and Arrow State Park is a small and undeveloped section of the former rail bed which is used as the road to Bow and Arrow Point. Knight Point and North Hero State Parks are commonly used for walking and cross country skiing. Knight Island is accessible only by boat and also features remote camp sites.

The North Hero State Park serves as a valuable recreation opportunity. There are currently limited services at the park. Renewed use of the North Hero State Park is an important planning goal. A joint effort between the Town and the State could address mutual planning goals. The Town has identified the need for access to the lake for swimming, boating and general recreation activities. North Hero does not have a place where Townspeople who do not own beach front can go. With the closing of the Park, the Lake Champlain Paddlers' Trail, established in 1996, also does not have a place accessible to launch or connect with suppliers since the Trail guide lists the North Hero State Park. Additionally, North Hero property owners living on Butler Island do not have public access to get to and from their homes. North Hero State Park has fully developed roads, handicapped access, walking, bicycling, and boating features. The park is an ideal and valuable North Hero resource. Reactivating the North Hero State Park to serve as lake access for townspeople and to promote the recreational economy is a priority.

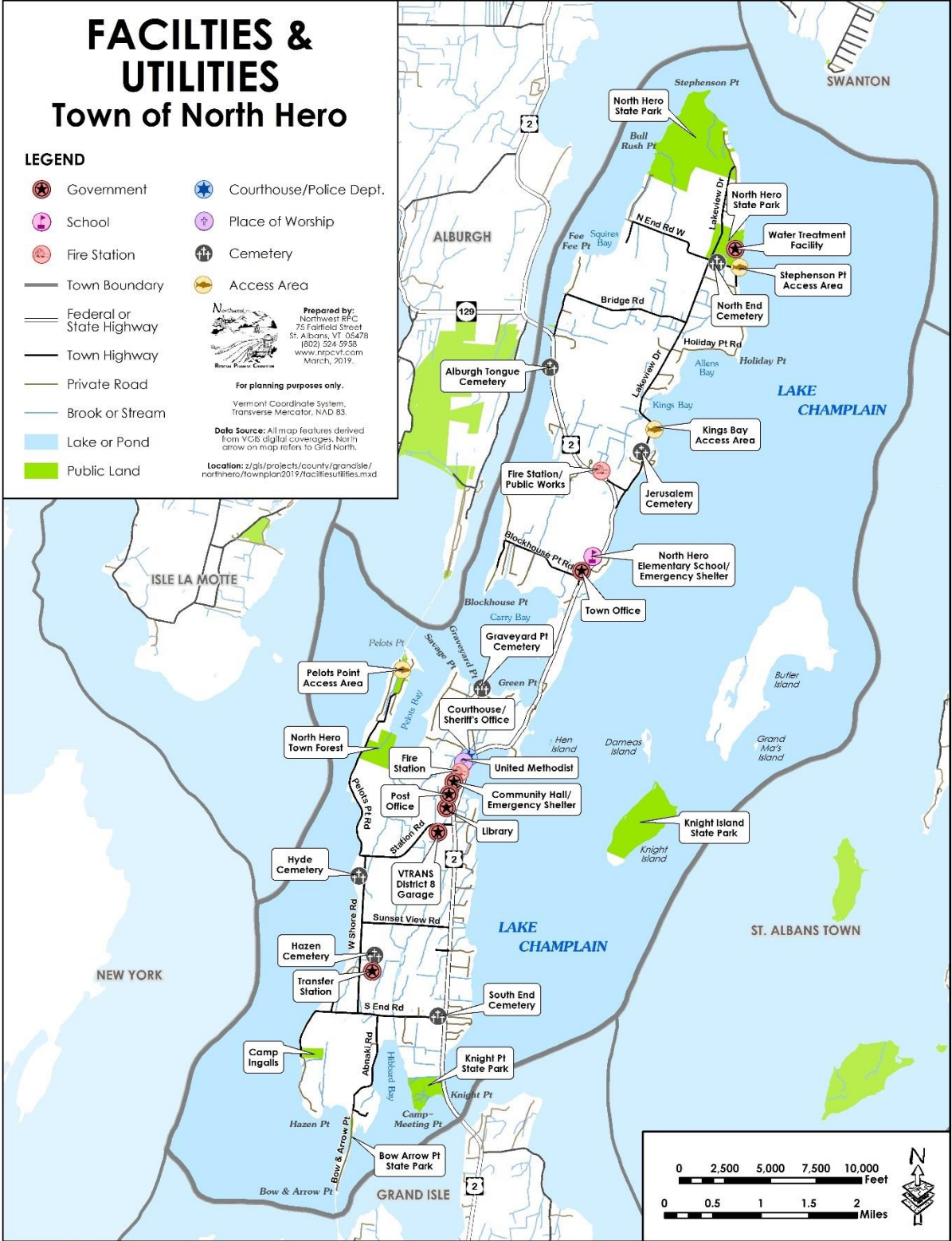
The Town owns the northern section of the rail bed on Pelots Point. Currently this property is undeveloped except for an unmarked walking path. The land has a Town owned beach at the northernmost section. The removal of part of the causeway is being considered as a way to mitigate pollution in Missisquoi Bay. The Town should maintain its interest in this land as part of a future recreational site.

The Recreation Committee also offers extensive recreational programs directed towards children, adults and seniors, including summer camps and school programs, as well as support to other groups including CIDER, Island Arts, the North Hero Historical Society and the North Hero PTYO Halloween Party. The Community Hall is also seen as an important recreational center (see discussion on the Community Hall below for more information).

**4. Town Facilities and Services**

**Community Hall.** The North Hero Historical Society has renovated the Community Hall. Thanks to community action, private donors and several substantial grants, the Hall's original exterior was restored, the roof replaced, and the interior updated with a catering kitchen, a meeting room, office space and handicap accessible restrooms on the lower level. These restrooms are open weekends from May until October for the convenience of travelers. On the upper level, the stage was expanded and acoustical tile installed in the ceiling of the Hall. Stage lights were added and a sound system purchased. The air conditioned space is the only indoor venue of its kind in the Islands. Many local groups and others use the Community Hall for cultural events and private parties bringing large numbers of people to local businesses. The Vermont Community Foundation manages The North Hero Community Hall Fund, a fund left to the Historical Society by a generous benefactor. The amount available for use each year from the fund must be matched by The North Hero Historical Society and used only for capital improvements to the Hall.

**Town Offices.** The North Hero Town Offices are located in the Elementary School. Two excess classrooms are utilized to provide space for the Town Clerk/Treasurer, Listers and Zoning Administrator and room for board meetings and voting. This space is anticipated to be sufficient to serve the needs of the Town for many years.



**Fire and Rescue.** North Hero has a volunteer fire department, providing firefighting and marine rescue services to the town and mutual aid to neighboring towns' fire departments as needed. The department is housed in two facilities, Oman Station located in the village and North Station located about four miles north of the Village.

The North Hero Volunteer Fire Department has been working to build a new fire station. Land at the current site will be used for the project. The North Hero Selectboard has secured land to build, completed design plans and are currently working on a construction cost estimate and reviewing mechanical, plumbing, and electrical designs.

Grand Isle Rescue provides emergency medical services for North Hero and Grand Isle. Grand Isle Rescue operates out of its station in Grand Isle with two fully equipped ambulances and volunteer crew members.

Both Grand Isle Rescue and the North Hero Volunteer Fire Department are indebted to their volunteers for giving their personal time to respond to calls. Both fire and rescue services continually seek to attract new volunteers to ensure adequate staffing to respond to community needs.

**Public Works.** The Public Works facility (North Station) is located four miles north of the Village. It is a dual purpose facility housing town and fire department vehicles while providing meeting and storage space. The facility is inadequate in size and showing its age. The town has established a North Station Renovation/Replacement fund and has a planning committee evaluating the town's future needs.

**Recycling and Waste Transfer Station.** North Hero is a member of the Northwest Vermont Solid Waste District (NWSWD). NWSWD maintains a recycling and waste transfer station located on town owned property (362 West Shore Road). Solid waste, various recyclables and organics are accepted.

**5. Sewage and Water**

Wastewater is treated by on-site septic systems, which are regulated by the State of Vermont Drinking Water and Groundwater Protection Division of the Agency of Natural Resources.

Potable water has been available since 1996 and is supplied by the North Hero Water Treatment Facility. Our treated water originates from Lake Champlain. Some property owners utilize drilled wells, springs and grandfathered lake lines, which are regulated by the State of Vermont Drinking Water and Groundwater Protection Division of the Agency of Natural Resources.

As we all draw water in some fashion from Lake Champlain source protection is vital. The North Hero Water Treatment Facility now serves over 600 properties. New water system users continue to come online at an average of 10 per year. The facility currently has four water filters that can produce 450 gallons per minute. Planning is currently underway for the future addition of a 5<sup>th</sup> filter. Summertime usage continues to increase. For example, the water department services approximately 3,000 users during the summer versus 800 the other parts of the year. The facility has reservoir storage capacity of 150,000 gallons. The Water Board has had engineering completed and has leased land from the State of Vermont in the event a water tower (mid-island) becomes necessary in the future.

**6. Transportation**

**Text Box 1**

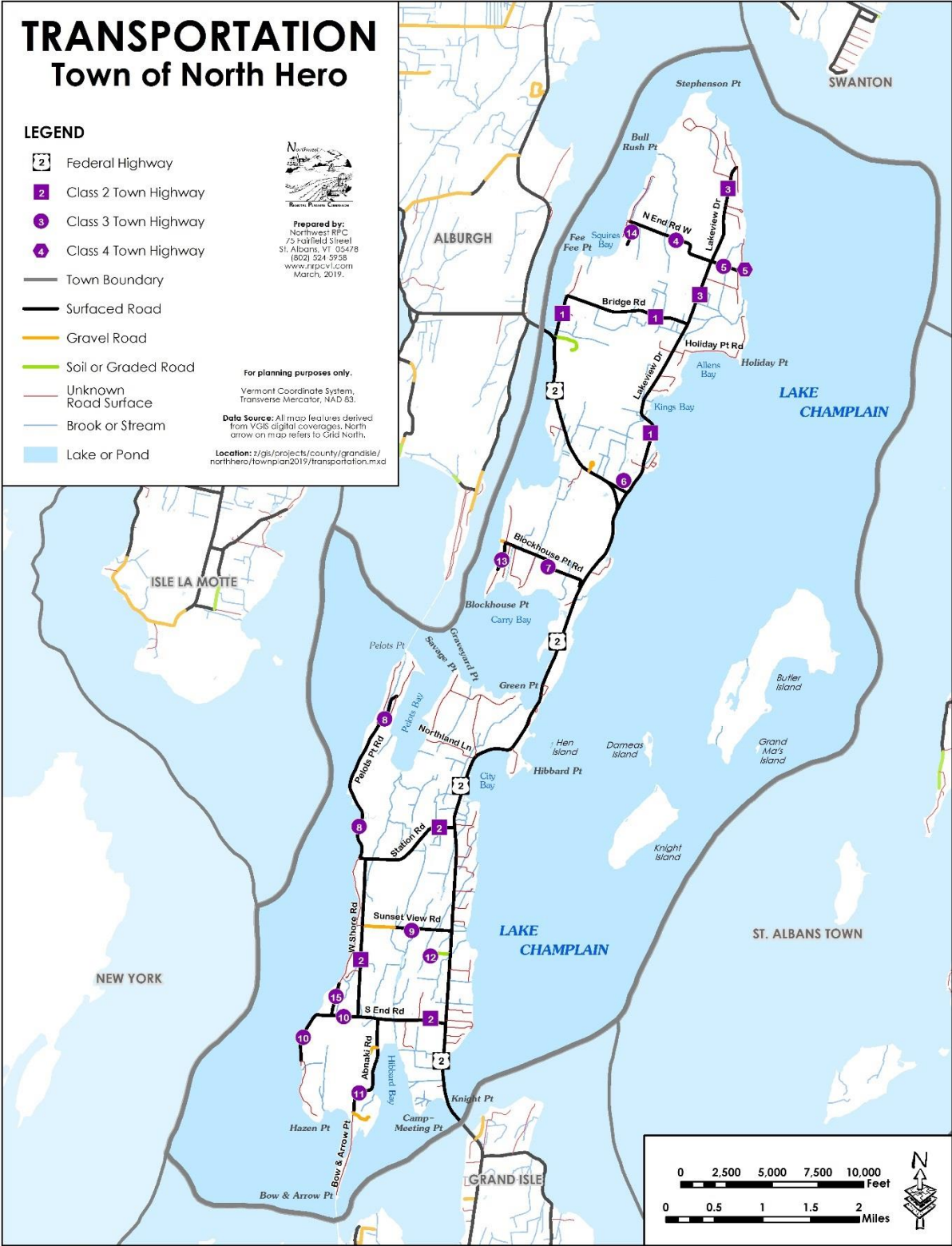
With the abandonment of the Rutland Railroad and the subsequent sale of all railroad property and rights of way, the only means of transportation for the Town of North Hero is by highway.

North Hero has one Federal Highway passing through it. U.S. Route 2 is the north-south route connecting the island by bridges to the Town of Grand Isle in the south and the Town of Alburgh in the north. The 1990 Functional Classification of this approximately ten mile stretch of Route 2 is minor arterial. For geographical reasons, it would be next to impossible to construct any parallel north-south highway to help alleviate the growing traffic congestion on Route 2 and for environmental reasons, highly undesirable. The Town maintains over 18 miles of class 2, 3, and 4 highways throughout the remainder of town (See Transportation Map Pg. 23).

<b><u>North Hero Road Inventory by Class</u></b>	
<b>Town Highways</b>	
Class 1 –	0.00 miles
Class 2 –	9.42 miles
Class 3 –	8.66 miles
Class 4 -	.10 miles
Total Town Highways – 18.08	
<b>Federal and State Highways</b>	
U.S. Route 2 –	9.34
Total Federal & State Highways – 9.34	
Total Highways – 27.42	
<i>VTRANS Policy and Planning Division, as reported February 10, 2015</i>	

**Text Box 2**

<b><u>VTRANS Functional Classifications for Significant Travel Corridor</u></b>	
<b><i>Road</i></b>	<b><i>Functional Classification</i></b>
Route 2	Rural, Minor Arterial
Bridge Road	Rural, Major Collector
Lakeview Drive	Rural, Major Collector





Close to 35% of North Hero workers traveled between 45 and 59 minutes to work and just over 15% traveled between 35 to 44 minutes to work in 2017. According to the 2013-2017 American Community Survey estimates, 11.8% of North Hero workers carpooled.

<b>Table 4</b>	
<b>North Hero Commuter Flow, 2017</b>	
Less than 10 minutes	10.9%
20-24 minutes	6.6%
30-34 minutes	9.0%
Greater than 50 minutes	47.1%
Mean travel time to work	38.5 minutes
Data Source: 2013-2017 ACS Estimates	

This percentage has increased since the addition of a park and ride facility in Grand Isle County, and would likely continue to increase with more access to public transportation in the area. The closest park and ride facility is located on Route 2 in South Hero and features 15 parking spaces. There is currently no bus service that passes through the Islands, except for CIDER, which provides transportation and other services to the elderly and disabled. Passengers can meet up with the St. Albans Link Express at the Exit 17 park and ride for access to Chittenden County or St. Albans.

## 7. The Lake and the Environment

**Lake Champlain.** The lake is the town's main source of drinking water, as well as the town's principal attraction for private, public, and commercial recreation. The lake is also a source of visual and aesthetic enjoyment. As a result, the single most important factor in the quality of life is the protection of the lake. All growth must be compatible with the preservation of lake quality. Water quality is impacted by stormwater and agricultural run-off, the discharge of effluents, and increased recreational use. The scenic beauty of the shorelines is in danger from shoreline erosion and the indiscriminate removal of trees and other natural vegetation. Nuisance non-native weeds are a deterrent to boating, fishing, and swimming that impact our tourism base and must be addressed.

Several efforts are underway to address water quality in Lake Champlain, which will hopefully improve water quality along North Hero's shorelines. The States of Vermont and New York jointly developed a Lake Champlain Phosphorus Total Maximum Daily Load (TMDL) after a multi-year process that included lake modeling analyses, numerous public informational meetings, and responses to public comments. The TMDL was approved by EPA in 2002 and updated in 2010. However, in January 2011 this TMDL was then disapproved by the EPA in response to a lawsuit filed by the Conservation Law Foundation. The EPA initiated the process of developing a new TMDL for Lake Champlain in 2011, in cooperation with the State of Vermont, which is

also being referred to as the Lake Champlain Restoration Plan. A new phosphorous TMDLs for Lake Champlain was then established in 2016.

**Wetlands.** Wetlands are crucial to maintaining and regulating stream and surface water discharge. Wetlands store large quantities of water during periods of high run-off and gradually release water during periods of low-flow.

There are numerous swamps, marshes, and swales in North Hero's wetland systems. A unique vernal pool is found at Camp Ingalls. These systems are extensive and affect every geographical area of North Hero. Wetlands neighbor or are part of every development in North Hero. Some of the swales have been cut off from the lake by roads and other development. Some swamps are isolated by beach material during low water. Land use should address ground and surface hydrology. Flooded wetlands provide essential habitats for spawning, nesting and breeding. Nutrients are trapped in the wetlands, preventing discharge in our bays. Nutrient loads from regional run-off have had major deleterious effects on several bays. Extensive mitigation efforts conducted by residents have been required to maintain lake access from individual properties. Wetlands, especially marshes, also prevent erosion of sensitive shorelands from high water and wave action. The wetlands are particularly important for the lake ecosystem during the spring run-off and the lake at high water. Protection of wetlands continues to be an important element of our planning.

The Vermont Significant Wetland Inventory (VSWI) Map identifies a number of Class 2 Wetlands throughout North Hero (See Critical Areas Map Pg. 28-29). These wetlands are regulated by the Vermont Agency of Natural Resources.

**Wildlife and Fish Habitat.** Diversified wildlife helps maintain the balance of nature and plays a key role in agriculture, private recreation and tourism. In order to maintain wildlife diversity, conservation of necessary habitat must take place. Deeryards and other designated wildlife areas should be avoided when planning new development in order to avoid adverse impacts on the natural balance of the habitat.

Threatened and Endangered Species have been identified in various locations throughout the town and its outlying islands (See Critical Areas Map). A significant number of the identified sites are located within three state parks or within mapped wetlands.

**Agricultural Soils.** Grand Isle County has the highest percentage of prime agricultural soil (approximately 13 percent) of any county in the state. The Natural Resource Conservation Service's most recent soil survey shows that soils in the county have a high natural fertility. Prime agricultural soils have high fertility retention, high organic matter content, and high available moisture content.

**Forestland.** Forests are a renewable resource. Conservation of forestlands is important for wildlife habitat, stream bank and lakeshore erosion protection, and many other benefits. Proper forestry management is important to protect the resource, as wood and wood products are becoming increasingly valuable commodities. Forestry practices are generally exempt from any state or local regulations. Currently, North Hero has not formally identified and/or designated any forestlands.

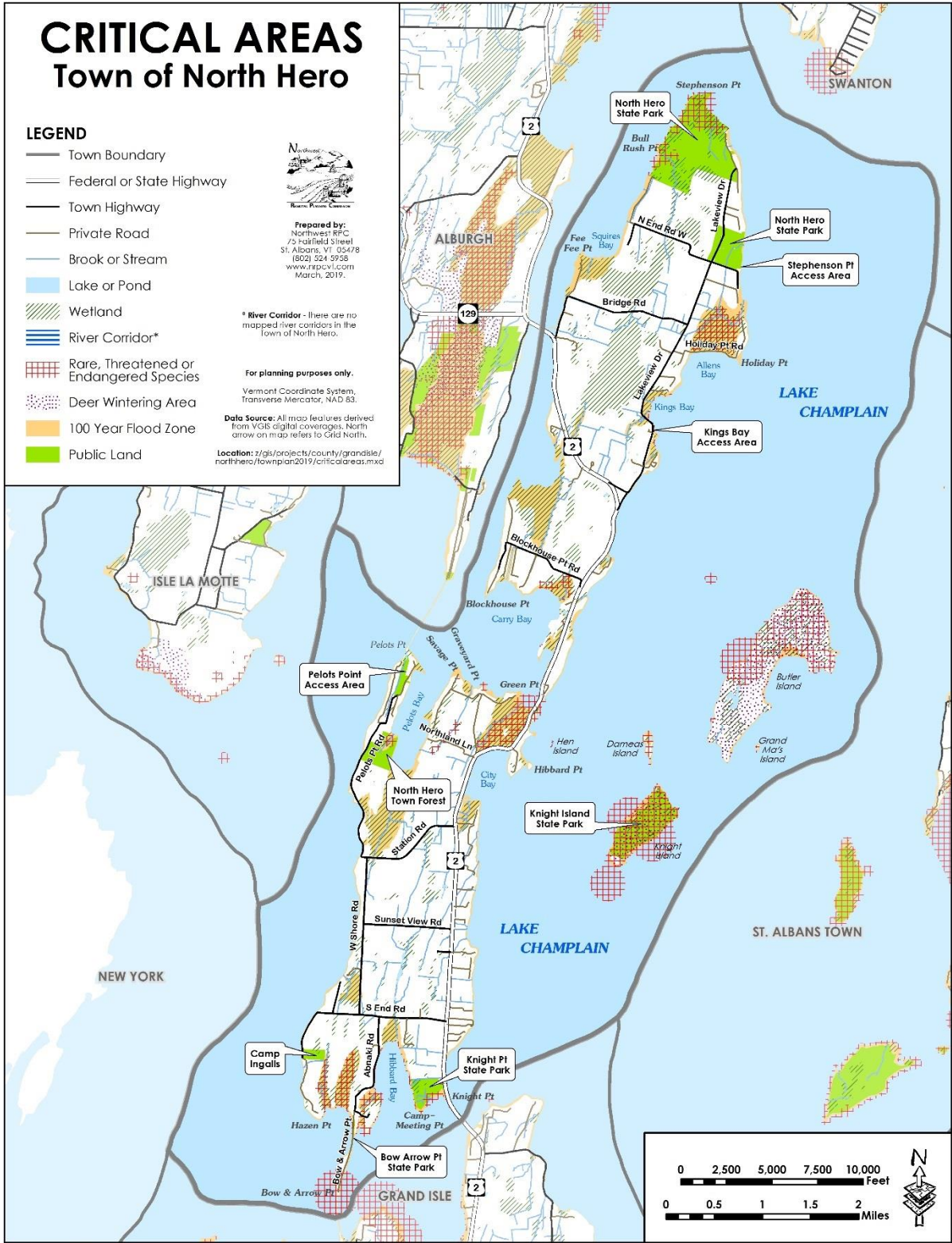
As of January 1, 2018, all municipal plans must address how “Vermont's forestlands should be managed so as to maintain and improve forest blocks and habitat connectors.” Habitat blocks are areas of contiguous forest. North Hero contains four moderately-size forest blocks between 250 and 500 acres in size and one large forest block on Butler Island greater than 500 acres in size. There are additional forest blocks located in other areas of town, but these forest blocks tend to be much smaller and fragmented by roads, development, and agriculture.

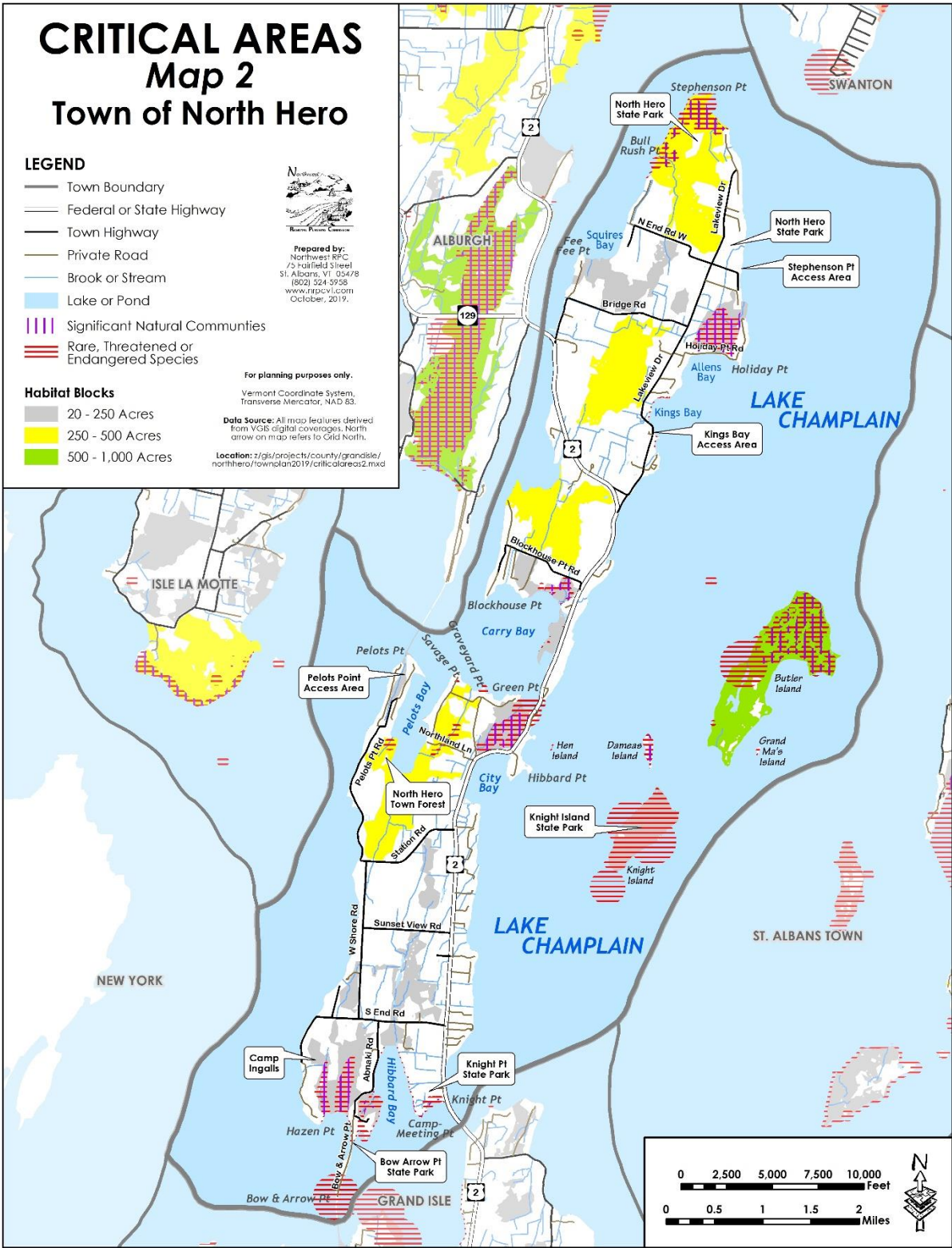
**Natural Areas and Features.** Natural areas and features have educational, scientific, and/or recreational value to present and future residents and visitors to North Hero. These may include wilderness or semi-wilderness areas, areas with unique or unusual ecologies or topographies, unique or unusual formations, and areas or features that possess scenic or recreational value. A number of privately conserved lands, including the swamp at City Bay and the Camp Ingalls Butternut Hill Area are part of our Town's natural environment. Public properties, including Camp Ingalls, Pelots Point Natural Area, Knight Point and Knight Island State Parks, and North Hero State Park are all natural areas that contribute to the island ecosystem, some of which have received statewide designation for important habitats and unique flora.

**Minerals and Other Deposits.** The excavation of minerals and other deposits can be a potential economic benefit to the town. However, they can also be a potential environmental liability. If erosion is not controlled during excavation, and if the landscape is not restored after excavation has ended, the ecology of the surrounding area may be irreparably damaged. Any potential excavation proposals within North Hero will be carefully reviewed according to local bylaws.

**Scenic Views, Vistas, and Roads.** Scenic views and vistas provide aesthetic pleasure to both residents and visitors. They are valuable resources linked to our personal well-being and the Vermont economy and are an irreplaceable part of a community's identity. It is important to locally identify scenic views and vistas. Whenever and wherever possible these views and vistas should be visible from areas where public access is available and utilized, such as roadways, town and state-owned properties, and the shoreline. Development

in or near a scenic view or vista should be in such a way as to preserve and maintain the value of the view or vista.





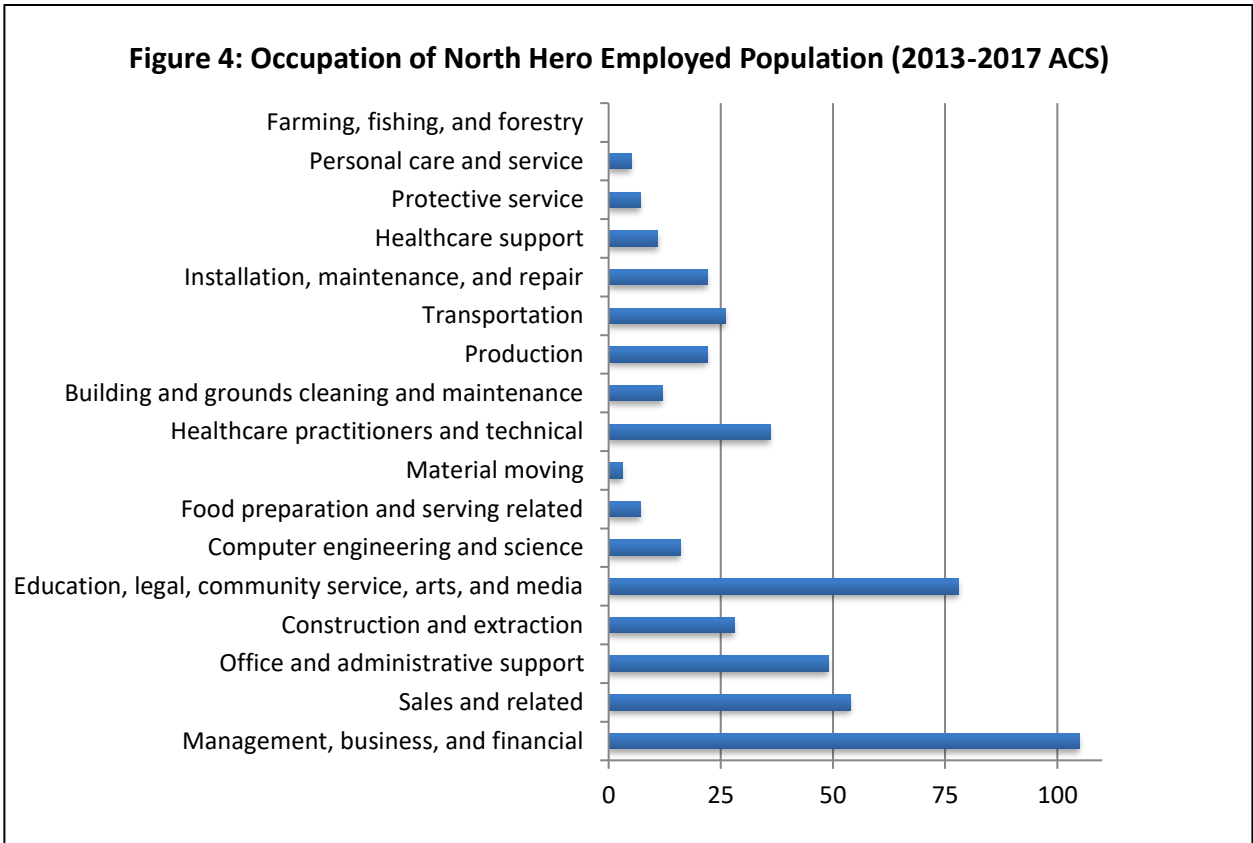
**8. Economy**

**Business and Industry in North Hero.** Agriculture and tourism have long been important components of the economy in North Hero. While North Hero is experiencing a decrease in the number of farms, dairy farming not only remains a stable base for our economy, but also a means of maintaining the open land and rural atmosphere desired by both our recreational visitors and the permanent residents of North Hero. The economics of dairy farming seem to indicate that the decrease in dairy farming will continue, which will have a negative impact on the community and should be studied. A growing number of small farms may become an important agricultural economic factor. According to the 2007 U.S. Census of Agriculture, there were 16 farms in North Hero. Seven of the 16 were between 1 to 49 acres and 8 were between 50 to 999 acres. One farm was listed as 1,000 or more acres. The more recent U.S. Census of Agriculture, released in 2012 and 2017, does not provide information about farms at the town level.

Current trends indicate that tourism is increasing in the Islands. The arts are valuable economic elements of tourism and enhance the cultural community. A number of organizations have been active in these activities, including the North Hero Historical Society, Island Arts, the Champlain Islands Chamber of Commerce, and the North Hero Recreation Committee. Taxable receipts for room sales in North Hero increased by 23% from 2010 to 2017 (Vermont Department of Taxes, 2017). This is significantly higher than the increase in Franklin and Grand Isle Counties as a whole (2.3%).

In 2017, the VT Department of Labor reported 38 private business establishments in North Hero based on the National Association Industry Classification System (Table 5). The majority of businesses in North Hero are small home-based businesses.

<b>Table 5</b>	
<b>Business Establishments in North Hero by Industry</b>	
Private Ownership	38
Construction	8
Other Goods Producing	1
Trade, Transportation, and Utilities	6
Professional and Business Services	10
Leisure and Hospitality	6
Financial Activities	3
Other Services	2
Government	7
Federal	1
State	1
Local	5
<b>Data Source: VT Department of Labor, 2017</b>	



**Employment in North Hero.** Based on the VT Department of Labor in 2017, 481 people were employed out of a workforce of 510. North Hero residents are engaged in a wide range of jobs including agriculture, construction, production, sales, business and professional services, and health occupations. Figure 4 shows the occupations of employed North Hero residents.

**9. Childcare.** Childcare is a strong concern for existing and prospective families with young children, whether it means finding quality services or securing the costs of services. The average cost for center-based care in Vermont is \$240.51 for infants and \$219.96 for preschoolers per week (2017 Vermont Child Care Market Rate Survey, Vermont Department of Children and Families). High quality, affordable childcare is a critical component to supporting a stable workforce.

Many child development experts believe that children often do not have the maturity and self-care skills to be left unsupervised until the age of 12. The 2010 U.S. Census indicates that there are 79 children under the age of 10 currently living in North Hero (data is not available for the under 12 population). According to the Vermont Bright Future Childcare Information System, North Hero currently has no registered childcare homes and one (1) licensed center. North Hero Elementary School also operates North Hero Eagle Care, which is an after-school and summer program for children ages 3 and up. There are a



total of 14 registered childcare centers and homes in Grand Isle County. However, according to Let's Grow Kids, a statewide campaign to improve access to childcare, about 81% of infants and toddlers likely to need care in Grand Isle County in 2016 did not have access to high-quality programs.

Of the 2 childcare options in North Hero, spots are filled with children from adjacent municipalities as well as children from North Hero. In addition, North Hero children fill spots in adjacent communities and Chittenden County locations. Further, data on other childcare options, such as grandparents, siblings, stay at home parents, un-registered childcare homes or other opportunities, and the quality and affordability of existing services is not available. Given these data limitations, it is difficult to assess the availability and quality of childcare in the community.

It is also important to note that the childcare industry can contribute to the local economy by creating jobs and supporting a stable workforce. The accessibility, affordability, and quality of childcare may affect a parent's ability to enter and remain in the workforce and to be a productive employee.

**10. Housing**

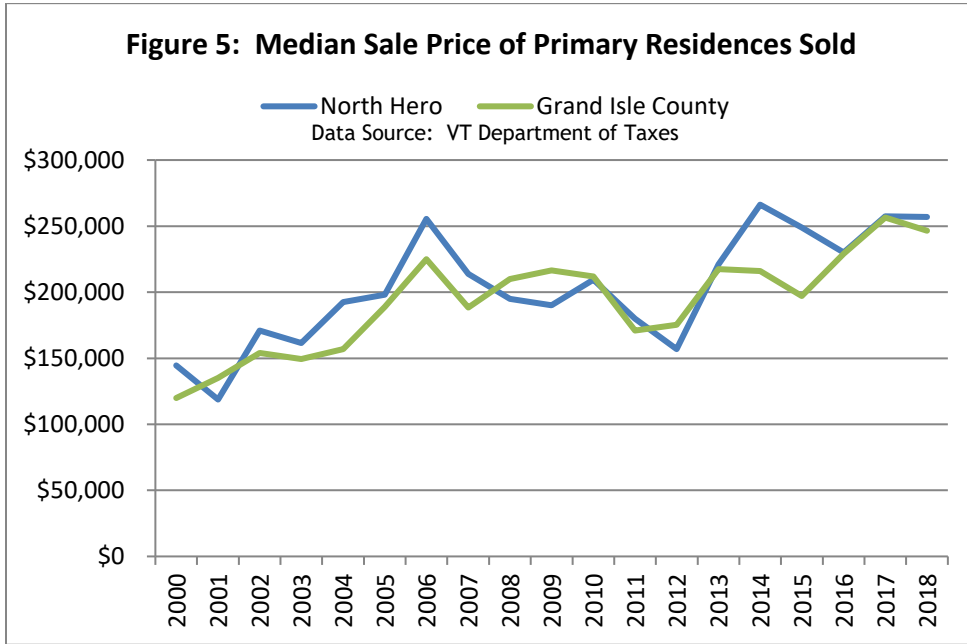
The best available data from the 2010 U.S. Census indicates that there is currently a diversity of homes (for ownership and for rent) of all different sizes in the Town of North Hero to meet the needs of families and nonfamilies of different sizes and types. The 2010 census showed a total of 966 housing units in North Hero. Of these units, 316 were owner-occupied year-round housing, 33 were renter-occupied year-round housing, 573 were seasonal or recreational housing units, and 14 were vacant housing units (see Table 2). While total housing units increased by over 22 percent from 1990 to 2000, growth slowed from 2000 to 2010 with a 7% increase. Seasonal housing units increased by only 2 percent from 1990 to 2000, and then increased by 7% from 2000 to 2010.

The majority of North Hero households are families (70 percent) and the average household size was 2.30 people in 2010 (down from 2.43 in 2000). The largest age-group of Grand Isle's population is from age 50 to 59 (see also Figure 3), which typically includes "empty nesters" who may be ready to downsize to smaller homes or condominiums. In addition, the senior population is increasing and is expected to continue increasing. This larger population of seniors will need a variety of senior housing and assisted living arrangements.

The state has defined an indicator of "affordable housing" in a community as when 80% of the county median or metropolitan statistical area (MSA) median income, if it applies, consumes no more than 30% of a household income. Housing costs include the mortgage payment, taxes, and insurance for owner-

occupied units and rent plus utilities for renter-occupied units. All of Franklin and Grand Isle County have recently been added to the Burlington-South Burlington MSA.

From 2013-2017, the American Community Survey (ACS) determined the median family income in North Hero to be \$89,167 vs. \$65,476 in the Burlington-South Burlington MSA as a whole (ACS 5-Year Estimates.) Low income households are those in which income is less than 80% of the median.



<b>Table 6</b>							
<b>Affordability Gap for Homeownership Costs in North Hero</b>							
		30% of Income Per Month	Taxes & Insurance	Income Available for Housing per Month	5% Down Payment	Maximum Affordable Mortgage	Median Sale Price Primary Residences
Median MSA HH Income	\$65,476	\$1,637	\$677	\$960	\$12,848	\$189,855.74	\$256,950
Low HH (80%)	\$59,938	\$1,498	\$677	\$821	\$12,848	\$160,617	\$256,950
Data Source: Median Household Income (2013-2017 5-year estimate American Community Survey; 2018 median home sale price (Vermont Housing Data); taxes and insurance (NRPC estimate); all other figures computed by NRPC.							

Tables 6 and 7 analyze whether housing in North Hero is affordable using the state’s indicator for affordable housing outlined above. The maximum affordable

mortgage for the median income is more than \$30,000 over the median price of homes sold in North Hero during 2018. Based on this analysis, affordability does not seem to be a major issue in North Hero. Figure 5 above shows how sale prices have been increasing in recent years. Rental housing in North Hero appears to be more affordable for median and low incomes.

<b>Table 7</b>			
<b>Affordability Gap for Rental Costs in North Hero</b>			
	Income Available for Housing per Month	Median Gross Rent (2000)	Rental Affordability Gap
Median MSA HH Income	\$1,637	\$1,141	\$496
Low HH (80%)	\$1,498	\$1,069	\$429
Data Source: U.S. Census, NRPC Calculations			

The Town will take steps to preserve the existing quantity of housing and investigate ways to add to the affordable housing stock considering the following trends and geographic realities:

- a. Lakeshore lots will maintain value and will continue to provide a good tax base. Pressure on lake access will increase.
- b. Land locked lots are available. Although North Hero is some distance from industrial centers and has a small seasonal economy, its demand for residential development is increasing.
- c. All land in North Hero has a limited capacity for on-site wastewater treatment.
- d. Because it is an island, North Hero's development is limited geographically. It has limited but adequate housing needs at the present. However, in view of the limitations to growth discussed in this plan, any large scale construction of housing for speculative development would be harmful to the community by overextending the capabilities of Town services and the environment.
- e. Present trends indicate that as additional seasonal homes are built that many such homes will be converted to year round dwellings.

**11. Emergency Operations Plan and Hazard Mitigation Plan**

North Hero has a Emergency Operations Plan (EOP) to help organize the town in case of an emergency. The EOP contains basic emergency preparedness essentials for responding to local emergencies. It includes critical phone numbers, contact persons, and critical facilities.

North Hero adopted a Hazard Mitigation Plan on March 18, 2019. The plan profiles all potential hazard that may occur in North Hero and identifies

potential way to mitigate the impact of future hazards. The primary hazards profiled in the plan are flooding and winter storms.

## 12. Energy

While many of the decisions regarding energy production are made outside of the town, having reliable and clean sources of energy is critical to supporting a high quality of life in North Hero. North Hero residents can influence energy consumption with methods that range from personal decisions to buy energy efficient products to public policy decisions, such as the development of land use policies that encourage tighter settlement patterns, thereby reducing the amount of energy demanded by the transportation sector.

Today, the Town mainly relies on energy resources produced off the island. The Vermont Electric Cooperative (VEC) provides electric service. Electric power distributed by the VEC originates from several different sources including large hydro (57.5%), nuclear (16.6%), large wind (14%), wood (3%), small hydro (3.6%) and farm methane/solar/net metering (5.4%). A typical monthly residential bill for 500 kWh of power in 2017 was \$96.24, which is higher than equivalent bills for other electric utilities in the state.

In the northern climate of Vermont, a significant amount of energy is used for heating homes and buildings. According to the 2013-2017 American Community Survey, fuel oil and kerosene are the most popular home heating fuels at 48.9% followed by propane at 26.7%.

At the local level, concerns related to energy efficiency, conservation, and the use of renewable energy resources generally fall into four categories: town-owned or town-maintained buildings, utilities, and vehicles; private energy use in residences and businesses; development patterns and the construction and siting of buildings; and energy used for transportation.

The Town of North Hero can take the lead in promoting energy conservation by replacing fixtures and components in public buildings with energy efficient units that can save the municipality money in heating and lighting, while helping to protect the environment. The town can also work with utilities to promote energy conservation programs aimed at residences and businesses, to reduce energy demand, save money, and preserve natural resources.

The Town can also promote energy conservation and efficiency through development controls. Development that is clustered together provides for greater efficiency because fewer miles of road are needed to connect the homes or commercial buildings, school buses and snowplows travel smaller distances, and electric utility lines need not extend as far. In addition, other public services such as fire and ambulance, water, and sewage treatment, should it become a municipal service, are all made more efficient by "well-

planned" new development. Carefully considered placement of a building on a lot adds to the efficiency of any new development by increasing passive solar gain and decreasing heat loss by wind.

Transportation accounts for a significant amount of energy demand, which can be reduced through conservation efforts. Public transportation, carpooling, and encouraging local and home businesses would help reduce transportation related energy consumption, and would promote economic vitality in accordance with state energy goals.

Locally generated power from renewable sources, such as solar, wind, biomass, and methane, can provide cost saving and environmental benefits for Vermont municipalities. The more power produced locally (on a household or community basis), the less dependent communities, and the state as a whole, are on purchasing non-renewable and/or non-locally produced power. This in turn reduces the impact of volatile electric and heating fuel costs on the community and the state as a whole. The Town will continue to investigate and promote alternate energy resources such as wind and solar.

### **13. Flood Resilience**

North Hero lies within the Champlain Islands sub-basin of the Northern Lake Champlain Direct watershed. Several small streams and wetland complexes drain into Lake Champlain. Flooding has been identified as the worst natural hazard within the community. Lake Champlain rises above flood levels in the spring of each year when snow melts and also rises during major summer storm events.

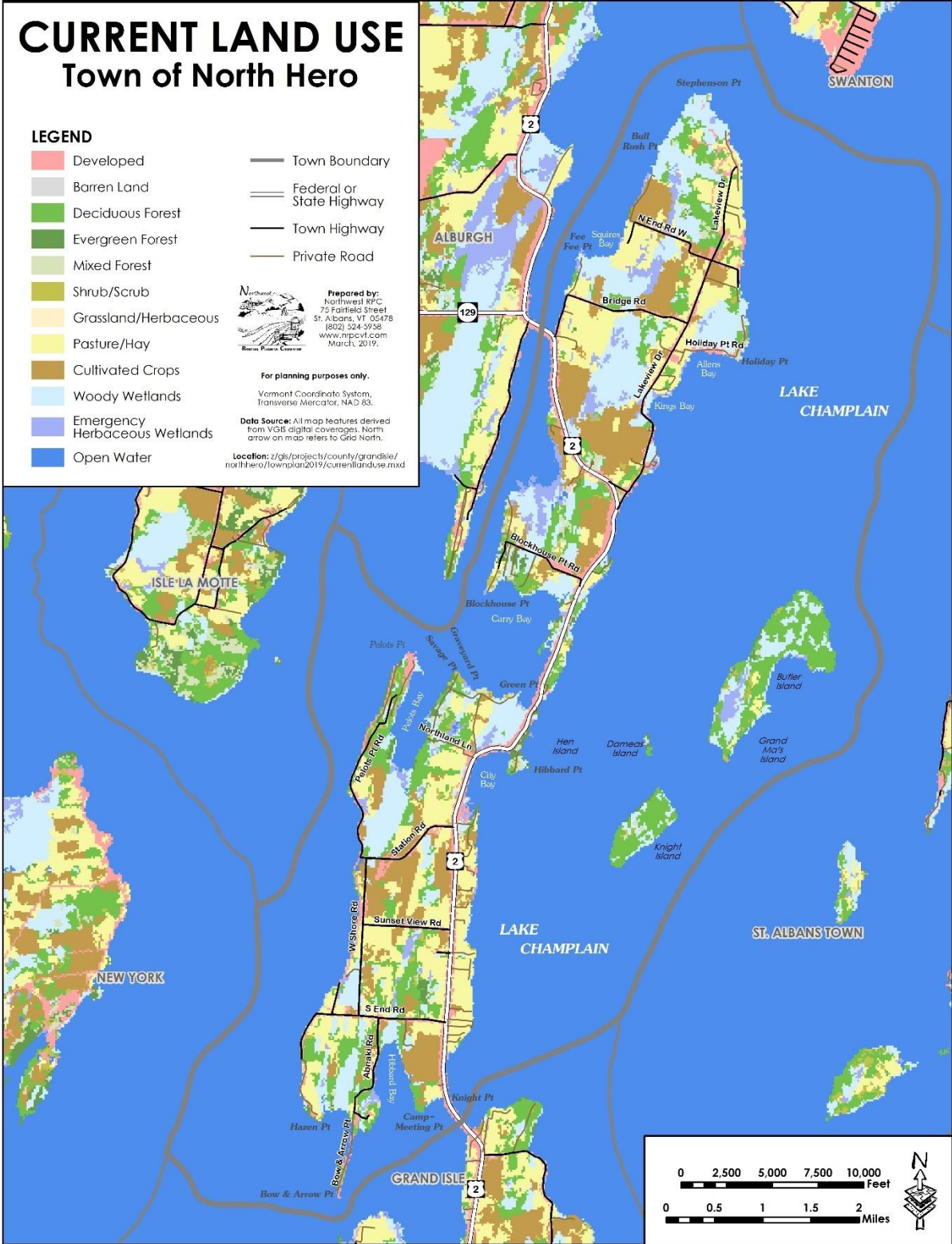
Flooding is a natural occurrence and happens when water rises and inundates the adjacent low-lying land. The Federal Emergency Management Agency (FEMA) defines a floodplain as an area of land adjacent to lakes and streams that is subject to recurring inundation or high water (See Critical Areas Map Pg. 28-29). The base flood elevation for Lake Champlain is 102 feet above sea level. Development within floodplains can have many potentially damaging consequences, as construction may obstruct the natural flow of water or displace soil and raise base flood elevations. A strategy to mitigate potential encroachment and flood loss is to prohibit development below base flood elevation, or set the elevation from which development is prohibited at a level higher than the base flood elevation. Lake and river buffers can also be used as a planning tool to reduce future development in these areas. The state has recently adopted a statewide buffer regulation on all Lakes greater than 10 acres, therefore including Lake Champlain. This will essentially prohibit new clearing and development within 100 feet of the mean water level of the Lake (95.5 feet above sea level) and place limits on clearing and development from 100 to 250 feet from the mean water level.

The Town of North Hero has adopted land use regulations for special flood hazard areas as defined by FEMA on Flood Insurance Rate Maps (FIRMS) in order to protect the health, safety, and welfare of its residents and to allow the community to participate in the National Flood Hazard Insurance Program. It is important to note that the existing FIRMS are dated January 2, 1981 and the Flood Insurance Study was published in December 1979. While this information is the best available, the hydrology that these maps are based on has not been updated since the study in 1979 and therefore does not account for shifts in shoreline or effects of development since 1979 in these areas. The FIRMS were digitized by the Northwest Regional Planning commission in 1999 to assist in planning efforts and are used to determine approximate locations. The digital version is not used for regulatory rulings.

The Agency of Natural Resource has identified River Corridors in Vermont. River Corridors are immediately adjacent to river and stream channels and are prone to erosion. The Agency of Natural Resources has mapped river corridors for all watersheds larger than 2 square miles in size. River corridors for watersheds between 2 square miles and .5 square miles in size are measured as being 50 feet from the top of bank or top of slope of a stream or river.

There are no streams in the Town of North Hero that have watershed of greater than 2 square miles. Therefore, river corridors in North Hero include only a 50 foot setback on streams with a drainage area of over .5 square miles.

River corridor regulations may be adopted by a municipality. The intent of these regulation is to protect stream stability and natural flow. North Hero is planning to adopt local river corridor regulations at some point in the future.



## **IV. THE LAND USE PLAN**

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The following factors have been considered in developing the Town Plan: capacity of the land for development, natural features, transportation, public services, balanced development, preservation of community, protection of existing property, community facilities, existing land use patterns, environmental and aesthetic factors, benefits of development, cost to the community, and limitations of Act 250.

The Town Plan seeks to preserve the rural atmosphere of our Town while allowing for regulated growth. To do this, we should encourage cluster development to concentrate uses and balance residential uses with recreation areas to maintain open space. Each subdivision should be considered on its own merits. Use of PUDs will allow flexibility. The Planning Commission should encourage development that preserves open land.

North Hero has a variety of different kinds of public land. The State of Vermont has land such as Pelots Point and Knight Island, fishing accesses, and the Knight's Point and North Hero state parks. The Planning Commission should encourage access to these facilities to include ensuring access to Knight's Island and supporting public events. If in the future the State withdraws support from these areas, then these items should be revisited.

The following are the designated zoning districts in North Hero: Village District, Rural District, Conservation District, Shorelands District, Off-Islands District and the Flood Hazard Overlay District. The density of development is lower in the Rural District, Shorelands and Off Island Districts, and higher in the Village District. Development is prohibited in the Conservation District. Planned Unit Developments allow for concentrated development in conjunction with preserved open space and may allow for a density bonus in the Village and Rural Districts.

### **A. VILLAGE DISTRICT**

The Village District is located along City Bay extending south to Station Road, west approximately 450 feet from Route 2, and to the north side of Northland Lane. It also extends about 850 feet west along Northland Lane. The Village District is characterized primarily by single and two-family residences, but also includes a mix of commercial, municipal and recreational uses. The density of development is low. The purpose of the Village District is to maintain and further this traditional village character. This assures that the Village will remain an attractive residential community with access to municipal and commercial activities. The possibility of a town green, additional parking off Route 2 and expanding the Village area should be explored.

The Village District has received status as a Vermont Designated Village Center, which affords the area with benefits that further the community's goals for the district. Benefits include priority consideration for state grants, priority site consideration by the State Building and General Services (BGS) when leasing or constructing buildings, and a variety of tax credits available to commercial



property owners in the district. The tax credits provide incentives to improve commercial structures in the district, which will in turn encourage revitalization and reinvestment. Priority consideration for grants allows the Town to take on planning and other implementation activities that support the Village.

**B. RURAL DISTRICT**

The Rural Lands District consists of the balance of land in North Hero that is not designated as Village, Shorelands, Conservation, or Off Islands District. While farming is the primary use in this District, low density residential areas, as well as recreational, commercial and light industrial uses may be approved with careful review by the DRB. Development review shall focus on siting development to maintain the rural character of this District, which consists of open agricultural land with views of Lake Champlain, the Adirondacks and the Green Mountains.

**C. CONSERVATION DISTRICT**

This District contains all those lands within North Hero requiring the most protection and is composed mainly of low swampy sections serving as cover and habitat for many forms of wildlife. These lands include but are not limited to Class 1 and Class 2 wetlands as defined by the Vermont Department of Environmental Conservation (DEC) and designated floodplain. These lands may be subject to regulations administered through the Vermont Agency of Natural Resources (ANR) and the Town's flood hazard regulations. This area is designated as a conservation zone and all development is prohibited. Subdivision is allowed, but no parcel of land shall be created that contains less than ten (10) acres.

**D. SHORELANDS DISTRICT**

This District includes all land from the mean water mark of Lake Champlain (elevation 95.5 feet) inland for a distance of five hundred (500) feet. The purpose of the Shoreland District is to preserve water quality, prevent erosion, and regulate the visual character and aesthetic setting of shorelines. Low-density residential development and carefully sited commercial uses are appropriate in the Shorelands District. Building siting should take into consideration the preservation of views and include appropriate landscaping and screening.

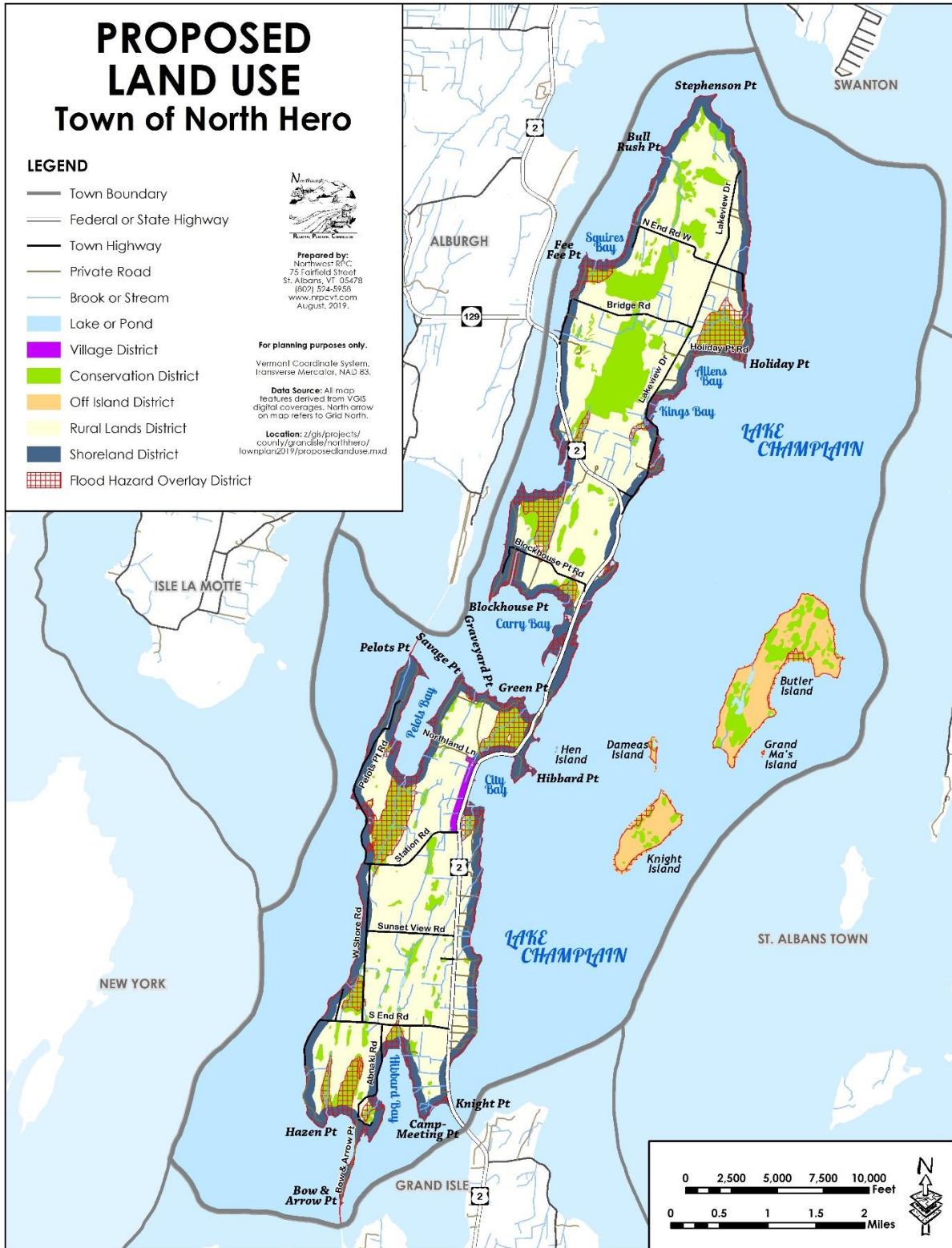
**E. OFF-ISLANDS DISTRICT**

The Off-Islands District includes several small islands that are only accessible by boat, including Butler, Knight, Gull, Hen, Diadama (Dameas) and Grand Ma's. In this district, environmental concerns and the availability of Town services make these areas distinct from other areas.

**F. FLOOD HAZARD OVERLAY DISTRICT**

This District is established to protect the Town's flood hazard areas and consists of the 100-year floodplain as designated by the National Flood Insurance Program. The Overlay District imposes an additional layer of regulations upon the affected lands.

Proposed Land Use



## V. COMPATIBILITY

---

It is important to recognize that municipalities do not exist apart from one another and that land use planning in one community can affect land use in neighboring communities. This Chapter considers the compatibility of proposed land use in this Town Plan with land use in adjacent communities.

North Hero is located in Grand Isle County, bordering Alburgh to the north and Grand Isle to the south. Route 2 is the only road that connects North Hero to other communities. However, North Hero is accessible to many communities via Lake Champlain, including communities in New York and Franklin County. While there are no compatibility issues with the plans of these communities and North Hero's plan, it is important to note the shared responsibility of improving the water quality of Lake Champlain.

The Town of Alburgh adopted its most recent municipal plan in September of 2016. The Plan identifies 7 proposed land use districts including a commercial, high density, shoreland, conservation A, conservation B, low density residential, and industrial district. Alburgh has proposed a shoreland district similar to that in North Hero to regulate development along the shoreline. Alburgh's shoreland and low-density residential districts border North Hero where Route 2 crosses the town line. There are no conflicts in land use between Alburgh's proposed districts and those of North Hero in that area.

The Town of Grand Isle adopted its most recent municipal plan in February of 2017. The Plan identifies 7 proposed land use districts including a village, commercial/light industrial, commercial/recreation/shoreline, residential shoreline, rural residential/agricultural, small off-shore islands, and a flood hazard district. The residential shoreline and rural residential/agricultural districts that surround Route 2 where it crosses into North Hero are compatible with the Rural Lands 2 and Shoreland District in North Hero.

# HELP PLAN SOUTH HERO'S FUTURE

South Hero is working on an update of its Town Plan.  
Your participation is vital to the process!

The updated town plan will help guide the Town's decisions around land use, infrastructure investments, and more. Input from residents will inform the vision & goals of the plan. The goal of this update is to develop a unified vision for the future of South Hero & better address current issues facing the town.

## Key Themes

*This project will include a comprehensive update of all areas of the current South Hero Town Plan. However, special focus will be paid to these key themes.*



Vibrant Villages: South Hero Village & Keeler Bay



Recreation & the Recreation Economy



Living on the Island: Housing & Transportation



Addressing Climate Change & Climate Resilience



Equity & Inclusion

## Project Schedule

Summer 2022: Community Events Held

Fall-Winter 2022: Updated Town Plan Chapters Drafted

Winter-Spring 2023: Planning Commission Reviews Draft Plan

Spring-Summer 2023: Updated Town Plan Adopted

## Want to Learn More?

Go to: [nrpcvt.com/south-hero-town-plan-2023](http://nrpcvt.com/south-hero-town-plan-2023)

... or open your phone's camera app and point it at the QR Code!



# South Hero Recreation Commission Public Surveys

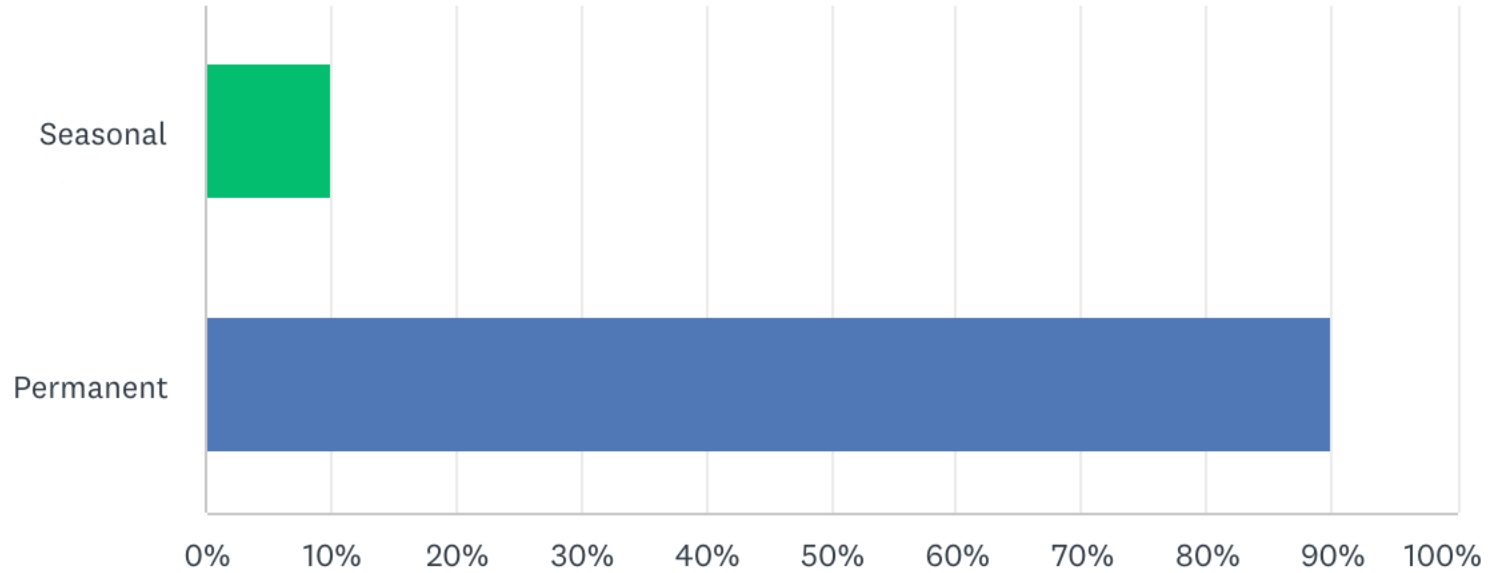
Summary of Results

Second Survey: Q4/2021,

First Survey: 5/28/2021,

# Are you a permanent resident or seasonal resident of South Hero?

Answered: 40 Skipped: 0



ANSWER CHOICES	RESPONSES
Seasonal	10.00% 4
Permanent	90.00% 36
<b>TOTAL</b>	<b>40</b>

Post Covid, what types of activities or events would you most like to have in South Hero? Select your top 3 (only) most desired.

Answered: 40 Skipped: 0

ANSWER CHOICES	RESPONSES
▼ Youth or young adult outdoor events or activities.	37.50% 15
▼ Adult oriented outdoor events or activities.	62.50% 25
▼ Youth or young adult indoor activities.	5.00% 2
▼ Adult oriented indoor events or activities.	32.50% 13
▼ Summer events or activities	50.00% 20
▼ Winter events or activities	47.50% 19
▼ Social gatherings (when allowed)	20.00% 8
▼ Individual or small group activities	12.50% 5
<b>Total Respondents: 40</b>	



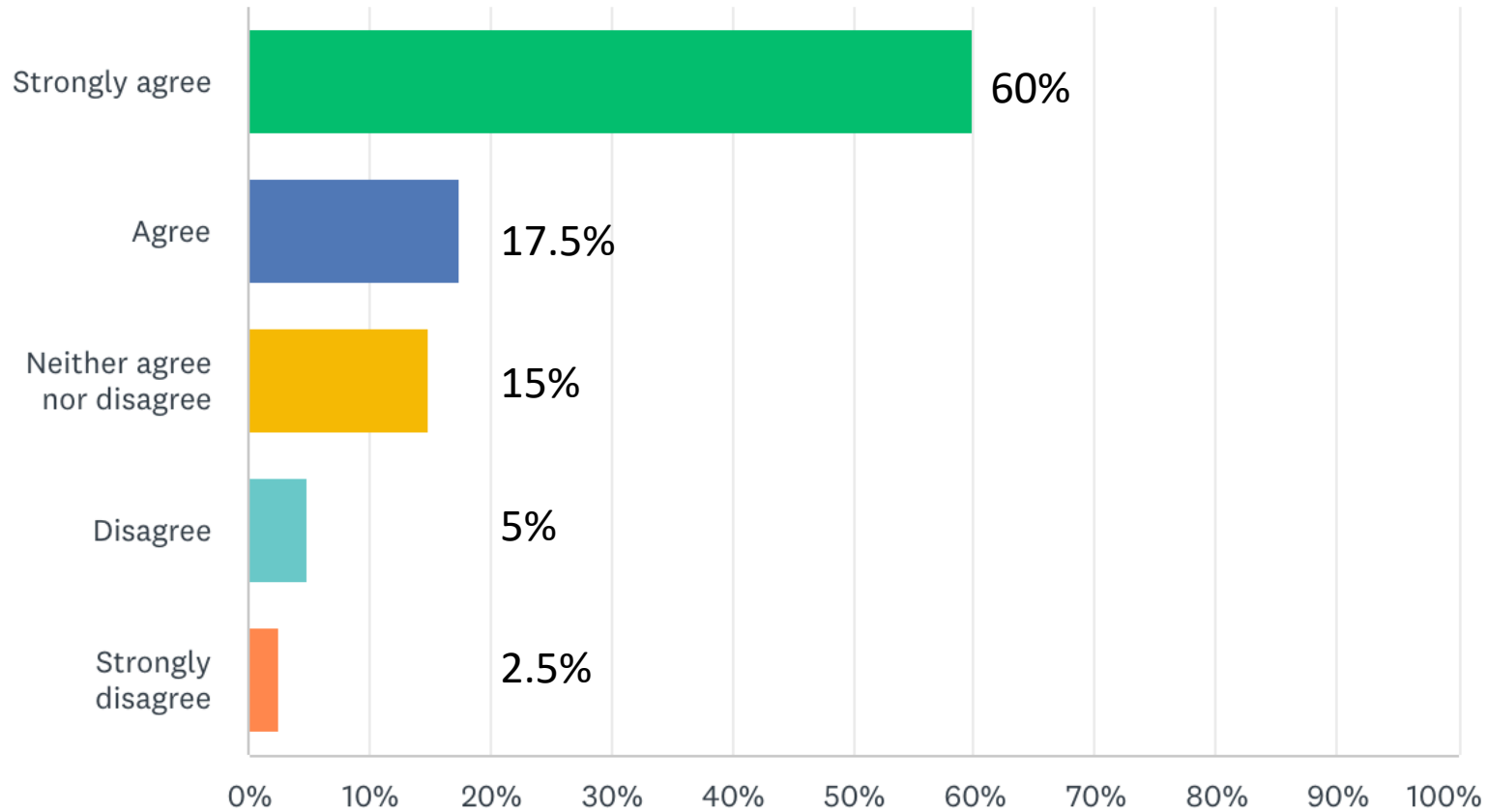
Which of the following would be of interest to you? Please select only the that are of most interest to you (5 limit)

Answered: 40 Skipped: 0

ANSWER CHOICES	RESPONSES
▼ Hiking events	57.50% 23
▼ Biking events	32.50% 13
▼ Swim lessons for you or your children	25.00% 10
▼ Boater safety training	32.50% 13
▼ Fly fishing lessons	25.00% 10
▼ Kayaking lessons	20.00% 8
▼ Ice fishing experience	17.50% 7
▼ Learn to play card games	2.50% 1
▼ Outdoor gardening	37.50% 15
▼ Farm tour	15.00% 6
▼ Micro-brewery tour	20.00% 8
▼ Bingo	10.00% 4
▼ Pictionary, charades, or other games for children	2.50% 1
▼ Pictionary, charades, or other games for families (all ages)	5.00% 2
▼ Square dancing	17.50% 7
▼ Pickleball	42.50% 17
▼ Disc golf	17.50% 7
▼ Self defense classes	15.00% 6
▼ Other (please specify)	<a href="#">Responses</a> 20.00% 8

# Do you feel a town park or recreation area would improve the social and physical well being of the South Hero community?

Answered: 40 Skipped: 0



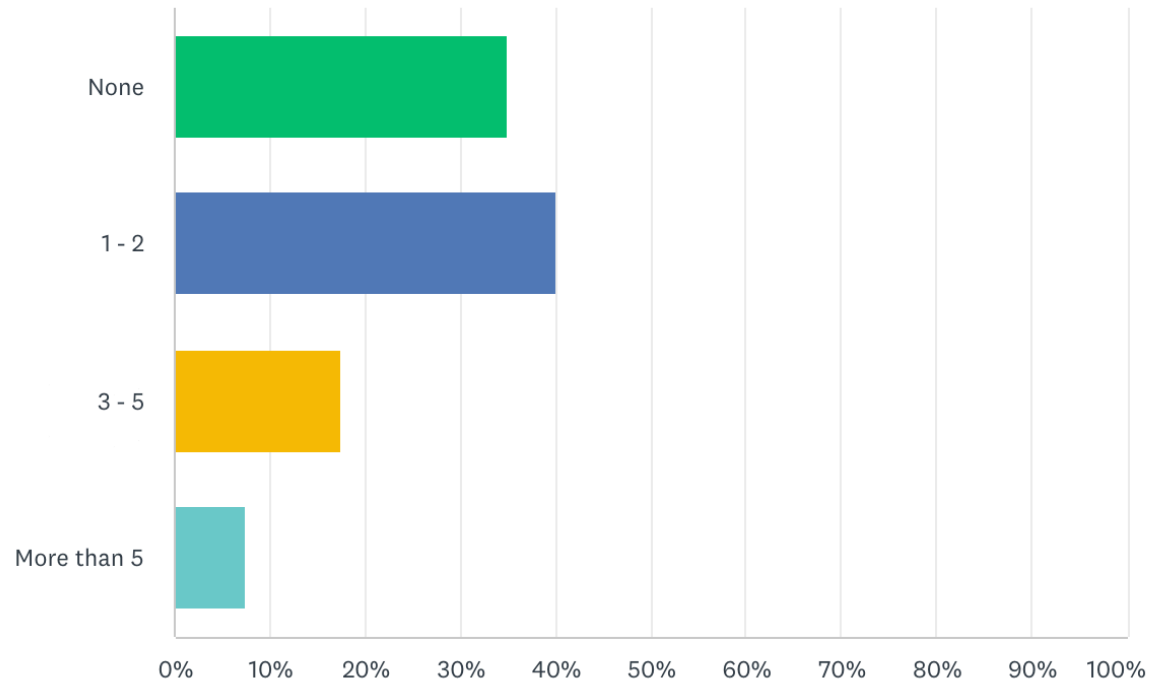
Please check the top three amenities / activities you would envision for a town park. Please check only three from the list.

Answered: 38 Skipped: 2

ANSWER CHOICES	RESPONSES
▼ Basketball courts	26.32% 10
▼ Tennis courts	28.95% 11
▼ Bocce ball courts	23.68% 9
▼ Pickle ball courts	34.21% 13
▼ Picnic area	28.95% 11
▼ Covered pavilion	55.26% 21
▼ Disc golf course	13.16% 5
▼ Kids playground	26.32% 10
▼ Baseball, softball, or kickball field	13.16% 5
▼ Walking trails	42.11% 16
▼ Skateboard park	2.63% 1
▼ Outdoor chess or checkers area	0.00% 0
▼ Fitness course	13.16% 5
<b>Total Respondents: 38</b>	

# Approximately how many South Hero Community events did you participate in over the past year?

Answered: 40 Skipped: 0



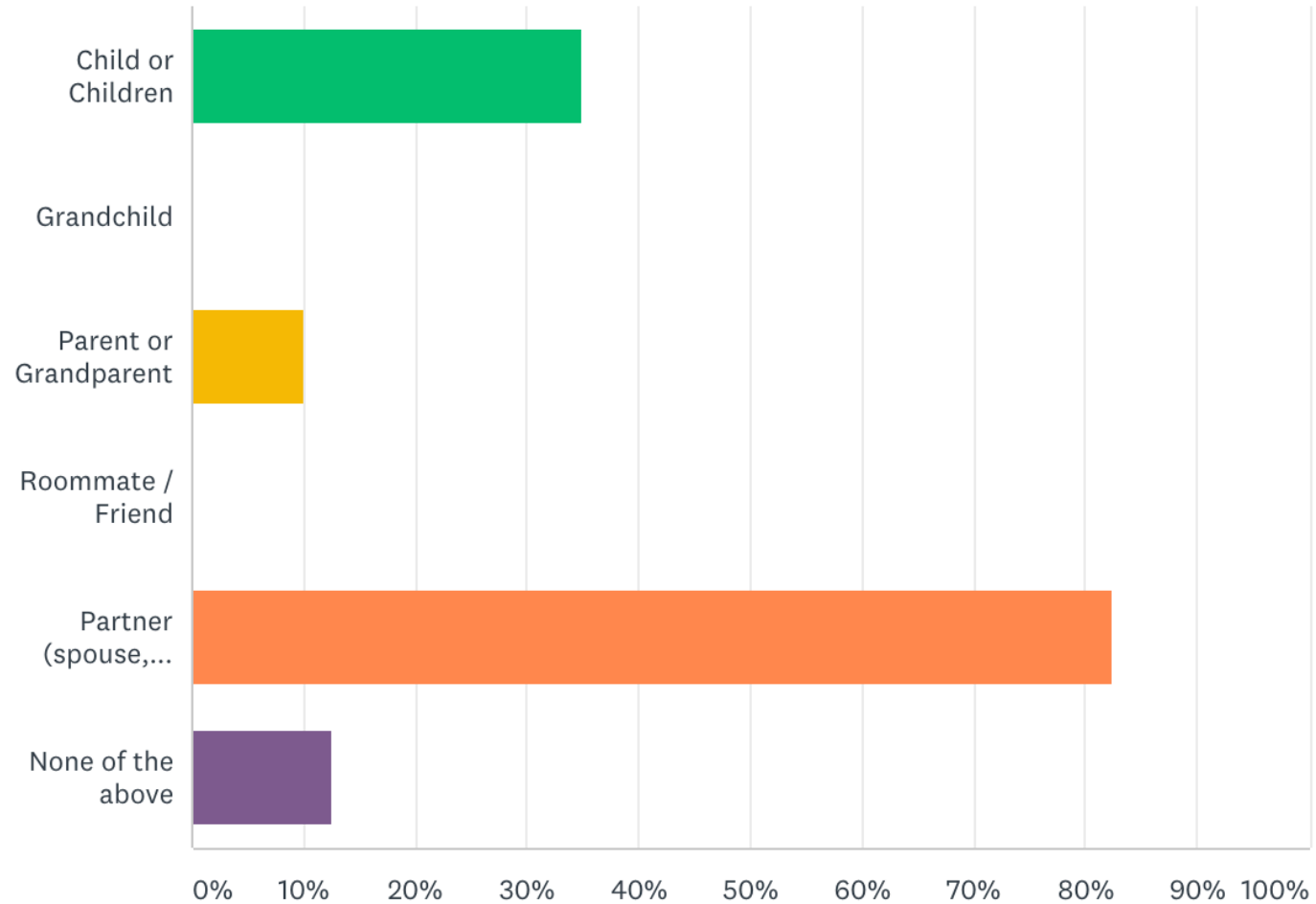
ANSWER CHOICES	RESPONSES
▼ None	35.00% 14
▼ 1 - 2	40.00% 16
▼ 3 - 5	17.50% 7
▼ More than 5	7.50% 3

# South Hero Recreation Commission Survey

Summary of Results  
First Survey: 5/28/2021,

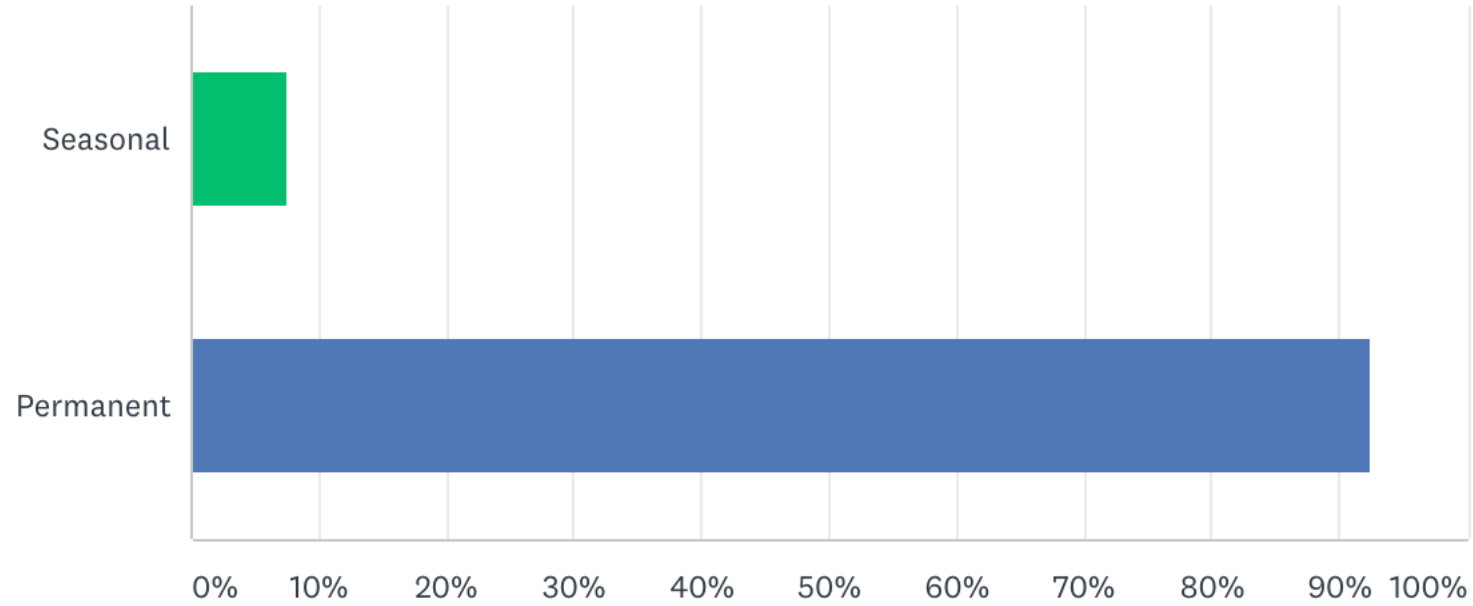
Who, if anyone, currently lives with you in your household? (Please select all that apply.)

Answered: 40 Skipped: 0



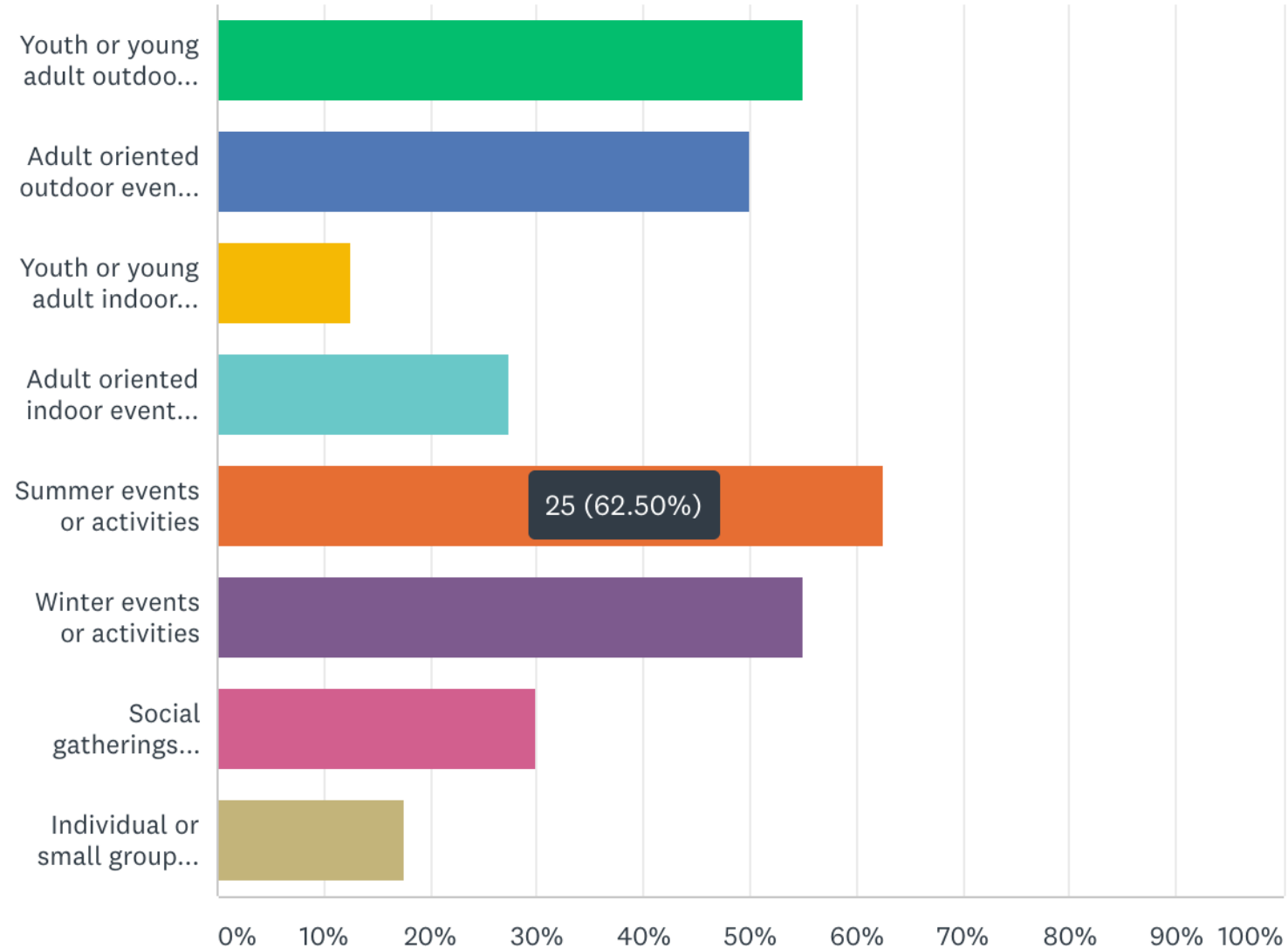
# Are you a permanent resident or seasonal resident of South Hero?

Answered: 40 Skipped: 0



# Post Covid, what types of activities or events would you most like to have in South Hero? Select your top 3 (only) most desired.

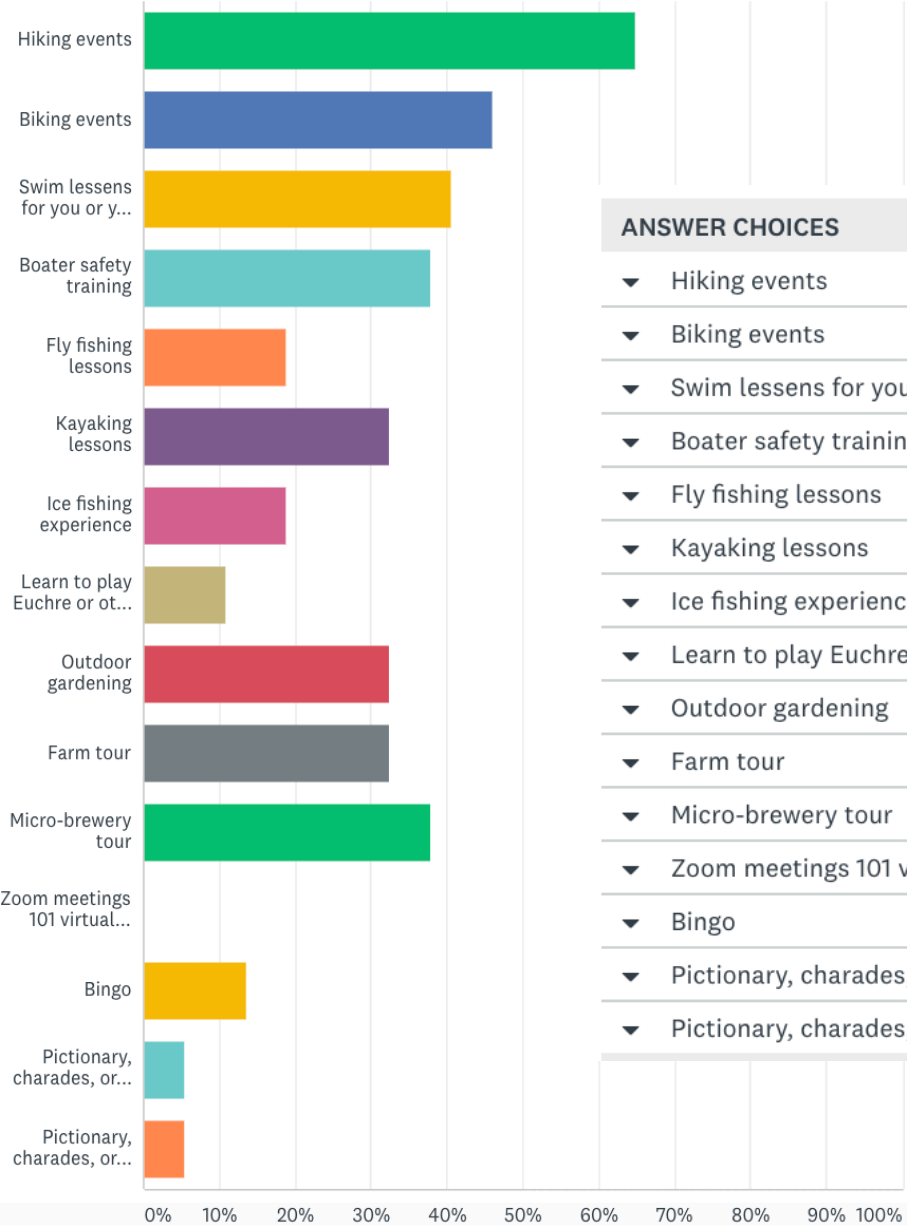
Answered: 40 Skipped: 0





Which of the following would be of interest to you? Please select only those that are of most interest to you (5 limit)

Answered: 37 Skipped: 3



ANSWER CHOICES	RESPONSES
▼ Hiking events	64.86%
▼ Biking events	45.95%
▼ Swim lessons for you or your children	40.54%
▼ Boater safety training	37.84%
▼ Fly fishing lessons	18.92%
▼ Kayaking lessons	32.43%
▼ Ice fishing experience	18.92%
▼ Learn to play Euchre or other card games	10.81%
▼ Outdoor gardening	32.43%
▼ Farm tour	32.43%
▼ Micro-brewery tour	37.84%
▼ Zoom meetings 101 virtual class (how to host and conduct a zoom meeting)	0.00%
▼ Bingo	13.51%
▼ Pictionary, charades, or other games for children	5.41%
▼ Pictionary, charades, or other games for families (all ages)	5.41%

# Do you have an event or activity you'd like to suggest?

Answered: 23 Skipped: 17

RESPONSES (23)

WORD CLOUD

TAGS (0)

🔒 Sentiments: OFF



Filter: by tag ▼

Search responses



Showing **23** responses



Mahjong, jazzercise, chess

5/11/2021 7:10 PM

[View respondent's answers](#)

[Add tags ▼](#)



family tag-team trail walk/run

5/11/2021 1:45 PM

[View respondent's answers](#)

[Add tags ▼](#)



It would be nice to have like a rec. park , so our young children could have there own ball fields or could have like horse shoe pits. Something like Grand Isle has . Instead of always trying to get more walking paths all the time. I think it's time for something different .

5/11/2021 10:55 AM

[View respondent's answers](#)

[Add tags ▼](#)



Bocce courts

5/11/2021 8:42 AM

[View respondent's answers](#)

[Add tags ▼](#)

A race or competitive sporting event. Such as the Great Race that used to happen in St. Albans, Franklin is now doing a race around the lake. Can run, bike, kayak, can be solo or teams competing.

5/10/2021 6:15 AM

[View respondent's answers](#)

[Add tags](#)▼

music

5/9/2021 7:54 AM

[View respondent's answers](#)

[Add tags](#)▼

Town "olympics" Volleyball Pickleball!

5/9/2021 12:05 AM

[View respondent's answers](#)

[Add tags](#)▼

Fitness activities for adults

5/8/2021 9:35 PM

[View respondent's answers](#)

[Add tags](#)▼

Since the majority of lakeshore and open space within the town of South Hero is privately owned, my hope is that the town will work to support a variety of outdoor activities (non-motorized) for families and adults by creating more public access for residents.

5/8/2021 12:45 PM

[View respondent's answers](#)

[Add tags](#)▼

Mountain biking

5/8/2021 7:39 AM

[View respondent's answers](#)

[Add tags](#)▼

Basketball team for combo south Hero/grand isle middle schoolers

5/8/2021 7:36 AM

[View respondent's answers](#)

[Add tags](#)▼

4th of July parade

5/8/2021 7:11 AM

[View respondent's answers](#)[Add tags](#)▼ Festivals or celebrations with entertainers and activities for all ages, including young children

5/8/2021 6:18 AM

[View respondent's answers](#)[Add tags](#)▼ French club/conversation

5/8/2021 1:57 AM

[View respondent's answers](#)[Add tags](#)▼ Family activities. Picnic with music. Parade. Outdoor movie night.

5/7/2021 9:26 PM

[View respondent's answers](#)[Add tags](#)▼ group walks, would love this town to have its own park with pickleball, winter group hikes, town picnics, bird walks that can accommodate more people, boat trips for those of us who don't have boats. We could pay for an hour bike trip, Kayak groups, winter indoor activities - learn to crochet. The Land Trust is doing an awesome job on talks.

5/7/2021 9:20 PM

[View respondent's answers](#)[Add tags](#)▼ Tuesday Night Volleyball

5/7/2021 8:43 PM

[View respondent's answers](#)[Add tags](#)▼

Swimming lessons

5/7/2021 8:31 PM

[View respondent's answers](#)

[Add tags](#) ▼

Nature walks on rec and Land Trust trails for learning about plants/birds Basic bike maintenance/flat tire repair ( perhaps with Local Motion Nature photography outdoors with indoor classes on photo editing Promote learning in person or zoom perhaps at Snow Farm or library about hiking trails throughout VT to increase physical activity for individuals and families

5/7/2021 8:15 PM

[View respondent's answers](#)

[Add tags](#) ▼

sledding, volleyball

5/7/2021 8:11 PM

[View respondent's answers](#)

[Add tags](#) ▼

Please help the town get a non-school play yard. The school play equipment is not user friendly for at home parents who look for day time exercise for our children. Please stop putting in all these trails and focus on the youth besides swim lessons. We need a town park that gives our youth a safe place to play and offers a place for parents to gather besides the over crowded beach and the school.

Adult league pickup sports

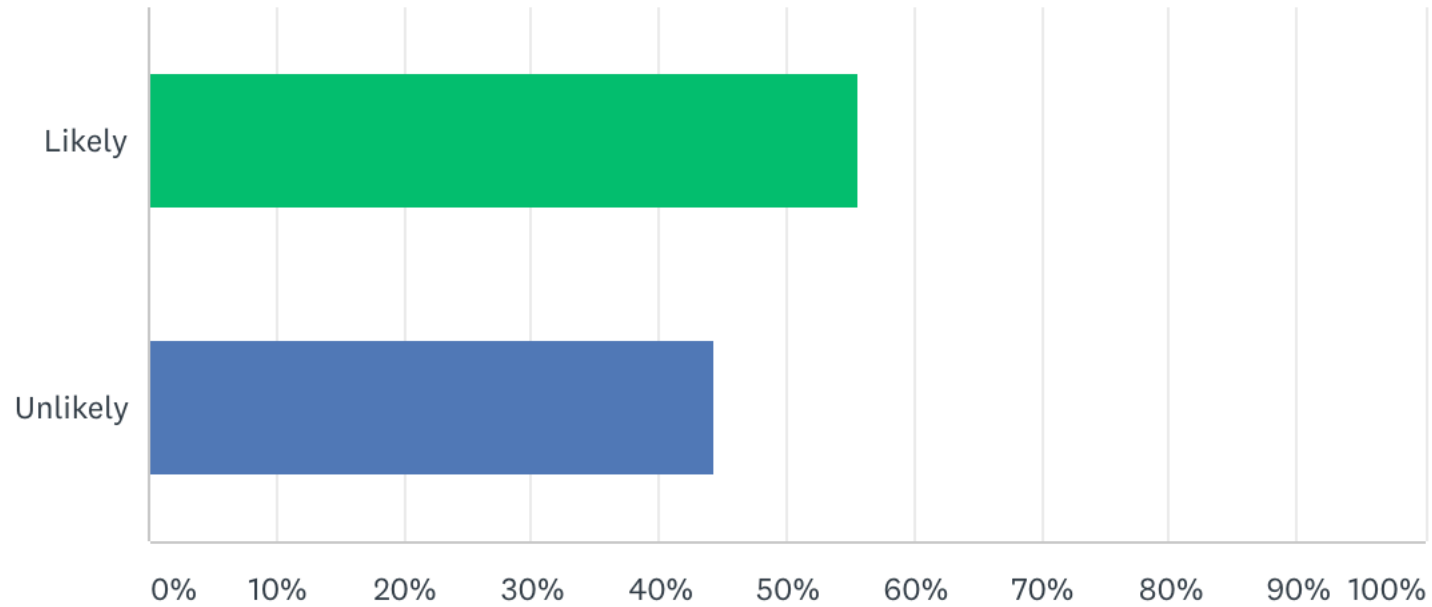
5/7/2021 6:54 PM

[View respondent's answers](#)

[Add tags](#) ▼

# Would you be interested in volunteering for any of the above activities or events?

Answered: 36 Skipped: 4

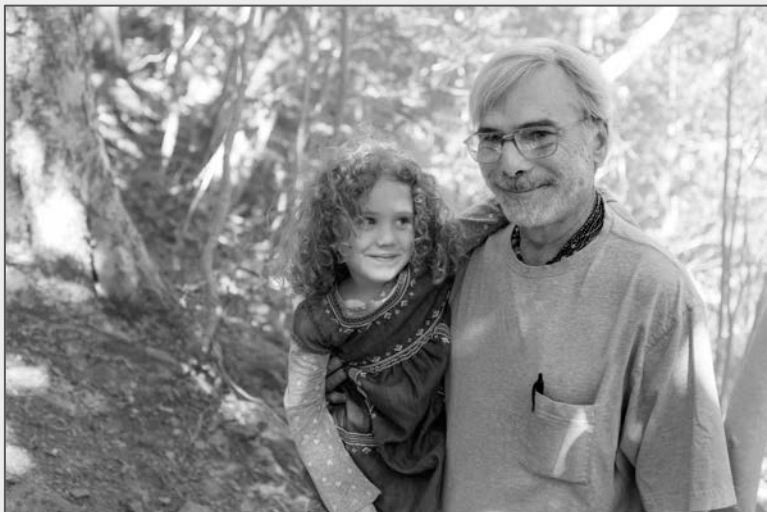


# Fairfax Town Plan 2018 - 2026



Adopted by the Fairfax Selectboard on  
September 24, 2018

### Special Dedication



Mark Hunziker has dedicated over 15 years to planning and volunteering in the Town of Fairfax. The Planning Commission wants to thank Mark for the many volunteer hours he has spent over the years utilizing his editing expertise and knowledge of all things Fairfax. Your positive impact on our community will always be appreciated and we wish you the best in your future endeavors.

### Acknowledgements

Prepared by the Fairfax Planning Commission:

Greg Heyer, Chairman

Richard Wimble

Mark Hunziker

Mark Kane

Martha Varney

Many thanks to the following for their time and assistance in preparing this Plan:

Amanda Holland, The Northwest Regional Planning Commission,

Amber Soter, Zoning Administrator and Planning Coordinator, and

Darla Heyer, for her amazing treats that fuel the meetings

Revision and update of the Fairfax Town Plan was funded the Town of Fairfax and technical assistance by the Northwest Regional Planning Commission



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## Section 1: Planning with a Purpose

Planning is a means of preparing for the future in order to overcome problems, meet opportunities, and achieve community goals. In response to changes in the community, problems must be addressed by comprehensive forethought to ensure that future decisions will provide long-term solutions rather than stopgap measures. Since communities exist primarily for the health and enjoyment of those who live in them, it follows that the nature, location, and timing of any future development should be determined by the people of Fairfax rather than left solely to chance.

### What's In the Plan?

The plan for the Town of Fairfax must consider many inter-related factors. It is helpful to understand Fairfax's history and traditions to give a perspective for considering our present and our future. Present trends and their likely future impact must be analyzed. These components plus knowledge of the natural resource limitations and suitability for various uses provide the basis for determining what is possible and what may be desirable in our future. To begin, broad public goals should be stated. Consideration of these in light of Fairfax's past and present enables specific policies and land use, transportation, and recreation plans to be developed.

This document is drafted to comply with Section 4382 of Title 24, Chapter 117, Vermont Statutes Annotated, which outlines the 12 required plan components. They are, briefly:

1. A statement of growth related objectives, policies, and programs;
2. A land use plan;
3. A transportation plan;

4. A utility and facility plan;
5. A statement of policies on the preservation of rare and irreplaceable natural areas, scenic, and historic features and resources;
6. An educational facilities plan;
7. A recommended program for the implementation of the plan objectives;
8. A statement indicating plan compatibility with plans and trends in adjacent municipalities, the region, and state;
9. An energy plan;
10. A housing element;
11. An economic development element; and
12. A flood resilience plan.

State law requires that municipal plans be updated and readopted every eight years to remain in effect; prior to July 1, 2015 plans were required to be updated every five years. Once adopted, the comprehensive plan allows the Town to exercise its authority with regard to the course of its future growth and development. It forms the basis for policy implementation at the local level and permits greater participation in regional and state planning efforts and project review (e.g. Act 250). Public and private interests are made aware of the desires of the Town through stated goals and policies.

A Plan can also serve as an important function in the evaluation of major development under Vermont's Land Use and Development Law, Act 250.

### Structure of the Town Plan

This plan is split into sections and each major topic area has a series of goals, policies and actions. Goals express broad, long-range community aspirations that intend to show

what the town will strive for over the life of this plan. Policies express statements of the Town’s intent with regards to specific issues or topics. Actions are intended to be “SMART”—specific, measurable, actionable, relevant and time-bound—to form a to-do list for the town and its boards and commissions. This list can be found in Section 2, the Implementation Section of this plan. Appendix 1 is the Fairfax Enhanced Energy Plan enabled per 24 V.S.A. §4352.

There are a number of documents incorporated by reference into this plan including:

- ❖ **Fairfax Community Data Profile**, which includes the supporting data and information about the past and present town trends in more depth than is covered in the Town Plan. This profile is incorporated by reference so that it can be separately updated and maintained.
- ❖ **Town of Fairfax Historical Record**
- ❖ **2017 Fairfax Town Survey Results**

These documents will be available by request and posted on the Planning Commission’s section of the Town website.

### **Role of the Planning Commission**

It is the charge of the Fairfax Planning Commission to prepare and update a comprehensive Town Plan. The Fairfax Planning Commission has a responsible role in all phases of the planning process. This role does not end with the adoption by the Selectboard of a comprehensive plan, but continues in the following areas:

- Plan implementation, which may include the preparation of appropriate

regulations (e.g., zoning and or subdivision regulations) and capital programming to direct the course of future growth and development;

- Preparation of further studies to identify and plan for specific issues that may arise; and
- Regular review and revision of the Plan, Development Regulations, and programs to ensure that they reflect changing conditions and requirements.

### **The Planning Process**

The Town of Fairfax is engaged in a planning process to encourage the appropriate development of land, facilities, and services located within the Town in a manner that will promote the health, safety, and general welfare of its residents. The Fairfax Town Plan provides a framework for the achievement of recognized community goals and policies, while the planning process serves to coordinate public and private actions with these goals and policies.

### **Citizen Participation**

Citizen participation is important in all levels of the planning process. Opportunities for citizen involvement throughout the Town Plan update process as well as during projects that implement goals and policies of the Plan have been assured through diverse initiatives (see inset Citizen Participation). These efforts are intended to foster the broadest level of public participation possible, and to utilize the planning process as a vehicle for exercising an inclusive, community-wide vision for the future of Fairfax.

### **Citizen Participation: A History of Involvement**

Citizen input has been utilized in formulating and implementing the Town Plan since the adoption of the first Plan in 1984.

**1971** The first meeting of the Fairfax Planning Commission was held March 22, 1971.

**1984** The first Town Plan was adopted.

**1990** A community survey was mailed to all postal patrons in the Town of Fairfax. The survey received 395 responses. Questions were focused on identifying community needs and concerns, and on defining areas which are most important to protect from future development.

**1991-95** Citizen committees were developed to formulate goals, objectives, and policies regarding the future of the Town. Focus areas included recreation; business and commerce; housing; historical and cultural resources; agriculture and natural resources; and roads. Reports from each group were submitted to the Planning Commission for further action.

**1997** A follow-up survey similar to that of 1990 was distributed to Fairfax residents. Results were tabulated and compared to results from 1990 to gauge similarities and changes in citizen ideas and concerns.

**2002-03** Citizen focus groups were formed according to geography, to stimulate discussion and receive input. The Planning Commission coordinated ten separate meetings through late 2002 into early 2003.

**2007-08** A community survey was mailed to all postal patrons in the Town of Fairfax. The survey received a 19% response rate. The survey asked questions about the rate and pattern of growth in the community, important community issues, and the quality of town services.

**2012-2013** The Village Vision Steering Committee held four public informational events to inform community members about the on-going project and to provide an opportunity for residents to identify opportunities, express concerns and foster open dialogue.

This Committee also provided input to a long-term vision for a network of bicycle and walking facilities in and around the Village that would maximize non-motorized mobility and conveniently link the Village with the rest of the Town.

**2017** A booth during the Fourth of July celebrations displayed a series of posters to kick off public outreach on the Plan update. The posters introduced themes the Town will be addressing such as renewable energy, continued population growth, and pedestrian connectivity.

A community survey was distributed in property tax mailing (1850 recipients) and on social media; 258 surveys were completed.

## Overall Community Goals

Although specific goals, policies, and implementation strategies are included within each section, several broad statements may be made regarding the future of Fairfax in the focus areas described. These are included below as overall community goals.

1. To accomplish the goals, policies, and implementation strategies set forth by the Town of Fairfax Plan in compliance with all applicable state and federal regulations, rules and standards.
2. To develop, maintain and implement any plans or studies as necessary to achieve the goals and policies set forth by the Town of Fairfax Plan.
3. To preserve the natural, cultural, and historic features and activities which define the rural character and scenic beauty of Fairfax.
4. To promote safe and healthful housing for all segments of the population.
5. To maintain and enhance recreational opportunities for all residents.
6. To insure the provision of efficient, environmentally sound public utilities.
7. To build and maintain a strong and diverse local economy, encourage the efficient use of public funds, and to maintain a sound fiscal balance.
8. To provide broad access to quality educational and vocational services which respond to the needs of a growing community.
9. To promote the efficient use of energy and encourage the development of renewable energy resources.
10. To focus future development toward areas most suitable for that purpose, and to promote planned development which does not exceed the physical capability of the land to support it.
11. To ensure that future growth, including commercial and industrial development, is in harmony with the traditional pattern and scale of existing development, and to promote complimentary development patterns of open space and concentrated growth in traditional, mixed use areas.
12. To provide for safe, convenient, economic and energy efficient transportation systems that respect the natural environment and utilize a variety of transit modes, including bicycle and pedestrian travel wherever existing or desired future development densities would support it.

## Section 2: Achieving the Vision

*“Even if you’re on the right track, you’ll get run over if you just sit there.”*

*-- Will Rogers*

### Implementing the Plan

The implementation of the goals and policies of this Town Plan falls into two general categories: regulatory and non-regulatory options. Regulatory options consist of Development Regulations and Town Ordinances that further the goals and policies in the Plan. Non-regulatory implementation options include, but are not limited to, capital planning, special studies, and advisory commissions.

### Regulatory Implementation Strategies

#### *Development Regulations*

The majority of policies outlined in the Fairfax Town Plan will be implemented through the Development Regulations. The purposes of the Development Regulations are to implement the Fairfax Town Plan and to further the purposes of the Act [Title 24, Chapter 117, Section 4302 of V.S.A]; specifically, to promote the public health, safety, comfort, convenience, economy, and general welfare of the community. The Development Regulations require that all land development, including the subdivision of land, obtain all permits and approvals as required in the regulations before it is commenced. The Development Regulations should be reviewed on an ongoing basis to implement the goals, policies, and implementation strategies of this plan.

### Regulatory Implementation Actions Since 2013 Plan Adoption:

- 2017** Adopted a Building Inspection, Code Enforcement, and Fire Safety Ordinance
- 2016** Adopted a Special Events Ordinance
- 2016** Adopted a bylaw to establish screening standards for ground-mounted solar
- 2016** Amended the 2014 Development Regulations with:
  - Modified sign standards to increase allowable size of business signs from 20 to 25 square feet per side and other district specific guidelines
  - Outlined the use of screening and factors to prioritize type and amount necessary
  - Incorporated Sidewalk Construction and Design Standards
  - Clarified definitions or terms including: expired permit extension, definition of “family” changed to “household”, home occupation categories are considered residential uses and not a commercial use.
- 2014** Amended the 2011 Development Regulations with:
  - Site Plan process and submission requirements
  - Definitions and permitting requirements for Replacement Homes; Abandoned, Destroyed or Demolished Structures; and Structural Alterations
  - Clarification of permit exemptions and definition of “Dwelling Unit”

**Town Ordinances**

The Town has adopted many regulatory ordinances that implement the goals and policies of the Town Plan.

**Non-Regulatory Implementation Strategies**

**Capital Planning**

A Capital Improvement Budget and Program (CIP) is a tool that will allow the Town to plan for municipal improvements by linking long-term municipal expenditures and development plans with municipal budgeting to avoid sharp increase in the tax rate from one year to the next. It also makes the Town’s financial management and decision-making process more visible to the voters. Capital budgeting in Fairfax is essential in planning needed improvements such as expansions to the Village water and sewer systems and road improvements.

Fairfax has been levying an impact fee, which implements the Capital Budget and Program, since 2003. An impact fee is levied on new development to help mitigate its fiscal impacts on the community. Under state law (24 V.S.A. §5200), the purpose of authorizing impact fees is “to enable municipalities to require the beneficiaries of new development to pay their proportionate share of the cost of municipal and school capital projects which benefit them and to require them to pay for or mitigate the negative effects of construction.” Fairfax’s impact fee is important because it offsets a portion of the burden of additional services incurred by new development from the existing taxpayers.

**Non-Regulatory Implementation Actions Since 2013 Plan Adoption:**

**2016\*** Funded a Village Gateway Study to explore the arrival gateways into Fairfax Village and evaluate measures to enhance their appearance, improve safety, and promote a more unified community identity.

**2015\*** Explored a recommendation of the 2012 Non-motorized Travel Plan to connect the North and South Villages. A route was identified utilizing 5-foot sidewalks and 8-foot shared use path to improve safety for walking and biking in and between the villages. An Advisory Committee comprised of community members including the Town’s Recreation Director and Elementary School Principal provided input on the route.

*\*Funded by a State Municipal Planning Grant*

**Special Studies and Projects**

Development Regulations and capital planning work best at implementing the goals and policies of municipal plans when they are coupled with studies and projects initiated or recommended by the Planning Commission (see inset of Non-Regulatory Implementation Actions).



### Implementation Plan

Listed below are strategies that the Fairfax Planning Commission recommends to implement the goals and policies of this Town Plan.

<b>Responsible Parties</b>	TM (Town Manager), PC (Planning Commission), RD (Recreation Director), SB (Selectboard), DRB (Development Review Board), Town (to be determined)
<b>Partners</b>	NRPC (Northwest Regional Planning Commission), FCRC (Franklin County Regional Chamber of Commerce), FCIDC (Franklin County Industrial Development Corporation), FPR (VT Forest, Parks, & Recreation), VANR (VT Agency of Natural Resources), DHCD (VT Department of Housing & Community Development), USFWS (U.S. Fish & Wildlife Service), VTtrans (VT Agency of Transportation), PPP (Public Private Partnership)
<b>Timeline</b>	S-Short (1-4 years), M-Medium (5-8 years), L-Long (>8 years), O-Ongoing
<b>Critical Action</b>	Highest priority actions that are critical to meet the Goals and Policies of this Town Plan

Actions	Responsible Party & Partners	Timeline	Critical Action
<b>Local Economy</b> (see Page 21 for section Goals and Policies)			
1. Develop strategies to encourage centralization of public services and commercial amenities in the Village to promote a healthy localized economy.	TM, PC	O	
2. Inform eligible applicants of the Village Center Tax Credit program to improve historic structures in the designated Village Center.	Historical Society, Committee, Zoning Dept.	S	
3. Develop strategies and consider implementation incentives that support desired development and encourage businesses to locate or expand in Fairfax.	TM, PC	O	✓
4. Market and publicize community events to attract residents and visitors.	Town, RD	O	
5. Develop a creative, high quality signage and wayfinding program.	Town, FCRC	S	
<b>Facilities, Utilities, &amp; Services</b> (see Page 32 for section Goals and Policies)			
1. Conduct a market study of the regional economy and residential buildout to outline the types of development the service area could support as a driver for water and sewer improvements.	Town, RPC	L	

Actions	Responsible Party & Partners	Timeline	Critical Action
2. Develop a plan to expand Town water and sewer systems, including providing a back-up water source, to enable centralization of public services and commercial amenities at higher densities of development in the Growth Center and Mixed Use Districts.	Town (Utility Dept.)	O	✓
3. Work on increasing Town-wide support for funding community infrastructure in the Village, with specific attention to wastewater treatment and water supply.	Town	S	✓
4. Hold semi-annual meetings of the Planning Commission, Development Review Board, and Selectboard to coordinate the implementation of the goals, policies, and recommendations in this Plan.	SB, DRB, PC	S	✓
5. Review the Community Facilities, Utilities, and Services Plan yearly to assess that progress is being made to meet community needs.	TM, Utility Dept.	O	
6. Request regional approval of the Town Plan to make the Town eligible for Municipal Planning Grants and enable the Town to assess impact fees.	Town	S	
7. Maintain the Capital Improvement Program and Budget that serves as a five-year plan to be revised and adopted on an annual basis.	Town, PC	O	✓
8. Review and evaluate the effectiveness of the impact fee ordinance.	Town, PC	S	
9. Pursue the implementation of projects identified in the 2018 Fairfax Stormwater Master Plan.	TM, Highway Dept., VANR, NRPC, Watershed Groups	S/O	
10. Provide outreach to citizens and businesses emphasizing the importance of the solid waste collection and recycling programs.	Town	O	
11. Increase capacity for composting by promoting household and commercial establishment composting to meet the state target by 2020.	Town, Private Contractor	O	
12. Continue to provide a town-wide household hazardous waste collection program.	Town	O	

Actions	Responsible Party & Partners	Timeline	Critical Action
13. Appoint a town representative to participate in the update and implementation of the Fairfax Community Library 5-year Strategic Plan.	Town	M	
14. Investigate and promote viable options for expanding communications infrastructure (broadband internet access and cellular service) in Fairfax.	Town, PC, NRPC, Committee, Public	S/O	✓
15. Investigate the use of existing municipal property and land for development of cellular and broadband services.	Town	M	
16. Communicate with public and private partners to assess the gaps in broadband and cellular service by town highway and evaluate the level of service customers can access.	Town	L/O	
<b>Recreation (see Page 33 for section Goals and Policies)</b>			
1. Pursue State and Federal Grant programs to secure funding for recreational projects that that are consistent with the recreational goals of the Town.	TM, RD	S/O	✓
2. Increase the availability of recreation department programming to the residents of Fairfax.	RD	S/O	✓
3. Improve accessibility to the Town Forest as a recreational resource by improving the access road from VT Route 104 and installing a marked parking area.	Town, RD, Highway Dept.	S	✓
4. Improve the trails in the Town Forest by conducting a trail assessment, design and construct a trailhead, and install trail markings.	Town, RD, FPR	S	✓
5. Complete renovations to the Fairfax Community Center to enable the facility to serve as a venue for services, activities, and events that support community residents of all ages.	RD, Fairfax Community Center Non-profit	S	✓
6. Develop an operational plan that outlines the use of the Community Center.	RD, Town Committee	S	✓
7. Periodically evaluate the current and future recreational needs of the residents and ability of existing infrastructure and facilities to fulfill this target.	RD	O	

Actions	Responsible Party & Partners	Timeline	Critical Action
<b>Education &amp; Childcare</b> (see Page 36 for section Goals and Policies)			
1. Offer childcare at Town Meeting and other town-sponsored events.	Town	S	
2. Support the use of the Community Center for child enrichment programs.	RD, School	O	✓
3. Provide opportunities for students to participate in civic life by including student representatives on Town boards, committees, and commissions; work with school administration to ensure it meets curriculum.	Town, School	S	
<b>Community Health</b> (see Page 38 for section Goal and Policies)			
1. Annually review Town financial support for public health and human service agencies.	Town	O	✓
2. Provide municipal facilities as a venue for public health education and screening.	Town	O	✓
3. Provide a venue for health-related classes (i.e. yoga, aerobic, etc.).	Town	O	✓
4. Assess zoning (sign standards, setback requirements, etc.) for barriers to on-site farm stands and direct marketing outlets (farmers' markets, community supported agriculture pick-up sites, etc.).	Town	O	
5. The Town will work with the School Board to support the BFA Farm to School Program.	Town, School	S	
6. Encourage healthy food and beverage options are offered in municipal venues (e.g. town office, recreational facilities, etc.) and at municipal events.	Town	O	
<b>Housing</b> (see Page 42 for section Goal and Policies)			
1. Review the Development Regulations and look for areas where affordable housing could be further encouraged.	PC	L	
2. Investigate the implementation of appropriate zoning techniques to encourage affordable housing.	PC	M	
3. Analyze the existing residential development pattern, such as location of housing and density, to identify if current regulations are effective at meet the intent of the districts.	PC	S	✓

Actions	Responsible Party & Partners	Timeline	Critical Action
4. Study the feasibility of design standards for the North and South Village that considers the historic character of the community.	PC	L	
5. Conduct a housing needs assessment to gain a better understanding the types and affordability of the current housing stock and guide decisions to accommodate the growing population.	PC	S	✓
6. Promote use of Village Center Tax Credits to improve historic structures in center.	Town	S	
7. Support the development of a network of pedestrian and bicycle infrastructure within a half-mile radius of village services for walking and a three-mile radius for biking.	Town, SB, PC, Public	M/L	✓
<b>Transportation</b> (see Page 47 for section Goals and Policies)			
1. Review and evaluate Road and Driveway Standards (Sec 7.6F) of development regulations to ensure they meet public safety standards.	PC	S	✓
2. Review and revise as needed municipal road standards to ensure that they reflect the “complete streets” principles.	Town, PC, Highway Dept.	M	
3. Pursue the short-term solution to connecting the North and South villages with shifting the striping on the Route 104 Bridge to accommodate a wider shoulder on the west side, as identified in the 2015 Pedestrian Connectivity Feasibility Study between the North and South Villages report.	Town, PC, VTrans	S	✓
4. Continue to explore opportunities to form a network of safe, connected non-motorized facilities in both the North and South Villages as identified in the 2015 Pedestrian Connectivity Feasibility Study between the North and South Villages report.	Town, PC	O	
5. Evaluate the feasibility of the Town taking over the Class 1 section of town highway within the Growth Center to implemented identified improvements.	Town, VTrans	S	✓
6. Pursue wayfinding and gateway signage to promote traffic calming.	Town, PC	S	✓

Actions	Responsible Party & Partners	Timeline	Critical Action
7. Participate in the regional Transportation Advisory Committee to facilitate coordination with Regional Planning Commission and VTrans on plans and policies that are in the best interest of the region and the Town such as improvements to the Route 104 corridor.	Town	O	
8. Participate in regional discussions on transit service that can serve the needs of residents.	Town	O	
9. Secure funding for the completion of the Sidewalk Master Plan.	Town	S	✓
10. Prioritize the repair and implementation of pedestrian and bicycle infrastructure within the Growth Center to allow students to safely walk or bike to school.	Town	S	✓
11. Review the results of the 2013 Fairfax Village Non-motorized Travel Plan with the Town Highway Department to identify short- and long-term opportunities.	Town, Highway Dept.	S	
<b>Energy (see Page 50 for section Goals and Policies)</b>			
1. Investigate the installation of a municipal net-metering facility to off-set municipal electric use.	Town, PC, NRPC	O	
2. Investigate installation of a community-based renewable energy project.	Town	M	
3. Ensure firefighters receive proper training to handle structures that have roof-mounted solar.	Fire Dept.	S/O	
4. Review and maintain the Building Inspection, Code Enforcement, and Fire Safety Ordinance to incorporate any changes to national rooftop solar installation methods and standards.	SB, Fire Dept.	S/O	
5. Coordinate with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fairfax residents.	Town, Energy Committee	O	✓
6. Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.	Zoning Dept.	S/O	
7. Create an Energy Committee and/or appoint an Energy Coordinator to coordinate energy-related planning and projects in Fairfax.	Town, PC	S/O	✓

Actions	Responsible Party & Partners	Timeline	Critical Action
8. Evaluate the remaining improvements identified in the 2012 energy audit of Fairfax Fire Station and incorporate the recommendations into the municipal capital budget.	Town, Fire Dept.	S	
9. Implement recommendations from the 2012 NRPC evaluation of street lighting in Town, including switching to LED lighting.	Town, Green Mountain Power	S	
10. Review local policies and ordinances to limit water and sewer services to those areas of town where additional development will not contribute to sprawl.	Town, PC	L	
11. Study potential need for a park and ride in Fairfax with a particular focus south of the village	Town, PC, NRPC, VTrans	L	✓
12. Promote and provide information about the GoVermont website which provides information to citizens about ride share, vanpool, and park-and-ride options.	Town, Energy Committee, NRPC, VTrans	L	✓
13. Plan for and install electric vehicle charging infrastructure on municipal property.	Energy Committee, VTrans, DHCD, PPP	L	
14. Aid in locating an EV charging infrastructure on public or private property.	Energy Committee, VTrans, DHCD, PPP	L	
<b>Natural Resources</b> (see Page 66 for section Goal and Policies)			
1. Periodically review the site plan and subdivision review standards for preserving natural, scenic, and cultural resources, and evaluate for conformity to the Town Plan.	PC	O	✓
2. Evaluate the effectiveness of the subdivision review standards to minimize impact to (or protect) prime agricultural soils and existing farmland and forest resources.	PC, NRPC	L	
3. Participate in the Agency of Natural Resources' Tactical Basin Plan process as plans are updated on a 5-year rotation.	Town (TM, Highway Dept., Utility Dept.), NRPC, VANR	O	
4. Promote readily available educational efforts from regional and state partners aimed at assisting the municipality and residents to employ steps they can take to improve water quality.	Town, NRPC, VANR	L/O	

Actions	Responsible Party & Partners	Timeline	Critical Action
5. Strengthen regulations in the flood hazard areas beyond National Flood Insurance Policy minimums and consider adoption of the state river corridors to protect floodplain and stream resources and support public health and safety.	PC, NRPC, VANR, DHCD	L	
6. Conduct a scenic resource inventory to identify important community resources (i.e. views, viewsheds, corridors) to guide regulatory and non-regulatory protection measures.	PC, NRPC, DHCD	L	
7. Utilize available tools (e.g. Biofinder) to identify the high priority habitat blocks and assess their vulnerability for fragmentation by development.	PC, NRPC, USFWS, VANR	L	
<b>Land Resources (see Page 77 for section Goals and Policies)</b>			
1. Review the planned unit development standards to evaluate the protection of significant agricultural lands, forest lands, meadows, and wildlife habitat from fragmentation and conversion in the Residential and Rural Districts; and to discourage strip development along existing roads.	PC, DRB, NRPC, DHCD	M	✓
2. Consider strategies to discourage residential development from encroaching on large tracts of forest land.	Town, PC	M	✓
3. Consider implementing regulatory changes that would enable and encourage community services and businesses to locate in the growth center and mixed use district.	Town, PC	S	
4. Consider expansion of the land use mapping capabilities of the Town to assist in development review.	Town, PC	M	
5. Produce and maintain a map that identifies infrastructure and amenities for all roadway, sidewalk, and trail users.	Town	S	
6. Expand water and wastewater capacity in the villages to achieve the desired levels of density that would support the plan vision.	Town, Utility Dept.	S/O	✓
7. Consider implementing design standards in the North and South Villages.	PC	L	
8. Identify sites appropriate for use as park-like gathering areas and increase the amount of plantings and seating.	Town	S	



Actions	Responsible Party & Partners	Timeline	Critical Action
9. Periodically review the regulations to ensure that the regulatory tools support the vision.	PC	O	
10. Consider site improvements and amenities such as bike racks and canoe/kayak storage to encourage use of natural destinations.	Town, RD	O	
11. Develop a street tree planting program in the North Village.	Town, Committee	L	
12. Identify areas for landscape enhancements in the South Village.	Town, Committee	L	
13. Transitional areas of residential development in the Rural Planning area will be monitored and evaluated by the Planning Commission during this Town Plan cycle to inform revisions to the development regulations.	PC	M	

### Section 3: Community Profile

#### The Setting

The Town of Fairfax is located in the western foothills of the Green Mountains and characterized by open farmland and wooded slopes with panoramic views of Mt. Mansfield and the Lamoille River. It is the southernmost municipality in Franklin County. Fairfax is served by several State Routes that link the Town with St. Albans, the Interstate and communities to the east and south.

#### Understanding Population Projections

Population projections provide a good estimate of future growth; these estimates are based on past trends from two time periods. From 1990-2000 much of the state experienced a surge of population growth; this period was used to calculate a “high growth” estimate. The following decade, 2000-2010, experienced slower growth and thus provides a “low growth” estimate.



Population: 4,455

#### The People

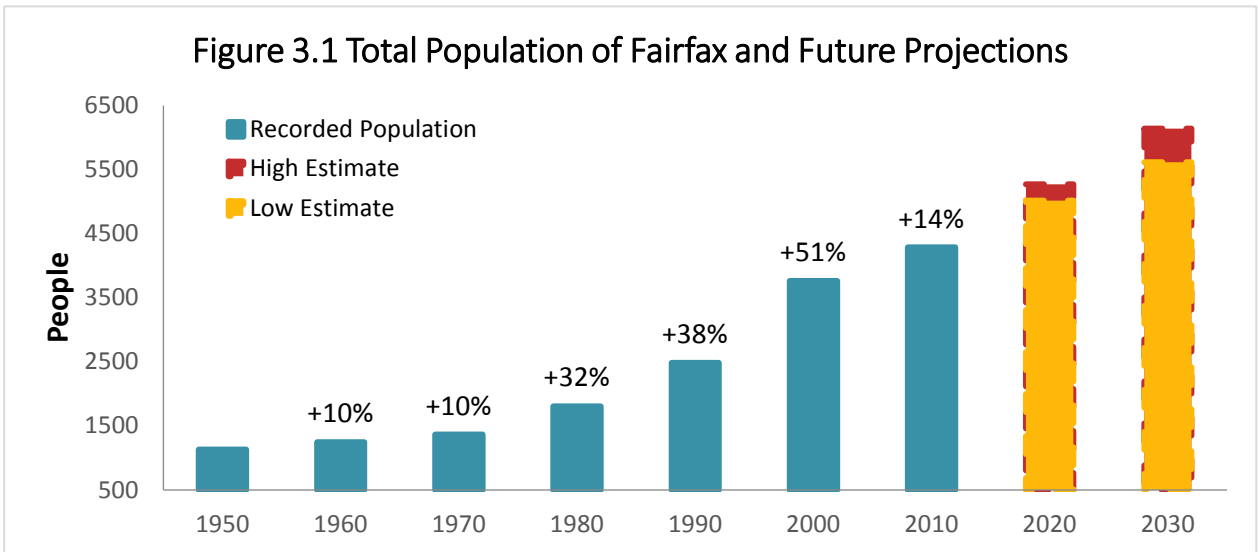
**The Population is Growing.** Fairfax’s population has risen to historically high levels; due in large part to a period of sustained, accelerated growth that began in the 1970’s and has continued to the present decade. As shown in Figure 3.1, Fairfax has more than tripled its population between 1960 and 2010 and has a significantly higher growth rate than that of the County as a whole. Forecasts for future growth show Fairfax’s population continuing to grow at a similar rate.



#3 From 2000 - 2010 Fairfax was the 3<sup>rd</sup> fastest growing municipality in the County.

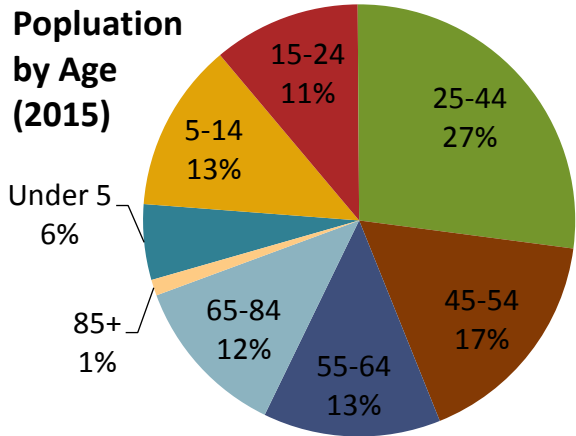


Population expected to increase 26-38% by 2030



 **Fairfax Median Age: 39.5**

**The Population is Aging.** The majority of residents are between the ages of 25 and 54. From the period of 2000 to 2015 the number of residents 55+ has been steadily increasing while the number of children under the age of 15 has decreased.



**Defining a Household**

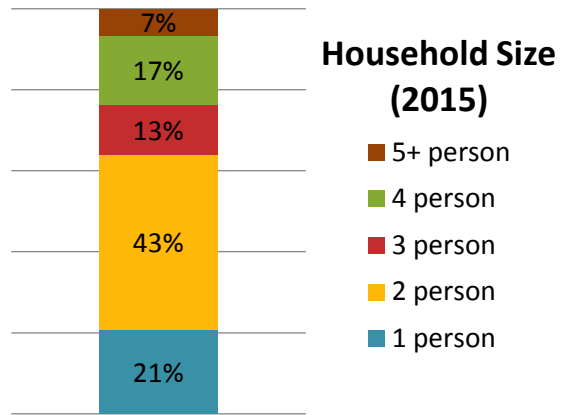
A **household** is all people who occupy a housing unit regardless of relationship, such as a person living alone or multiple unrelated individuals or families living together.

A **family** is two or more people related by birth, marriage, or adoption in the same housing unit.

 **Households: 1,745**  
Average Household Size: 2.55

 **Families: 1,205**  
Average Family Size: 3.03

**Household Composition is Changing.** The number of 1- and 2-person households has increased since 2000 by 101% and 89% respectively. These two groups make up the majority of households in Fairfax. The American Community Survey also reports a higher number of households do not have children under the age of 18.



 **No related children under 18 years.**

The # of residential parcels has increased by 115% since 1990

**Fairfax has a higher density than many communities in the County.** Fairfax has a population density of 102.8 people per square mile, which is double the density of Franklin County as a whole of 49.6. The majority of the land in Town is considered residential.

 **Median Household Income: \$70,975**

1.7% of Population below poverty level (Franklin Co. 8.7%)

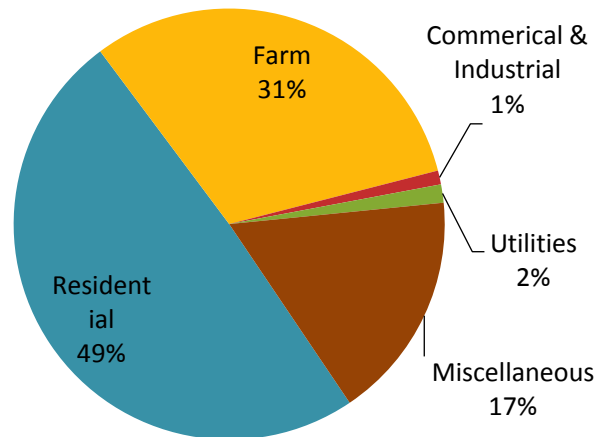
**Higher than average household income.** On average, residents of Fairfax bring home a larger income than the median of both Franklin County and the three county areas of Chittenden, Franklin, and Grand Isle Counties.

 **76%** Percent of residents that own their home (versus rental)

 **Median Home Value: \$247,200** Based on sale price

**High rate of homeownership.** The majority of residents own their home leaving little inventory for rental properties. Twenty percent of homeowners are cost burdened (paying more than 30% of their income towards housing).

**% Total land Area by Category (2015)**



**Workforce largely commutes to access employment centers.** The majority of residents commute to Chittenden County for jobs. A small percentage of residents in Fairfax report to jobs in Town (7%) and an even smaller amount of residents (5%) likely telework as their listed job sites are more than 90 minutes away. The top employment sectors of residents are: educational services, health care, social assistance sector, and public administration.

 **60%** (30 min+) Residents who commute more than 30 minutes.

 **78%** Fairfax adults in the workforce.

## Section 4: Economy

The term “economy” for purposes of municipal planning refers to resources, production, jobs, income and activities in the town and region that contribute to the economic well-being of local residents, businesses and industries. The economy in Fairfax is supported primarily by the businesses and services in the historic village area and Mixed Use district south of the Lamoille River and the rural economy in the remainder of the Town. The rural economy largely consists of agricultural operations, agriculture-related businesses, and home-based businesses. The intent of this plan is to enable business and industry that will contribute to and maintain both the traditional village character and rural, agricultural setting.

### Local Economy

According to the Vermont Department of Labor, there were 92 employers in Fairfax in 2015, an increase by 23% since 2000. The top three industries based on number of people employed in Fairfax are trade/transportation/utilities, education services, and manufacturing. The Village has a number of retail businesses serving the basic needs of villagers and the surrounding countryside. Future commercial development is likely to be primarily in the service sector and retail businesses and should be encouraged to be located in the Growth Center and Mixed Use district as identified in the Fairfax Development Regulations. Sixty-nine percent of the respondents to the 2017 Fairfax Town Survey supported the Town encouraging more commercial development in the Growth Center and Mixed Use zoning districts.

Despite the decline in the total number of dairy farms in Fairfax, there is an overwhelming desire to maintain the agricultural culture of the community. Ninety-three percent of the respondents to the 2017 Fairfax Town Survey stated that local agriculture was important. Agriculture in Fairfax is seen as a part of the regional economy, a way to maintain the town’s rural character, and provides a source of local food. The Town should encourage efforts that support its agricultural base, including the protection of primary agricultural soils, support diversified agriculture, and support of tax abatement programs such as the Use Value Appraisal Program or Current Use. Agribusiness and other support and cooperative services should be encouraged to locate in Town. Home occupations and other small industries and businesses should also be encouraged as part of the rural economy to encourage local employment opportunities and a diverse economic base.

### Challenges Related to Economic Development

The Town is faced with many challenges to local economic development. By working on these challenges, the Town will encourage the continued development of a healthy economy in the Village area. These challenges are discussed in other areas of the plan, but are briefly introduced here as they relate to economic development:

*Sewer and Water Infrastructure* - Additional sewer and water capacity would encourage new businesses to locate in the Growth Center, and help to realize the goal of a compact village center surrounded by rural countryside. Until the Town addresses this ongoing problem, the village will not realize significant economic development.

Parking - Adequate parking is important to attract people to stop in Fairfax and patronize businesses. Parking is currently seen as adequate for the commercial activity in town today. Given the vision for the dense village center and commercial areas, it may make sense to encourage common parking lots.

Sidewalks - A safe pedestrian environment in the Village will contribute to its economic vitality. Continued effort to maintain and improve sidewalks in the Village area and along Route 104 in the Mixed Use district will encourage people to walk the village streets and patronize local businesses. Specific attention should be paid to providing safe pedestrian links from the Mixed Use District to the Growth Center. Further discussion on sidewalks is located in the Transportation Section under Pedestrian and Bicycle Facilities.

Traffic - Vehicle speed is an issue along Route 104 through the Growth Center and the Mixed Use District. To improve access and circulation to local businesses, the Town should implement the recommendations of prior studies the Village Gateway study (2016), the Route 104/104A Corridor Study (2005) and the Route 104/128 Intersection Study (2007).

### **Opportunities Related to Economic Development**

All of the challenges for economic development mentioned above can also be positioned as opportunities for bringing in new investment. Improving the broadband and cellular coverage to support small businesses and tele-working professionals is another opportunity the Town has prioritized

this plan cycle. Additionally, the north village and Growth Center areas are designated as a sub-regional growth area by the Regional Plan and are intended to serve as an economic and cultural hub for the surrounding area.

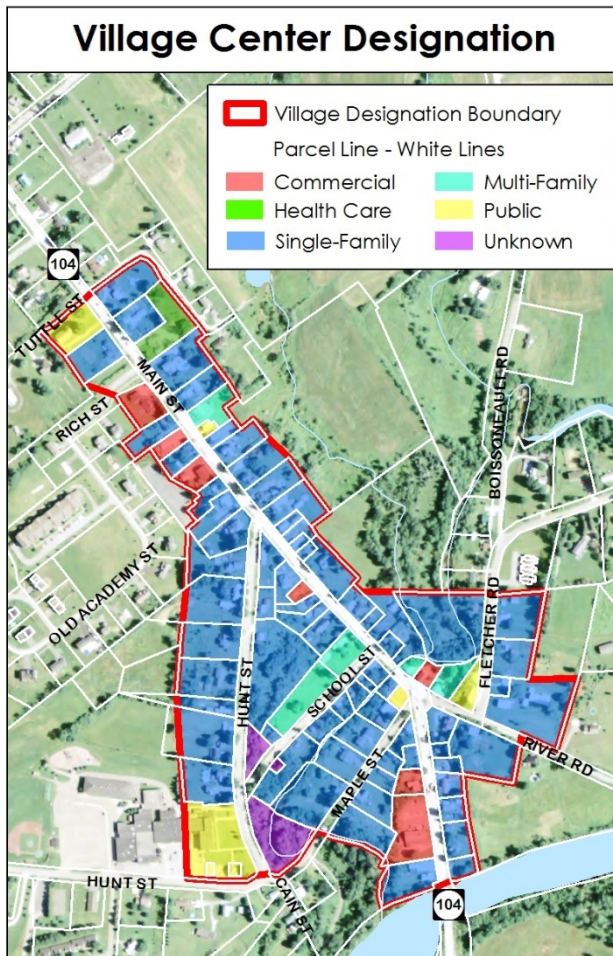
Village center revitalization is an ongoing process to improve a community's vitality and livability. Investment in these areas will expand access to employment, housing, education and schools, services, public facilities, and other basic needs. Supporting our villages also aligns with the statewide planning goals of encouraging compact development and maintaining the historic settlement pattern as stated in 24 V.S.A. § 4302.

Village Center Designation is one tool the state offers communities to focus on supporting commercial activity in the center of Vermont's villages. Benefits available for designated village centers are:

- Access to tax credits;
- Priority consideration for state grants
- Priority consideration for state building and general services when leasing or constructing buildings;
- A special assessment district in a designated village center may use funds for operating costs.

The Fairfax Village Center Designation was obtained in September of 2008 for the North village area and is set to be renewed in 2018. This designation supports the goals of the community by gaining access to the benefits listed above and aligns with the statewide planning goals of compact development and maintaining the historic settlement pattern as

stated in 24 V.S.A. § 4302. Since designation in 2008 Fairfax has received priority consideration for state grants; most recently in 2017 the United Church received a Historic Preservation Grant. The Town has not received any tax credits in the designated village center. In the future, Fairfax hopes to promote the benefits of the designation program to village property owners to enhance participation in state programs.



**Local Economy Goals and Policies**

**Goals:**

- Promote a balanced, diverse economic base, with a focus on locally owned businesses.
- Encourage a vibrant local food economy with access to healthy foods.

**Policies:**

- To encourage a mixture of commercial uses including retail, personal and professional services, and restaurants in the Growth Center and Mixed Use districts.
- To support the maintenance of and/or upgrade to reliable services that attract commercial development, such as broadband internet, cell phone service, and municipal water supply and wastewater treatment.
- To support agriculture and forestry related businesses, and protect productive agricultural and forestry lands from conversion to incompatible land uses.
- To promote opportunities to produce, process and distribute locally grown food products and forest resources.
- To support and encourage low-impact, home-based businesses.
- To consider developing ways to promote the Villages as an attractive and supportive community where business thrives.
- To develop materials encouraging promotion and utilization of local businesses, marketing materials and tourism plan to encourage economic growth.

## Section 5. Community Services, Facilities, & Utilities

A core function of local government is to provide services, facilities, and infrastructure to meet community needs. An important function of the Town Plan is to review accessibility, availability, condition, and capacity of municipal facilities, services, and infrastructure to meet the current and projected needs of the Town. The Fairfax **Facilities and Utilities Map** shows the location of these facilities.

Fairfax offers a wide variety of services to residents including roads, public safety, community library, recreational facilities, and trash and recycling pick-up. Water and sewer are provided by the Town in designated districts that serve the village.

Fairfax has experienced consistent growth since the 1980s and its population is projected to continue to rise at a steady rate until 2030. As the Town continues to experience growth pressures due to the proximity to job centers in Chittenden County, a need for additional or improved services and facilities will likely occur. Clear forethought and planning will be necessary to ensure that the rate of future growth in Fairfax does not exceed the ability of the community and the area to provide necessary facilities and services to maintain public safety, environmental integrity, and a high quality of life.

### Local Government

The local governance in Fairfax is composed of full-time and part-time employees as well as volunteers (see Table 5.1). The Town Office serves as the administrative offices for much of Town government. The building came into service in 2014. It has two public meeting

<b>Departments, Boards, and Committees</b>	<b>Number of Members</b>
Town Manager	1
Selectboard	5
Town Clerk/Treasures Office	2
Assessor	1
Animal Control Officer	1
Health Officer	1
Planning and Zoning Department	1
Highway Department	4
Water & Sewer	4
Town Constable	0
Fire Department	26
Emergency Management	1
Recreation Department	3
Library	8
Planning Commission	5
Development Review Board	5
Cemetery Commission	5
Fire Warden	1
IT staff	1
Justice of the Peace	12
Legislative Representation	1

rooms and is handicap accessible. The office houses working space for the Town Manager, Town Clerk, Town Treasurer, the Assessors, the Zoning Administrator, Recreation Department, and the Water and Sewer Departments. It also serves as a meeting place for the Selectboard, Planning Commission, Development Review Board, and Recreation Committee.

### Municipal Finance

The majority of services and facilities are funded through local property taxes. The rate of growth in Fairfax should not exceed the ability of the community to provide services. As it stands today some services and facilities



**Maintain a moderate tax rate** was the top planning objective from the 2017 Community Survey

need improvements in order to meet current and future need. The Town utilizes the CIP as a tool to plan for the future needs and should

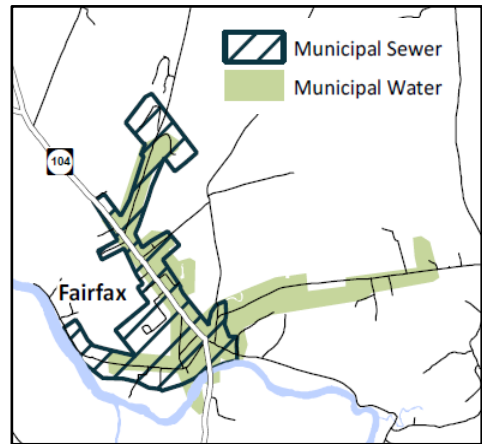
maintain an annual adoption process as part of the budget development. The capital budget also gives the Town the ability to enact an impact fee to help offset the costs of capital expenditures. Impact fees were first assessed in 2003 and the Impact Fee Ordinance was last updated in 2012.

**Municipal Properties**

The Town is currently listed as the owner or part-owner of several pieces of property in town totaling 218.5 acres.

**Public & Private Services**

This section provides an assessment of the primary services available in Fairfax; additional information about each service is located in the Fairfax Community Data Profile report. The intent of this information is to provide an assessment of the available services in Fairfax and the ability of each service to meet the needs of current residents as well as accommodate future growth. The template below details how this information should be interpreted.



**Service**

General narrative of each service.

**Fairfax Today:**

“Fairfax Today” provides a report on the existing conditions and status of the system as it stands at the writing of this Town Plan in 2018 to provide service to current customers.

**Fairfax Tomorrow:**

“Fairfax Tomorrow” provides a report on the ability of the current service to accommodate new users or population growth. This section emphasizes the importance of planning for the future demand and the projected population increase of additional 1160-1685 residents by 2030.

**Status Indicator:**

= Meets the needs of the current level of users and *may* have available capacity to accommodate additional users

= Needs improvement and/or is at capacity and cannot accommodate more users


**Next Steps:** Statement outlining actions the Town should take related to each service.


**Highway System Infrastructure**

The Town Highway Department maintains 61.5 miles of Town roadways and a system of culverts and bridges. The Town has adopted standards for the construction and maintenance of the town highway system that include:

- Standards for driveways;
- Town Road standards; and
- Requirements of the Municipal Roads General Permit (MRGP)

**Fairfax Today:** **Fairfax Tomorrow:**

 The Town institutes a regular maintenance program and annually budgets for improvements.


 The Highway Department will continue to maintain the town system to meet the needs of the population.

**Next Steps:** Future development from public and private investment should aim to connect roads to improve motorized and non-motorized accessibility.


**Pedestrian & Bicycle Facilities (Sidewalks, Paths, On-road facilities)**

There is currently 4,731 feet of sidewalk located along VT Route 104 between Tuttle and School Streets as well as along Hunt and School Streets. Phase 1 of the Sidewalk Master Plan will be constructed in 2018 adding an additional 2,310 feet of sidewalk from Huntville Road to Hunt Street along VT Route 104. Several resources are available to provide guidance on infrastructure improvements as noted in *Section 5 Bicycle and Pedestrian Facilities*.

**Fairfax Today:** **Fairfax Tomorrow:**

 Once the construction of the Master Plan Phase 1 sidewalk is complete, sidewalks will be present along 28% of the streets in the Growth Center. However:

- Sections of current sidewalk need repair and are not plowed in winter.
- Gaps in the sidewalk system force pedestrians to walk in the streets.

 The current system does not meet the needs of the users for safe use. The following needs should be addressed:

- Continue construction and repair to achieve a safe, complete, and contiguous village sidewalk system.
- Improve connectivity to the southern village.

**Next Steps:** The Town should finish the remaining phases of the *Sidewalk Master Plan* and continue to pursue recommendations of *Non-Motorized Travel Plan* to meet the needs of current and future residents.


### Stormwater Infrastructure

Fairfax has a network of stormwater infrastructure throughout town that ranges by type and level of treatment:

- Catch basins and outfalls are present in the north and south village.
- Development creating 1 acre or more of impervious surface is required to obtain a state stormwater permit and provide treatment, such as a stormwater pond.
- Roads throughout Town utilize best management practices to direct stormwater runoff off of the road and reduce the potential for erosion

In 2018, Fairfax is developing a Stormwater Master Plan that will identify areas where additional treatment should be considered to reduce impacts from erosion and flooding and improve water quality.


#### Fairfax Today:

 Taking strides to ensure that adequate infrastructure is in place.

- The Town provides maintenance to the municipally owned catch basins and outfalls;
- All private developments with existing permits are in compliance with state permits; and

Town is in the process of complying with the Municipal General Roads Permit and identifying needed improvements to roads.

#### Fairfax Tomorrow:


 To ensure the Town does not experience negative impacts from excess stormwater, the Town should continue to maintain existing infrastructure, aim to treat unregulated stormwater, and consider additional local requirements.

**Next Steps:** The Town should pursue implementation of projects identified in the 2018 Stormwater Master Plan and consider standards to encourage treatment of stormwater on development creating less than 1-acre impervious surface.


### Cemeteries

There are 13 cemeteries in Town, of which 9 are private and 4 are public. The Town maintains or contributes funding to 10 cemeteries. The cemetery budget primarily funds mowing; other maintenance includes cleaning up vegetation and stones, and installing fence. Towns are required by statute to ensure town cemeteries have a maintained fence; funded by an annual appropriation.

#### Fairfax Today:

 The Town maintains the vegetation at 8 cemeteries; additional funding is needed to perform restoration of damaged markers and mark boundaries.

#### Fairfax Tomorrow:


 There is capacity for the public at 5 cemeteries for additional burial plots.

**Next Steps:** The Town will identify the cost to perform restoration and mark the boundaries as applicable.


**Community Library**

The Fairfax Community library is combined with the school library and located with the BFA-Fairfax building. Accommodates evening, weekend and online access to resources.

**Fairfax Today:**

-  The library accommodates a steady stream of public users and has increased programming to accommodate current needs.
  - From 2012 to 2017 the Fairfax library saw a 33% increase in the number of public patrons visiting the library with an average of 441 patrons per week in 2017.
  - Available programming from 2012 to 2017 increased by 118% and attendance increased by 127%.

**Fairfax Tomorrow:**


-  Library has capacity to serve existing and new customers. In 2018 the Library will be updating their 5-year strategic plan that will identify potential improvements to meet the needs of residents.

**Next Steps:** The Town should coordinate with the library on the update and implementation of the Fairfax Community Library 5-year Strategic Plan.


**Parks and Recreation Department**

The Parks and Recreation Department offers recreation and fitness programs for the community and sponsors/co-sponsors a series of annual events in the community. The Department also maintains and manages community facilities including: Community Park and Recreation Path, 100-Acre Woods, and Community Center (see additional information under *Recreation Facilities* later in this section).

**Fairfax Today:**

-  The program offerings continue to expand and the Town is conducting improvements to all 3 of the main recreational facilities.

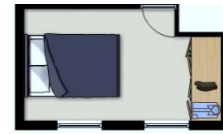
**Fairfax Tomorrow:**

-  The Town will need to support improvements to facility space, such as the Community Center, for recreational programming in order to grow offerings and accommodate the need.

**Next Steps:** The Town should provide support and resources to identified improvements at the 100-Acre Woods, the Community Center, and other opportunities to expand recreational programming and field space.

**Utility Department – Village Water District**

The Town water supply services approximately 299 connections in the Village, including the school. The Wheezy Way Road well has a total possible yield of 60,000 gallons/day and provides for an average daily demand of 36,941 gallons (based on average demand from 2012-2017). An additional 2,025 gallons/day is allocated to future development. The Water Source Protection Area for the Village water supply is shown on the **Water Resources Map**; see Groundwater Section for more information.



*Residential allocations based on 150 gallons per day per bedroom*

Outside the municipal water service area, the majority of residents obtain their water supply by individual private wells.

**Fairfax Today:**

User fees maintain current system. An additional water source is needed as a backup source of water in case of contamination or other emergency.

**Fairfax Tomorrow:**

The well is at capacity based on current use and allocations to future development. The Town continues to search for a new water source to augment the current system of users and accommodate new growth in the Water District. No capital reserve exists to fund system expansion.

**Next Steps:** The Town will continue to pursue a secondary water source to expand capacity.

**Utility Department – Wastewater Treatment Facility (WWTF)**

The WWTF serves approximately 403 connections in the Village. The system is able to treat 78,000 gallons of waste per day and treats on average 36,653 gallons/day (based on average discharge from 2012-2017) or 47% of its capacity. The Town reserves 10% capacity for municipal use. As of February 2017, 25,000 gallons/day are available for future development.



*Residential allocations based on 210 gallons per day per single-family residence*

Outside the municipal sewer service area, residents depend on individual and community septic systems.

**Fairfax Today:**

User fees maintain current system. Recent improvements have been limited to minimum measures; additional improvements are needed to ensure longevity of system.

**Fairfax Tomorrow:**

The system is near capacity and only able to serve limited future wastewater needs within the village. No capital reserve exists to fund system expansion.

**Next Steps:** The Town should continue to explore and identify available options to expand capacity of the system.


**Fire Service**

Fire Department responds to a variety of calls ranging from auto crashes, carbon monoxide alarms, hazardous materials, hazardous conditions, automatic fire alarms, public event standbys, and fires of all types. The majority of the roster is volunteers. In last 4 years the department has averaged 176 calls.


Year	# of Calls
2014	194
2015	162
2016	164
2017	184

There are 33 fire hydrants connected to the system for use in immediate response to fires. The Fire Department has a map of other water sources available for emergency use, including fire ponds.

**Fairfax Today:**

 Planning for future equipment purchases with regular contributions to a replacement fund in the Town Budget.

**Fairfax Tomorrow:**


 The Fire Department is able to handle the needs of the community as it changes.

**Next Steps:** The Planning Commission and Fire Department should evaluate the driveway standards to ensure the intent is being met and is not creating an unfair burden to residents.

**Rescue Service**


Fairfax Rescue is a subscription service that provides ambulance and emergency rescue service in town. The service is funded by billing for ambulance service, use of a subscription plan, fundraising, donations, and from the voters of Fairfax, Fletcher, and Westford. In 2018 the cost of services increased due to the addition of paramedic services.

**Fairfax Today:**

 Fairfax Rescue is able to meet the needs of the community and serve at the Paramedic level 24-hour year-round service.

- Maintaining qualified volunteers is challenging with new requirements and needed training.

**Fairfax Tomorrow:**

 Fairfax Rescue is able to handle the needs of the community as it changes and should aim to keep costs in line with services provided.

**Next Steps:** The Town should continue to support Fairfax Rescue with an annual appropriation to retain the local provider of emergency services.


**Law Enforcement Services**

Community needs are met by a combination of providers:


- Franklin County Sheriff’s Office contracts with individual towns requesting additional police services; the Sheriff responds to complaints, makes arrests, and issues traffic tickets.
- Vermont State Police provide additional law enforcement
- Town Constable works in conjunction with the Sheriff’s Office primarily related to traffic safety issues.

The majority of respondents to the 2017 Community Survey ranked police services as adequate.

**Fairfax Today:**

 Law enforcement services minimally meet the needs of the community today. Town has found filling the post of Constable as challenging due to training requirements.

**Fairfax Tomorrow:**


 Law enforcement services can provide this same level of service in the future. If expansion of services is desired, the ability of these providers to meet the need should be evaluated.

**Next Steps:** The Town should evaluate the need for increased enforcement.


**Solid Waste & Recycling Services**

The Town contracts for weekly curbside trash and recycling pickup; the fees for this service are collected with property taxes. As of 2015 it is a statutory requirement for all municipalities to establish unit-based pricing systems for residential municipal solid waste; meaning a user pays a set fee per container or per pound if by weight.

**Fairfax Today:**

 All residents receive service with expectation that it is hauled from end of driveway.

**Fairfax Tomorrow:**



 Contractors able to handle existing and new customers

**Next Steps:** The Town should monitor whether the contracted service is meeting the needs of residents.



**Telephone & Cellular Services**

There is only one local telephone provider and multiple providers for long-distance service. Cellular service has improved in recent years but dead areas still exist in areas of town.

**Fairfax Today:**

-  Non-cellular service is acceptable and meets the needs of current customers.
-  Cellular service is spotty in Town and additional infrastructure is needed to ensure town-wide coverage

**Fairfax Tomorrow:**


-  Non-cellular service can meet the needs of new customers.
-  Cellular service providers can meet the needs of new customers however, as noted with existing conditions; additional infrastructure is needed to expand service.

**Next Steps:** The Town will work with public and/or private partners to assess where there are gaps in cellular service coverage.


**Internet & Broadband Services**

Internet service is available through various platforms: dial-up, DSL high-speed, satellite high-speed, cable, and wireless broadband.

**Fairfax Today:**

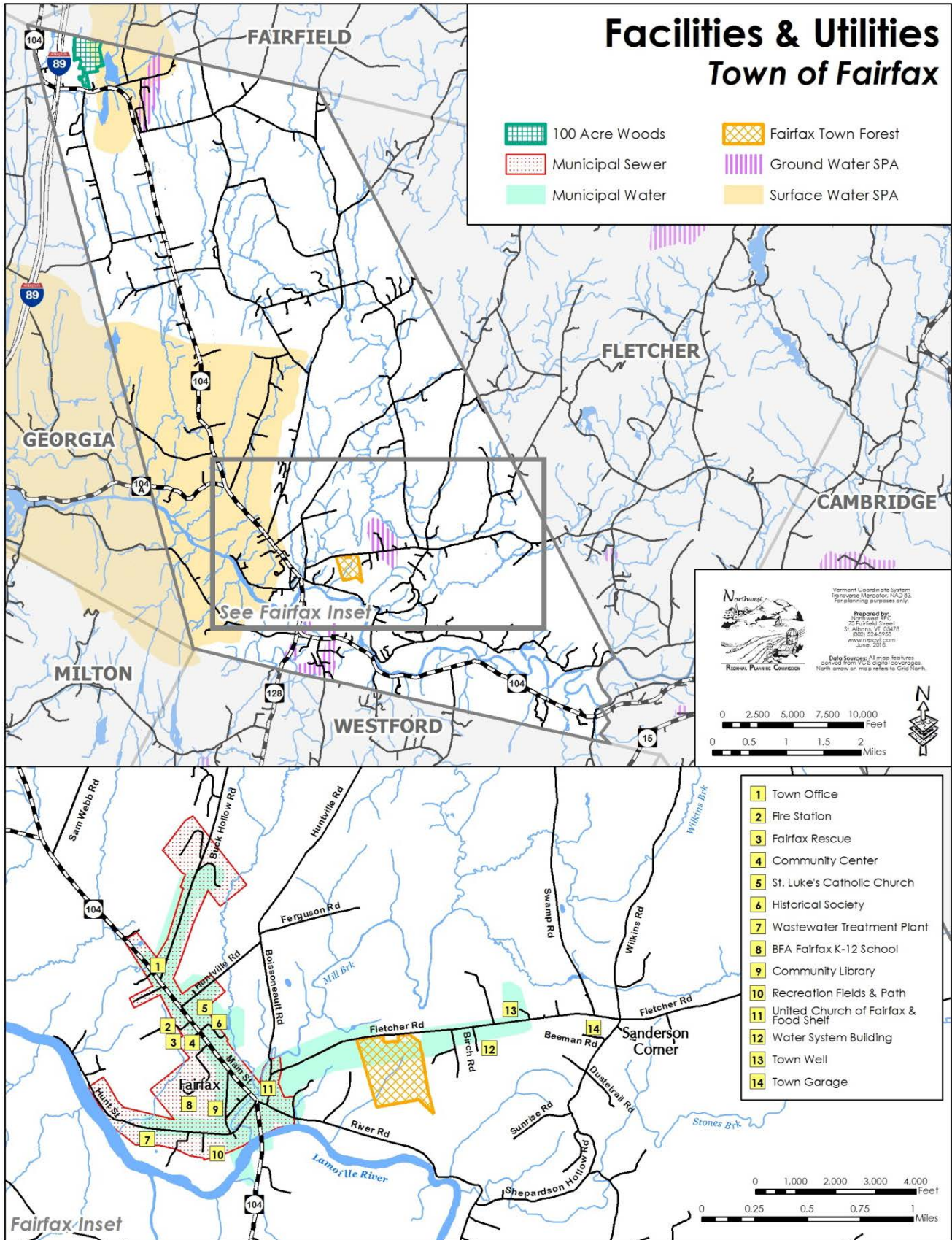
-  Many of these services are provided to most residents but there are service areas that experience unreliable service or are unable to obtain faster internet speeds. This is seen as hindering economic development and ability of residents to telework.

**Fairfax Tomorrow:**

-  Service providers can meet the needs of new customers but it should be noted that improvements to infrastructure are needed to expand service to ensure town-wide coverage.

**Next Steps:** The Town will work with public and/or private partners to assess which roads are being served by providers and what level of service people can access.





## Facilities, Utilities, & Services Goals and Policies

### **Goal:**

- Provide and plan for municipal facilities and services to ensure the public's health and safety, and to improve the quality of life in Fairfax.

### **Policies:**

- To maintain a public water and public wastewater system that meets state and federal standards, and provides for the future development needs of the town.
- To assess when improvements or expansions to the municipal water supply and wastewater treatment plant will be needed and how to finance them.
- To provide for the physical safety of Fairfax residents through quality fire, emergency response, and law enforcement services.
- To locate and maintain public facilities and services to encourage patterns of land use, population density, transportation strategies and street design to promote walking, biking, and public transportation.
- To balance growth with the Town's ability to provide expanded services and facilities.
- To improve stormwater management by the implementation of best management practices to reduce stormwater runoff and control erosion.
- To continue educational efforts to reduce waste generation and provide a variety of efficient, environmentally sound, and cost-effective long-term solid waste disposal options as identified in the Fairfax Solid Waste Implementation Plan.
- To support efforts to maintain and enhance the library.
- To expand communications infrastructure, such as broadband internet access, cellular service, DSL, etc. to serve residential and commercial needs.





### **Recreation Facilities**

The outdoors provides an abundance of recreation opportunities for Fairfax residents. The Lamoille River, which flows through the southern portion of town, is used for fishing and canoeing, and the wooded areas and fields found throughout the town are used for hunting and walking, snowmobiling, and cross-country skiing. There is also a large

biking and running community as well as a variety of both team and individual sports program in which to participate.

There are four formal facilities in Fairfax for recreation activities and programming. Full descriptions of the facilities is available in the Fairfax Community Data Profile.

**Formal Recreational Facilities in Fairfax**

			
<p><b>Community Park &amp; Recreation Path</b></p> <p>This 23-acre park provides over a mile of mixed surface paths by the Lamoille River, 2 multi-use fields, softball fields, horseshoe pits, restrooms and a pavilion.</p>	<p><b>BFA-Fairfax Facility</b></p> <p>The Recreation Department coordinates with the School to utilize space for fitness programing; space is limited which constrains program offerings</p>	<p><b>100-Acre Woods</b></p> <p>This 100-acre property is heavily wooded with a small network of trails. Planned improvements include demarcating the parking area and trails as well as constructing a trailhead.</p>	<p><b>Community Center</b></p> <p>This facility aims to address the unmet needs for a venue for programming and to expand the services of afterschool programming and enrichment classes.</p>

**Recreation Facilities Goals and Policies**

**Goals:**

- Provide a broad range of quality community programs and services to the residents of Fairfax.
- Establish a physical and visual connection between the North and South Village and the Lamoille River and incorporate the river as an active vital corridor.
- Provide diverse community recreation areas, cultural programs, pocket parks and greens.

**Policies:**

- To maintain, improve and expand Town-owned recreation areas and facilities in order to provide multi-generational recreational opportunities.
- To encourage recreational and cultural programs that support personal growth, enhance family relationships, and encourage civic involvement.
- To support needed improvements and resources to strengthen access to the Lamoille River and other natural features and destinations.
- To seek to establish public access to hunting and fishing, and other outdoor recreational activities.

### Educating Our Children

Quality education is essential to the health of a community. The Town is committed to working cooperatively with the local school district to meet facility needs, foster a safe and healthy school environment, and recognizing the critical role that all types of education play in Fairfax’s vitality. State statute not only requires that town plans address the present and projected needs of the local public school system, but also requires that municipalities broaden educational and vocational training opportunities for all Vermonters. It is not the municipality’s responsibility to make policy or spending decisions for the school—those are made by the school district, with the budget voted on annually by citizens. However, as both the municipal and school budgets are financed by property taxpayers, the impacts of the combined budgets must be considered, and large capital projects should be coordinated. Fairfax’s public educational facilities are shown on the Fairfax **Facilities and Utilities Map**.

#### Existing Facilities & Enrollment

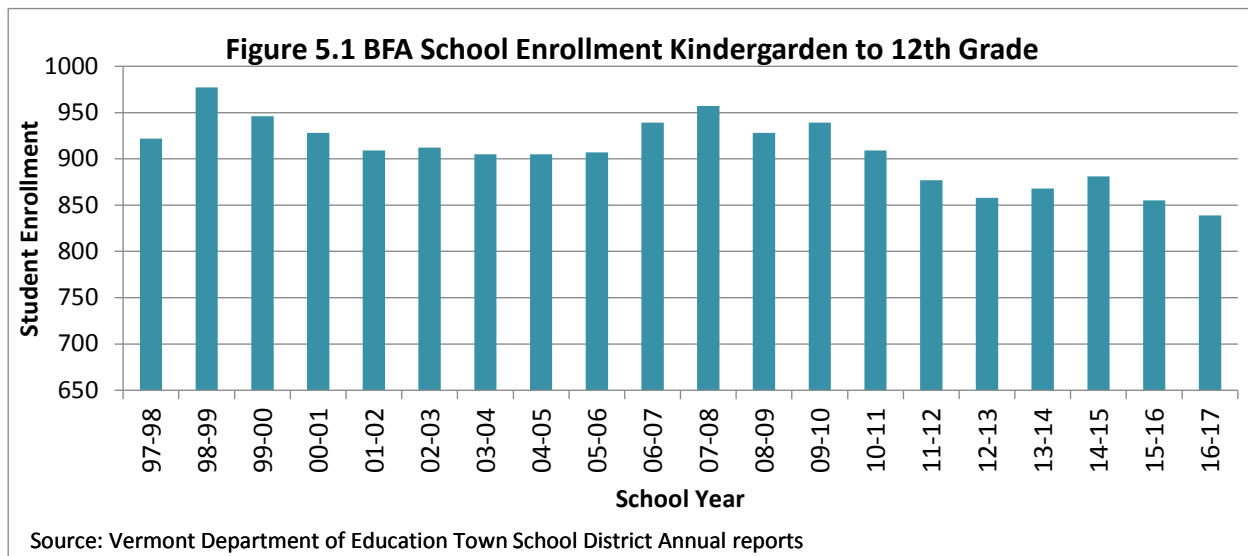
Bellows Free Academy Fairfax (BFA-Fairfax) is a public educational facility serving residents of Fairfax in grades PreK-12. The facility has a

capacity of 1,200 students after an addition, constructed in 1998, increased the capacity by 400 students. The addition provided more classroom space, improved the existing kitchen facilities, added parking, provided greater separation of elementary and high school facilities, and installed fiber-optic technology.

Total enrollment at BFA Fairfax has dropped by twenty-three percent in the last ten years; this decline is largely from a reduction of high school students. BFA Fairfax also accepts tuition students from Fletcher in grades 7-12, as well as grade 9-12 students from Georgia, and fewer students from other communities. One factor that influences the high school enrollment is the number of students that tuition to BFA from choice towns; the number of tuition students in grades 7-12 has decreased by 33% since the 2007-2008 school year.

#### Preparing for the Future

The state projections show the number of school aged residents (ages 5-19) in Franklin County will be lower than 2010 numbers in both 2020 and 2030 (VT Agency of Commerce and Community Development, 2013).



However, the population of the Town of Fairfax, based on these same projections, is predicted to increase by 2030. Based on enrollment trends, BFA Fairfax has sufficient capacity for the near future. The School Board has identified potential upgrades to the current facilities in order to meet the demands of today's education system. These improvements, which are not yet approved, would include a 400-seat auditorium, and upgrades to several facilities such as locker rooms, science labs, bathrooms and the joint school and community library.

### **Community Resource**

BFA Fairfax is an important hub for community activities and provides coordinated public access to school facilities and grounds. Community use of the building typically includes meeting spaces used by local government, service organizations, adult recreation, self-help groups, youth activity groups, and cultural groups. Even though the school board has encouraged community use of the facility, the increase in school programs and security has started to restrict community use of the building. Gym space in particular is in high demand between November and March.

### **Higher Education & Adult Learning**

Adults in Fairfax are generally well-educated, with 56.7% of residents that have some college education or graduate degrees. There are several opportunities for continuing education at public and private educational institutions in nearby towns of St. Albans, Johnson, and Chittenden County.

### **Workforce Training**

BFA Fairfax provides High School students access to vocational training at the Northwest Technical Center, Center for Technology at Essex, and Burlington Technical Center as well as access to courses through the Community College of Vermont. These programs provide students with skills sets they can directly apply in the labor force. The Vermont Woodworking School is a local opportunity to gain specialized skills in a trade.

### **Childcare**

Childcare can be a growing concern for existing and prospective families, including finding quality care and paying for its cost. High quality, available childcare is a critical component supporting a stable workforce. As of 2015 there were just over 267 children under the age of 6 in Fairfax; 62% of these children are in 2-parent families with both parents in the labor force and 32% are in a 1-parent family that is working (2011-2015 American Community Survey). Based on this data, the majority of young children has parents in the labor force and will likely need access to childcare services. According to the Vermont Dept. of Children and Families in 2017, Fairfax had 19 childcare providers that are able to serve 262 children with 142 spots for children under 5. Based on these estimates the need exceeds local childcare capacity by a large margin. Given that the majority of residents commute outside Fairfax for employment, residents may utilize services located in the neighboring communities. Data on other options, such as out-of-town childcare providers, stay at home parents, family care providers, un-registered childcare homes, or other in-home childcare options are not available.

## Education and Childcare Goals and Policies

### **Goals:**

- Provide educational services, childcare, and enrichment programs to meet the needs of the children and adults in Fairfax.
- Encourage youth to pursue higher education and vocational training opportunities that will make them an asset to Fairfax as adults.
- Foster an environment that stimulates lifelong learning.

### **Policies:**

- To promote healthy and safe school environments.
- To provide students with safe ways to walk or bicycle to school through a network of infrastructure (i.e. sidewalks, crosswalks, trails) and traffic calming measures.
- To provide opportunities for community participation by families with young children.
- To maximize resources for the provision of a rich education for all students.
- To encourage the use of public and private facilities in offering multi-generational educational opportunities.

### Community Health

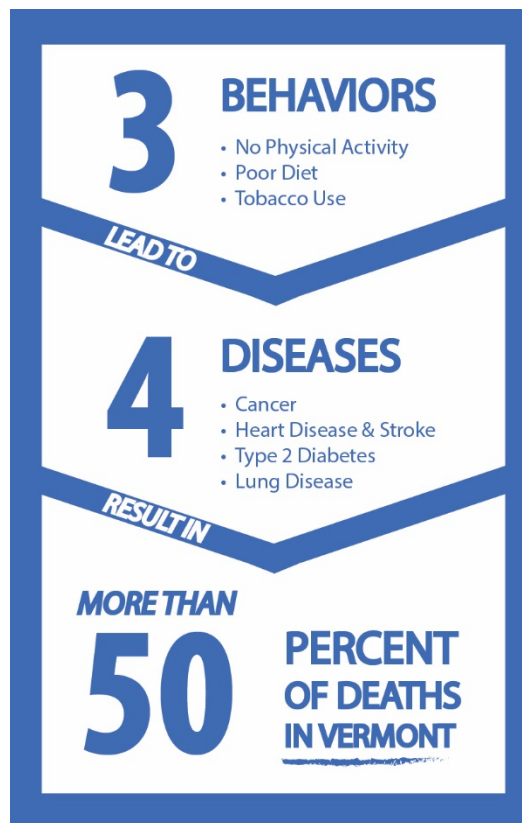
An individual’s health and wellbeing can be strongly influenced by where they live; physical inactivity and poor nutrition are among the top causes of preventable death in the United States.

The Vermont Health Department has found a relationship between daily behaviors and an individual’s long-term health. In addition, early use of alcohol, tobacco, and other drugs is associated with numerous problems later in life that can impact mental wellbeing as well as lead to higher risk behavior. Teaching our youth to build healthy habits will influence these health outcomes as they become adults.

The 2015 Vermont Youth Risk Behavior Survey provides a glimpse at where the youth of Fairfax stand in making healthy choices. The following statistics are from the responses of BFA-Fairfax students in 9<sup>th</sup>, 10<sup>th</sup>, and 11<sup>th</sup> grade.

- 26% of students participated in at least 60 minutes of physical activity every day during the past 7 days.
- 22% of students ate 5 or more servings of fruits and vegetables in the past 7 days.
- The percent of students who drank alcohol, smoked cigarettes, or used an electronic vapor product in the last 30 days was 31%, 12%, and 20% respectively.
- 58% of students reported that they see advertisements for tobacco products “at least most of the time” when they are in a grocery store, gas station, or convenience store.

Municipalities can support their resident’s ability to make healthy choices by influencing the way the community develops, facilitating access to healthy food, and adopting



measures that limit the exposure of youth to tobacco and alcohol products. Measures Fairfax could take to address these include:

- Create a pedestrian oriented environment by encouraging mixed use concentrated development in the Growth Center and Mixed Use zoning districts.
- Provide facilities for safe walking and biking in the community.
- Improve access to parks and recreational opportunities.
- Increase access to healthy food by supporting famers markets and community gardens.
- Prohibit the use and disposal of tobacco, marijuana, and alcohol products and equipment on municipally owned lands.
- Restrict the visibility of advertisement for products containing alcohol or tobacco by incorporating standards into the zoning regulations that limit the area allowed for on-premises signs.

- Provide a venue where health-related education, screening events, and exercise classes can be offered.

Many of these strategies align with other goals and policies in the town plan and will be addressed in the recreation, transportation and land use sections. To address *Health in All Policies*, the Town will consider actions they can take to prevent risky behaviors and support general wellbeing.

A recent program aimed at involving and educating students on their local food system is a successful example of how these strategies can play out in the community. In 2016, Bellows Free Academy began a School Farm program for High School students supported by two grants from the Vermont Farm to School Program. The school program has engaged local farmers, experts, and town residents who have volunteered to support the project financially or through technical assistance. This program engages students and the school with food system curriculum

and a Club and results in creating healthy eating habits and larger engagement within the community.

### ***Health Assets***

Fairfax is in close proximity to three hospitals and a variety of medical offices from neighboring towns serve residents' needs. At the writing of this plan, there are several services that are located in town which include: two physicians, a pharmacy, and a physical therapy office. For seniors, the Town contributes financially to the Franklin County Home Health Agency and Age Well service agencies; Age Well provides services such as the volunteer program Meals on Wheels. See the *Fairfax Community Data Profile* report for additional information on health services. The quality of health and human services available now will continue to meet the needs of the Town well into the foreseeable future.

## **Community Health Goal and Policies**

### ***Goal:***

- Support and encourage activities and community infrastructure, both social and physical, which enable and sustain the health and well-being of all residents.

### ***Policies:***

- To encourage opportunities to provide convenient access to health and human services for Fairfax residents.
- To provide diverse, meaningful programming with an emphasis on community health and wellness. Specifically target alcohol free, cross-generational activities for families, teens, and seniors.
- To support the local food system (growing, harvesting, processing, packaging, transporting, marketing, consuming, and disposing of food).
- To collaborate with interested parties to complete a community food audit to identify existing access and future opportunities to increase access to healthy food.
- To improve the access to healthy food and model best practices related to promoting healthy communities.



## Section 6. Infrastructure: Housing, Transportation, and Energy

### Housing

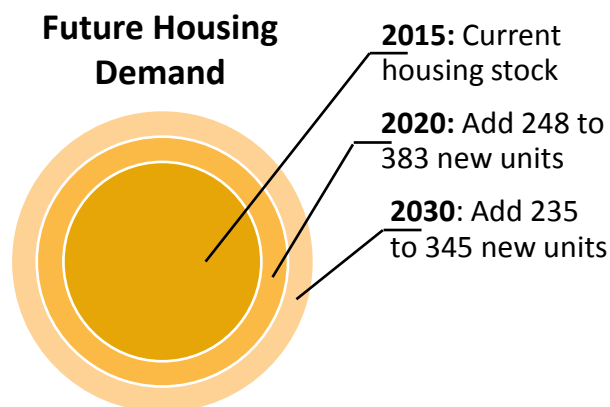
Fairfax is a bedroom community for residents who work in the Burlington and St. Albans areas. This is due to its accessibility from Routes 104 and Interstate 89, as well as the shortage and the cost of housing closer to these employment centers. As a result, Fairfax has experienced continued growth since the 1970s, with a record 51% increase in population from 1990 to 2000. Residential parcels represent 80% of the tax base in the community reflecting the focus of the community in providing a rural to suburban setting for residential development.

### Housing Stock

According to the 2015 American Community Survey (ACS) there are 1,745 housing units in Fairfax. The vacancy rate for homeownership has been at or below 2% since 2000. As of 2015 the housing stock in Fairfax is in good condition and can be characterized by:

- ❖ Two-thirds of residential structures are less than 40 years old.
- ❖ Eighty percent of the homes are single-family homes; multi-family dwellings with more than 3 units make up only 11% of all residential units.
- ❖ Residential lots of less than 6 acres account for 71% of the total parcels but only 18% of the total land.
- ❖ Three bedrooms are the most common housing unit, accounting for 56%, while 1 and 2 bedrooms are both around 13% of the units.
- ❖ Rental units make up just under a quarter (24%) of all housing units.

Based on population projections for 2020 to 2030 (ACCD Population Projections 2020-2030), Fairfax will continue to grow and is expected to account for 10% of the growth county-wide in both 2020 and 2030. Considering the current household size of 2.55 people, Fairfax will need to construct additional housing units to accommodate this growth.



### Types of Households

As of 2015, the following are characteristics of the types of households that live in Fairfax:

- ❖ The majority of households consist of 2 people (43%).
- ❖ The number of 1-person households has doubled since 2000.
- ❖ 24% of all households have children under 18 at home.
- ❖ The median age is 39.5 and the majority of residents are between the ages of 25 and 54.
- ❖ The number of residents aged 55+ has been steadily increasing.
- ❖ The median household income of residents is \$70,795; 43% of all households earn between \$50,000 and \$99,999.
- ❖ 76% of the residents own versus rent their housing unit.

**Affordable Housing as defined by the 30% Rule**

Owners: Housing that is owned by its inhabitants whose **gross annual household income** does not exceed **120 percent of the MSA<sup>1</sup> median household income**...and the **total annual cost of the housing**, including principal, interest, taxes, insurance, and condominium association fees **is not more than 30 percent of the household’s gross annual income**.

Renters: Housing that is rented by its inhabitants whose **gross annual income** does not exceed **80 percent of the MSA<sup>1</sup> median income**...and the **total annual cost of housing**, including rent, utilities, and condominium association fees, **is not more than 30 percent of the household’s gross annual income**.

*(VT State Statutes Title 24, Chapter 117, Section 4303)*

<sup>1</sup>*All municipalities in Franklin County are deemed part of the Burlington-South Burlington*

***Affordability of Housing***

Safe, adequate housing is inarguably one of our most basic needs. It is an important planning consideration to ensure that first-time buyers, senior citizens (often on fixed incomes), and lower income residents are able to afford adequate housing in Fairfax. In order to foster a diverse community, which is not economically exclusive, the Town needs to provide a variety of housing types and price points.

Based on these values those households earning the median MSA income (\$63,255) or greater can afford to own a home in Fairfax. Homeownership affordability can, however, be a problem for some who earn less than \$62,000.

- ❖ The median gross rent in 2015 was \$1,193 per month.

To consider housing as affordable, households should pay no more than 30% of their income on housing related costs based on state and federal definitions. This rule is used as an indicator for the availability of affordable housing in a community.

Rental housing in Fairfax appears to be more affordable than homeownership for median and low-income households. However, the number of available rental units is extremely limited and the low vacancy rate can drive up rental costs, making housing less affordable.

Using the state definition of affordable housing outlined above, Fairfax does not have an “affordability gap” for homeownership for those earning 120% of the median income.

***Specialized Housing Options***

Communities also need to account for providing housing to individuals and families with varying housing needs such as seniors and individuals in poverty. Different measures will be needed to accommodate these groups ranging from modifications to existing housing stock to meet handicapped accessibility, assisted living arrangements, and smaller or lower cost housing options. If these housing options are not available, it may

- ❖ The 120% of the median household income for the MSA is \$75,906 which is lower than the 120% estimate for the Town of Fairfax residents of \$84,954.
- ❖ The median sale price for a primary single-family residence in 2015 was \$252,750.

force some residents to relocate outside of Fairfax as they age or need additional levels of care.

The following is a list of population groups with special needs and an indication of how well these needs are currently being met in Fairfax.

Seniors – As of 2015, the Town of Fairfax has limited opportunities for group housing for senior citizens that can be classified as independent or assisted living arrangements. There are two senior housing complexes for independent living, Franklin Green and Mountain View Apartments, which provide a combined total of 67 housing units. As of the 2015 US Census, 13.4% of residents or 595 people are age 65 and older. As previously noted the community as a whole is aging, steps need to be taken to ensure that there is adequate housing available for senior citizens.



*Franklin Green provides 47 market rate condos; 30 additional units are planned.*

*Mountain View Apartments provides 20 subsidized rental units; income limits*



Living in Poverty – As of 2015, 1.7% of residents are considered to be below the poverty level. One development in Fairfax that has incorporated subsidized low-income housing is the Eastfield Condominium Development on Route 104 across from Minor’s Store. This is a 32 unit 2-bedroom condominium development and 14 of the units are permanently affordable through the Champlain Housing Trust “Shared Equity Program”. While the typical buyer of a CHT home averages an income of 60-70% of the

MSA median, these units are open to all buyers with an income below 100% of the median. The Town should evaluate the current affordability of the town’s housing stock to ensure that there are opportunities for all incomes to find safe and adequate housing.

**“Affordable”**

Vermont Statute defines "affordable housing development" as a housing development of which at least 20% of the units, or a minimum of five units, whichever is greater, are affordable housing units. The affordability of these units shall be preserved for a minimum of 15 years or longer as provided in municipal bylaws.

***Options to Increase Housing Variety and Affordability***

The Town recognizes that there is a need for senior housing for the growing senior population and affordable housing for low and moderate-income households. The following are some identified ways the community can address these needs.

Standards provided in zoning regulations should be reviewed to identify if they are promoting opportunities to allow for a variety of housing types, while providing standards to maintain the character of the area and ensure adequacy of services. To accommodate a diversity of housing types and development near existing services, lot size and setbacks minimums should allow for more flexible design for development within village settings. Other forms of housing development that can be economically and structurally viable for affordable units are planned unit developments and other forms

of cluster housing, accessory apartments, and multifamily housing. Mobile homes can also provide an opportunity for those who cannot afford conventional housing. Vermont land use law does not allow municipalities to discriminate against or segregate mobile homes.

Public infrastructure contributes to the availability of low cost housing. In particular, shared sewer and water connections allow for higher densities and lower land costs by minimizing the amount of land that is necessary to accommodate new development. Affordable housing developers often depend on these public facilities to reduce building costs. The expense of drilling wells and designing individual septic systems significantly increases the price the developers require for their efforts.

### **Housing Goal and Policies**

#### ***Goal:***

- Guide the Town in achieving well managed residential growth that includes a diversity of housing opportunities.

#### ***Policies:***

- To ensure adequate housing options for people of all income levels, ages, household types, and housing forms.
- To promote lower-density residential housing in areas without municipal services and higher densities in parts of town with existing services (e.g. Growth Center) or close to existing service boundaries.
- To encourage the preservation and rehabilitation of existing housing stock.
- To encourage infill development of small, existing lots.
- To encourage the development of housing that will minimize long-term living costs through high quality design and energy efficient construction.
- To provide a range of housing types within walking and biking distance of village services and amenities.
- To encourage land use patterns which are inherently more affordable by nature of cost of efficiencies associated with construction (e.g. shorter access roads, smaller lots, proximity to utilities).
- To maintain the affordability and promote new development of rental housing opportunities.
- To enable affordable development in the Growth Center by increasing sewer and water system capacities.

Currently, municipal sewer and water infrastructure that serves the Village Center is near or at capacity. The potential for future growth in this area - at higher densities than in other parts of town – will be dependent on the availability of infrastructure.

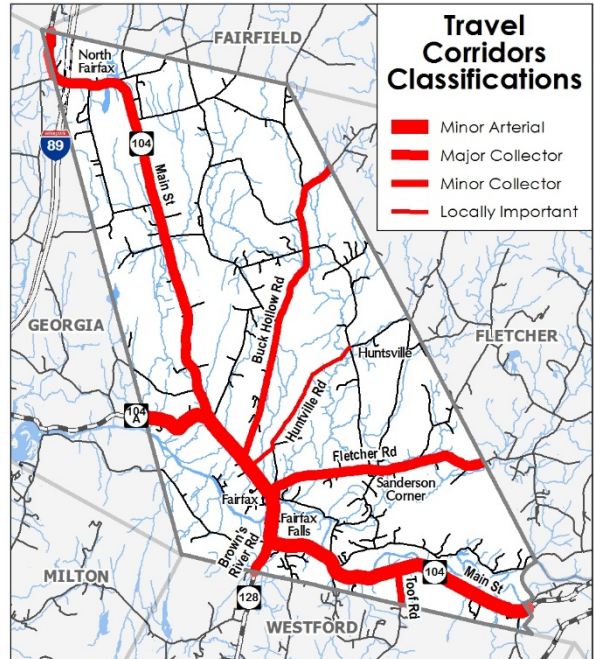
Fairfax can also promote housing variety and affordability by promoting programs such as HomeShare Vermont. HomeShare Vermont assists elders and persons with disabilities to live independently in their own home by bringing them together with persons who are seeking affordable housing and/or care giving opportunities. This program represents an opportunity to expand housing opportunities while maintaining open space and other sensitive areas such as floodplains.

## Transportation

### Road Network

Fairfax has a total of 79 miles of paved, gravel, and dirt roads and highways (excluding Class 4 and private roads). The **Transportation Map**, shows the roads in Fairfax, the class of road, road surface, and streams which are important for locating culverts. Many of the local roads provide scenic views, but there are no locally or state designated scenic roads in the Town.

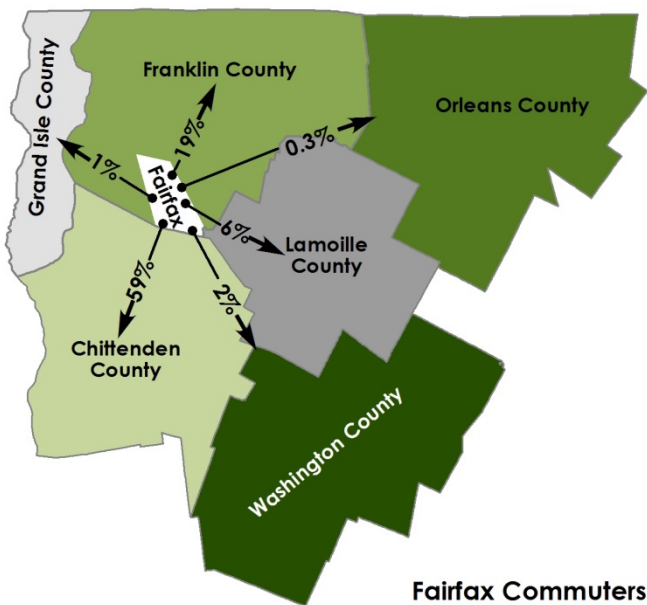
Roads are classified according to their use and ability to carry traffic. The Agency of Transportation has identified several roadways in Fairfax which are regionally important for the flow of traffic around Franklin County. These travel corridors are important for the flow of commuter traffic and many also carry a significant volume of truck traffic.



### Commuter Flow

The majority of commuter trips originating in Fairfax are to employment destinations outside of Town, particularly to Chittenden County’s major employment centers. According to the Census (Longitudinal Employer-Household Dynamics Program), just under 60% of the workers that live in Fairfax travel to Chittenden County communities for employment. Just under one-fifth of residents (19%) travel from Fairfax to other communities within the County. According to the 2015 American Community Survey, the majority (79%) of employed persons living in Fairfax commuted to work by driving alone.

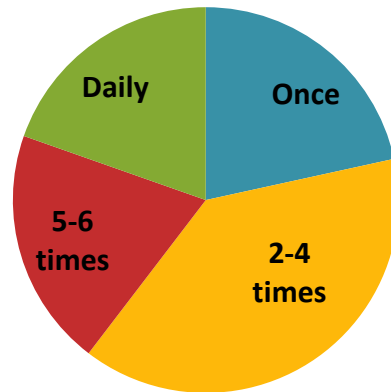
Only seven percent of workers are reported as being employed within Fairfax. This number is likely closer to 11% if you include employer locations that are more than a 90-minute commute from Fairfax; it could be even higher if you consider the number of home-based (self-employed) businesses that are not captured in this data.



Accessing Essential Needs

According to the 2017 Fairfax Town Plan Survey, residents primarily travel to St. Albans and surrounding towns to access retail shopping (grocery, clothes, toiletries, etc.). A small portion of these services are accessed in Fairfax and via the internet. It should be noted that residents do utilize the services in the Village Center. Forty percent of respondents are patrons 5+ times a week at a business in the Village.

**Number of times per week survey respondent was a patron of a Fairfax Village business**

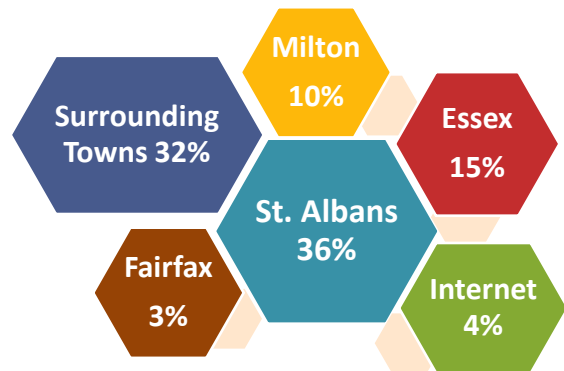


**Transportation Services**

Local Services

- ❖ Commuter Parking –The closest official commuter park and ride lot is located at Exit 18 in Georgia.
- ❖ Transport for Elders – Limited transportation services are provided through various service providers. Green Mountain Transit provides trips to medical appointments for Medicaid/Medicare patients.

**Communities that provide retail shopping for residents based on 2017 Town Survey**



Regional Services

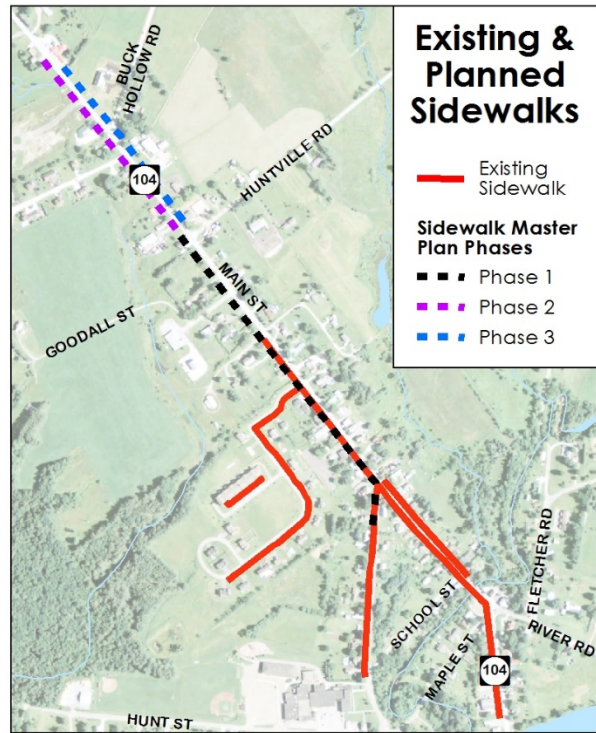
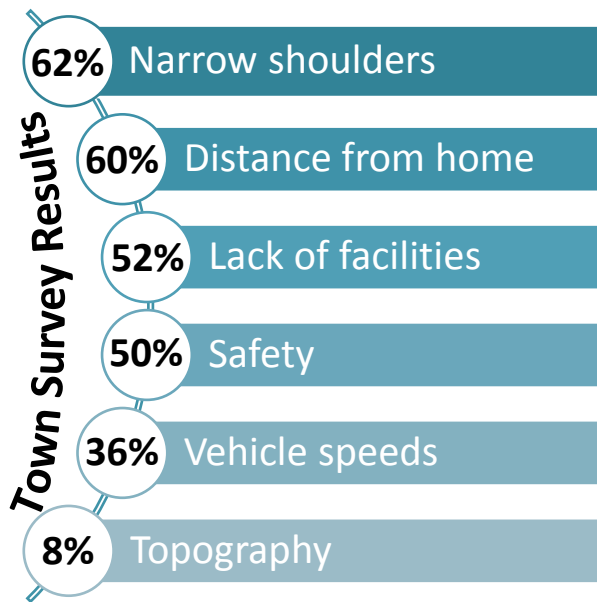
- ❖ Public Transportation - There are no regional public transit routes that directly service Fairfax, nor does the Town provide any public transportation for its residents. The closest transit stop is located at the Georgia Industrial Park or St. Albans Town for the St. Albans Link Express, which provides service to Chittenden County.
- ❖ Train - Amtrak provides passenger rail service out of the St. Albans depot on the Vermonter line which extends down to Washington, D.C.

- ❖ Airport - The Burlington International Airport in South Burlington, the Plattsburgh International Airport in Plattsburgh, and the Trudeau Airport in Montreal provide air service to the region.

**Pedestrian and Bicycle Facilities**

Creating a system of infrastructure that provides residents the opportunity to travel on foot or bike throughout Town has numerous benefits. There is a core system of sidewalks in the Village that stem off of Route 104 and mainly service the School. Bicycle and pedestrian travel for recreation is accommodated by the Fairfax Recreation Path and Class 4 roads. No other bicycle and pedestrian related infrastructure (e.g. bike lanes) or signage (e.g. share the road) is available to residents. Bicycle travel in the Village can be accommodated on the existing road network although there are no dedicated lanes. Outside the Village however, this can be hazardous due to varying widths of shoulders. Route 104 and other roads in town would benefit from a dedicated bicycle lane and wider shoulders to provide a safe route as identified by the 2013 Non-motorized Travel Plan. Efforts to maintain and improve a network have been underway for many years.

According to the 2017 Fairfax Town Survey, the top road blocks that prevent people from walking and biking today in Fairfax relate to a lack of facilities to connect the community.



**Benefits of a defined system for walking and biking**

- Increase safety for all users
- Fewer motor vehicles on the road
- Promote better public health and active recreation
- Encourage walking and bicycling to the school and other amenities
- Contribute to Village revitalization and economic growth
- Foster a greater sense of community

Safe Routes to School

Fairfax is a participant in the Safe Routes to School Program. The program actively encourages walking and bicycling by students and helps to identify infrastructure projects to make walking and bicycling safer. BFA Fairfax completed a School Travel Plan in 2010 that documented problems related to the journey to school and strategies to address these issues; this study is a valuable tool for planning and should be periodically updated.

**Assessing needs, designing improvements, & getting it on the ground**

- 2006 - Initial investigation of sidewalk expansion in Village along Route 104 identified potential expansion of sidewalk on west side of VT 104 in three phases.
- 2010 – Town receives Transportation Enhancement grant from VTrans to design and construct phase 1 from Huntville Road to Hunt Street. As of January 2018, this project construction is expected in 2018.
- 2013 – Town-wide study to explore opportunities to connect residents outside the village with bicycle and pedestrian infrastructure. (*Fairfax Non-motorized Travel Plan*)
- 2015 – Identified improvements needed to walk or bike from the existing network in the northern village center to amenities across the bridge in the south village. (*Fairfax Pedestrian Connectivity Feasibility Study between the North and South Villages*)
- 2017 – *Village Gateway Study* presents improvements to improve safety along Route 104 and promote community identity.

***Building a Sustainable Transportation System***

Encouraging a pattern of high density, mixed use development within the Village Center could help create more local job opportunities, lessening the demand on the existing road network to carry commuter traffic to destinations outside of Town for basic services. Promoting home occupations and local agriculture-related businesses would further assist in reversing current commuting trends.

High density development of this kind would best be performed in conjunction with improvements to municipal infrastructure in the area of the existing village. These infrastructure improvements include water and sewer system improvements; continuing the extension of sidewalks within the village for safe, easy pedestrian travel; and the possible addition of new roads within the village which extend the current pattern of interconnected streets in a “neighborhood” street layout. The creation of interconnected “neighborhood” streets is preferred in order to provide efficient flow of automobile travel and opportunities for safe pedestrian travel.

*Standards for New Roads*

The Fairfax Selectboard has established the Town of Fairfax Statement of Procedures and Standards Regarding Town Highways, dated July 18, 2011. The purpose of this document is to protect the Town from undue financial burdens associated with maintaining existing roads and new construction of development roads. This document provides several additional benefits:

- Standardized road evaluation in regards to widths, surface type, safety and use;
- Ensure that any private roads are constructed reasonably to provide for adequate emergency responder access, and future pedestrian amenities; and
- Avoid creating future issues currently identified as problematic on existing streets (e.g. ‘dead end’ streets)

*Reducing the Transportation Load on the Road*

A Park-and-Ride would greatly benefit the community and the transportation infrastructure. As reported, the majority of Fairfax residents travel to other communities for employment, entertainment, medical needs, or supplies. Increasing the number of



residents carpooling will reduce the number of cars on the road and can be beneficial for these residents by reducing their out-of-pocket costs on fuel and maintenance costs on individual vehicles. The Town should investigate suitable locations where carpoolers can leave their vehicles considering informal "park and ride lots" at locations such as churches, where weekday park and ride needs do not usually conflict with the parking needs of the particular location.

In the past, it has been impractical to offer public transportation services in this rural community due to relatively low ridership potential and a diffuse pattern of land use. Due to the steadily increasing population and the fact that more residents are commuting out of town for employment, the potential for some level of public transportation services may too be increasing. The Town should engage Green Mountain Transit to examine possibilities for expansion of existing services.

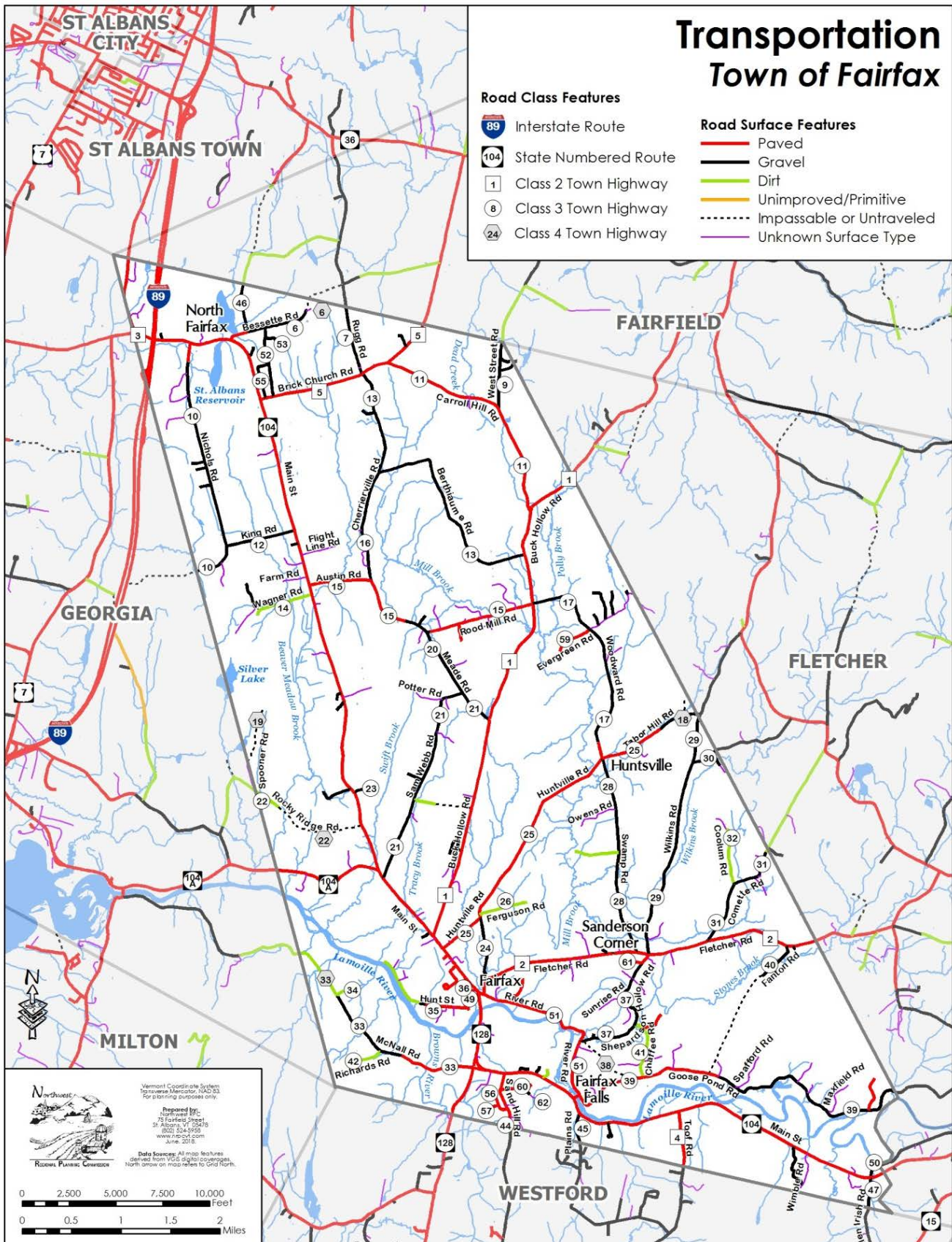
## Transportation Goals and Policies

### **Goals:**

- Design a transportation system that provides community-wide non-motorized connectivity to town assets and destinations.
- Provide a transportation system that is safe, connected, and sustainable to build, maintain, and access.

### **Policies:**

- To maintain public roads according to the adopted standards and at a level consistent with their use.
- To ensure new roads within the Growth Center shall be reviewed for the ability to contribute to the interconnected village street network and non-motorized infrastructure system.
- To apply the Vermont "Complete Streets" policy to its transportation system to ensure the needs of motor vehicles, public transportation services, bicyclists and pedestrians are being met. This complete street policy shall pertain to both town and private development streets.
- To create pedestrian-friendly village areas that incorporate pedestrian infrastructure (sidewalks, paths, and crosswalks), community amenities (i.e. street trees and wayfinding), and address the safety of motorized and non-motorized travel through traffic calming measures. Traffic calming techniques could include lateral shifts, roundabouts, bulbouts, or neckdowns, in order to reduce traffic speeds, increase safety and encourage pedestrian activity in the villages.
- To coordinate with state and regional partners on transportation improvements.
- To provide pedestrian and bike access to key community places that include the school, town facilities, recreation areas, and river access.
- To encourage appropriate provisions for bicycle and pedestrian use on designated routes, including proper signage and pavement improvements.
- To continue the sidewalk improvement program so that there is a network of continuous, safe, maintained, and accessible sidewalks in the Village.
- To use the comprehensive Fairfax Village Non-motorized Travel Plan in conjunction with existing programs and as a guide for walking and bicycling improvements within the Village.

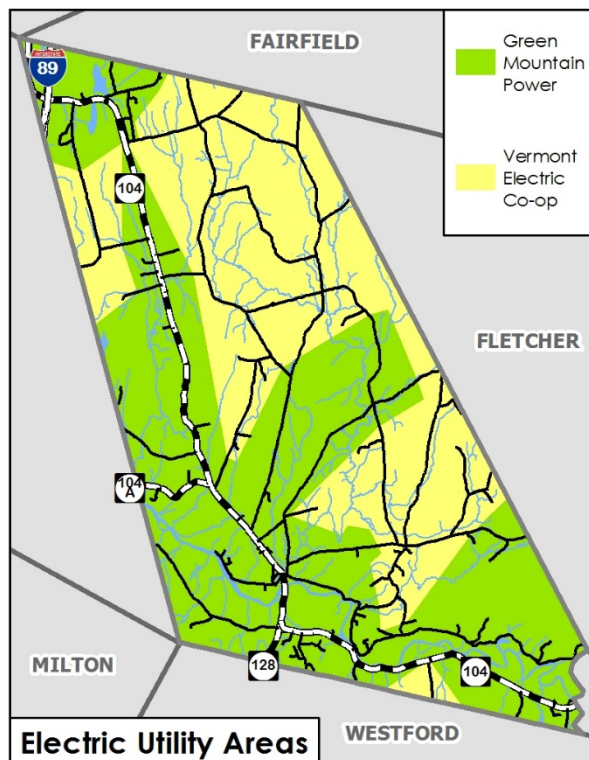


## Energy

Vermont planning law states that municipal plans must include an energy strategy for the community. Such a strategy is intended to promote the efficient and economic utilization of energy. With the adoption of the 2018 Town Plan, Fairfax has incorporated an “Enhanced Energy Plan” in conformance with 24 V.S.A. 4352 and provided in Appendix 4. The enhanced energy plan takes the place of other energy-related plan requirements in 24 V.S.A. 4382. The Goals, Policies and Strategies from the Enhanced Energy Plan are provided in this document and in Appendix 4.

Practical energy planning and implementation results in positive environmental and economic returns to the community and energy providers. Conservation of energy lessens the demand for expensive new sources, and allows utilities to defer capital investments necessary to provide for additional capacity. This has benefits for residents, businesses, and ratepayers.

While it is recognized that energy supply and demand are directed largely by economic forces at the state, federal, and international levels, the manner in which the Town plans for future growth can have an impact on energy. For example, a highly dispersed and unplanned pattern of land use can waste both land and energy resources. The need for additional infrastructure and fuel consumption can be reduced with proper planning that includes job locations, public services and housing near the growth centers. The siting and design of buildings as well as the selection of appropriate energy systems can influence the efficiency and conservation of energy.



Fairfax Energy Snapshot:

- There are two utilities that provide electricity to residents, Green Mountain Power and Vermont Electric Co-op.
- The majority of residential buildings are heated with fuel oil (49%); other major sources are propane (24%) and wood (21%).
- The majority of renewable energy generated in Fairfax today is from the hydroelectric plant, Fairfax Falls.

Achieving the State’s goal of having 90% of energy used powered with renewables by 2050, and the other energy goals in state statute, will be difficult. Fairfax is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, less costly, and more secure energy future.

## Energy Goals and Policies

### **Goals:**

- Plan for increased electric demand with the support of Green Mountain Power, Vermont Electric Coop, and Efficiency Vermont.
- Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips, increasing the amount of pedestrian and bicycle commute trips, and increasing public transit ridership.

### **Policies:**

- To support the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in the Fairfax Enhanced Energy Plan. Development of generation in identified preferred locations shall be favored over the development of other sites.
- To support energy conservation efforts and the efficient use of energy across all sectors.
- To support patterns and densities of concentrated development that result in the conservation of energy.
- To support public transit connections from Fairfax to other parts of the region if economically feasible in the future.
- To support the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
- To support the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.

## Section 7 Land Resources & the Built Environment

### Historic Resources

The initial growth of Fairfax was fueled in part by access to waterpower. Throughout the history of this area, the Lamoille River and several of its tributaries in the immediate vicinity were utilized to drive mills. With its 88-foot descent, Fairfax Falls has been the most heavily utilized hydropower location in the Lamoille drainage.

Historical buildings and structures give perspective on the Town's rich past. The Vermont Division for Historic Preservation has placed many homes, farms, buildings, bridges, as well as the Fairfax Falls, and the Fairfax Village Historic District, in the Vermont State Register of Historic Places (see Appendix 1, Table 6.1). The Maple Street Covered Bridge, also known as the Fairfax Covered Bridge, is the only structure in the Town to be placed on the National Register of Historic Places. This structure was listed in 1972 and is an important part of the village landscape.

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*162 documented historic structures in Village & Town*

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There are thirteen cemeteries in Fairfax. Preserving the history of the Town and its residents is very important for the community as well as visitors and care should be taken to preserve these places.

### Archaeologically Sensitive Areas

Archaeological resources provide evidence of human habitation dating from prehistoric

times. This includes evidence of prehistoric habitation and use, including villages, trails, trade networks, and burial grounds, as well as remnants of historic settlement and use, including old foundations and cellar holes, quarry, mill, kiln and foundry sites, and unmarked cemeteries and roads.

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*Local resources such as the Lamoille River, streams, and wetlands would have supported native populations relying on subsistence activities such as fishing, hunting, & gathering*

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For planning purposes, the Vermont Division for Historic Preservation has identified "sensitive areas" that include a 200 foot buffer along all major rivers and tributaries in the region, particularly in the vicinity of major confluences, and the Lake Champlain shoreland, which is considered highly sensitive.

The Lamoille River running westward from Fairfax Village is designated as being an archaeologically sensitive area. In addition, the corridor running eastward from Fairfax Village is expected to have moderate to high archaeological sensitivity. Portions of the Olin, Swift, Tracy and Beaver Meadow Brooks may also contain archaeologically sensitive sites. Development in known or anticipated sensitive areas should be cognizant to the possibility of buried sites.

### Scenic Resources

Scenic resources should be considerations in planning and development, including ridgelines, foregrounds of distant views, open land, vistas, and historic villages and

settlements. These scenic features contribute to the local quality of life and a sense of place, and are instrumental in defining the rural character of the Town, so prized by its inhabitants.

The scenic views in Fairfax extend from the winding curves of the Lamoille River to the peak of Mt. Mansfield, with a varied pattern of wooded hills and open farm fields in between. Views of the river can be enjoyed from points along Routes 104 and 104A, Goose Pond Road, Hunt Street, and River Road. Mt Mansfield can be seen from several roads throughout the town. Many roads in Fairfax allow for the enjoyment of a drive through countryside with tree covered roads, wide open farm land, and views of the neighboring hillsides and mountains.

Future development should be sensitive to these often unprotected elements of the landscape. Proper siting for development, avoidance of steep slopes and hilltops for construction, and development which fits the existing historic settlement pattern of the town should be encouraged. Implementation of flexible zoning which pays more attention to the character of the landscape than to strict dimensional requirements may enable the Town to preserve its rural character and scenic resources, while not imposing overly restrictive conditions on potential future growth.

## **Natural Resources**

### ***Topography & Geology***

Topography, or the shape of the land surface, is a function of the underlying bedrock, soil cover, and the effects of weather over time. Fairfax is located in the rolling hill terrain of the central uplands of Franklin County with a

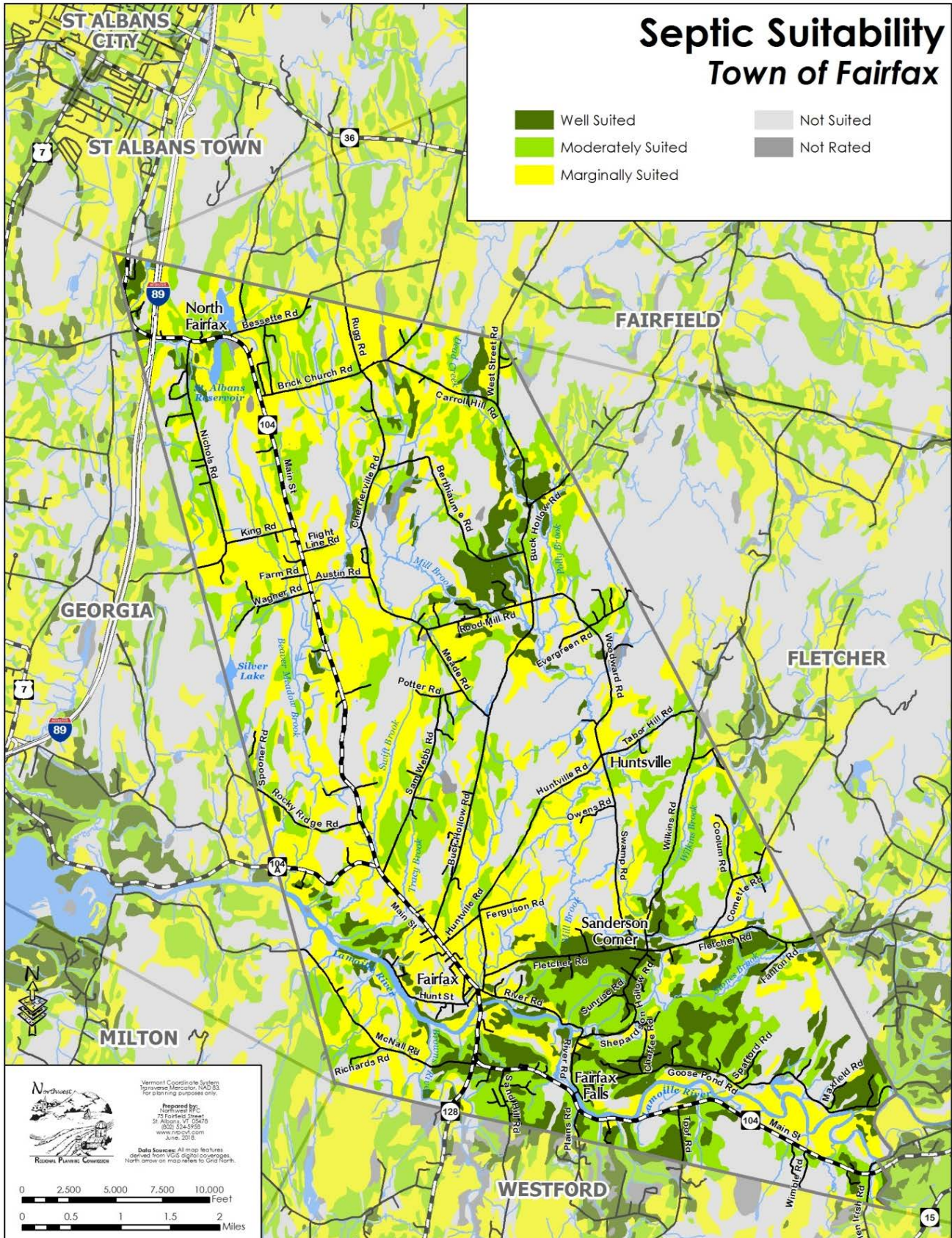
total elevation gain of 500 feet (see **Topographic Limitations Map**).

The bedrock geology in Fairfax relates back to the historical glacial activity, receding waters of the inland sea, and weathering. A fault-line, the Hinesburg Thrust, runs adjacent to the western edge of the town and marks the boundary between two distinct geological areas namely the Champlain Lowlands and the Green Mountains. Glacial erosion and deposition has left many hilltops scoured to bedrock, thin layers of till overlying much of the rest of the landscape, and (glacial) lake-deposited silts and clays filling many of the valleys. Streams from the melting of the glacier deposited thick areas of sand and gravel in various places in the town. Over the next few thousand years, numerous small streams and the Lamoille River further modified the topography, carving valleys and creating perhaps the most dominant geologic feature of the town, Fairfax Falls.

### ***Earth Resources***

There is potential for sand and gravel extraction in Fairfax; the areas of deposition relate back to the geology of the area. Currently there is only one active quarry extracting resources in Town. To minimize negative impacts on the natural and cultural environment, a focus on appropriate site development that minimizes visual impact and reduces the risk of resource degradation should be coupled with plans for erosion and sediment control during active operation and post-operative site reclamation. Appropriate guarantees shall be required to ensure the rehabilitation at the operator's expense.







### ***Slope***

Slopes pose an important consideration for development as it pertains to factors such as bearing capacity and drainage; development in steep slope areas can result in destabilization and environmental damage. Development on steep slopes, the removal of vegetation, and the injection of effluent by onsite sewage disposal may increase runoff, erosion and the possibility of mass movement or slumping unless properly designed. Development on steep slopes should be regulated as to address these impacts.

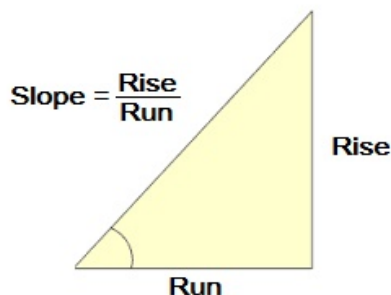
In general, land that is nearly level (less than 8% slope) is better suited for farming and most types of commercial and residential development. Development on steep slopes (more than 15%) may also increase the costs of road maintenance, stormwater and erosion problems, and access for public services (school bus, fire service, etc.). Steeply sloping land is usually best used for timber production, which minimizes the potential for erosion and provides wildlife habitat, recreation, and open space. These types of uses are not incompatible, but steep terrain with multiple uses requires careful land management and appropriate land use controls. Steep slopes over 15% and 25% are shown on the **Topographic Limitations Map**.

### ***Soils***

Soils are an important environmental factor in determining the use of land in rural areas. The Natural Resource Conservation Service (NRCS) digital soil survey is an invaluable resource for land use planning and accessing numerous soil attributes, which include:

- *suitability for on-site septic disposal*
- *prime agricultural attributes*

*Slope is the inclination, or change in elevation, of land over a horizontal distance, and is often expressed as a % (# of feet of vertical rise over 100 feet of horizontal distance or run).*



- *frequency of flooding*
- *depth to bedrock*
- *slope classifications*
- *drainage information*
- *potential for woodland productivity*

These factors should be viewed in combination when assessing the ability of the land to support a certain use or activity.

The majority of the land area in Fairfax is marginally suited or not suited for on-site sewage disposal. In total, 37% of the total land area is not suited based on soils for onsite sewage disposal. See the **Septic Suitability Map** for a complete septic suitability survey of the Town.

***Prime Agricultural Soils*** can be characterized as having natural fertility retention qualities, high organic matter content, favorable drainage, level to gently rolling slopes, sufficient depth and textural qualities as well as a high available moisture content. These factors in combination make such soils

intrinsically suitable for crop production. A significant portion of Fairfax contains areas recognized by the NRCS, or by the State of Vermont, as having primary agricultural potential (**Agricultural Soils Map**). These areas of high productivity potential coincide well with areas which are currently in agricultural production.

Prime agricultural areas have few local regulatory protections, and from a purely physical perspective, are often extremely suitable for residential and commercial development. Preservation of primary agricultural soils should be considered when reviewing development proposals. Effective conservation of prime agricultural resources may be practically achieved by concentrating conservation efforts on existing productive farmland. Conserving agricultural resources is important to preserving rural character, and sustaining the traditional and economic resources which agriculture and silviculture provides to Vermont's working landscape. Finding innovative ways to balance future growth with maintaining critical resources is central to the planning process for Fairfax. To ensure that these important resources will be available for agricultural use in the future, mechanisms to enhance agricultural opportunities should generally be encouraged and supported. This interactive process between landowners and the Development Review Board will not completely prohibit growth in these areas, but will ensure site planning that is sensitive to these irreplaceable resources, while enabling landowners to realize a fair economic return. To best implement conservation practices, soil resources should be measured against the economic viability and practicality of its use and the Fairfax Town Plan as a whole.

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*Prime Agricultural Soil has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to acceptable farming methods.*

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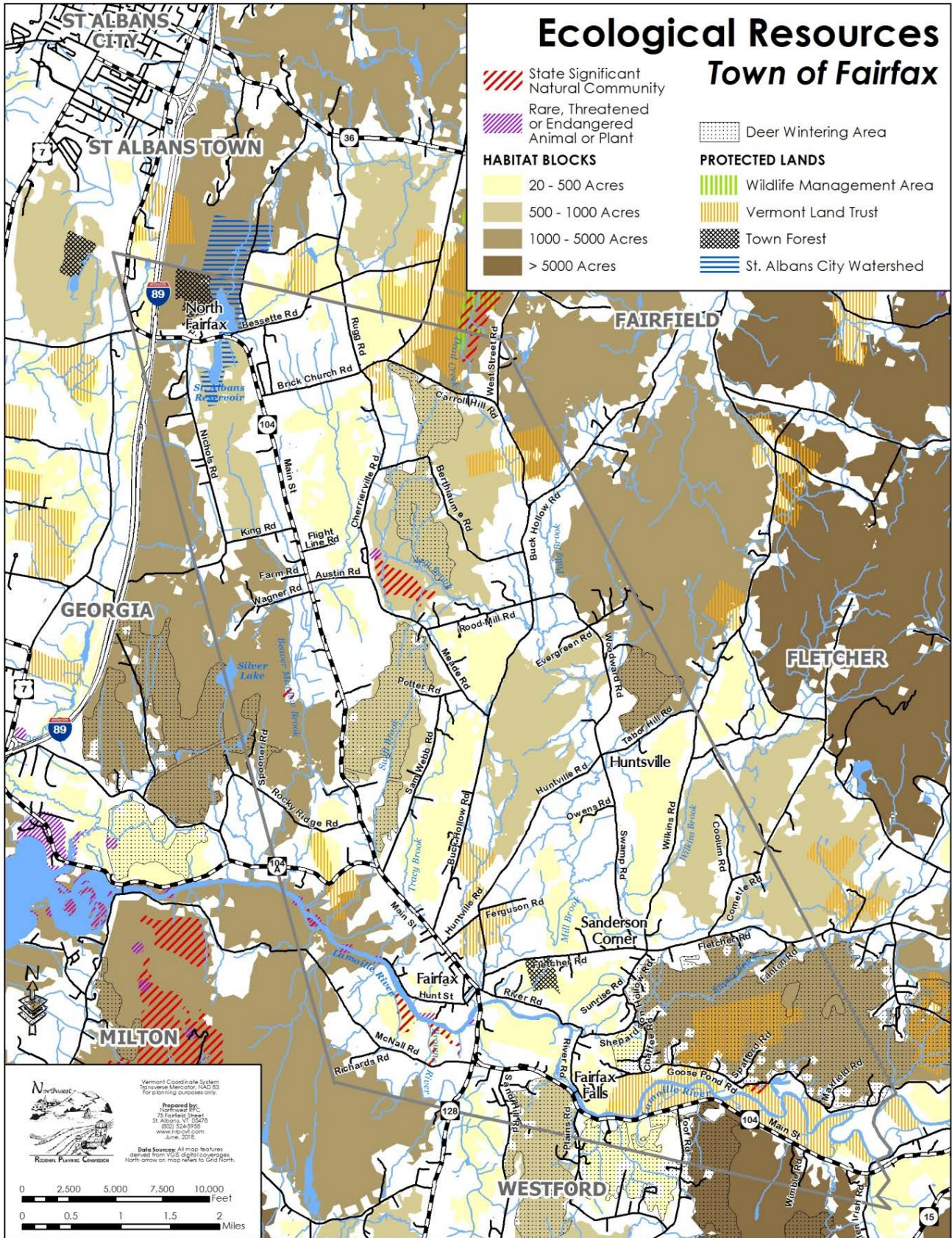
### **Forest Resources**

Much of Fairfax's landscape is heavily wooded with a mixture of hardwood and softwood types. According to 2011 National Land Cover Dataset, 13,130 acres or 50.0% of the land in Fairfax consists of coniferous, deciduous or mixed forests. See the **Working Lands Map** for a depiction of forestland in the Town.

Wood and wood products are becoming increasingly valuable commodities. Productive local woodlands can provide a source for raw materials for various forest products industries and value-added products such as maple syrup. Forestry operations should be conducted in accordance with the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont (AMPs) to comply with the Vermont Water Quality Standards and discourage discharges from logging operations. The conversion of productive forest land to low density development could have impacts on maintaining viable commercial forestry operations.

Forests also provide a range of other benefits and services; forests play a role in water supply protection, flood control, wildlife habitat and biodiversity, and air quality. Careful management of these resources could reap several economic benefits for recreation and tourism.





***Keeping the Forest Connected***

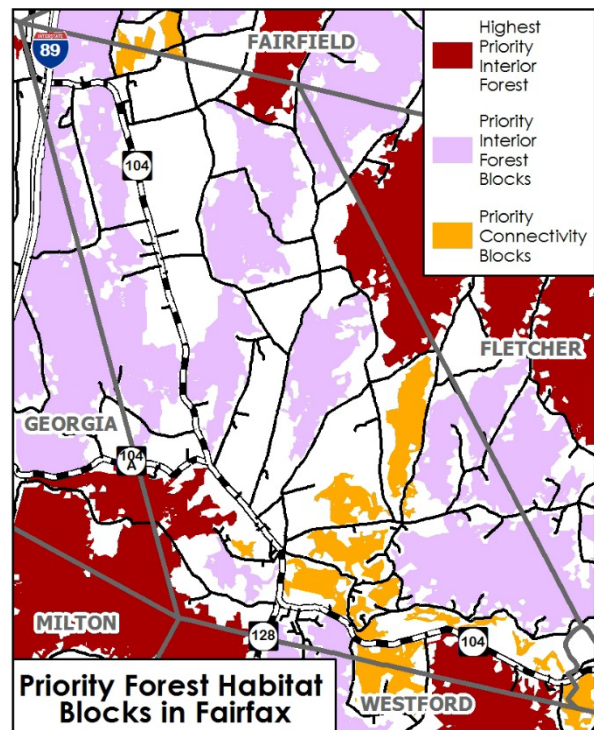
The forestland that covers much of the community is vulnerable to fragmentation as over 95% of the land area is privately owned and managed. The Town of Fairfax owns and maintains less than 1% of the land area in the community; aside from the tip of Fairfield Swamp WMA that dips into the northern corner there are no other state or federal lands in town. Having large areas of land in private ownership poses two risks for forest resources; a forest owned by multiple people results in different land management priorities and as land is subdivided it will result in land clearing and smaller parcels. A trend seen in Fairfax and around Vermont is the incremental impacts of low-density development that physically breaks up continuous forest.

Many species of wildlife, especially large mammals, utilize forested habitat to travel from place to place; when forestland is cleared either for development or agriculture it can alter where wildlife live and how they move. To understand which areas may have more value for wildlife the VT Fish and Wildlife Dept (FWD) has mapped and prioritized Forest Habitat Blocks. These areas identify contiguous forest that do not have internal development or roads but may include recreational trails, wetlands and other natural features such as a stream corridor (**Ecological Resources Map**). The large majority of the habitat mapped on the Ecological Resources map serves a role as either core habitat or as a habitat connector to enable travel.



*Forest fragmentation is the conversion of a contiguous area of forest by land development. Signs of fragmentation occurring off Route 104 along the Fairfax/Georgia town line are shown above.*

The priority of habitat blocks is identified in the VT Biofinder 2016<sup>1</sup> and shown in the Priority Forest Habitat Blocks inset below. The highest priority habitat blocks in Town correspond to the larger habitat blocks with the least amount of internal development that disrupts internal or core habitat.



<sup>1</sup> Vermont Biofinder 2016, accessed via <http://anrmaps.vermont.gov/websites/BioFinder2016>

**Wildlife Habitat**

Vermont state agencies have identified several unique natural habitats in Fairfax, including wetlands, deer habitat, and locations of rare, threatened, and endangered species (**Ecological Resources Map**).

Wetlands - Wetlands provide habitat for a wide floral and faunal diversity, including habitat for threatened and endangered species in numbers which are disproportionately higher than are found in other habitat types. Many species are dependent on wetlands for their habitat requirements including many species of fish, small mammals, large mammals, and many species of waterfowl and migratory birds.

Deer Wintering Areas - Deer wintering areas provide critical habitat for white tail deer and other species of vertebrates. In Fairfax the largest mapped wintering range borders the Town of Fletcher along and south of Stones Brook. Smaller areas in central Fairfax and along the southern border with Chittenden County have also been recorded. These mapped areas support micro-climatic conditions—combinations of elevation, vegetation, and solar aspect—that significantly increase the winter survival rates of deer populations, and therefore critically impact Vermont’s landscape ecology. These areas have been targeted for protection by the U.S. Fish and Wildlife Service.

Black Bear Habitat - The forested areas in the far southeastern part of Town are considered important seasonal bear habitat, which include feeding areas and travel corridors. The black bear is a sensitive indicator of the health of Vermont’s forest. These areas are

considered critical to the black bear’s long-term survival in Vermont.

Rare, Threatened, and Endangered Species Habitat - Numerous locations within the Town have been identified which support populations of designated rare, threatened, or endangered plants and animals. Locational data and descriptions for these areas have been entered into the Vermont Nongame and Natural Heritage Program database. The species identified have very particular habitat requirements, or have been identified because they are at the edge of their natural range, are vulnerable to collection or disturbance, or have difficulty reproducing.

**State-identified Significant Natural Communities**

A natural community is an interacting assemblage of plants and animals, their physical environment, and the natural processes that affect them. A state-identified significant natural community has been determined by the State of Vermont to be significant, either because it is a rare natural community without many occurrences in Vermont, or because it is an extraordinary example of a particular natural community type, due to large size or lack of past disturbance. Fairfax has five identified natural communities classified as “uncommon”; these communities range from forested swamps to floodplain forest to hemlock forests (**Ecological Resources Map**). Many of these natural communities are considered uncommon, since the soils that support the species are uncommon. To learn more about Natural Communities visit BioFinder 2016 - <http://anrmaps.vermont.gov/websites/BioFinder2016/>.

## Water Resources

### Groundwater

Groundwater is defined as all water that exists beneath the surface of the earth. Groundwater is replenished from precipitation or surface water that infiltrates deep into the soil.

A Source Protection Area (SPA) identifies the area of land that likely recharges or passes groundwater through it to the public water source as defined by the Agency of Natural Resources. These recharge areas are to be protected from any activities and/or businesses that would harm the potability of water supplies. There are six SPAs within Fairfax, including around the St. Albans Reservoir, around the water supply well for the Fairfax Municipal Water System, and four community water supply wells for residential developments (**Water Resources Map**). The Town may refer any proposed development in a SPA to the water provider for comment to assure that public and private drinking water remains available and clean.

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*All Fairfax residents rely on groundwater as their source of drinking water. This includes individual or community wells or springs, as well as the Fairfax Municipal Water system.*

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### Surface Water

Surface water accounts for 1,824 acres of land in Fairfax, or 7.1% of the overall acreage. Fairfax is situated among three major drainage basins that all lead to Lake Champlain. The majority of Fairfax is part of the Lamoille River Basin; the Lamoille River flows over 84 miles from its headwaters in

**Working Together for Water Quality**

The VT Agency of Natural Resources maintains Tactical Basin Plans for each drainage basin in Fairfax (Lamoille Basin-7, Missisquoi Basin-6, and Northern Lake Champlain Basin-5). A Tactical Basin Plan (TBP) lays out the current condition of surface waters and aquatic habitat, describes problems occurring with water quality, designates strategies to be taken by State Agencies, and establishes partnerships to improve water quality.

Glover to the outer Mallets Bay in Lake Champlain. There is an extensive brook system within Fairfax that includes Beaver Meadow, Mill, Wilkins, Stones, Polly, Swift, and Tracy.

There are two significant surface water bodies in Fairfax, Silver Lake and St. Albans Reservoir. St. Albans Reservoir, located in North Fairfax, is a public water supply source for St. Albans' drinking water. Silver Lake straddles the border between Georgia and Fairfax, in the central-western area of town. Many surface waters in Fairfax exhibit unique wildlife habitat including the known natural areas of Beaver Meadow Brook and Wilkins Brook.

### Streambanks and Shorelines

Vegetation along streambanks and shoreline not only shades the water, keeping it cooler and thus more tolerable for certain species of fish, but also provides cover for other wildlife, is aesthetically desirable, and prevents erosion.





Removal of this vegetation for development or conversion to agricultural uses is detrimental to water quality for the Town, and the state as a whole. The effects of erosion on downstream environments is often more severe than at the point of erosion itself, resulting in decreased water quality from additional suspended sediments, increased nutrient loading from overland runoff and increased risk of flooding due to losses in flood storage capacity and increased velocity.

Maintenance or construction of vegetative buffers along waterbodies should be adamantly pursued. The short-term drawbacks of reduced tillable acreage are more than offset by the bank stabilization power of buffers, which results in long term conservation of important agricultural resources. Road construction projects should avoid buffer areas, and filling, dredging or gravel extraction in or near rivers and streams should be avoided. Further, maintenance of roads should utilize the best mechanisms and standards.

Effective July 1, 2014 the State of Vermont implemented a statewide buffer regulation on all lakes and ponds greater than 10 acres (including Lake Champlain); this regulation applies to the St. Albans Reservoir North and South as well as Silver Lake in Fairfax. The Shoreland Protection Act essentially prohibits new clearing and development within 100 feet of the mean water level of these waterbodies and places limits on clearing and development from 100 to 250 feet from the mean water level. The intent of the regulation is to limit bank erosion, to protect shoreland habitat, and to improve water quality.

### ***Wetlands***

Wetlands provide critical habitat and play an important role in regulating stream discharge. They store large quantities of water during periods of high runoff and gradually release water during low flow periods. Loss of this storage capacity would not only adversely affect stream behavior but would also increase floods and reduce stream flow during crucial low flow periods. Wetlands also aid in maintaining water quality; the biological activity of a wetland area enables the absorption and assimilation of nutrients and thus purifies to some extent the water that is discharged.

Numerous Class 2 wetland complexes have been identified within Fairfax. Wetlands in the Town range from less than 1 acre to over 350 acres (Fairfax Swamp on Mill Brook between TH 13 and TH 16). In all, over 1,300 acres of wetlands in the Town have been identified by the National Wetlands Inventory. The state issues permits for projects that impact a wetland or its 50 foot buffer only if it is determined that the uses will have no undue adverse impacts on protected functions, unless such impacts are mitigated.

### **Flood Resilience**

Flooding is a natural occurrence and a hazard that may become more prevalent as the climate changes; in the past 50 years Vermont has seen an increase in total annual precipitation by 7 inches. Vermont is anticipated to continue to get wetter with storms that are more frequent and intense. Predicting the occurrence of flooding is nearly impossible so the best protection against loss of life and property is to not build in areas prone to flooding and to restore a

**Flooding in Vermont can occur in two ways: inundation and fluvial erosion**

**Inundation Flooding**

**Fluvial Erosion**

**What is it?**

When water rises in a stream after storm events and submerges the floodplain or the adjacent low-lying land

When fast moving waters, typically in steep areas, cause erosion of the land surrounding the streams and rivers

**Tools to identify areas in community prone to this risk.**

FEMA Flood Rate Insurance Maps (FIRMs) outline the **Special Flood Hazard Area (SFHA)** also known as the **100-year floodplain**, this area has a 1% or greater chance of flooding in a given year.

Vermont Agency of Natural Resources **River Corridors** outline the minimum area adjacent to a river that is required to accommodate changes to the river over time. These areas are based on the individual conditions of streams and rivers including topography and the existence of public infrastructure.

It is important to note that the existing FIRMs were created in the 1970s and have been “effective” since 1982. While this information is the best available, the hydrology that these maps are based on is out of date and does not account for subsequent shifts in waterbodies or effects of building in the floodplain.

waterbodies’ access to floodplains where possible.

impacts, including restriction of flood flows, decreases in flood storage capacity, increases risk of erosion and landslides. Appropriate uses of floodplains are those that can accommodate this inundation cycle and such as agriculture, open space and recreation. Limiting development in flood and river corridor areas will minimize risk and provide streams the opportunity to reestablish a stable, equilibrium condition. Maintaining vegetated buffers around waterways also helps to minimize risk to property and provides water quality benefits.

The floodplain provides important functions including the storage of water after weather events and slowing the velocity of the water in the river channel. This in turn can reduce the amount of localized and downstream flooding. River channels are constantly undergoing a physical adjustment process that results in stream bank erosion or sediment deposition. Land nearby streams is particularly vulnerable to erosion damage by flash flooding, bank collapse, and stream channel changes. Historic land uses in Fairfax resulted in floodplain encroachments and removal of vegetation along river and stream banks. Encroachments of development into floodplain areas have several negative

***Special Flood Hazard Area***

There are several areas of 100-year floodplain in Fairfax including along the banks of the Lamoille River, Mill Brook, Beaver Meadow

Brook, Browns River and several small tributaries (see **Water Resources Map**). The Town of Fairfax adopted a stand-alone Flood Hazard Area Regulation Ordinance in September of 2006, which places an additional set of regulations on Special Flood Hazard Areas (100-year floodplain) as identified by Federal Emergency Management Association's (FEMA); flood hazard areas are also subject to the Development Regulations for the Town of Fairfax. These regulations protect the health, safety, and welfare of its residents and to allow the community to participate in the National Flood Hazard Insurance Program (NFIP).

Currently less than 2% of all structures in the community lie within the 100-year and 500-year floodplain. This does not quantify the impacts of repairs to utilities, roads, bridges, and culverts after flooding events. It should also be noted that about two-thirds of Vermont's flood-related losses occur outside the mapped floodplains revealing a fundamental limitation of the FEMA identified floodplain delineation.

### ***River Corridors***

River Corridors generally align with the 100-year floodplain and are delineated in two ways. Field data is used map the corridor in rivers and streams with a watershed area of more than 2 square miles. For streams with a watershed area of 0.5 to 2 square miles, the ANR advises using a 50-foot setback on each side of a stream with the intention of protecting stream stability and natural flow. The **Water Resources Map** shows both types of River Corridors in Fairfax.

River Corridor regulations currently apply only to Act 250-related land development and land

development not regulated by municipalities (like agriculture). Municipalities may adopt River Corridor maps and regulation as a part of their development regulations. Adoption may provide financial benefits to the Town in the event of a federally declared natural disaster through the Emergency Relief and Assistance Fund (ERAF).

Fairfax has adopted zoning regulations that begin to address fluvial erosion hazards on rivers and streams in the community. Specifically, Fairfax has adopted a 50-foot vegetative buffer on either side of streams to help control soil erosion and protect water quality. These regulations state all structures that require a permit be setback at least 50 feet from all named streams. Given the existing regulations it may be relatively straightforward for the Town to transition to regulating River Corridors Fairfax should investigate adopting River Corridor standards as a part of the Development Regulations.

### ***Hazard Mitigation Planning***

Several homeowners along the Lamoille River in the village area are concerned about riverbank erosion along their property. In addition, the Town Highway system has experienced many erosion events along the road shoulder or near culvert inlets during periods of high precipitation and rapid run-off within proximity of the Lamoille River and its tributaries. Fairfax will explore regulatory changes to land in the floodplain and use of river corridors as a way the community can enhance its protection of assets and infrastructure.

Planning for future flooding events is important to ensure that a community is flood resilient. The flooding hazards discussed

above are described in greater detail in the 2017 Fairfax Hazards Mitigation Plan (HMP). The HMP also identifies areas of town that are more at risk, critical infrastructure to protect, and strategies for the town to take to mitigate

against hazards and increase resilience. *The Fairfax Hazards Mitigation Plan, as adopted by the Select Board every 5 years, is incorporated by reference into this plan.*

## Natural and Cultural Resources Goal and Policies

### **Goal:**

- Preserve, protect and improve the natural, cultural, and scenic resources, which help define the Town's rural character, natural environment, and traditional working landscape.

### **Policies:**

- To maintain the historic, cultural, and scenic sense of place in the Village, including the historic district, sites, cemeteries, landscape features, and archaeological sensitive areas.
- To protect natural, scenic, and recreational areas so that they may be maintained as destinations for hiking, biking, and other physical activities.
- To facilitate appropriate extraction of earth resources that minimizes impacts on the natural and cultural environment.
- To consider topography, geology, and soils in land development review to allow reasonable and wise use of the land while protecting the quality of the environment and the public good.
- To maintain and improve the quality of important agricultural soils and connectivity of forestlands when considering the future development of the Town.
- To prohibit land development on slopes greater than 25% and ensure careful review of land development on slopes of 15% to 25% to prevent runoff, soil erosion, ensure adequate wastewater disposal, and other impacts on resources.
- To protect the surface and ground water resources in the Town and ensure appropriate development and intensity of use in Water Source Protection Areas.
- To discourage development that increases the community's risk from natural and man-made hazards, and to limit new development within the floodplain and state defined river corridor areas.
- To protect fragile and sensitive resources, and endangered species, including but not limited to critical habitat, wetlands, significant natural communities, and floodplains.

**Land Use**

The residents of Fairfax have had a long history of working the land.

- By the 1880's, the lumber and mill-oriented industry began to shift to dairy farming.
- The population in 1940 was 1,229 residents. At the same time, there were 80 farms with a total of 2,400 milking cows.
- In 1950's Fairfax's employment base began to diminish and the Fairfax branch of the Cooperative Creamery shut down.

Since the Town's population boom in the 1990s, Fairfax has been transitioning from an agrarian-based community to that of a rural suburban community. The increase in residential development is changing the visual landscape and increasing the demand for services. The Town is therefore challenged with maintaining the rural agricultural character and small village setting while accommodating population growth and new residential development.

**Existing Land Use**

Although the community has gained additional residential development, the forest land and agricultural fields are still the dominant land features today (see **Existing Land Use Map**).

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8 *Active dairy operations in 2018*

50% *Total land area is forested*

357 *Residential buildings built since 2006*

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Agriculture

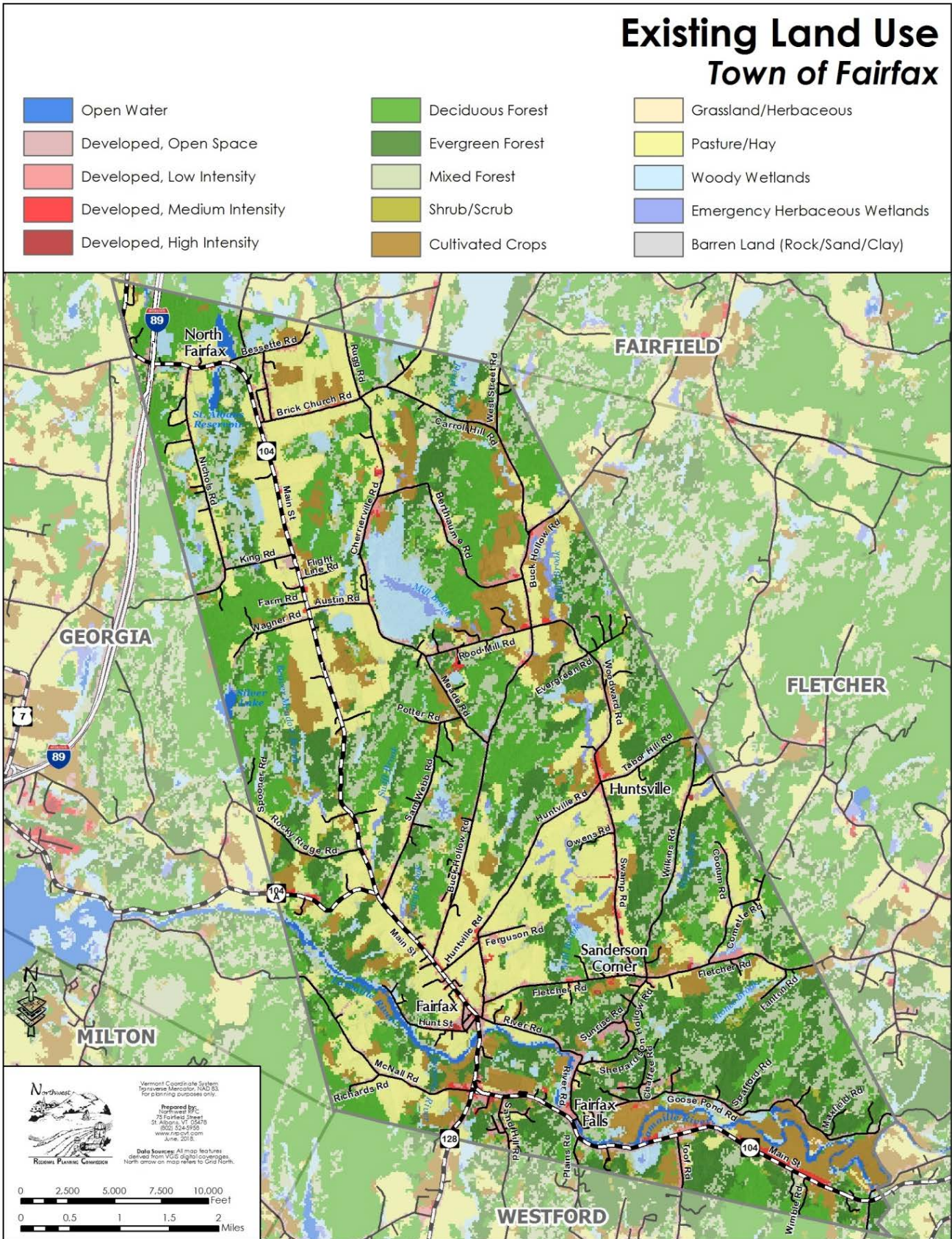
Similar to the trend seen around the state, Fairfax has lost several dairy farms in the last ten years; three dairy farms sold their herds during the writing of this Town Plan. In most cases the land itself is staying in production and being owned and or managed by fewer operations. As of the 2015 grand list there are 29 parcels categorized as "farm" which equates to 7,677 acres or 31% of the land area. This is down from a listing of 46 farms in the 2006 grand list and an associated 8,051 acres or 32.7% of the land area.

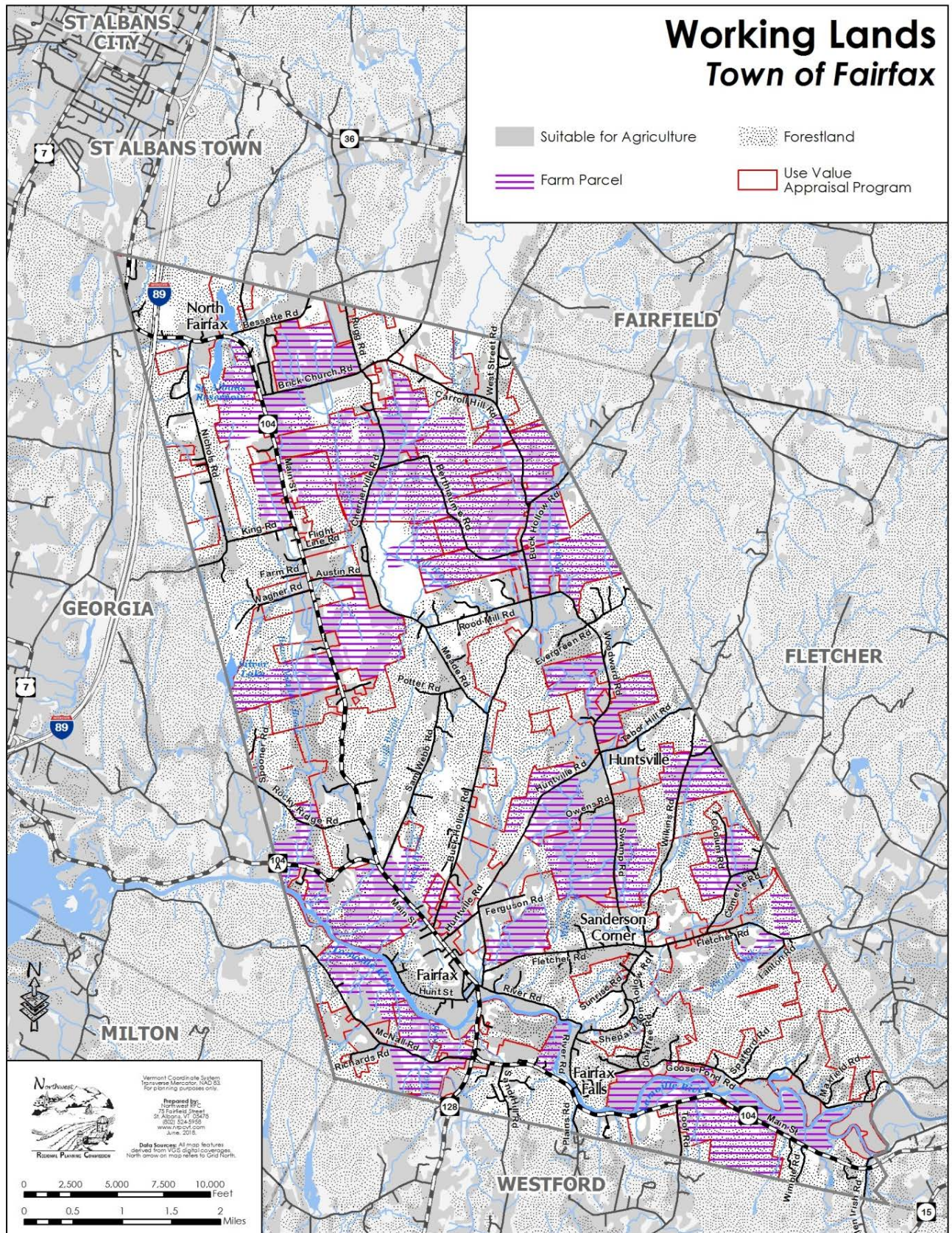
Forests

Approximately 50.8% of Fairfax is covered by forest (2011 National Land Cover Database) that is a mix of coniferous and deciduous forest types. The existing forestland may be well-suited for use as small woodlots and low-impact recreation; large scale forest products operations may be limited by the existing land ownership and forest parcel size.

Working Lands

Fairfax has a large amount of undeveloped land that exists as forests and farm land. The most widely used program to enable land to remain undeveloped is the Use Value Appraisal program or "Current Use" that is administered by the state Department of Taxes. Enrolled parcels are taxed according to the use rather than fair market value; as of the 2015 Grand List 99 parcels were enrolled in the Current Use program (see **Working Lands Map**).





Both farm and forest land are being conserved or managed in Fairfax through available programs:

- **45% of the land area** is enrolled in the Current Use Program
- **6% of the land area** is protected by a Conservation Easement

Conserved Land

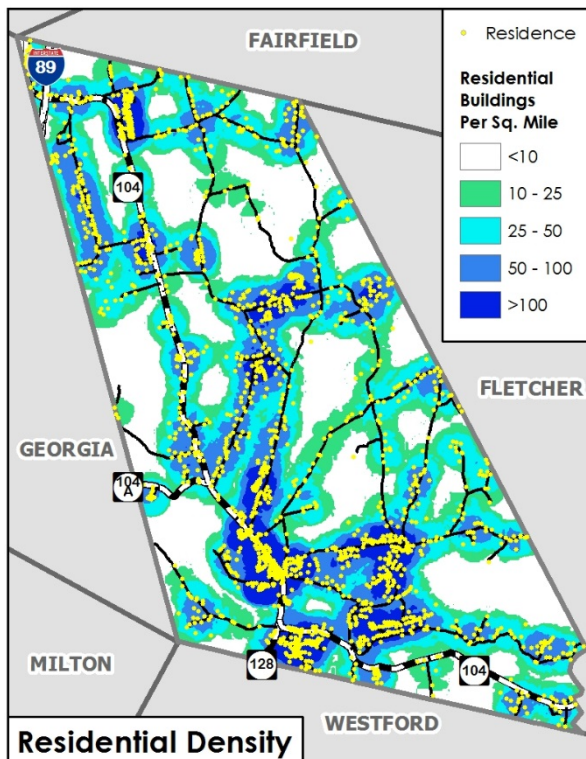
Thirty-three parcels or 1,540 acres in Fairfax have conservation easements with the Vermont Land Trust; all but one of these parcels is also enrolled in the Current Use program. The Vermont Land Trust works with landowners to conserve land by the purchase of development rights; this ensures this land will remain perpetually open and the land is managed for forestry and/or agriculture.

Residential Dwellings

The highest density residential land use in Fairfax is concentrated within the historic settlement areas (the north village where water and sewer infrastructure exists, the south village, and North Fairfax) and the residential zoning district. However, given the population growth in recent years, residential development of all scales is occurring outside these settlement areas. Clusters of concentrated development exist along Nichols Road, Sam Webb Road, Rood Mill Road, Buck Hollow Road, and Woodward Road. Each yellow dot in the *Residential Density* figure represents a residential building.

Commercial Establishments

The majority of commercial uses in the Town are concentrated within the North Village, and the South Village near the intersection of



Route 104 and Route 128. The predominant commercial development in Fairfax is service-oriented, including restaurants, shops, gas stations and convenience stores. Commercial development in the Village area is limited by the capacity of the municipal sewer and water service.

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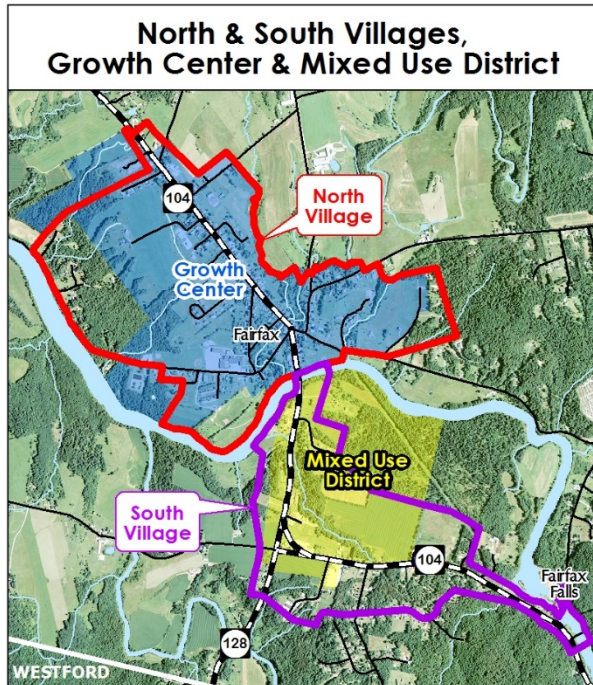
**18** *Commercial businesses in the Village*

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The Village – North and South

A starting point for the 2012 Village Visioning project was the engagement of residents, local business owners, and students to define the vision for the village areas, meaning how the village should look, feel, and function. From there a series of public outreach events identified assets and challenges in the community, places of importance, opportunities to improve the streetscape, and a visual preference survey on architectural style for design guidelines.





North Village has retained the pattern of traditional historic development with buildings close to the street, sidewalks and a mix of uses. Residents take pride in the remaining historic architecture and it is important that these features of the village be preserved. These elements that reinforce the local character of North Village contribute to a shared sense of place and community vitality.

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*The **North Village** could be enhanced with private investments such as the addition of awnings, wayfinding, and engaging storefronts along the length of Main Street to enhance the pedestrian realm and add character.*

---

South Village is characterized as automobile oriented with a lack of sidewalks and businesses setback from the road with parking lots serving as the main visual appeal upon first glance. This style of development differs from the North Village and the rhythm of

development set by buildings adjacent to the street. Landscaping and screening standards were revised in 2016 to more specifically address the use of vegetation in site design and both screen commercial properties as well as define landscaping to offer shade and visual interest.

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*Fairfax Falls is envisioned as a green entry corridor that establishes an identity and connects the Village and neighborhoods. Improvements to this area could include welcome and wayfinding signage and landscape elements.*

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Both villages have areas where wide commercial driveways create safety conflicts between cars and pedestrians. The 2016 Village Gateway study took a deeper dive into proposing modifications to the streetscape in each Village to provide pedestrian scale amenities and aid in calming traffic speeds along the corridor.

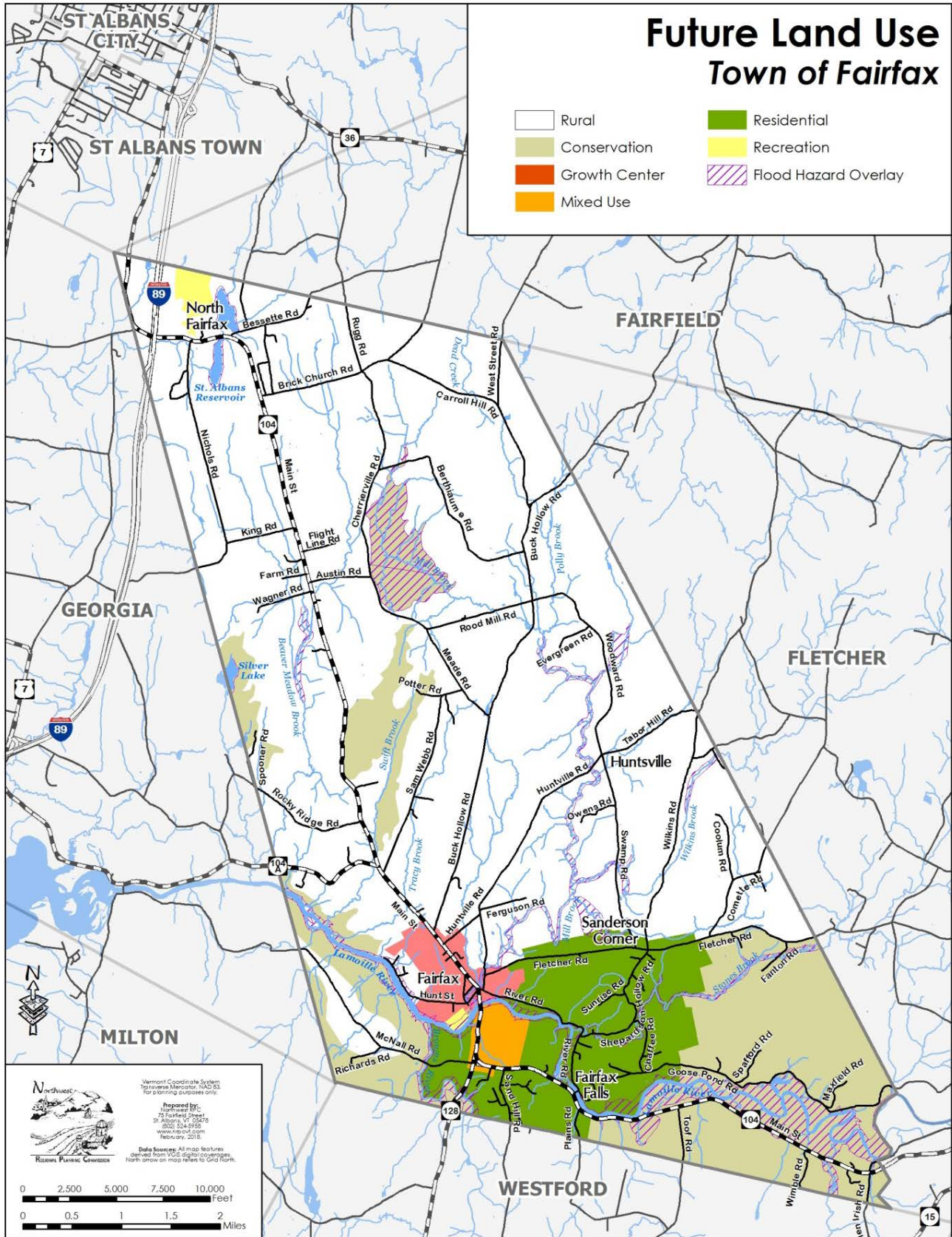
Although adjacent to one another the North and South villages are being shaped by separate identities in zoning. The Growth Center encompasses the North Village with a focus on the desire for higher density growth and the mixed-use portion of the South Village focuses on promoting walkable, village scale development that complements and provides connection to the North Village. However, as noted in Table 4.2, the wastewater system is not adequate to meet the needs of the future growth and development in the village area without improvements to the current system. Absent this investment, the town will not be able to achieve the desired density or level of economic development and services in the Villages.

**Assets and Strengths of the Village** *(Source: 2012 Village Visioning Project)*

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Small town feel</li> <li>• Proximity to Burlington/Essex</li> <li>• Density</li> <li>• Close to farm land</li> <li>• Location on river</li> <li>• Good views</li> <li>• Covered bridge</li> <li>• Limited sprawl</li> </ul> | <ul style="list-style-type: none"> <li>• Park &amp; Bike/Recreation Path</li> <li>• BFA School</li> <li>• Wonderful people</li> <li>• Community events/theatre/band</li> <li>• Excellent library</li> <li>• Baptist building</li> <li>• Small businesses</li> <li>• Tax Rate</li> </ul> |
|--|---|

**Issues and Challenges of the Village** *(Source: 2012 Village Visioning Project)*

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Light pollution</li> <li>• Water and sewer system capacity and back-up</li> <li>• Stormwater runoff</li> <li>• Keeping the school competitive</li> <li>• Lack of pedestrian connections</li> <li>• Sidewalk maintenance</li> <li>• Sidewalks not user friendly</li> <li>• Limited public spaces</li> <li>• Lack of activity space</li> </ul> | <ul style="list-style-type: none"> <li>• Commuter population</li> <li>• Town and event promotion and communication</li> <li>• No major employers/business centers</li> <li>• Limited road network</li> <li>• 104 truck route</li> <li>• Limited public transit options</li> <li>• Limited traffic calming measures</li> </ul> |
|---|---|



**Future Land Use**

The overall policy concerning future land use shall be to encourage Fairfax to grow and develop in a manner and intensity that reflects its traditional land use patterns and encourages a mix of uses in the defined growth areas, especially where infrastructure exists.

The Town defines the rural character of Fairfax as,

*Encouraging a diverse, small-scale local economy (including agriculture and forestry enterprises), maintaining and enhancing a mixed use, high density Town Center, minimizing strip development, and preserving natural and cultural features.*

Through proactive planning, this community vision can be translated into actions that best serve the people, the culture, and the land itself.

Since the 2001 Fairfax Growth Center Master Plan, residents have expressed a strong desire for the higher densities of future growth to occur in designated growth areas, with the remaining land being kept in uses such as agriculture, open space, forestry, and some low density rural residential development. To reach this goal, the Town defined a high density, mixed use growth center in the existing village that is intended to accept the majority of future growth in the Town, and will include a mixture of residential, multi-family and commercial land uses on smaller building areas than are allowed in other parts of town. In short, the Growth Center represents “North Village,” with the typical amenities which downtowns have

**Characteristics of Growth Centers**

- *incorporates a mix of uses*
- *provides public spaces organized around a focal point*
- *promotes denser development than that outside a growth center supported by existing or planned infrastructure*
- *results in concentrated development surrounded by rural countryside*
- *planned in accordance with chapter 117 planning goals and with smart growth principles*
- *supports the purposes of Act 250*

~ ~ ~

*(As enacted into Law under Title 24 § 2791)*

traditionally offered: pedestrian friendly streets, “neighborhood” living, an integrated street network, shops, government services, schools, parks and playgrounds.

The Growth Center concept is the engine by which the remainder of Fairfax’s future land use policy is driven. The designation (and enabling) of high density growth in certain areas promotes a contrast in land use outside its borders. In addition, the contrast between low and high density land uses helps create an “edge” or visual gateway to the core of the community. The fuel that will drive this policy therefore is the availability and quality of municipal services and infrastructure in these areas. The provision of efficient municipal water distribution and wastewater treatment systems is of paramount importance for higher density development to be adequately absorbed by the land. In this regard, Town policies for expansion and improvement of these systems is the keystone of a successful future. Planning for improvements and acquiring the necessary funding for

improvements has been a working strategy for the past 15 years.

Encouraging the majority of development into the Village area and balancing the rights of individual landowners with aesthetic and cultural considerations in the rural areas is an important challenge for the Town. Creative approaches in subdivision and site design, including encouraging the clustering of residences to prevent strip development and the parcelization of agricultural, forestry, and meadow lands, and flexible zoning that allows for development of building sites that respects natural resources and aesthetic qualities of the land should be incorporated into development review and approval processes.

### ***Future Land Use Planning Areas***

This section is intended to guide future land use and development decisions as well as provide a framework for future zoning updates and amendments. Land use in the Town of Fairfax, for future purposes, has been defined in the following planning areas as shown on the **Future Land Use Map** and described below.

*Growth Center* - This planning area encompasses the traditional village center in Fairfax consisting of a mixture of residential, multi-household, and commercial land uses on smaller building areas than are allowed in other parts of town. The Growth Center is designed to accept the majority of future growth, which shall be designed and sited to further the traditional characteristics of village centers. Such characteristics include pedestrian friendly streets, sidewalks and walkways, neighborhood living, an integrated

street network, shops, government services, schools, parks, and playgrounds.

*Mixed Use* - This planning area is intended for mixed use development near the junction of VT Rte. 128 and VT Rte. 104. The Mixed Use area is intended to maintain the small scale commercial, residential, and recreational uses currently in existence, while complementing and providing connection to the Village. Pedestrian accessibility shall be required in future development applications to promote walkable, village scale development. Community wastewater treatment should be required for any new development to encourage density and clustering of uses. Safe pedestrian connection to the Village should be considered through sidewalks or other pedestrian paths.

*Residential* - This planning area is intended for low density residential development beyond what is accommodated by the Growth Center and Mixed Use planning areas. Agriculture and significant forestland does not dominate in this district and soils are generally suitable for on-site septic systems. Clustering of building lots and planned unit developments are recommended in these areas in order to preserve open land, forestland, and rural character. Linear strip residential development should be discouraged.

*Rural* - This planning area is intended to primarily consist of viable agricultural and forest land within the Town; it consists of areas with significant prime agricultural soils, areas in current agricultural use, and significant forestland not included in the Conservation planning areas. Most

**Monitoring Growth**

The Planning Commission has identified places in the community where development pressures are occurring and intends to perform targeted planning around these areas within this Town Plan cycle. These areas are largely characterized by changes in density and or land use intensity as the community has grown and represent low density or clustered housing development in the rural planning area.

There are several successful examples of clustered residential developments in these areas that have designated a portion of the property as open space. However, the current minimum lot size of 2 acres creates an avenue for development that may not align with the intent of maintaining lot sizes viable for agriculture and forestry operations.

These transitional areas will be monitored and evaluated to determine the best regulatory approach in order to guide future revisions to the development regulations.

importantly, the landscape of rural open countryside and forestland shall be maintained. It is the intent of this designation to encourage viable forest practices and the long-term viability of agricultural uses into the future, and to protect these areas from incompatible forms of development; provisions should be made to encourage the long term viability of agricultural uses. This area can accommodate a small portion of future residential development at low densities if clustered or sited to conserve productive agricultural and forestry soils, meadowland, and to maintain rural character.

Conservation - This planning area defines land generally not physically suited for development, or which should be protected for their inherent value as significant wildlife habitat and forest land. These areas include deer wintering areas; bear habitat; locations of rare, threatened, or endangered species or significant natural communities; or the existence of development constraints such as steep slopes and poor development soils. Development and subdivision should be limited; clustered development shall be required to avoid areas unsuitable for development and to conserve productive

agricultural and forest soils, wildlife habitat, and to maintain rural character. Fairfax Development Regulations reflect this intent through appropriate land use restrictions, dimensional standards, and development review standards, including the use of planned unit developments.

Recreation - This planning area consists of those areas owned by the Town, which have been set aside for future development as sites for public recreation. Construction should be limited to necessary public facilities associated with recreation activities. With

*Opportunities for intact preservation of forest and agricultural resources through single or common ownership should be encouraged.*

*For example, cluster development around the forest perimeter with common or single ownership of the forest interior)*

this exception, recreational lands will essentially remain in their present condition as forested areas and open land for public recreation.

*Flood Hazard Overlay* - The purpose of this overlay area is to prevent increases in flooding caused by development in flood hazard areas, to minimize future public and private losses due to flood, and to promote the public health, safety, and general welfare. Designation of this area is also required for

continued participation in the National Flood Insurance Program (NFIP) and is regulated under the Town's Flood Hazard Area Regulation Ordinance. Included are all areas in Fairfax identified as areas of special flood hazard on the National Flood Insurance maps.

## Land Use Goals and Policies

### Goals:

- Maintain a compact and vibrant village center surrounded by a landscape of farms, forestry, and rural countryside.
- Promote development and investment within the North and South Villages that reinforces the importance of these Villages as the Town's social and cultural center.
- Maintain and protect open space while accommodating community growth to ensure a network of land is available for use as recreation, working lands, and forest land.
- Create a safe and accessible environment that invites and supports pedestrian use, community events and an active lifestyle.

### Policies:

- To provide future services and public facilities within the *North or South Villages* that support pedestrian and other non-vehicular travel, are organized around a central focal area, and include public spaces that promote social interaction.
- To encourage the economic viability of local agriculture, forestry, and related industries.
- To discourage sprawling development patterns/strip development.
- To encourage an interactive permitting process between landowners and local planning officials to facilitate site sensitive planning and awareness of local and state permitting.
- To limit development on lands unsuited for that purpose, including fragile and sensitive resources, such as critical habitat, wetlands, steep slopes, prime agricultural soils, and floodplains.
- To encourage infill development and the rehabilitation of historic structures and features that are a part of Fairfax's character.
- To consider long term plans for the entire parcel and adjacent lands during development review and address their potential cumulative impact.
- To encourage the clustering of development in the rural areas of town to preserve the open rural landscape.
- To coordinate the preservation of forestland, working agricultural land, and open space throughout the Town to create connected corridors of undeveloped land.
- To provide access to parks, shared-use paths and trails, or open spaces within reasonable distance of residential areas.
- To allow select agricultural practices in open spaces set aside in permitting – e.g. community gardens or small agricultural enterprises in open spaces of cluster housing.

- To encourage new residential and mixed-use developments to include sidewalks, outdoor open space, recreational facilities, and community gardens to promote active living.
- Encourage redevelopment of mixed use buildings on lots to provide both residential and commercial activity.
- To define and establish meaningful public spaces within the Village and surrounding network that enhances placemaking and encourages community gathering.



## **Section 8: Compatibility with Adjacent Communities and the Region**

It is important to recognize that municipalities do not exist apart from one another and that land use planning in one community can affect land use in neighboring communities. As defined in 24 VSA §4302, compatibility is judged on whether the plan, if implemented, will significantly reduce the desired effect of the other. This section considers the compatibility of proposed land use in this Town Plan with land use in adjacent communities.

Fairfax is located in southern Franklin County, bordering the Chittenden County towns of Milton and Westford and the Lamoille County Town of Cambridge. The towns of Georgia, St. Albans Town, Fairfield, and Fletcher border Fairfax in Franklin County. Fairfax is well connected to adjacent communities via several state and local highways.

### **Consideration of Land Use Planning in Adjacent Communities**

#### ***Town of Georgia***

The 2017 Georgia Municipal Plan calls for Recreational and Natural Districts, not intended for future development, along the border Fairfax's Conservation and Rural Districts. Fairfax's Conservation Lands are generally compatible with these areas however Fairfax may allow more residential development in the Rural District that borders these areas; the scale of development is unlikely to present compatibility issues. Georgia's Agricultural/Rural Residential District which borders Fairfax's Rural District is compatible with the intended allowable land

use. The Lamoille River crosses the municipal border and the floodplain is currently protected in both towns.

#### ***Town of St. Albans***

The Town of St. Albans most recent municipal plan calls for the Rural District to border the Fairfax Rural District. The allowable land uses in these districts are compatible; both municipalities identify these areas as intended for agricultural, forest, and rural residential. Route 104 is the transportation link that connects St. Albans Town with Fairfax. Route 104 has experienced high levels of traffic and increasing congestion, these communities continue to work together in implementing recommendations of the Route 104/104A Corridor Study.

#### ***Town of Fairfield***

The Town of Fairfield's municipal plan calls for an Agricultural and Rural Residential planning areas that abut the Rural District in Fairfax. Fairfield's Agricultural planning area is intended for agricultural and forestry uses and allows for rural residential development, which is compatible with Fairfax's Rural planning area. Fairfield's Rural Residential planning area would allow for more residential development than Fairfax's Rural District but both utilize PUDs to cluster development to preserve open space and maintain the rural character. The State-owned Fairfield Swamp Management District is located in Fairfield and crosses the border into Fairfax between Cadieux Road and West Street. While Fairfax's Rural planning area would allow some residential development, the areas around the Wildlife Management Area are protected by Land Trust, thus the land uses are compatible. Several Town roads connect Fairfield with Fairfax; currently, there

are no issues with proposed land use compatibility or other multi-town issues that should be addressed jointly concerning these shared road corridors.

### ***Town of Fletcher***

The Town of Fletcher's municipal plan calls for three districts that border with Fairfax; the Village, Conservation, and Rural Residential/Agricultural Districts. It is not anticipated that there would be compatibility issues with any of the districts with Fletcher; areas that should be reviewed include:

- The Fletcher Village District is intended to provide for residential and commercial development that serves the needs of the Town and borders the Fairfax Conservation planning areas. While Fairfax's Conservation lands are not generally suitable for future development, the scale of development in the Fletcher Village District will likely not create compatibility issues.
- Fletcher's Conservation District is not intended for future development and borders areas of the Rural District in Fairfax. While the Rural District will allow for some residential development, the scale should not affect compatibility with the Conservation District; this plan recommends appropriate site planning to cluster development and maintain the quality of forestlands.
- The Rural Residential/Agricultural District in Fletcher borders Conservation lands in Fairfax. It is likely that the scale of development in Fletcher's Rural Residential/Agricultural District will not create any compatibility issues with Fairfax's Conservation lands.

Several Town roads connect Fletcher to Fairfax. Currently, there are no issues with

proposed land use compatibility or other multi-town issues that should be addressed jointly concerning these shared road corridors.

### ***Town of Cambridge***

The Cambridge municipal plan proposes the Agricultural and the Rural Residential land use areas border Fairfax's Conservation Lands. There is unlikely to be any land use incompatibilities between these two town borders. Route 104 is the transportation link that connects Cambridge with Fairfax. Route 104 has experienced high levels of traffic and increasing congestion, these communities continue to work together in implementing recommendations of the Route 104/104A Corridor Study.

### ***Town of Westford***

The Westford municipal plan identifies proposed land use districts that generally are compatible with the planning areas they border in Fairfax. Westford's Agriculture, Forestry, and Residential II District is intended to enable where appropriate certain commercial and industrial uses on good roads while conserving the rural environment of the District and it borders Fairfax's Conservation Lands on either side of Route 128. While commercial development is allowed adjacent to Conservation Lands, if Westford determines it to be appropriate and it conserves the rural environment, these proposed land uses can remain compatible. Westford's Rural Residential District is intended to provide an option for residential development at a higher density than surrounding rural areas and it borders areas of Fairfax's Conservation Lands between Plains Road and just east of Toof Road. If residential development is clustered and appropriately

sited to mitigate impact to wildlife habitat and forest land, there are no incompatibilities with Conservation Lands. Route 128 is the main transportation connection between Westford to Fairfax. Currently, there are no issues with proposed land use compatibility or other multi-town issues that should be addressed jointly concerning these shared road corridors.

sub-regional growth center. Sub-regional growth centers are expected to serve as economic and cultural hubs for surrounding towns. One factor in designating Fairfax Village as a sub-regional growth center is its desire for managed high density and mixed-use development within the center's boundaries.

### ***Town of Milton***

The Milton municipal plan calls for the Agricultural/Rural Residential District that borders Conservation Lands in Fairfax and there are no roads connecting the two towns. The Agricultural/Rural Residential District is intended to provide for continued agriculture, forestry, and open space uses together with compatible low-density residential development. These land uses are compatible with proposed land use planning in this area of Fairfax.

### **Consideration of Land Use Planning in the Region**

To receive an Act 250 permit, a project must conform to the regional plan. The Northwest Regional Plan, most recently adopted in 2015 and amended in 2017, proposes land use planning areas to encourage the conservation of valued resources and a development pattern that will maintain the character and quality of life important to this region. The planning areas include agricultural resource lands, conservation and forest resource lands, low-density development areas, growth centers, and sub-regional growth centers. Fairfax contains agricultural resource lands, conservation and forest resource lands, and low-density development areas throughout the town. In addition, the Fairfax Growth Center zoning district has been designated a

## Appendix 1: Fairfax Enhanced Energy Plan

### Intent

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further regional and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (the “90 x 50” goal), and the following:

- A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
- B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
- C. Vermont's building efficiency goals under 10 V.S.A. § 581;
- D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
- E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005.

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Fairfax to achieve “substantial deference” instead of “due consideration” in Section 248 applications for energy generation facilities (e.g. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. This means that Fairfax will have a greater “say” in Certificate of Public Good proceedings before the Vermont Public Service Board about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and must contain the following information:

- A. An analysis of current energy resources, needs, scarcities, costs, and problems.
- B. Targets for future energy use and generation.
- C. “Pathways,” or implementation actions, to help the municipality achieve the established targets.
- D. Mapping to help guide the conversation about the siting of renewables.

This chapter will include the required analysis, targets, and mapping. The “pathways,” or actions, have been included in the implementation section of the municipal plan.

### Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each energy sector of energy use (thermal, transportation, electricity) and generation in Fairfax.

#### *Thermal Energy*

An estimate of current residential thermal energy demand in Fairfax, based on data from the American Community Survey (ACS 2011-2015), is shown in Table A1.1. This data represents homes’ primary fuel source for home heating and does not account for backup or secondary home heating fuel sources. The data shows that 49.2% of households in Fairfax depend on fuel oil as their primary fuel source for home heating. Fuel oil and wood sources are estimated to heat almost 70.2% of homes in Fairfax. There is no access to natural gas in Fairfax, so the 75 households that are reported to heat their households via natural gas is likely an error from ACS. These households are more likely to be heated through other sources like wood, fuel oil, or propane.

**Table A1.1 - Current Fairfax Residential Thermal Energy Use**

Fuel Source	Fairfax Households (ACS 2011-2015)	Fairfax % of Households	Fairfax - Households Square Footage Heated	BTU (in Billions)
Natural Gas	75	4.3%	103,376	6
Propane	414	23.7%	729,824	44
Electricity	19	1.1%	36,176	2
Fuel Oil	859	49.2%	1,451,792	87
Coal	0	0.0%	0	0
Wood	367	21.0%	691,024	41
Solar	0	0.0%	0	0
Other	11	0.6%	20,944	1
No Fuel	0	0.0%	0	0
<b>Total</b>	<b>1745</b>	<b>100.0%</b>	<b>3,033,136</b>	<b>182</b>

Estimates for commercial and industrial thermal energy use are more difficult to calculate. An estimate of total commercial energy use (thermal and electricity) is provided in Table A1.2. Based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 48 billion BTU per year, is likely to be for thermal energy needs.

**Table A1.2 - Current Fairfax Commercial Energy Use**

	Commercial Establishments in Fairfax (VT DOL)	Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)	Estimated Thermal Energy BTUs by Commercial Establishments in Fairfax/year (in Billions)
Municipal Commercial Energy Use	66	0.725	48

Fairfax does not have access to natural gas. The nearest natural gas distribution system is located in Georgia. It is not anticipated that this system will be extended to Fairfax.

*Electricity Use*

An estimate of current electricity use in Fairfax is shown in Table A1.3. This data is from 2016 and is available from Efficiency Vermont. Fairfax electricity use has decreased by about 400,000 kWh since 2014. The decreased use has come from commercial/industrial and residential sectors. Fairfax’s average residential electricity usage in 2016 was 7,562 kWh per household which is a higher than the

regional average of 7,038 kWh per household in the region. Green Mountain Power is the electric utility that serves the majority of customers in Fairfax. It’s service area is centered around VT Route 104 and VT Route 104a. Vermont Electric Coop is the electricity utility that serves the more rural portions of town, including the northeast part of town.

**Table A1.3 - Current Fairfax Electricity Use, 2016**

Use Sector	Electricity Use in kWh (Efficiency Vermont)	Electricity Use in Billion (BTUs)
Residential	13,379,211	48
Commercial and Industrial	5,956,929	15
<b>Total</b>	<b>19,336,140</b>	<b>63</b>

**Table A1.4 - Current Fairfax Transportation Energy Use**

Transportation Data	Fairfax Data
Total # of Passenger Vehicles (ACS 2011-2015)	3,641
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	41,347,196
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
Total Gallons Use per Year	2,222,968
Transportation BTUs (Billion)	268
Average Cost per Gallon of Gasoline in 2016 (NRPC)	2.31
Gasoline Cost per Year	5,135,055

*Transportation*

Table A1.4 contains an estimate of transportation energy use in Fairfax. It’s estimated that Fairfax residents drive approximately 41.3 million miles per year and spend about \$5.1 million on transportation fuel expenses a year. This calculation does not include expense for commercially owned and operated vehicles.

As of January 2016, data from the Vermont Department of Motor Vehicles notes that there are between 5 and 19 electric vehicles within the Fairfax zip code (which includes parts of Cambridge, Fletcher, and Georgia, VT).

*Generation*

There is currently 4.03 MW of electricity generation capacity from renewable generation facilities in Fairfax. This capacity results in approximately 13,150 MWh of electricity generation per year. This is roughly equal to the annual electricity use of about 1,963 households in Vermont based on information available from the U.S. Energy Information Administration (558 kWh per VT household per month).

Table A1.5 organizes information about existing generation in Fairfax by type of facility. The **Existing**

**Generation Facilities Map** shows the location of all electricity generators in Fairfax with a capacity greater than 15 kW.

The Town generally has good access to electricity transmission lines and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. Access to this type of infrastructure may make development of renewable energy facilities easier and more cost-effective in than in other surrounding communities with less existing grid infrastructure. The **Transmission & 3 Phase Power Infrastructure Map** shows the

electricity transmission and three-phase distribution infrastructure in Fairfax. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

**Table A1.5 – Existing Renewable Generation**

Generation Type	MW	MWh
Solar	0.43	527.35
Wind	0.003	9.20
Hydro	3.60	12,614.40
Biomass	0.00	0.00
Other	0.00	0.00
<b>Total Existing Generation</b>	<b>4.03</b>	<b>13,150.95</b>

**Targets for Energy Use**

Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and generation to meet the State of Vermont’s 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan ([www.nrpcvt.com](http://www.nrpcvt.com)).

Tables A1.6, A1.7 and A1.8 show the targets for future energy use for Fairfax by sector (totals are cumulative). These municipal targets are based on regional targets that have been disaggregated.

The thermal targets for Fairfax in 2050 is to have 87.1% of structures be heated by renewable sources. Much of this transition is likely to come in the form of electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. The target also relies on wood heating being a continued source of residential heating. There are also high targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

**Table A1.6 - Thermal Targets**

	2025	2035	2050
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	45.7%	59.2%	87.1%
New Efficient Wood Heat Systems (in units)	0	0	4
New Heat Pumps (in units)	208	477	891
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	49%	73%

The transportation energy targets for Fairfax are similarly ambitious. By 2050, almost 90% of transportation energy will need to come from renewable sources. This will primarily be done through conversion to electric vehicles from fossil fuel vehicles for light-duty, passenger vehicles. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. The biodiesel technology and infrastructure will certainly need to advance and evolve in order to meet this target.

To meet the goals set by the Vermont Comprehensive Energy Plan, other changes will also be required in the transportation sector. This includes maintaining or decreasing the current level of vehicles miles traveled per person per year. This can be done through more compact development in Fairfax, most notably in the village. More compact development allows for greater numbers of people to walk instead of use vehicles. Compact development also more easily supports public transportation routes, another strategy that can result in decreased vehicles miles traveled.

**Table A1.7 - Transportation Targets**

Transportation Targets	2025	2035	2050
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	8.2%	28.9%	89.4%
Electric Vehicles	319	2386	5675
Biodiesel Vehicles	437	867	1665

Targets for electricity use are more complex to interpret. Electricity use is targeted to double by 2050 (Table A1.8). At the same time, total energy use is expected to become more efficient due to the increased use of electricity as an energy source. The increase in total electricity use will likely be driven by conversions to electric heat pumps and electric vehicles. At the same time, total energy use (energy, not electricity) will become more efficient and therefore decrease. This is because electric cars and electric heating sources are more efficient (i.e. use less BTUs) than using other energy sources, such as fossil fuels. So while the doubling of electricity use is the target, then intent is to continue to work towards electricity conservation while becoming more reliant on electricity for transportation and heating. To truly assess whether or not Fairfax has achieved this target, it will need to assess both parts of the targets, conservation and conversion, in the future.

**Table A1.8 - Electricity Targets**

Electricity Targets	2025	2035	2050
Increased Electricity Use (Efficiency and Conservation in BTUs)	25.2%	48.3%	100.7%

**Targets for Energy Generation**

Table A1.9 shows the electricity generation targets for Fairfax in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (24,034.77 MWh) is about 1.5 times the current generation capacity (13,150.94 MWh) within the Town of Fairfax.

**Table A1.9 – Generation Targets**

Renewable Generation Targets	2025	2035	2050
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Total Renewable Generation Target (in MWh)	7,931.47	15,862.95	24,034.77
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Fairfax has sufficient land to meet the above generation targets based on mapping completed by NRPC. Based on mapping and calculations completed by NRPC, Fairfax has access to the generation capacity outlined in Table A1.10. This generation capacity was calculated using the “base” layers for solar and wind. For an explanation of what constitutes a “base” layer, please see the mapping subsection below.

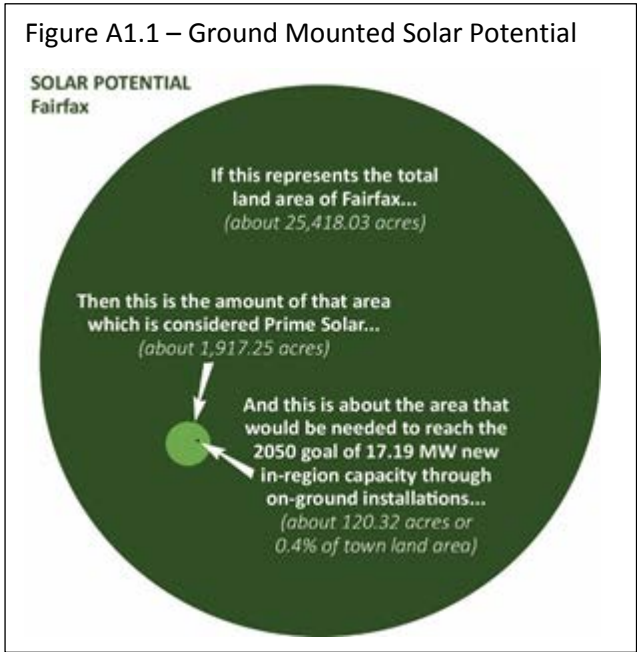
**Table A1.10 - Renewable Generation Potential**

Resource	MW	MWh
Rooftop Solar	2	1,841
Ground-mounted Solar	750	920,187
Wind	254	778,319
Hydro	0.012	42
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>1,006</b>	<b>1,700,389</b>

Table A1.9 provides the generation targets for Fairfax but does not prescribe how the Town meets these targets. As a reference for what it would take to meet these targets, Figure A1.1 shows the total land area that would be needed to provide 17.19 MW of ground-mounted solar, or 88% of the 2050 target, in relation to the total land area of the Town.

Fairfax supports NRPC’s position regarding “commercial” and “industrial” wind facilities. The NRPC Regional Plan finds that the construction of new “industrial” or “commercial” wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an “industrial” or “commercial” wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Fairfax encourages the use of these sources for electricity and thermal generation, especially on farms.



**Figure A1.2 – Rooftop Solar Potential**

Rooftop solar was estimated by using methods suggested by the Vermont Department of Public Service. The methodology estimates that 25% of residential and commercial structures in Fairfax could be suitable for rooftop solar generation. This results in 436 residential structures and 17 commercial structures in Fairfax. It is then estimated that the average residential rooftop system is 4 kW in size and the average commercial rooftop system is 20 kW in size. The resulting estimated generation capacity is 2.08 MW of solar generation.

**Mapping Energy Resources and Constraints**

Fairfax has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Determination Standards, including access to energy resources and constraints to renewable development, and are a required element of enhanced energy planning. All maps may be found at the end of Appendix 1.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When a generation facility is proposed, it is the applicant’s responsibility to verify the presence of all constraints on site as a part of the application.

*Mapping Methodology*

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass “potential.”

“Known” and “possible” constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table A1.11. The known constraints and possible constraints used to create the maps include constraints that are required per the State Determination Standards from the Department of Public Service and regional constraints that were selected by NRPC.

### *Solar and Wind*

The solar and wind maps show both “base” and “prime” areas. Base areas are areas with generation potential, which may contain possible constraints. Prime areas are areas that have generation potential that do not contain known or possible constraints. Areas that do not contain generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general concentration of base and prime solar areas around the northern portion of VT Route 104, near the southern portion of Buck Hollow Road, and in the vicinity of Commette Road. Fairfax has identified the following preferred locations for solar generation facilities: rooftops, parking lots, landfills and net-metering facilities located on farms (as defined by the Vermont Required Agricultural Practices). Brownfield sites located outside of the village are also considered preferred locations.

It is Fairfax’s preference that solar facilities located in town be no larger than 5 MW in size. Facilities this large should not be colocated with facilities of a similar size. The intent is to limit the aesthetic impact of solar facilities on the rural areas of Fairfax. This limit has the same intent of Fairfax Solar Screening Ordinance.

Wind resources are concentrated in the vicinity of Brick Church Road in the northern part of Fairfax.

### *Hydro and Biomass*

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays “base” and “prime” areas. However, these categories are not necessarily indicative of generation. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites.

Fairfax has three existing dam sites. One dam, owned by Green Mountain Power, is located on the Lamoille River and currently generates electricity. The two other dams are located in the northwest part of Fairfax and create the St. Albans Reservoir. These dams do not generate electricity, but could potentially be retrofitted to produce electricity.

### **Conclusion**

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Fairfax is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, less costly, and more secure energy future.

## Enhanced Energy Plan Goals, Policies, and Implementation Actions

**Goal:** Plan for increased electric demand with the support of Green Mountain Power, Vermont Electric Coop, and Efficiency Vermont.

**Policy:** Fairfax supports the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in the Fairfax Enhanced Energy Plan. Development of generation in identified preferred locations shall be favored over the development of other sites.

**Action:** Investigate the installation of a municipal net-metering facility to off-set municipal electric use.

**Action:** Investigate installation of a community-based renewable energy project.

**Action:** Ensure firefighters receive proper training to handle structures that have roof-mounted solar.

**Action:** Review and maintain the Building Inspection, Code Enforcement, and Fire Safety Ordinance to incorporate any changes to national rooftop solar installation methods and standards.

**Goal:** Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.

**Policy:** Fairfax supports energy conservation efforts and the efficient use of energy across all sectors.

**Action:** Coordinate with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fairfax residents.

**Action:** Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.

**Action:** Create an Energy Committee and/or appoint an Energy Coordinator to coordinate energy-related planning and projects in Fairfax.

**Action:** Evaluate the remaining improvements identified in the 2012 energy audit of Fairfax Fire Station and incorporate the recommendations into the municipal capital budget.

**Action:** Implement recommendations from the 2012 NRPC evaluation of street lighting in Town.

**Policy:** Fairfax supports patterns and densities of concentrated development that result in the conservation of energy.

**Policy:** To support public transit connections from Fairfax to other parts of the region if economically feasible in the future.

**Action:** Review local policies and ordinances to limit water and sewer services to those areas of town where additional development will not contribute to sprawl.

**Policy:** Fairfax supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.

**Goal:** Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips, increasing the amount of pedestrian and bicycle commute trips, and increasing public transit ridership.

**Policy:** Fairfax supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.

**Action:** Study potential need for a park and ride in Fairfax with a particular focus south of the village.

**Action:** Promote and provide information about the GoVermont website which provides information to citizens about ride share, vanpool, and park-and-ride options.

**Action:** Plan for and install electric vehicle charging infrastructure on municipal property.

**Action:** Aid in locating an EV charging infrastructure on public or private property.

<b>Table A1.11 – Mapping Constraints</b>		
<b>Solar, Wind and Biomass Maps - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
Confirmed and unconfirmed vernal pools	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
State Significant Natural Communities and Rare, Threatened, and Endangered Species	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
River corridors	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
National wilderness areas		VCGI
FEMA Floodways		VCGI/NRPC
Class 1 and Class 2 Wetlands		VCGI
Designated Downtowns, Designated Growth Centers, and Designated Village Centers	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain -500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
Ground and surface waters drinking protection areas	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR

Vermont Conservation Design Highest Priority Forest Blocks	The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)	ANR
Public water sources	A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
National Natural Landmark – e.g. Chazy Fossil Reef	The Chazy Fossil Reef in Isle La Motte has been designated a National Natural Landmark by the US Department of Interior.	NRPC
Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D. No land use districts in Fairfax are included in this category.	NRPC
<b>Solar, Wind and Biomass Maps - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
Protected lands	This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements held by non-profit organizations.	VCGI
Deer wintering areas	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR

Hydric soils	Hydric soils as identified by the US Department of Agriculture.	VCGI
Agricultural soils	Local, statewide, and prime agricultural soils are considered.	VCGI
Act 250 Agricultural Soil Mitigation Areas	Sites conserved as a condition of an Act 250 permit.	VCGI
Class 3 wetlands	Class 3 wetlands in the region have been identified have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D. The Fairfax Conservation District was included in this category.	NRPC
<b>Hydro Map - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
National scenic and recreational rivers	The Upper Missisquoi and Trout Rivers are designated as a National Wide and Scenic River System.	BCRC/NRPC
<b>Hydro Map - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
“303d” list of stressed waters		ANR
Impaired waters		ANR
State Significant Natural Communities and Rare, Threatened, and Endangered Species	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI



The date in Table A1.12 displays the 103 facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of Fairfax recognizes that some of the data in the table may be out of date or incorrect. The Town of Fairfax also recognizes that some identified facilities may no longer generate electricity.

**Table A1.12 - Fairfax Electricity Generators, As of 3/27/18**

**Sub Category:** GM- Ground-mounted, RM – Roof-mounted, PV – Photovoltaic  
**Utility:** GMP – Green Mountain Power, VEC – Vermont Electric Coop  
**Electricity Type:** NM – Net metered  
 All facilities are residential unless denoted with a (1) for Business or (2) for Municipality

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Hydro	Hydro	Fairfax Falls (1)			Grid	GMP	4200
Solar	GM PV	Harold Vance III	1139 Main St	3406	NM	GMP	3.3
Solar	GM PV	Jeffery & Linda Corey	86 Sam Webb Rd	3798	NM	GMP	6.4
Solar	GM PV	John Quinn	5 Benny Rd	4043	NM	GMP	7
Solar	GM PV	Karen Slowinski & Debra Warner	83 Ledge Rd	2801	NM	VEC	7.5
Solar	GM PV	Madeline Mann	399 Buck Hollow Rd	3111	NM	GMP	9.8
Solar	GM PV	Marti Sterin	73 SAM WEBB RD	1560	NM	GMP	4.4
Solar	GM PV	Paul Gamm	89 Evergreen Road	772	NM	VEC	3.2
Solar	GM PV	Joseph Ducharme	6 Bailey Road	16-0489	NM	GMP	5
Solar	GM PV	Donald Fleming	77 Fletcher Rd		NM	GMP	5
Solar	GM PV	Fairfax Fire Department (2)	15 Goodall St		NM	GMP	15
Solar	GM PV	Tom Snyder	16 Bellows St		NM	GMP	15
Solar	GM PV: Tracker	Keith & Sally Billado	86 W Street Rd	2997	NM	GMP	6
Solar	GM PV: Tracker	Fairfax Family Physical Therapy PC (1)	1282 Main Street	7001	NM	GMP	7
Solar	RM PV	Barbara & William Duval	758 Fletcher Rd	3497	NM	GMP	5.6
Solar	RM PV	Carol Roberts	6 Alexzis Rd	3804	NM	VEC	5
Solar	RM PV	Christen & Thomas Bessette	2371 Main St	2792	NM	GMP	8.9
Solar	RM PV	David Vallett	287 Buck Hollow Rd	5749	NM	GMP	5
Solar	RM PV	Dayon And Heather Brown	68 Upper Meadow Rd	3815	NM	GMP	5
Solar	RM PV	Douglas & Evangeline Lantagne	82 WINDTOP RD	2661	NM	GMP	5.6

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	RM PV	Douglas Reaves	2227 Main St	2653	NM	GMP	3.7
Solar	RM PV	Elaine Barkyoub	102 Huntville Rd	3512	NM	GMP	7.5
Solar	RM PV	Scott Picucci	15 Cherrierville Rd	3748	NM	VEC	5
Solar	RM PV	Elizabeth Wagner	13 Snowcrest Rd	2622	NM	GMP	2.3
Solar	RM PV	Eric Foreman	1789 Main St	5311	NM	GMP	10
Solar	RM PV	Eric Torraca	1235 Main St	2638	NM	GMP	4.7
Solar	RM PV	Genevieve & Joseph Gallagher	9 Fletcher Rd	6061	NM	GMP	6
Solar	RM PV	Glen Twilley	137 West Street Rd	2716	NM	VEC	3.7
Solar	RM PV	Gregory Martin	41 Maple Hill Rd	3538	NM	GMP	9.9
Solar	RM PV	Hannah Mason Hauser	184 Mead Rd	3698	NM	VEC	4.6
Solar	RM PV	Harald and Rebecca Akdsal	296 Woodward Road		NM	VEC	5
Solar	RM PV	James Naylor	178 Wilkins Rd	4002	NM	VEC	8
Solar	RM PV	Jason Elledge	14 Hawley Rd	3939	NM	GMP	7.7
Solar	RM PV	Jennifer Osgood	17 Michelle Rd	3671	NM	GMP	4.6
Solar	RM PV	John & Kathryn Connell	20 Delorme Road	5954	NM	GMP	3.8
Solar	RM PV	Joseph Jacobson	20 Summit View St	2863	NM	GMP	5.6
Solar	RM PV	Kevin Jarvis	16 King Road	3272	NM	GMP	5.3
Solar	RM PV	Kris Hoyt	2855 Main Street	3496	NM	GMP	4.3
Solar	RM PV	Lisa Atherton	32 Audelin Woods Rd	3605	NM	GMP	4.6
Solar	RM PV	Matthew Roth	281 River Rd	6065	NM	GMP	3
Solar	RM PV	Michael Cain	2757 Main St	4156	NM	GMP	5
Solar	RM PV	Pauline Paquin and Steve Marsh	34 Windtop Rd	5294	NM	GMP	7.6
Solar	RM PV	Peter Lynch	78 Rood Mill Road	4244	NM	VEC	6
Solar	RM PV	Richard Jarmusz	26 Richards Rd	2804	NM	GMP	3.7
Solar	RM PV	Sarah Hodgson	34 Dewey Rd	5614	NM	VEC	3.8
Solar	RM PV	Sarah Jones and Jesse Jones	26 Summit View St	3508	NM	GMP	8
Solar	RM PV	Steve Rainville	272 Wilkins Rd	3771	NM	VEC	5
Solar	RM PV	Steven Dumas	23 Summit View St	3645	NM	GMP	6.8
Solar	RM PV	Wayne Thompson	47 Browns River Rd	4217	NM	GMP	5.7
Solar	RM PV	Winfred & Aleta Decker	67 White Pine Rd	43	NM	VEC	3.8

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	RM PV	Bethany Dukette	36 Craftsfield Rd	16-0261	NM	GMP	5
Solar	RM PV	Bethany Hayden	769 Goose Pond Rd	6446	NM	GMP	6
Solar	RM PV	Bob Bessette	1979 Main Street	6834	NM	GMP	4
Solar	RM PV	Brendan Conray	42 Crystal Dr		NM	GMP	3.6
Solar	RM PV	Bruce Alvarez	147 Nichols Rd	7031	Group NM	GMP	8
Solar	RM PV	Candace Johnson	37 Lochmoor Rd	5253	NM	GMP	6
Solar	RM PV	David Gardell	51 Richards Road	7069	NM	GMP	5
Solar	RM PV	Gennette Carr	416 Carroll Hill Rd	6708	NM	VEC	4
Solar	RM PV	Ian Duckett	45 Lochmoor Rd	16-0333	NM	GMP	5
Solar	RM PV	John Young	351 Buck Hollow Road	16-0129	NM	GMP	7.6
Solar	RM PV	Joshua Silman	161 Bessette Road	6396	NM	GMP	11
Solar	RM PV	Karen Carlin	1209 Main St	16-0389	NM	GMP	5
Solar	RM PV	Kevin Tobey	352 Sam Webb Road	7266	NM		7.6
Solar	RM PV	Lara Scott	28 Old Academy Street	16-0674	NM	GMP	3.8
Solar	RM PV	Mary Lewis	6 School St		NM	GMP	3.6
Solar	RM PV	Matthew Garrett	58 Upper Meadow Road		NM	GMP	3.8
Solar	RM PV	Raquel Urbina	11 Michelle Rd	16-0686	NM	GMP	4.2
Solar	RM PV	Shannon Arnzen	183 Tabor Hill Road	7265			5
Solar	RM PV	Thom & Brenda Smith	464 Nichols Road	7216	NM	VEC	11.4
Solar	RM PV	Timothy Hathaway	10 Nichols Rd		NM	GMP	12
Solar	RM PV	Tom Bochanski	244 Sam Webb Road	7209	NM	VEC	7
Solar	RM PV	Vincent Redding	28 Rowland Rd	16-0321	NM	GMP	5
Solar	RM PV	Zachary Sprague	3 Hillcrest Road		NM	GMP	11.4
Solar	RM PV	Brannon Soter		6800	NM	GMP	4.2
Solar	RM PV	Curtis Lantagne	74 Windtop Rd	16-1104	NM	GMP	4.95
Solar	RM PV	Jennifer Prim	33 Windtop Rd	16-1447	NM	GMP	8.4
Solar	RM PV	Amy Gray	15 Andbron Rd	16-1178	NM	GMP	6
Solar	RM PV	Brenda Turner	110 Buck Hollow Rd	16-1549	NM	GMP	3.6
Solar	RM PV	Elizabeth Brunell	31 Hardwood Hill Rd	16-1506	NM	GMP	5
Solar	RM PV	Jeff Iszak	60 Village View Road	16-1495	NM	GMP	3

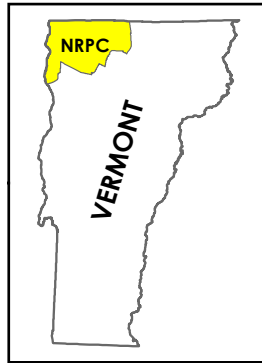
Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	RM PV	Josh Rollet	48 Leach Rd	16-1273	NM	GMP	6
Solar	RM PV	Kevin Quinlan	12 Meadows Road	16-1409	NM	GMP	4.2
Solar	RM PV	Robert Goboury	402 Buck Hollow Road		NM	GMP	3
Solar	RM PV	San Kong	12 Bentley Rd	16-0852	NM	GMP	3.6
Solar	RM PV	Terri Cote	6 King Road	16-1661	NM	GMP	3.6
Solar	RM PV	Tyler Burns	33 Bovat Road	16-1667	NM	GMP	8.2
Solar	RM PV	Stanley Moody	20 Craftsfield Rd		NM	GMP	3.6
Solar	RM PV	Roger Fisher	57 Allen Irish Road		NM	GMP	5
Solar	RM PV	Donald Tedford	375 Swamp Road		NM	GMP	16
Solar	RM PV	Aaron and Rebecca Wilson	4 Quincy Road		NM	GMP	3.8
Solar	RM PV	Kelly Lyford and Amy Larow	219 Sam Webb Rd		NM	VEC	11.4
Solar	RM PV	Joyce A Hunt	233 Nichols Rd		NM	VEC	6.6
Solar	RM PV	Erin Cain	43 Outback Rd		NM	VEC	3.6
Solar	RM PV	Bertrand Bolduc	27 Wiggins Rd		NM	-	5.2
Solar	RM PV	Deanna Farnham	28 Rock View Rd		NM	GMP	3.8
Solar	RM PV	Beverly Pascavage	4 Meadow Rd		NM	GMP	6.6
Solar	RM PV	Heidi Meunier	183 Brick Church Rd		NM	VEC	10
Solar	RM PV	Brian Duprat	52 Snowcrest Rd		NM	GMP	7.6
Solar	RM PV	John Kjos	20 Rock View Rd		NM	GMP	3
Solar	RM PV	Rob Green	216 Huntville Rd	16-2534	NM	GMP	5.2
Solar	Solar Canopy	Ricky Wood	272 Carroll Hill Rd		NM	VEC	7.6
Wind	Small Wind	Sam Nelson	108 Bessette Road	119	NM	GMP	3

# Utility Service Areas

## Fairfax, Vermont Act 174

### The Energy Development Improvement Act of 2016

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#### Legend

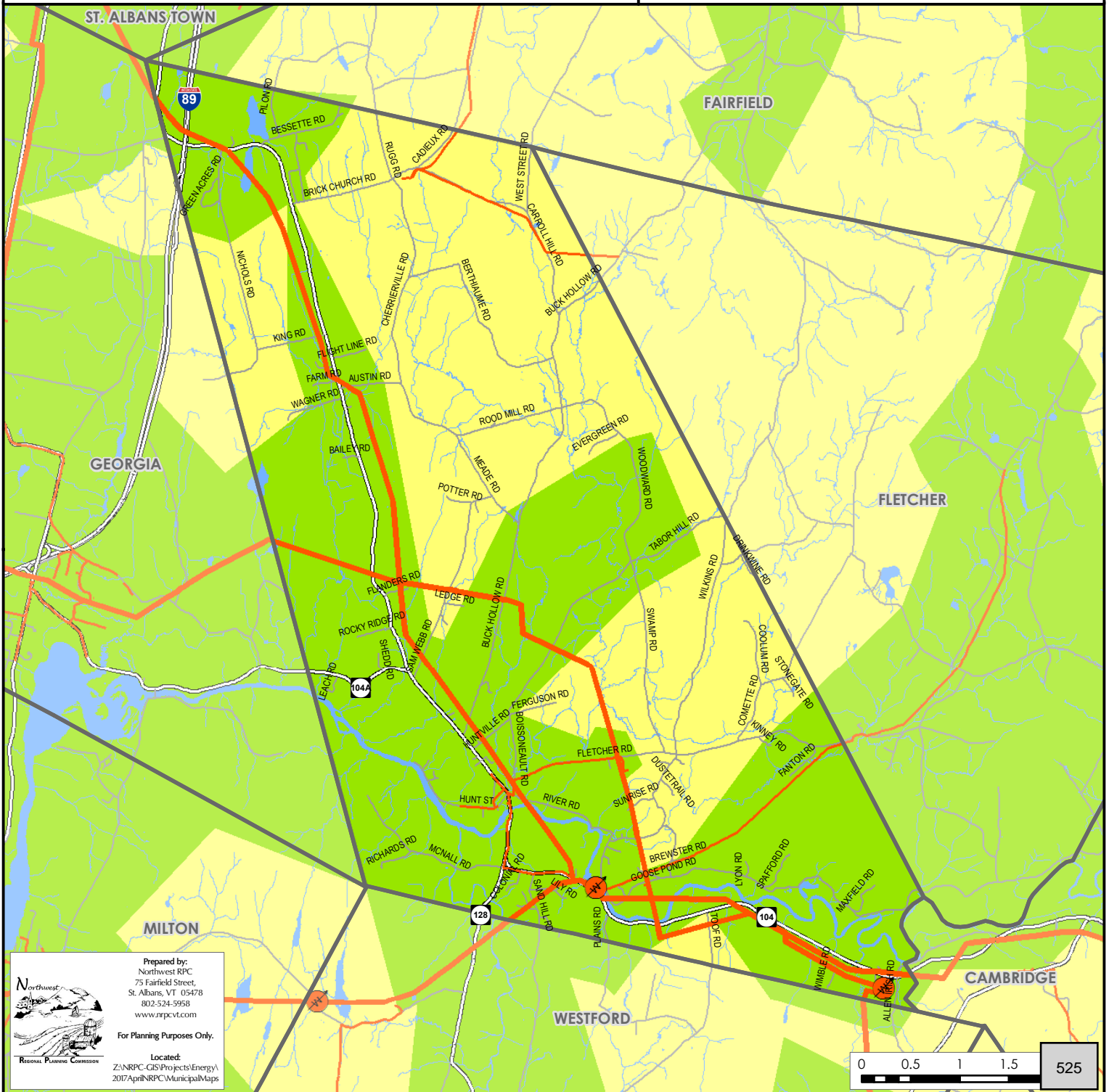
Section 3. Item #A.

#### Utility Service Area Features

- Green Mountain Power
- Swanton Village Electric
- Vermont Electric Co-op
- Enosburg Falls Electric
- Substation
- 3 Phase Power Line
- Transmission Line

Sources: VCGI

**Disclaimer:** The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Northwest RPC is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.



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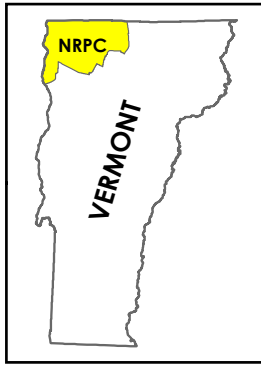


# Existing Generation Facilities

## Fairfax, Vermont Act 174

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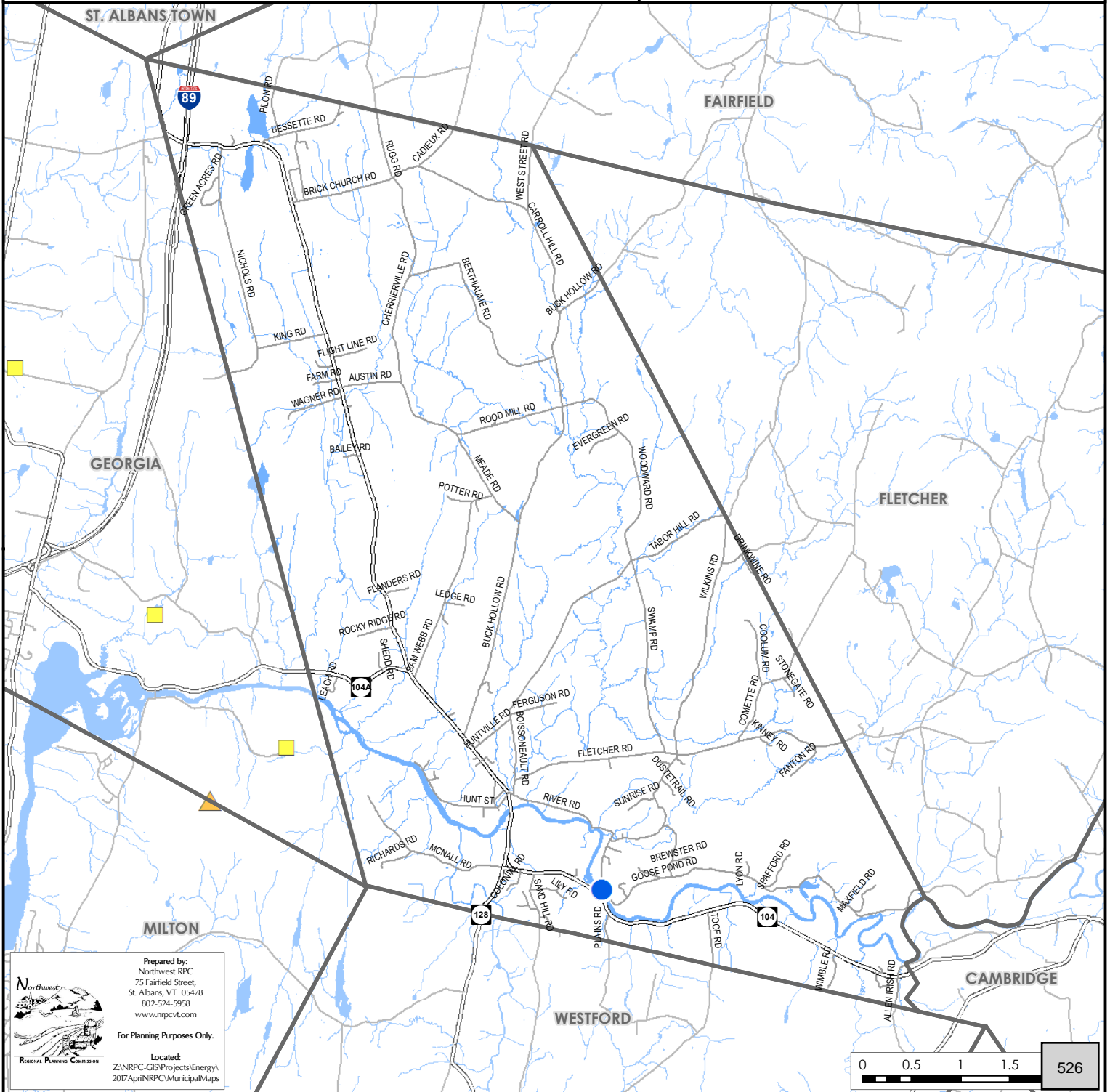
- ★ Biomass Facility
- Hydro Facility
- Solar Facility
- ▲ Wind Facility

Section 3. Item #A.

**Note:** Only generators 15kW are shown on the map. A full list of all generators is available.

**Sources:** VCGI

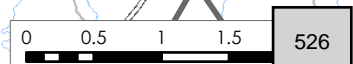
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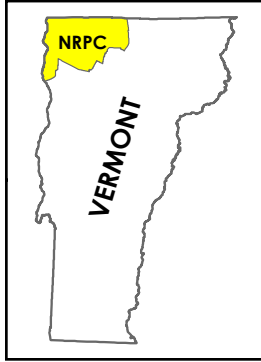


# Transmission & 3 Phase Power Infrastructure

Fairfax, Vermont  
Act 174

## The Energy Development Improvement Act of 2016

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### Legend



Substation

3 Phase Power Line

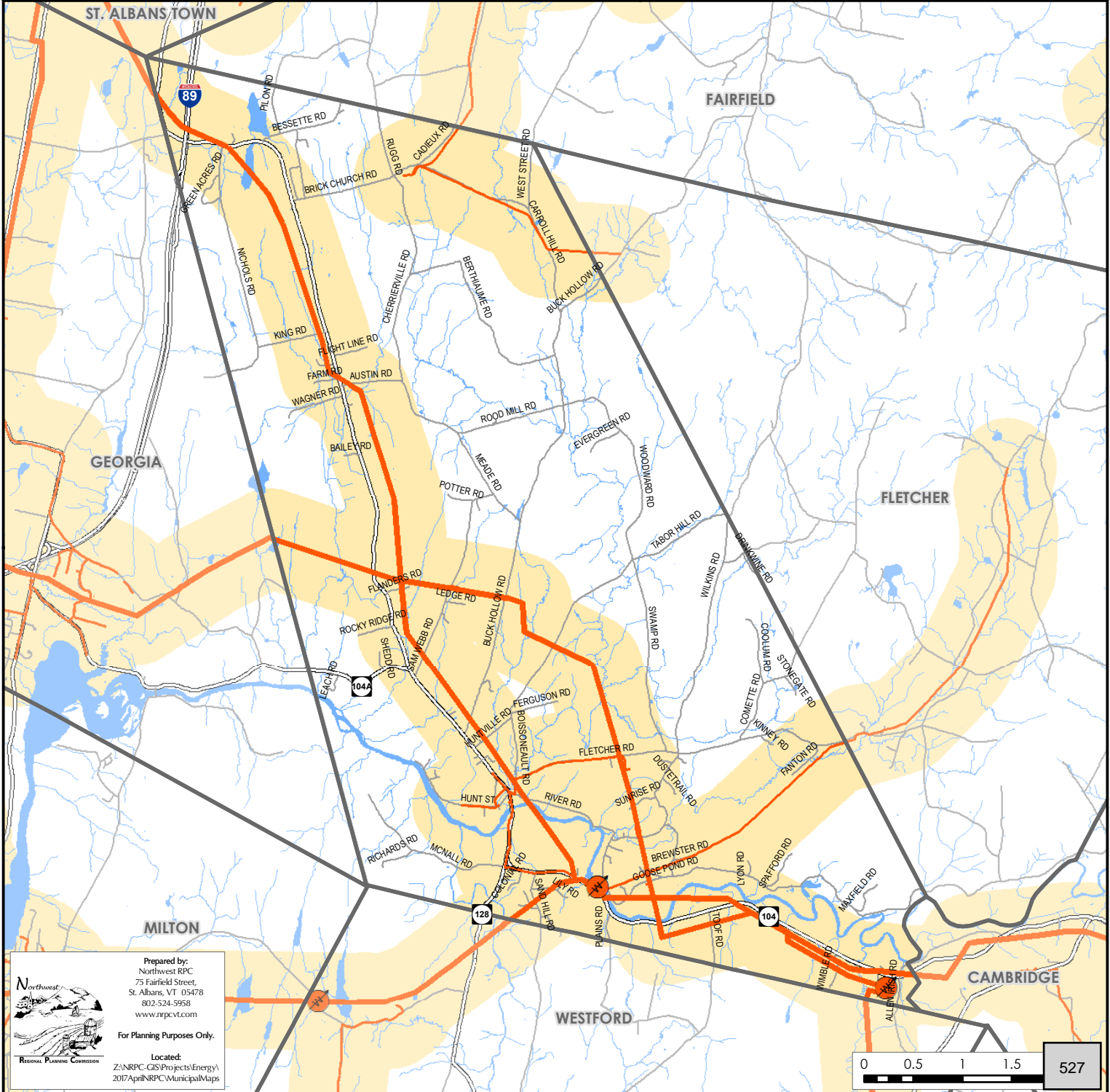
Transmission Line

1/2 Mile Buffer (3 Phase Power Line & Transmission Line)

Section 3. Item #A.

Sources: VCGI

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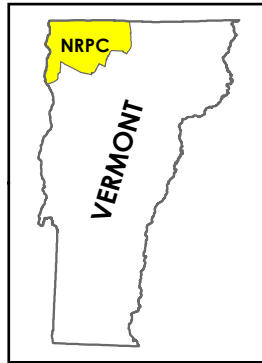
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2017 April\NRPC Municipal Maps

# Solar

## Fairfax, Vermont Act 174

### The Energy Development Improvement Act of 2016

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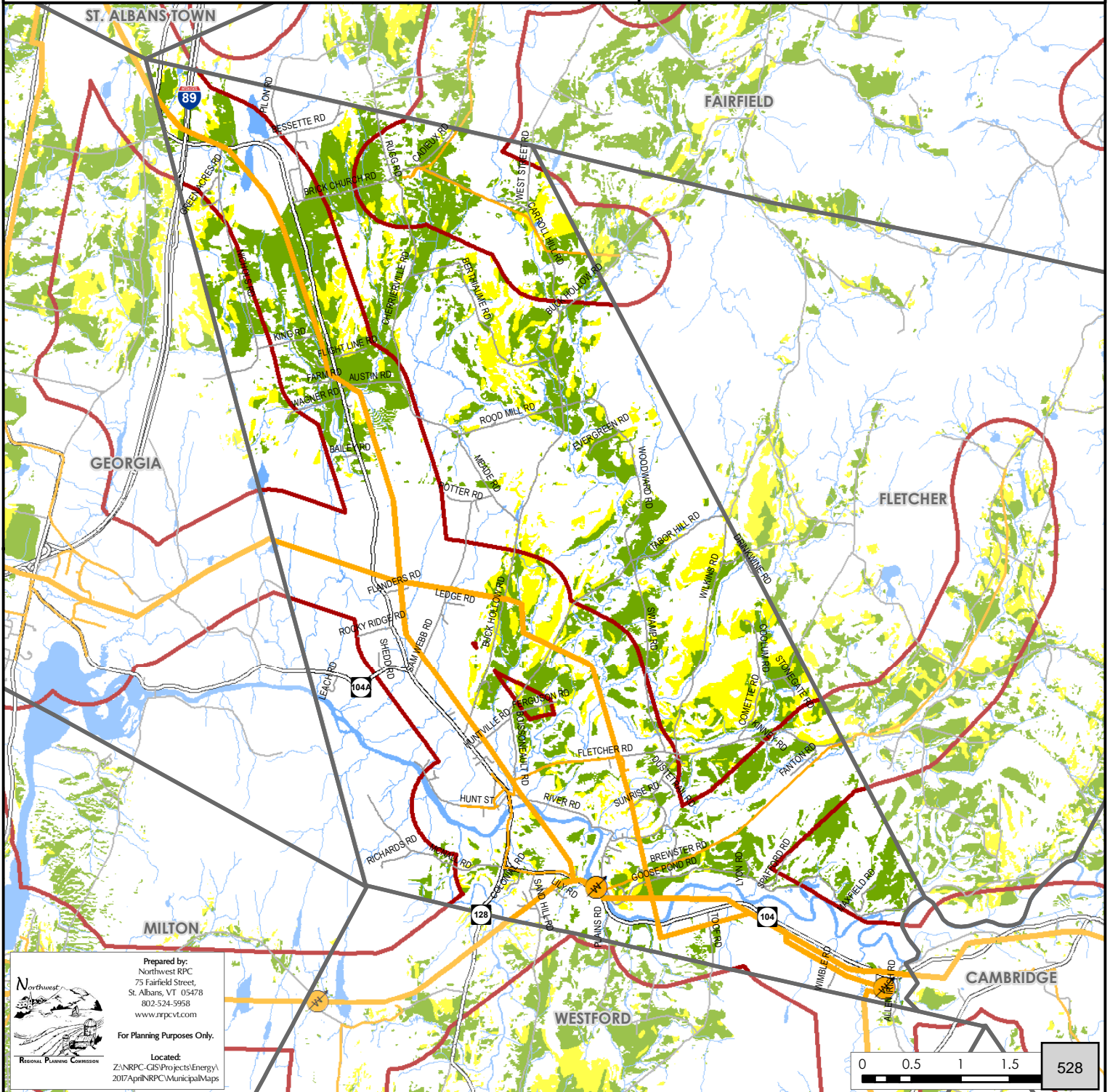
#### Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- 1/2 Mile Buffer (3 Phase Power Line & Transmission Line)
- Prime Solar/No Known Constraints
- Base Solar/Possible Constraints

Section 3. Item #A.

Sources: VCGI

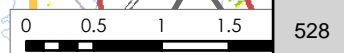
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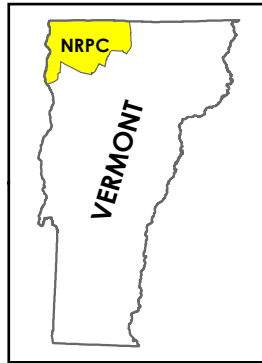




# Wind

## Fairfax, Vermont Act 174 The Energy Development Improvement Act of 2016

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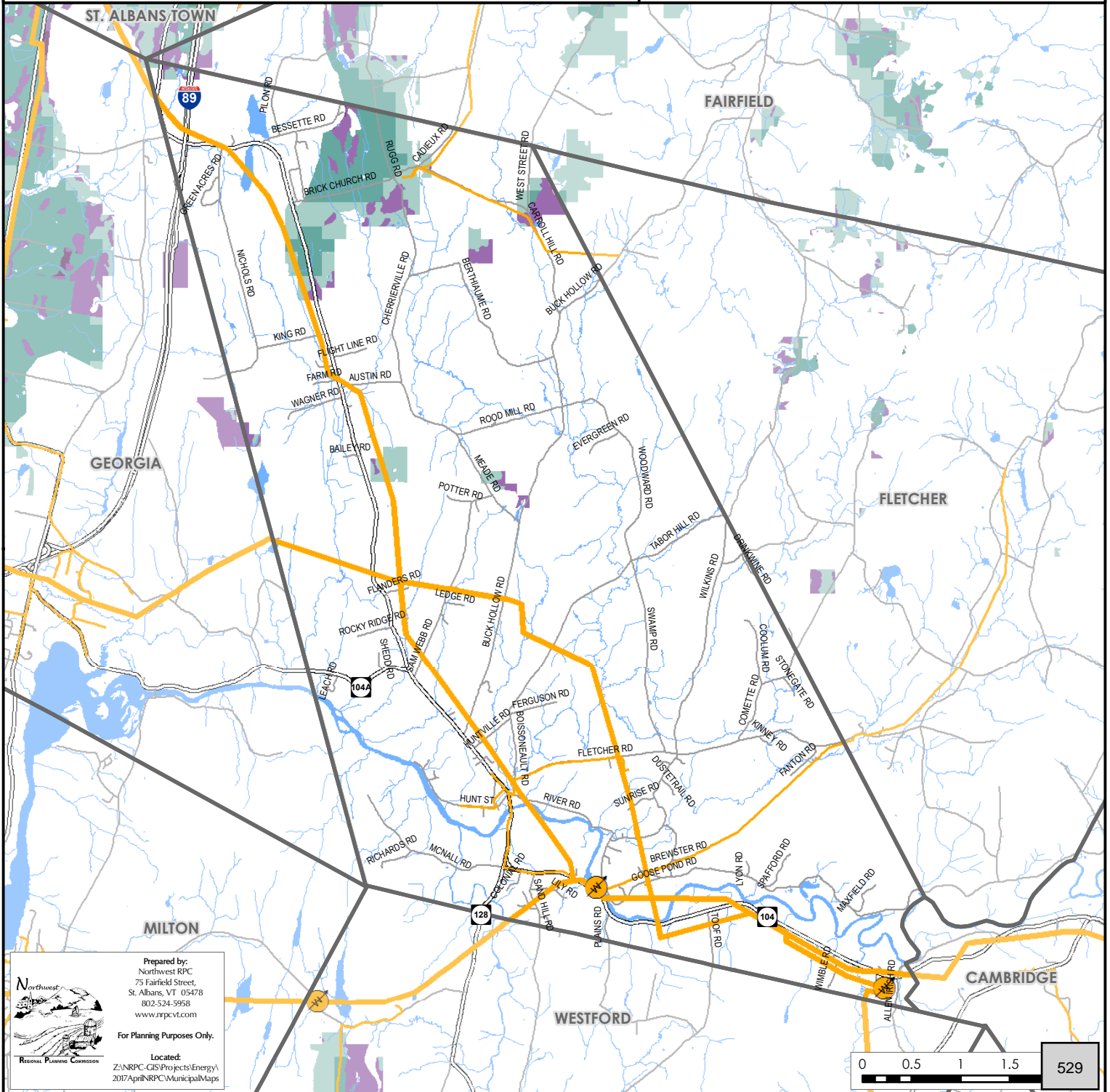
### Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- Prime Wind**  
Areas of high wind potential and no known constraints.  
Darker areas have higher wind speeds.
- Base Wind**  
Areas of high wind potential and a presence of possible constraints.  
Darker areas have higher wind speeds.

Section 3. Item #A.

Sources: VCGI

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# Hydro

## Fairfax, Vermont

### Act 174

## The Energy Development Improvement Act of 2016

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### Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- Designated Outstanding Resource Water
- Known Constraint - Designated National Wild & Scenic River
- Possible Constraint - Stressed or Impaired Water
- Possible Constraint - RINAs

### Potential Hydroelectric Facility

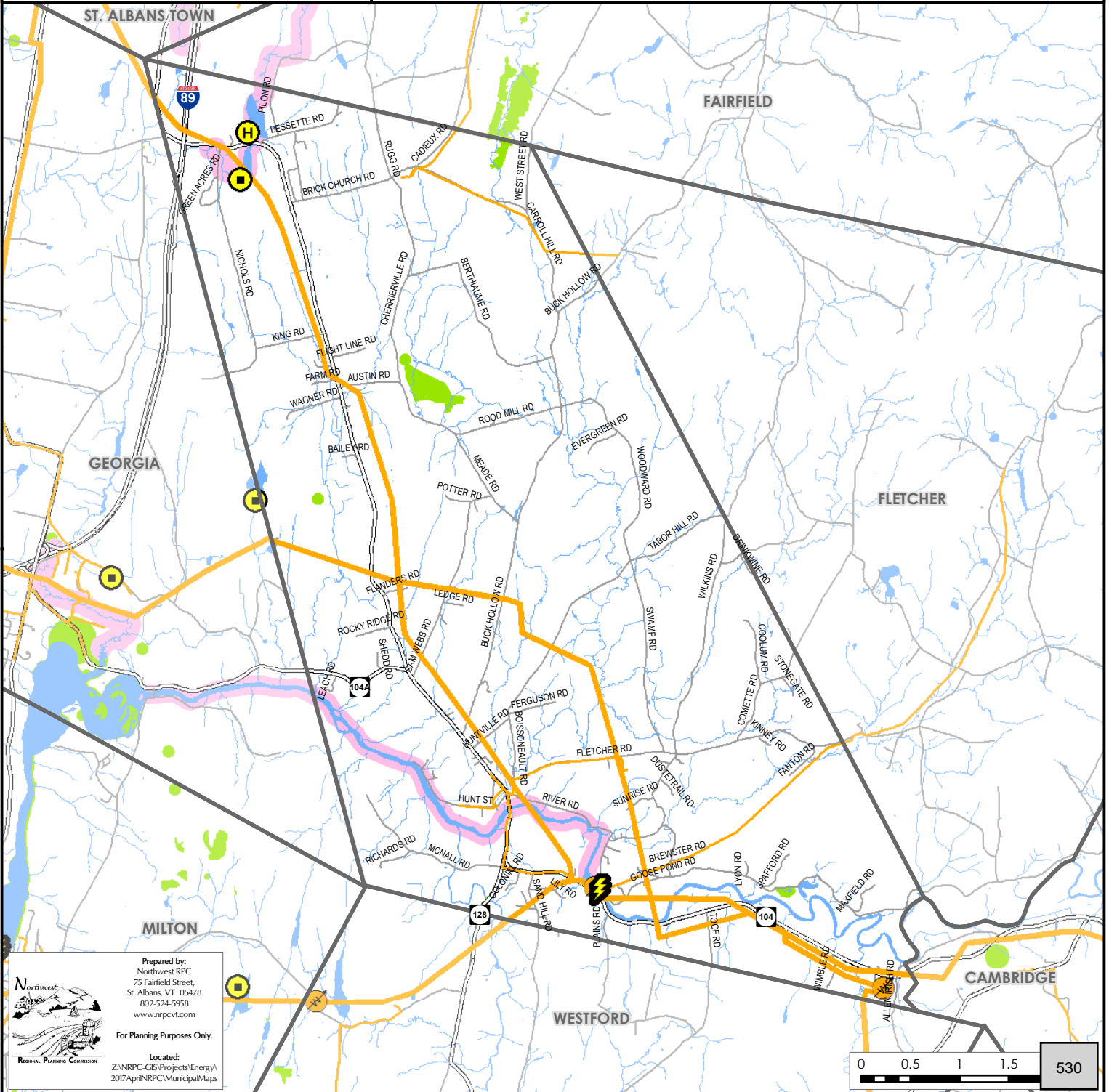
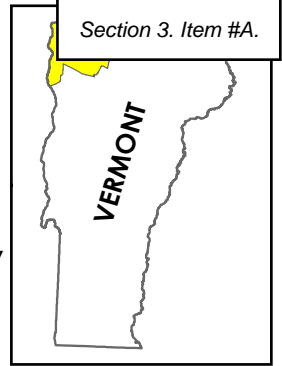
- < 50 kW Capacity
- > 50 kW Capacity
- High Hazard with < 50 kW Capacity
- High Hazard with > 50 kW Capacity

### Operating Hydroelectric Facility

- Dam not on National Wild and Scenic River
- Dam on National Wild and Scenic River

Sources: VCGI

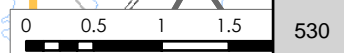
**Disclaimer:** The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Northwest RPC is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.



Prepared by:  
Northwest RPC  
75 Fairfield Street,  
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802-524-5958  
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For Planning Purposes Only.

Located:  
Z:\NRPC-GIS\Projects\Energy\A  
2017 April\RPC Municipal Maps

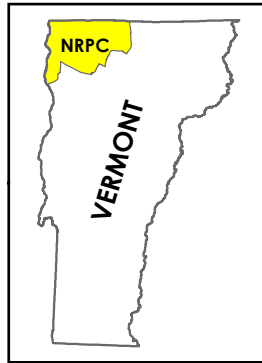


# Woody Biomass

## Fairfax, Vermont Act 174

### The Energy Development Improvement Act of 2016

This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. This may also be used for conceptual planning or initial site identification by those interested in developing renewable energy infrastructure. The maps do **NOT** take the place of site-specific investigation for a proposed facility and cannot be used of as "siting maps."



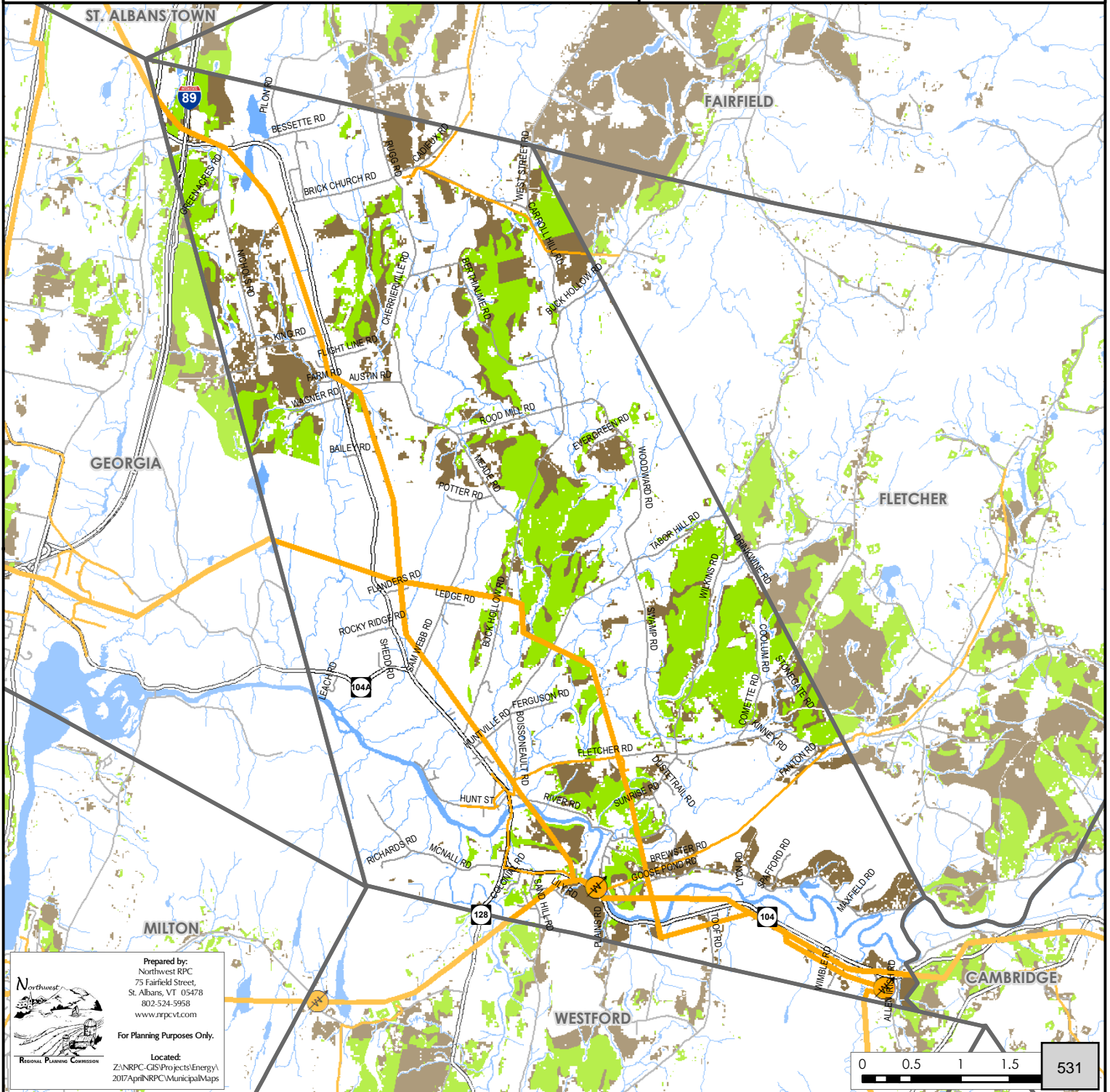
#### Legend

- Biomass System
- Cow Power
- Substation
- 3 Phase Power Line
- Transmission Line
- Prime Woody Biomass/No Known Constraints
- Base Woody Biomass/Possible Constraints

Section 3. Item #A.

#### Sources: VCGI

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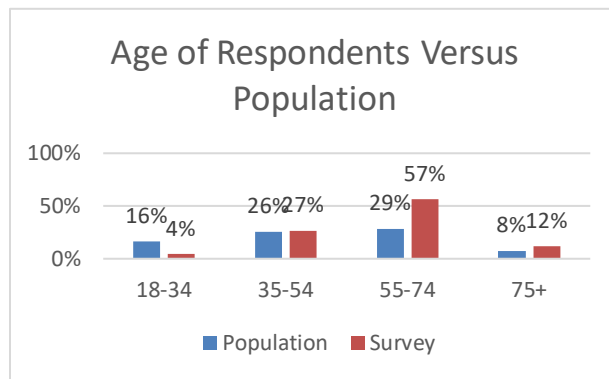
## MEMORANDUM

To: South Hero Planning Commission  
From: Emily Klofft- Regional Planner & Greta Brunswick-Senior Planner  
Date: August 3, 2022  
Subject: South Hero Town Plan Survey

### Distribution and Response Rate

The survey was available online at the South Hero Town Plan website and via paper copy at the Town office. Residents were sent a postcard with a link to the survey and the survey was advertised on local social media platforms. Copies of and links to the survey were also provided at the June Community Cheers and Cheese event.

The survey received 207 responses. 162 responses were received from year-round residents, which represents 11.7% of the year-round adult population. 32 responses were received from seasonal residents. Adults ages 55-75 are significantly overrepresented by survey respondents, while adults ages 18-34 are underrepresented. No responses were received from residents under the age of 18.



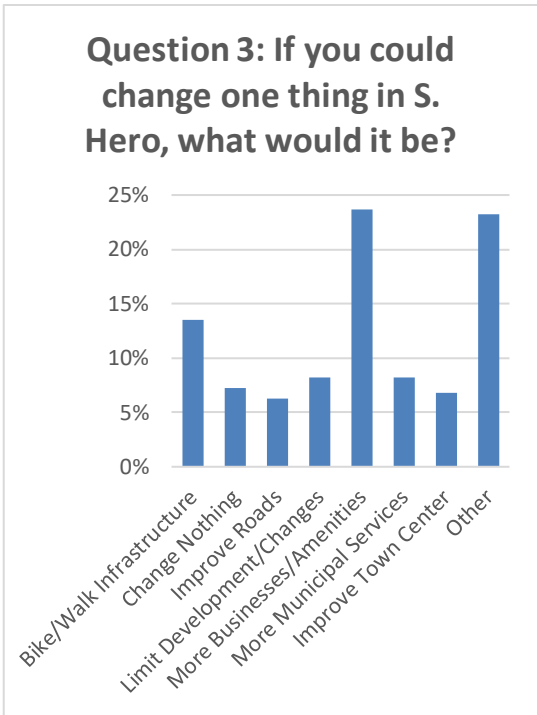
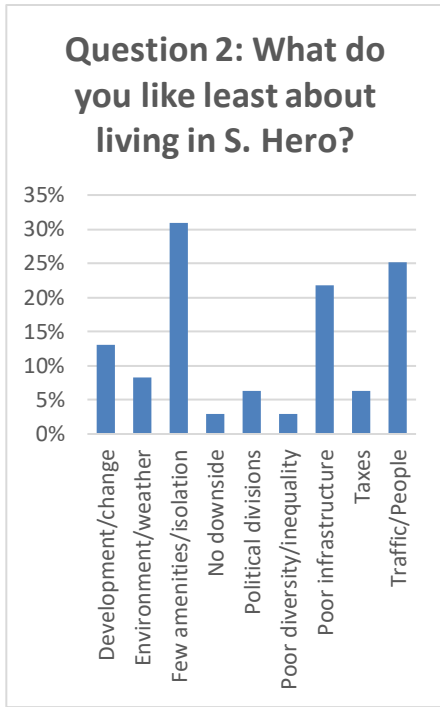
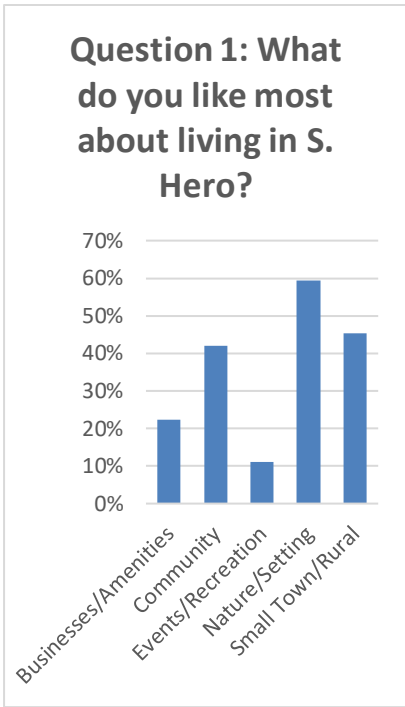
Renters are underrepresented, only 4% of survey respondents were renters despite rentals making up 15% of the housing stock. Results of the survey should be considered with this context, especially as it relates to issues that might most impact renters or younger residents.

Respondents were distributed across South Hero, with 11% living in the Village Zoning District, 42% in the Rural Residential District and 34% in the Shoreland Zoning District. Roughly 40% of respondents were retired, 18% work in Chittenden County, 19% worked at home and 8% worked a hybrid schedule. 7% worked at businesses in South Hero and 2% were unemployed. Other respondents worked out-of-state, were homemakers or disabled.

### What Do You Think About South Hero?

When asked what they liked most about South Hero, common themes were the natural beauty of South Hero (59%), the small & rural nature of South Hero (45%) and the community of South Hero (42%). Common themes that respondents liked least include the lack of amenities/isolation (31%), traffic and crowds (25%), and poor infrastructure (22%). Respondents most wanted more businesses/amenities (24%) and to change pedestrian and bicycle infrastructure (14%).

Swanton V • Sheldon T • South Hero • St. Albans C • St. Albans T • Richford • North Hero • Montgomery • Isle La Motte • Highgate • Isle La Motte • Highgate • Isle La Motte • Montgomery • North Hero • Richford • St. Albans C • St. Albans T • Sheldon T • South Hero • Swanton V

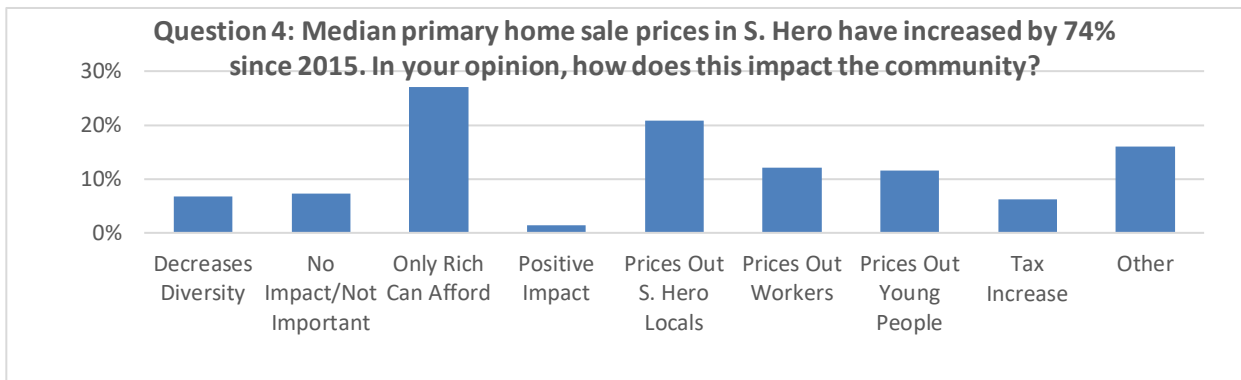
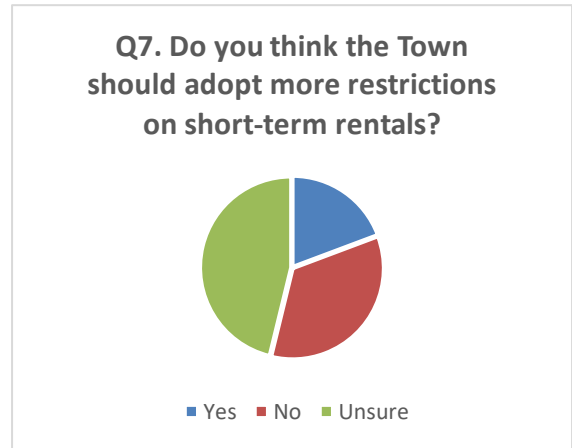


## Housing & Transportation

### Housing

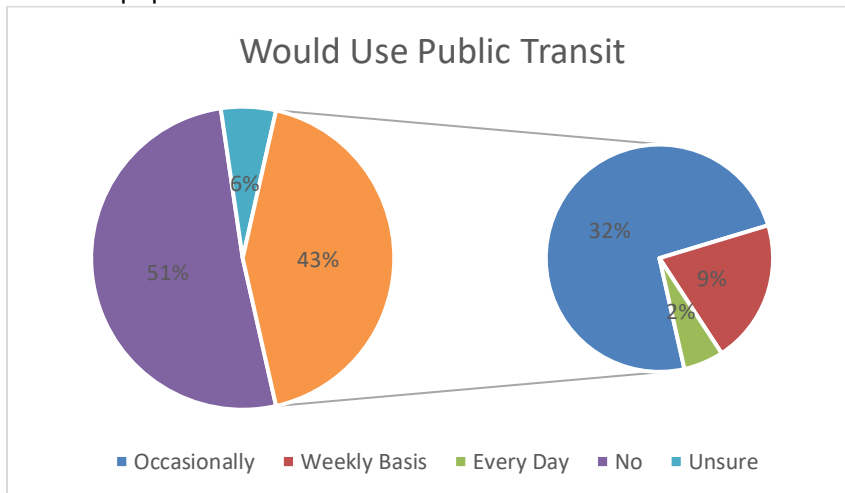
When asked about the impact of home price increases, respondents were concerned about only wealthy people being able to afford homes (25%), as well as South Hero locals (21%), workers (12%) and young people (12%) being priced out. Only 7% of respondents did not feel it had an impact on the community. 34% of respondents were satisfied with housing options, while 30% were dissatisfied. 96% of respondents lived in single household homes, with 2% in ADUs and 1% in small apartment buildings.

Respondents were divided on short-term rentals, with the plurality being unsure if they should be restricted (46%), while 19% believed they should be restricted and 35% believing they should not be restricted.



**Public Transit**

Roughly half of respondents would not use public transit, and a quarter were unsure. Of the half of respondents who stated they may would use public transit the most common reasons would be for appointments and transit connections. 68% would use public transit only occasionally, with just 5% stating they would use it every day. Mornings were the most popular departure time, and evenings were the most popular return time.

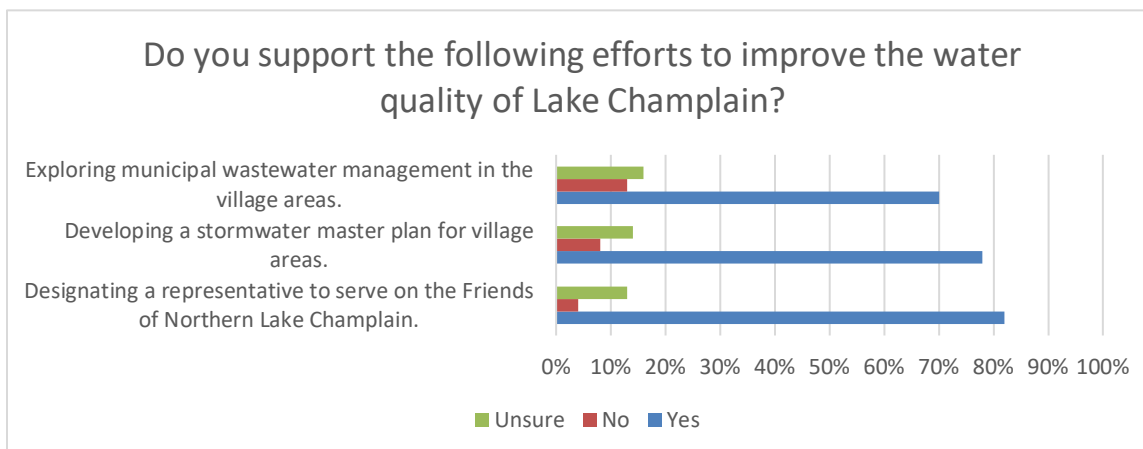
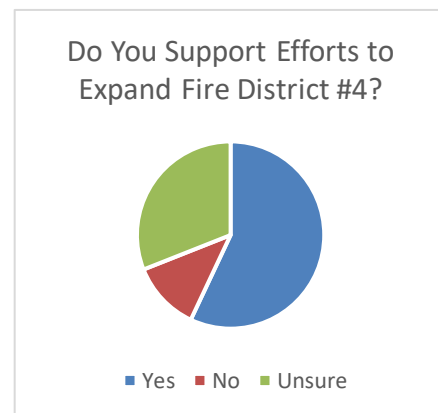


*Note: Orange represents yes and unsure answers who provided a frequency of potential use answer in a later question.*

**Climate Change and Resilience**

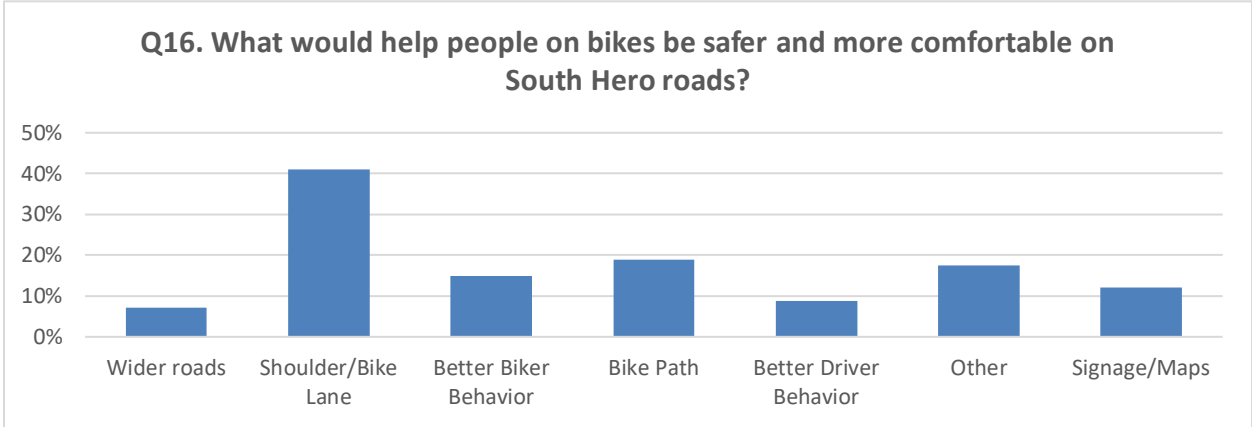
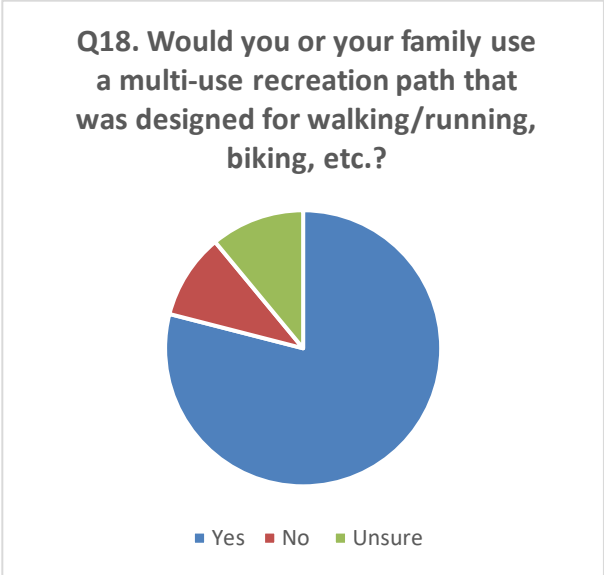
Just over half (57%) of respondents supported expanding Fire District #4, while 1/3 were unsure and 11% opposed such efforts.

Over 90% of respondents supported efforts to improve the water quality of Lake Champlain. Efforts to do so were supported by most, including designating a representative to serve on the Friends of Northern Lake Champlain (82%), developing a stormwater master plan for village areas (78%), and exploring municipal wastewater management in the village areas (70%).



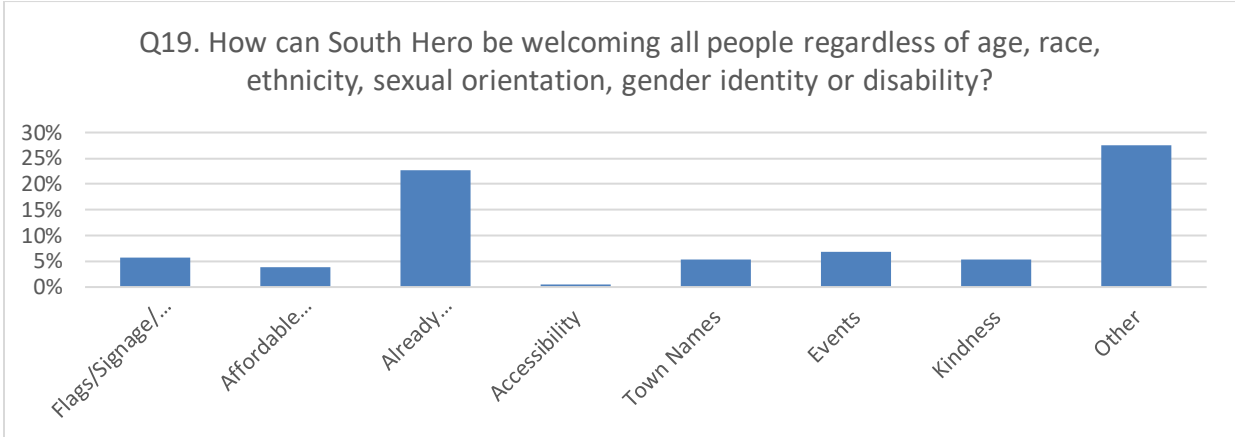
**Recreation and Recreation Economy**

When asked what would help bicyclists be more safe and comfortable on South Hero’s roads, the most common responses were wider shoulders & bike lanes (41%), and a bike path (19%). Respondents particularly identified South Street as too narrow to be safe, and many bike path suggestions were aimed at moving bike traffic off Route 2, South Street or Route 314. In regards to an open-ended question about the role of bike-centric tourism, 22% of respondents specifically stated support for it, with 16% noting it was a benefit to local businesses. 5% of respondents specifically stated they did not support bike tourism, and 6% believed it needed to be better planned or controlled. Roughly 80% of respondents stated they would use a multi-use recreation path.



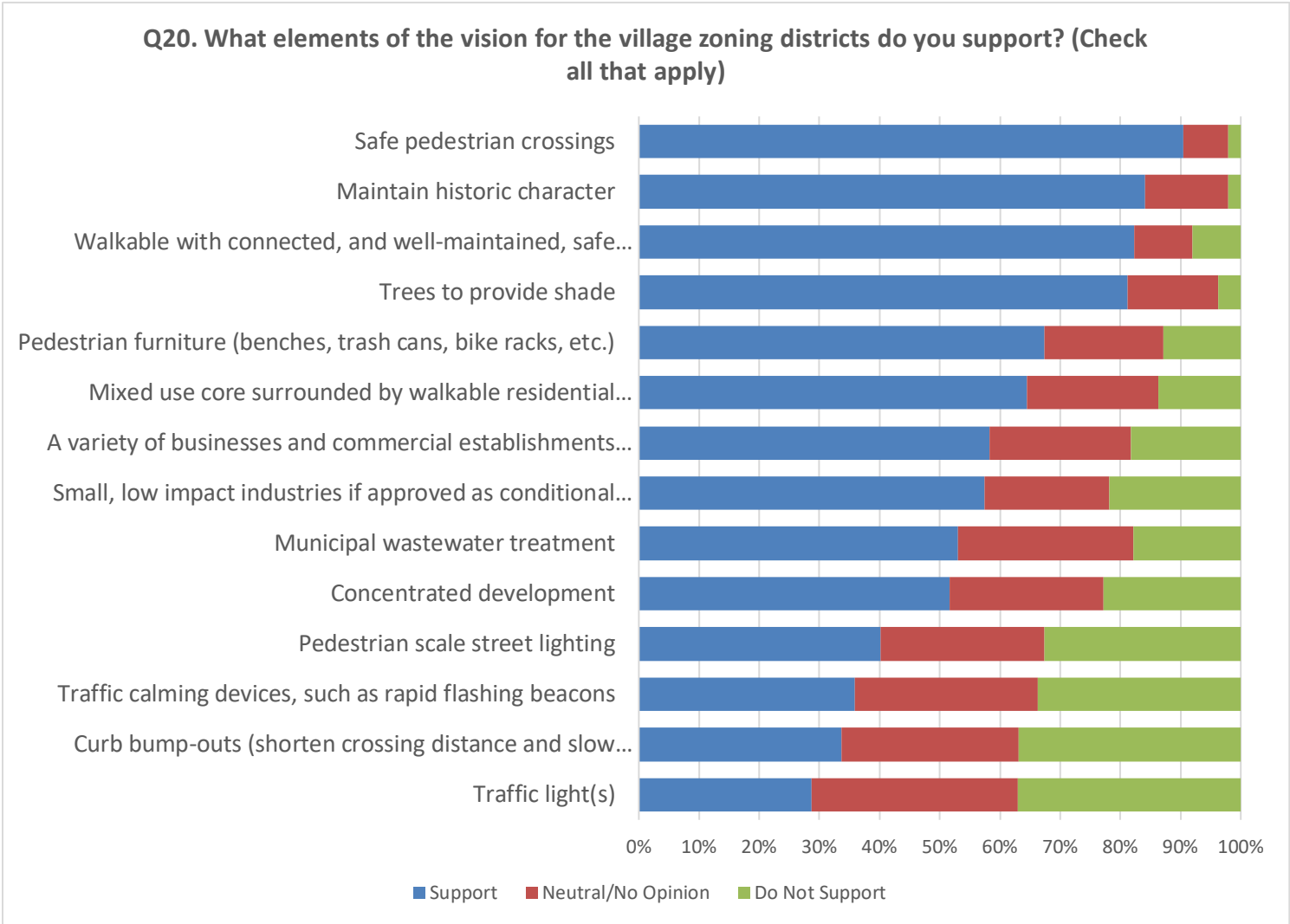
**Equity and Inclusion**

Roughly one-quarter of all respondents stated they felt South Hero was already welcoming to all people. Common ideas for making the community more welcoming included flags/signage/art (6%), diverse events (7%), and a culture of kindness (5%). 5% of respondents specifically mentioned changing the names of South Hero’s municipally-owned beach (White’s Beach) and the South Hero Meeting House (White Meeting House).



**Vibrant Villages**

Most elements of the village zoning district statement received at least 50% support from respondents. The most popular elements were: safe pedestrian crossings (90%), maintain historic character (84%), and walkable with connected, and well-maintained safe sidewalks (83%). Four elements received less than 50% support: traffic lights (29%), curb bump-outs (34%), traffic calming devices (36%) and pedestrian scale street lighting (40%).



**Other Comments**

10% of respondents used this space to state that they did not want to see any changes or increased density in South Hero. 8% had comments about town infrastructure.



**Appendix: Full Survey Results**

# Q1 What do you like most about living in South Hero?

Answered: 202 Skipped: 5

#	RESPONSES	DATE
1	<b>Businesses/Amenities</b> Knowing many of neighbors & friends, views, lake, open land for walks, bike rides, venues for eating	7/26/2022 5:05 PM
2	<b>Community</b> The people!	7/26/2022 5:00 PM
3	<b>Community</b> <b>Small town/rural</b> The country style living and the friendly atmosphere of the people who live here	7/26/2022 4:13 PM
4	<b>Businesses/Amenities</b> <b>Community</b> <b>Small town/rural</b> The low level of traffic, ease of access to "the City" and closeness of the people - friendly and caring	7/26/2022 3:54 PM
5	<b>Businesses/Amenities</b> <b>Community</b> <b>Nature/Setting</b> <b>Small town/rural</b> Small town where you know lots of people; quiet roads, good for taking walks; near the lake, with beautiful views	7/26/2022 3:48 PM
6	<b>Nature/Setting</b> <b>Small town/rural</b> The rural nature of the town. The general quality of life and the clean, fresh environment.	7/26/2022 3:27 PM
7	<b>Nature/Setting</b> <b>Small town/rural</b> The lake + ruralness	7/26/2022 3:11 PM
8	<b>Nature/Setting</b> <b>Small town/rural</b> The lake, farms, fields, wildlife	7/26/2022 3:04 PM
9	<b>Businesses/Amenities</b> <b>Community</b> Amazing neighbors, a sense of community, and the farmers markets!	7/16/2022 10:06 PM
10	<b>Nature/Setting</b> <b>Small town/rural</b> It is a small town near the lake.	7/16/2022 3:47 PM
11	<b>Nature/Setting</b> The lake.	7/16/2022 2:27 PM
12	<b>Nature/Setting</b> Lake front house	7/16/2022 2:27 PM
13	<b>Events/Recreation</b> <b>Nature/Setting</b> <b>Small town/rural</b> 1. Rural character, open fields and woods, not too many people or houses. 2. Access to biking, kayaking 3. Beautiful views walking and driving	7/16/2022 12:06 AM
14	<b>Community</b> <b>Small town/rural</b> Rural town setting, and the fact that the people/neighbors in this community are willing to help each other when needed.	7/15/2022 10:37 AM
15	<b>Community</b> <b>Small town/rural</b> peaceful small town where you know your neighbors	7/15/2022 10:36 AM
16	<b>Events/Recreation</b> <b>Small town/rural</b> Relaxed atmosphere, know a lot of people, volunteer opportunities.	7/15/2022 7:26 AM
17	<b>Businesses/Amenities</b> Close access to most everything I need	7/15/2022 6:16 AM
18	<b>Nature/Setting</b> plenty of undeveloped, natural land; clean water; clean air; quiet outdoors; no light pollution of night-time sky	7/15/2022 5:57 AM
19	<b>Nature/Setting</b> <b>Small town/rural</b> The rural island life	7/14/2022 7:02 PM
20	<b>Businesses/Amenities</b> <b>Community</b> <b>Nature/Setting</b> <b>Small town/rural</b> The rural setting, the lake, woods and meadows. Proximity to Burlington. I felt really safe here during the pandemic. We have many many good friends here.	7/14/2022 5:58 PM
21	<b>Community</b> <b>Small town/rural</b> Small town, great community, great people	7/14/2022 2:49 PM
22	<b>Community</b> <b>Events/Recreation</b> <b>Nature/Setting</b> Natural beauty, opportunities for meaningful volunteer experiences, library, preserved lands, hiking trails nearby, beautiful lake, community leaders who are knowledgeable and committed to public service	7/14/2022 11:56 AM
23	<b>Nature/Setting</b> <b>Small town/rural</b> The natural beauty and quiet	7/14/2022 11:26 AM
24	<b>Nature/Setting</b> <b>Small town/rural</b> Open land and our beautiful lake	7/14/2022 9:19 AM

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25	Nature/Setting Small town/rural	The lake and the relative peace and quiet.	7/14/2022 9:15 AM
26	Community	Safe community to raise family	7/14/2022 8:37 AM
27	Small town/rural	Rural farmland and agricultural businesses	7/14/2022 8:20 AM
28	Businesses/Amenities Nature/Setting Small town/rural	Beautiful location - quick to Burlington but far enough away to be quiet	7/14/2022 4:16 AM
29	Nature/Setting	location	7/14/2022 1:44 AM
30	Community	The tight knit community.	7/13/2022 11:38 PM
31	Nature/Setting	Lake	7/13/2022 9:34 PM
32	Small town/rural	Rural character.	7/13/2022 9:26 PM
33	Community	Quiet, scenic roads, people	7/13/2022 9:18 PM
34	Community Nature/Setting	Being on the lake but close to Burlington. Amazing friends and community.	7/13/2022 9:06 PM
35	Community Nature/Setting	The beauty, the people!	7/13/2022 8:39 PM
36	Small town/rural	The country atmosphere	7/13/2022 8:21 PM
37	Nature/Setting	Lake Champlain.	7/13/2022 7:54 PM
38	Businesses/Amenities Community Nature/Setting	The quaintness, beauty and community. The small businesses and being able to access a great deal of services on the island.	7/13/2022 7:27 PM
39	Community	Generations of my family rooted and grew up here.	7/13/2022 6:58 PM
40	Small town/rural	Peace and quiet low level Living	7/13/2022 6:51 PM
41	Community Small town/rural	Friendly and engaged community. Rural flavor	7/13/2022 6:51 PM
42	Nature/Setting	While I am seasonal, I care about development in the area	7/13/2022 6:37 PM
43	Nature/Setting	Living on the lake	7/13/2022 6:35 PM
44	Businesses/Amenities Events/Recreation Small town/rural	Small town size, Worthen Library, Grand Isle County Chorus, Farmer's Market	7/13/2022 5:49 PM
45	Small town/rural	Small town community	7/13/2022 5:49 PM
46	Nature/Setting Small town/rural	Having a paradise to call home without being on top of all my neighbors.	7/13/2022 5:30 PM
47	Nature/Setting	Beauty of the island	7/13/2022 5:29 PM
48	Nature/Setting	The lake. The views. Open spaces.	7/13/2022 5:20 PM
49	Community Small town/rural	The small town feel and the friendly people of the Islands.	7/13/2022 5:14 PM
50	Events/Recreation Nature/Setting	Access to the beautiful lake, scenery, walking and biking opportunities	7/13/2022 5:13 PM
51	Events/Recreation Nature/Setting	It's a very beautiful quaint town with lots of outdoor recreation and most people appreciate all that it has to offer!	7/13/2022 5:12 PM
52	Community	The quiet community.	7/13/2022 5:11 PM
53	Nature/Setting	proximity to Lake Champlain	7/11/2022 9:52 PM
54	Small town/rural	Small town feel	7/11/2022 3:00 PM
55	Nature/Setting	living on the lake with cool weather	7/8/2022 12:47 PM
56	Community	The sense of community. Everyone knows everyone and helps them as needed.	7/6/2022 7:35 PM
57	Community Nature/Setting Small town/rural	I have always loved the small town feel of South Hero and the Islands. I love the beauty. I always loved the old dirt roads before being	7/6/2022 4:22 PM

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paved! I love all the old time locals that have been here for generations. My husbands parents grew up in the Islands. His father was actually born here on the Island. Unfortunately many are gone and my generation may not be able to live here much longer with taxes and cost of living so high.

58	Nature/Setting	The lake!	7/6/2022 2:35 PM			
59	Events/Recreation	Nature/Setting	The beauty of our surroundings and outdoor recreation activities	7/6/2022 11:15 AM		
60	Community	Small town/rural	The rural setting and strong community. Great place to raise a family.	7/6/2022 10:40 AM		
61	Community	Small town/rural	Rural environment, small town atmosphere, able to talk to town officials directly.	7/6/2022 10:32 AM		
62	Nature/Setting	Lake		7/6/2022 7:31 AM		
63	Businesses/Amenities	Having a choice in which high school to send our students to.		7/6/2022 12:00 AM		
64	Nature/Setting	Access to lake and natural views		7/5/2022 9:46 PM		
65	Businesses/Amenities	Community	Nature/Setting	South Street: off main road way, Nice town beach, great people	7/5/2022 9:24 PM	
66	Community	The seniors are respected. Seniors ideas are listened to.		7/5/2022 9:06 PM		
67	Businesses/Amenities	Nature/Setting	It's rural. The lake and mountain views. It's proximity to Burlington.	7/5/2022 8:50 PM		
68	Businesses/Amenities	Small town/rural	Love the small town feel of the islands and south hero is the closest to Burlington	7/5/2022 8:42 PM		
69	Nature/Setting	The lake		7/5/2022 8:02 PM		
70	Businesses/Amenities	Events/Recreation	Post Office, Library, railroad bed walking path, Stores like KBV	7/5/2022 7:55 PM		
71	Nature/Setting	The natural beauty		7/5/2022 7:00 PM		
72	Nature/Setting	Small town/rural	Rural nature. Being close to the lake	7/5/2022 6:41 PM		
73	Community	Community		7/5/2022 6:39 PM		
74	Community	Small town/rural	Fairly quiet most of the year. Friendly neighbors	7/5/2022 6:39 PM		
75	Businesses/Amenities	Small town/rural	Close proximity to city, shopping but country living	7/5/2022 6:27 PM		
76	Community	Nature/Setting	Small town/rural	The beauty, the people and the size of the town	7/5/2022 6:22 PM	
77	Small town/rural	The farmland		7/5/2022 6:13 PM		
78	Businesses/Amenities	Community	Nature/Setting	Small town/rural	The nature, knowing the community, the tourism market, community cares about environment and social issues, the school, food options growing	7/5/2022 6:03 PM
79	Community	Nature/Setting	Small town/rural	The smallCommunity, the quiet, the lake,and the feeling that I count.	7/5/2022 5:55 PM	
80	Nature/Setting	The beauty and quiet		7/5/2022 5:26 PM		
81	Businesses/Amenities	Small town/rural	Rural feel with central village	7/3/2022 2:18 PM		
82	Nature/Setting	Small town/rural	That it's a small town that still has open space and lovely lake and mountain vistas.	7/2/2022 12:13 PM		
83	Community	Nature/Setting	Small town/rural	Community; small town; quiet; scenery	6/30/2022 4:01 PM	
84	Nature/Setting	Small town/rural	Proximity to the lake, rural residential atmosphere	6/29/2022 6:05 PM		
85	Businesses/Amenities	Nature/Setting	Small town/rural	The quiet country roads with open spaces, the apple trees, easy access to Burlington, easy access to the lake	6/29/2022 11:47 AM	

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86	Nature/Setting Small town/rural	vermont lifestyle, living on Lake Champlain	6/29/2022 8:56 AM
87	Community Small town/rural	rural sense of community	6/28/2022 9:55 PM
88	Community Nature/Setting Small town/rural	It's been my community for 34 years. We raised three successful children here and I believe it is because of the people who live here and our beautiful working landscape.	6/28/2022 11:03 AM
89	Businesses/Amenities Nature/Setting	It's beautiful and relatively close to where I work.	6/27/2022 7:52 PM
90	Events/Recreation Nature/Setting	A lakefront with lots of recreational opportunities.	6/27/2022 4:30 PM
91	Community Nature/Setting	peaceful lake community	6/27/2022 10:26 AM
92	Events/Recreation Nature/Setting	Easy access to walking, swimming, biking in beautiful environments.	6/27/2022 9:27 AM
93	Nature/Setting Small town/rural	I love that it strikes a delicate balance between a working agricultural, residential, lake and tourism. The islands have maintained their rural beauty while keeping up with the changing times - for the most part.	6/27/2022 7:59 AM
94	Community Nature/Setting	Friendly neighbors, beautiful lake views at sunset.	6/26/2022 5:59 PM
95	Businesses/Amenities Community Events/Recreation	The proximity to Burlington, good school, walking trails, nice people!	6/24/2022 1:04 PM
96	Community Small town/rural	Quiet	6/24/2022 10:41 AM
97	Nature/Setting	The physical environment...the views, the climate, the wildlife	6/23/2022 5:44 PM
98	Nature/Setting	Being surrounded by water and beautiful sunsets	6/23/2022 8:03 AM
99	Community Nature/Setting Small town/rural	I love that it is not crowded or dense. I really love the minimum lot size of 1 acre. I love the farms and the clean air; the water, the animals, the nice people and the slower pace of life	6/22/2022 8:25 AM
100	Community	The kind and friendly people	6/21/2022 1:18 PM
101	Community	The people. They are kind, friendly, open, active, and genuine.	6/21/2022 9:05 AM
102	Community	I love the sense of small town community! It is a great town to live in and being able to wave hello to people wherever I go is amazing!	6/20/2022 6:06 PM
103	Community	Island community	6/20/2022 10:32 AM
104	Businesses/Amenities Nature/Setting Small town/rural	Beautiful Countryside/open spaces (although those are getting less and less), privacy, small stores/shops, availability of locally grown produce/apples	6/19/2022 8:21 PM
105	Businesses/Amenities Community Nature/Setting	I most like the sense of community and neighborliness. I love the school, and that is a big part of creating community. The beautiful, open land is also a draw.	6/19/2022 2:41 PM
106	Community Small town/rural	Small community	6/18/2022 2:44 AM
107	Businesses/Amenities Events/Recreation	Ease of travel in and out of Burlington. Bike able, community	6/16/2022 3:50 PM
108	Community Events/Recreation Nature/Setting	Great families, small businesses and views of the mountains and lakes. A vibrant community with community members generally partaking in activities beneficial to everyone in the community.	6/16/2022 1:13 PM
109	Community Nature/Setting	The lake, the people and the peace and quiet	6/16/2022 12:33 PM
110	Businesses/Amenities Community Nature/Setting	A community nestled in nature, close to the lake, active social community...comfortable driving distance into city	6/16/2022 9:42 AM
111	Events/Recreation Nature/Setting	Natural beauty of lake and access to walking/biking/kayaking areas	6/16/2022 8:25 AM
112	Nature/Setting	My view of the Mountains, access to the lake, the quiet	6/15/2022 4:43 PM
113	Community Nature/Setting	Quiet, peaceful beauty and the great people!	6/15/2022 4:11 PM

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114	Community Small town/rural	Quiet, quaint living, not over populated	6/15/2022 2:41 PM
115	Community Small town/rural	I like the fact that when I cross the causeway it feels like I have stepped back in time 40 years. This little community is now my home and I want to enjoy all that our residents have to offer for all the time I have left.	6/14/2022 10:22 PM
116	Events/Recreation Nature/Setting	Lake activity	6/14/2022 8:20 PM
117	Community	the families that we've met have been welcoming	6/14/2022 4:27 PM
118	Nature/Setting Small town/rural	The lake and scenery. Small town feel.	6/14/2022 10:44 AM
119	Businesses/Amenities Community Nature/Setting	Community feeling with neighbors. Not being crowded. High quality water.	6/14/2022 9:49 AM
120	Nature/Setting	Quiet and nature	6/14/2022 8:40 AM
121	Community Nature/Setting	Peaceful setting and friendly neighbors	6/14/2022 7:12 AM
122	Community	There has always been a sense of community her with neighbors helping neighbors--think ice storm and so much more.	6/14/2022 6:44 AM
123	Businesses/Amenities Small town/rural	Remote country feel yet still close to Btv	6/14/2022 6:15 AM
124	Community Nature/Setting Small town/rural	Quiet and quaint living. Enjoy observing the wildlife and nature. Love supporting farming neighbors/community.	6/13/2022 11:45 PM
125	Businesses/Amenities Community Nature/Setting Small town/rural	Beautiful landscape; close and accessible to one of the best lakes in the entire country; rural character with many working farms; excellent elementary school system for our families with children; Route 2 is well maintained in the winter, allowing easy commute to Burlington all year round; small government; a blossoming Town center that has somewhat recently added amenities that keeps residents here rather than having to go off Island, e.g., the mix of light commercial and residential properties around Community Drive	6/13/2022 8:59 PM
126	Community Nature/Setting Small town/rural	Small Community, open space, access to lake	6/13/2022 8:30 PM
127	Small town/rural	Quiet	6/13/2022 7:34 PM
128	Community Nature/Setting	Peaceful, quiet, beautiful, most people have been here all their lives.	6/13/2022 6:27 PM
129	Small town/rural	Small town. Isolated.	6/13/2022 6:18 PM
130	Community Nature/Setting Small town/rural	Quiet, low density, friendly people, beautiful scenery	6/13/2022 6:17 PM
131	Community	Sense of community	6/13/2022 6:13 PM
132	Businesses/Amenities	Affordability.	6/13/2022 6:08 PM
133	Community	Helpful community. Friendly without being intrusive.	6/13/2022 5:51 PM
134	Community Small town/rural	The small size of the population encourages people to get to know each other better.	6/13/2022 5:41 PM
135	Small town/rural	The country feel, although it's becoming more crowded yearly.	6/13/2022 5:38 PM
136	Businesses/Amenities	Buying Local Mentality	6/13/2022 5:30 PM
137	Community	The friendly population	6/13/2022 2:05 PM
138	Events/Recreation Nature/Setting	I like that there is a lot of undeveloped space, forests, public trails	6/12/2022 10:11 PM
139	Businesses/Amenities Nature/Setting	Lake access, no "big box store" development	6/11/2022 8:43 PM
140	Community Events/Recreation Nature/Setting Small town/rural	The small town atmosphere; community events; the access to the water;	6/11/2022 3:33 PM
141	Businesses/Amenities Nature/Setting Small town/rural	That, situated on an island, it is	6/11/2022 11:13 AM

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effectively further from Burlington that the actual mileage would indicate. So we benefit from being in the country and yet close to the city.

142	Nature/Setting	Owning a house next to lake.	6/11/2022 9:15 AM	
143	Nature/Setting	The quiet beauty.	6/10/2022 9:06 PM	
144	Small town/rural	That it is a rural small town that doesn't have expensive infrastructure	6/10/2022 5:01 PM	
145	Nature/Setting	Space, quiet, calm,	6/10/2022 3:05 PM	
146	Nature/Setting	Small town/rural It is a quiet, slow, peaceful town with lots of beautiful natural resources.	6/9/2022 7:52 PM	
147	Businesses/Amenities	Nature/Setting	Small town/rural The beauty of the lake. The rural feel while still being relatively close to Burlington.	6/9/2022 7:10 PM
148	Businesses/Amenities	Small town/rural	The small town atmosphere, yet depending upon the time of day , a short drive to urban entertainment , dining, theater, music , etc.	6/9/2022 7:01 PM
149	Nature/Setting	Natural Beauty	6/9/2022 6:47 PM	
150	Community	Nature/Setting	Small town/rural Land, Quietness, Generations of families living here, "small town" feel.	6/9/2022 6:39 PM
151	Community	Nature/Setting	Small town/rural Idyllic nature of a small town island community.	6/9/2022 6:12 PM
152	Businesses/Amenities	Small town/rural	It's rural and pastoral, and yet close to a major city.	6/9/2022 3:47 PM
153	Community	Small town/rural	Great community; rural landscape	6/9/2022 3:22 PM
154	Nature/Setting	Small town/rural	The open spaces and farmland.	6/9/2022 3:12 PM
155	Nature/Setting	Lake Champlain	6/9/2022 11:02 AM	
156	Small town/rural	agricultural character of the island	6/8/2022 9:09 PM	
157	Businesses/Amenities	Nature/Setting	South Hero is close enough to more populated areas with larger industry that can all be traveled to quickly, yet far enough away to be calmer and more serene.	6/8/2022 5:47 AM
158	Nature/Setting	The lake	6/7/2022 8:04 PM	
159	Businesses/Amenities	Community	Nature/Setting Small population, beautiful views, majority of businesses are locally owned, mostly clean water for recreation, good schools with small class size. Public trails. Family has been here for generations.	6/7/2022 9:46 AM
160	Community	Nature/Setting	Community, lake, the beauty.	6/6/2022 8:52 PM
161	Community	Nature/Setting	The community, landscape, and lake	6/6/2022 8:15 PM
162	Businesses/Amenities	Small town/rural	Small town / village feel. Farm to table options at local stores & restaurants. Variety of locally owned & operated resources.	6/6/2022 8:02 PM
163	Community	Nature/Setting	Community, beauty, and the lake.	6/6/2022 7:58 PM
164	Nature/Setting	Space	6/6/2022 3:39 PM	
165	Events/Recreation	Nature/Setting	Reasonably peaceful....great access to outdoors - hiking,boating, etc....low traffic	6/6/2022 8:12 AM
166	Businesses/Amenities	Events/Recreation	You're able to get just about anything you need without leaving the town. There are lots of areas for recreation and lots of trails.	6/5/2022 9:25 PM
167	Small town/rural	Country setting	6/5/2022 6:03 PM	
168	Businesses/Amenities	Small town/rural	Farms, small town and small businesses, minimal cookie cutter developments, large lots, the walking trails/land trust, not having big chain stores	6/5/2022 4:53 PM
169	Nature/Setting	Small town/rural	Quiet. Not crowded or developed. Lots of open space.	6/5/2022 2:58 PM
170	Nature/Setting	Vicinity to Lake Champlain and the great views.	6/5/2022 11:03 AM	

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171	Nature/Setting	Living by the lake	6/5/2022 6:07 AM			
172		Ytyy	6/5/2022 6:46 AM			
173	Businesses/Amenities	Nature/Setting	Small town/rural	Being close to the lake, the small town vibes of the local shops & restaurants	6/4/2022 10:48 PM	
174	Nature/Setting	Small town/rural		Peace and quiet	6/4/2022 9:06 PM	
175	Nature/Setting	Small town/rural		rural nature, views	6/4/2022 5:01 PM	
176	Businesses/Amenities	Small town/rural		Its rural character combined with just enough services and businesses.	6/4/2022 4:42 PM	
177	Community	Nature/Setting	Small town/rural	I take a deep breath when coming home across the sandbar. Rural landscape with pastoral, orchard and lake views are good for the soul. Sense of community is strong.	6/4/2022 9:38 AM	
178	Nature/Setting	Small town/rural		Rural beauty away from Burlington	6/4/2022 9:31 AM	
179	Community	Nature/Setting		People, open spaces, quiet & peaceful, lake!	6/4/2022 9:11 AM	
180	Nature/Setting			Lake Champlain	6/4/2022 9:02 AM	
181	Events/Recreation	Nature/Setting		I like best that it feels like a deep breath from Chittenden county. I like that it's smaller, quieter and replete with WIDE OPEN SPACES which we need for the health of our hearts and minds. I like that we have all kinds of wildlife here - That we have access to all kinds of outdoor activities. I like that, until recently, the postmaster knew my name. I'm not for major developments. Not everywhere has to grow. We already know we have just about everything we need. Life isn't all about money.	6/4/2022 8:28 AM	
182	Community	Events/Recreation	Nature/Setting	Location, community, lake access	6/4/2022 7:44 AM	
183	Community			community	6/4/2022 7:28 AM	
184	Nature/Setting	Small town/rural		The peace and tranquility	6/4/2022 5:01 AM	
185	Community	Small town/rural		Small town feel. Sense of community. Green space, lack of crowding, hopefully.	6/3/2022 9:43 PM	
186	Nature/Setting	Small town/rural		Small quaint town. Not too commercial, mixture of lake views while still having farms.	6/3/2022 8:20 PM	
187	Businesses/Amenities	Community	Events/Recreation	Nature/Setting	The community is amazing. I love the restaurants, the stores, the beach. The school is great.	6/3/2022 8:06 PM
188	Community			Brought up in town	6/3/2022 7:06 PM	
189	Small town/rural			Ruralness	6/3/2022 6:35 PM	
190	Community	Nature/Setting		The people and the outdoor beauty.	6/3/2022 6:13 PM	
191	Small town/rural			Rural atmosphere	6/3/2022 6:08 PM	
192	Community	Nature/Setting	Small town/rural	Beauty. Open areas/views. Small town. Good folks.	6/3/2022 6:01 PM	
193	Businesses/Amenities	Community		My husband and I moved here in July with our twin boys. I love being part of a small community and I especially love Folsom. My kids are thriving there.	6/3/2022 5:57 PM	
194	Community	Nature/Setting		The Lake and small community. Friendly.	6/3/2022 5:50 PM	
195	Businesses/Amenities	Nature/Setting	Small town/rural	Peace and quiet, farmland, small local stores with great stuff like Robinson's. Love the fact that we are on an island surrounded by a beautiful wild lake.	6/3/2022 5:46 PM	
196	Community			The willingness to develop what is needed by the residents. Projects are planned and the select board and teachers have the needs of residents upper most in their minds. Interested in keeping people in South Hero and working toward their best interest.	6/3/2022 5:40 PM	
197	Community	Events/Recreation	Nature/Setting	Small town/rural	Rural, by the lake, lots	6/3/2022 5:31 PM



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		of outdoor time all year round, great people	
198	Nature/Setting	Living on the lake	6/3/2022 5:24 PM
199	Businesses/Amenities	New Cider Housing and growth of small business	6/3/2022 5:19 PM
200	Community Nature/Setting	The lake in every view. The constant beat of the waves on the shore and the almost constant breeze. People who come together in times of need to help each other.	6/3/2022 5:16 PM
201	Businesses/Amenities Nature/Setting	The water, plus relaxed pace but close to Burlington.	6/3/2022 5:04 PM
202	Community	The people! They are friendly and down-to-earth.	6/2/2022 1:52 PM

## Q2 What do you like least about living in South Hero?

Answered: 197 Skipped: 10

#	RESPONSES	DATE
1	<b>Environment/weather</b> cold january and february	7/26/2022 5:05 PM
2	<b>Few amenities+isolation</b> The fact that one has to go to far to get things. Especially now that the pharmacy is gone!	7/26/2022 5:00 PM
3	<b>Traffic/people</b> People trying to change our way of life on this island	7/26/2022 4:13 PM
4	<b>Development/change</b> <b>Traffic/people</b> The increase of traffic in the summer and loss of open land	7/26/2022 3:54 PM
5	<b>Environment/weather</b> <b>Few amenities+isolation</b> not really anything, other than it would be nice if we still had a pharmacy in town. Oh - and I wish there weren't the blue-green algae outbreaks in the lake	7/26/2022 3:48 PM
6	<b>No downside</b> I do not have a downside to living here.	7/26/2022 3:27 PM
7	<b>Environment/weather</b> <b>Few amenities+isolation</b> The wind, distance to mainland	7/26/2022 3:11 PM
8	<b>Poor infrastructure</b> Lack of safe walk + bikeways, the bike ferry blasting its horn	7/26/2022 3:04 PM
9	<b>Environment/weather</b> Corn sprayed with glyphosate & chemical pesticides and fertilizers	7/16/2022 10:06 PM
10	<b>Few amenities+isolation</b> I'm not in walking distance to everything.	7/16/2022 3:47 PM
11	<b>Few amenities+isolation</b> No pharmacy.	7/16/2022 2:27 PM
12	<b>Few amenities+isolation</b> Lack of pharmacy	7/16/2022 2:27 PM
13	<b>Few amenities+isolation</b> <b>Poor infrastructure</b> 1. Need to drive off island for employment, many groceries (especially in winter), pharmacy, fitness. 2. Even though we have some walking trails in woods/fields, they are all relatively short and are not connected so I end up driving to other towns to walk/hike with my friends. 3. Limited restaurants, it is difficult to eat out in the summer	7/16/2022 12:06 AM
14	<b>Traffic/people</b> increased road traffic in summer	7/15/2022 10:37 AM
15	<b>Traffic/people</b> summer traffic	7/15/2022 10:36 AM
16	<b>Development/change</b> Fear of town becoming like a big city.	7/15/2022 7:26 AM
17	<b>Few amenities+isolation</b> Not enough stuff for kids to bike to and spend their time.	7/15/2022 6:16 AM
18	<b>Environment/weather</b> No mountains or rivers	7/14/2022 7:02 PM
19	<b>Taxes</b> <b>Traffic/people</b> Property taxes are way too high. Ferry traffic.	7/14/2022 5:58 PM
20	<b>Few amenities+isolation</b> A little far from certain conveniences (grocery store, tennis courts, fitness center, high schools)	7/14/2022 2:49 PM
21	<b>Political divisions</b> Recent sense of divisive forces which reflect the national political divisions. Conspiracy theorists and anti government believers are more vocal and emboldened in the last 2 years or so.	7/14/2022 11:56 AM
22	<b>Political divisions</b> The amount of resistance among some residents to progress on social justice and diversity issues	7/14/2022 11:26 AM
23	<b>Poor infrastructure</b> Roads not well cared for. They can be dirt, but could be better maintained.	7/14/2022 9:19 AM
24	<b>Few amenities+isolation</b> <b>Traffic/people</b> Jet skis, and the driving required to get life's necessities.	7/14/2022 9:15 AM
25	<b>Few amenities+isolation</b> <b>Poor infrastructure</b> Being so far from larger shopping Not having a	7/14/2022 8:37 AM

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		dedicated bike path on south street	
26	Traffic/people	Mansions on the shore	7/14/2022 8:20 AM
27	Poor infrastructure	Not having town water	7/14/2022 4:16 AM
28	Traffic/people	Traffic	7/14/2022 1:44 AM
29	Few amenities+isolation	The lack of activities for young people and middle aged people, places to eat, businesses in general, etc.	7/13/2022 11:38 PM
30	Traffic/people	Bike traffic in the summer	7/13/2022 9:34 PM
31	Traffic/people	Traffic. Particularly ferry traffic.	7/13/2022 9:26 PM
32	Few amenities+isolation	Sometimes inconvenient for errands etc	7/13/2022 9:18 PM
33	Few amenities+isolation Taxes Traffic/people	Dealing with traffic on route 2, lack of restaurants and high taxes	7/13/2022 9:06 PM
34	Few amenities+isolation	Not having a local pharmacy!	7/13/2022 8:39 PM
35	Traffic/people	The bike traffic on south street	7/13/2022 8:21 PM
36	Few amenities+isolation	Too much secluded.	7/13/2022 7:54 PM
37	Few amenities+isolation Poor infrastructure	Not having a pharmacy or a park. I would also like be ches around town.	7/13/2022 7:27 PM
38	Development/change Traffic/people	All of the development and the bike ferry traffic!!!!	7/13/2022 6:58 PM
39	Traffic/people	The summer implants	7/13/2022 6:51 PM
40	Traffic/people	Traffic in summer	7/13/2022 6:51 PM
41	No downside	How can you not like living in south hero	7/13/2022 6:37 PM
42	Few amenities+isolation	Far from shopping especially Shaws etc	7/13/2022 6:35 PM
43	Political divisions	Some of the politics	7/13/2022 5:49 PM
44	Traffic/people	Out of Staters	7/13/2022 5:49 PM
45	Development/change	The speed with which south hero is being developed. Slow down!	7/13/2022 5:30 PM
46	Few amenities+isolation	Convince (lack of grocery restaurants activities)	7/13/2022 5:29 PM
47	Poor infrastructure	Making a left on to route 2 from South Street	7/13/2022 5:20 PM
48	Few amenities+isolation	No drug store but then I understand why and the financial ramifications to the druggist.	7/13/2022 5:14 PM
49	Few amenities+isolation	Lack of dining options with too many similar options and distance to other services.	7/13/2022 5:13 PM
50	Few amenities+isolation	Lack of activities for families	7/13/2022 5:12 PM
51	Few amenities+isolation Traffic/people	traffic coming through town and the lack of good restaurants.	7/13/2022 5:11 PM
52	Environment/weather	cyanobacteria	7/11/2022 9:52 PM
53	Traffic/people	Traffic, speeding manure trucks.	7/11/2022 3:00 PM
54	No downside	really nothing bad at all!	7/8/2022 12:47 PM
55	Few amenities+isolation	There are limited resources forgetting products - food and clothes shopping in particular. You have to go into Milton, Winooski, etc.	7/6/2022 7:35 PM
56	Development/change	All the changes and growth that are happening right now! All the small camps have turned into giant monstrosities. The Elderly housing building... I think is very intrusive! I think it could have been done better. Mostly not loving the growth.	7/6/2022 4:22 PM
57	Environment/weather	The winter winds!	7/6/2022 2:35 PM

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58	Environment/weather	Few amenities+isolation	Lack of activities in winter months- not enough snow, cold and windy; not enough indoor recreational activities	7/6/2022 10:40 AM	
59		Few amenities+isolation	Distance needed to travel for anything beyond basic needs.	7/6/2022 10:40 AM	
60		Few amenities+isolation	Wish there were some additional facilities-ie pharmacy, supermarket, recreational center.	7/6/2022 10:32 AM	
61	Traffic/people		Traffic	7/6/2022 7:31 AM	
62	Development/change		Town is growing In population to quickly.	7/6/2022 12:00 AM	
63		Poor infrastructure	Safe biking/walking options- feels like you take a risk with your life just to get some exercise.	7/5/2022 9:46 PM	
64		Poor infrastructure	Needs much sidewalks, green belt in place of yellow lines in road to slow traffic traveling through town, community park and gathering places.	7/5/2022 9:24 PM	
65		Few amenities+isolation	Poor infrastructure	Not enough snow! Too far from ski resorts! Actually, I wish there were a few more town services like taking care of the town buildings. The town garage needs to be painted. Shoveling sidewalks in the winter for seniors would be nice.	7/5/2022 9:06 PM
66	Development/change		That we are losing our farms, orchards, open fields.	7/5/2022 8:50 PM	
67	Traffic/people		All the bikers in the summer	7/5/2022 8:42 PM	
68	Environment/weather		When the winds top 20 mph	7/5/2022 8:02 PM	
69	Traffic/people		Traffic along route 2.	7/5/2022 7:55 PM	
70		Few amenities+isolation	Lack of essentials on the island. The need to drive to Milton.	7/5/2022 7:00 PM	
71	Taxes		Taxes	7/5/2022 6:41 PM	
72		Poor infrastructure	Lack of safety should on roads for bikers and walkers	7/5/2022 6:39 PM	
73	Traffic/people		During the summer months I'm not a lot of traffic of bicycles off the causeway onto Martin Road and South Street.	7/5/2022 6:39 PM	
74		Few amenities+isolation	Not much to do, no major grocery or pharmacy	7/5/2022 6:27 PM	
75		Few amenities+isolation	Poor infrastructure	Not having a town green space for public events in the center of town. We need a small picnic spot for travelers to stop for a quick picnic while traveling.	7/5/2022 6:22 PM
76	Traffic/people		The rich people along the shoreline	7/5/2022 6:13 PM	
77		Poor infrastructure	Real bike lanes for bikers	7/5/2022 6:03 PM	
78		Poor infrastructure	Route 2, but seeing that it's a state road any changes are in the hands of Montpelier. . . and that's not happening.	7/5/2022 5:55 PM	
79		Few amenities+isolation	I'd like to know more people	7/5/2022 5:26 PM	
80	Development/change		Sprawl development creeping up the hill on route 2	7/3/2022 2:18 PM	
81	Political divisions		The lack of empathy for residents and the short-sidedness of some in current town leadership.	7/2/2022 12:13 PM	
82		Few amenities+isolation	There are not a lot of necessity stores on the Islands (i.e. if you need prescriptions you have to go off-Island); no recreational center.	6/30/2022 4:01 PM	
83	Environment/weather		The weather	6/29/2022 6:05 PM	
84	Development/change	Traffic/people	Bikers don't understand how to share the road. Would like to see more land conservation.	6/29/2022 11:47 AM	
85	Taxes		taxes	6/29/2022 8:56 AM	
86	Development/change	Traffic/people	increasing population/traffic	6/28/2022 9:55 PM	
87		Poor infrastructure	Well, the village is finally starting to be revitalized! The lack of safe walking and biking on South Street and the lack of more affordable housing so young families	6/28/2022 11:03 AM	

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can start their lives here.

88	<b>Few amenities+isolation</b> <b>Poor infrastructure</b>	There are no mountain biking trails.	6/27/2022 7:52 PM
89	<b>Traffic/people</b>	Summer traffic on Rt 2.	6/27/2022 4:30 PM
90	<b>Traffic/people</b>	traffic	6/27/2022 10:26 AM
91	<b>Poor infrastructure</b>	Lack of public transportation	6/27/2022 9:27 AM
92	<b>Few amenities+isolation</b> <b>Poor infrastructure</b>	No town center with easy walking or biking access to restaurants and stores.	6/26/2022 5:59 PM
93	<b>Poor infrastructure</b>	Not very walkable	6/24/2022 1:04 PM
94	<b>Poor infrastructure</b>	Too many businesses clogging egress in and out of town	6/24/2022 10:41 AM
95	<b>Traffic/people</b>	The traffic...too many cars just driving through and stopping to enjoy the community	6/23/2022 5:44 PM
96	<b>Poor infrastructure</b>	Left hand turns after Memorial Day.	6/23/2022 8:03 AM
97	<b>No downside</b>	nothing	6/22/2022 8:25 AM
98	<b>Poor Diversity+Inequality</b>	The lack of racial diversity	6/21/2022 1:18 PM
99	<b>Poor Diversity+Inequality</b>	The poverty conditions that the Mexican Farmworkers live in.	6/21/2022 9:05 AM
100	<b>Few amenities+isolation</b>	I'm not sure there's anything in particular that I like the least, but I would love to see more community events like the Cheese and Cheers!	6/20/2022 6:06 PM
101	<b>Taxes</b>	Taxes	6/20/2022 10:32 AM
102	<b>Few amenities+isolation</b> <b>Poor infrastructure</b> <b>Taxes</b>	Poor snowplowing! High taxes for relatively small lakeshore property in my primary home! Lack of job opportunities.	6/19/2022 8:21 PM
103	<b>Poor infrastructure</b> <b>Traffic/people</b>	I least like the heavy traffic on the main roads (US 2 and South Street, Ferry Road) and the lack of space for pedestrians and bicyclists	6/19/2022 2:41 PM
104	<b>Traffic/people</b>	Traffic noise	6/18/2022 2:44 AM
105	<b>Few amenities+isolation</b>	Limited restaurants, missing a community center, affordable housing.	6/16/2022 3:50 PM
106	<b>Political divisions</b>	Other's fears of productive and thoughtful development.	6/16/2022 1:13 PM
107	<b>Poor infrastructure</b> <b>Traffic/people</b>	The traffic noise, excessive lawn mowing, the speed and amount of traffic going through the village. The lack of a bike lane on South St. is insane.	6/16/2022 12:33 PM
108	<b>Environment/weather</b>	The toll the disease is taking on the Elm trees	6/16/2022 9:42 AM
109	<b>Political divisions</b>	It feels like there is an increasing tension coming from a small number of people who seem to have difficulty accepting the decisions of our duly elected or appointed town leaders who spend countless hours evaluating the needs of the town and developing plans and regulations to improve our growing community.	6/16/2022 8:25 AM
110	<b>Few amenities+isolation</b> <b>Poor infrastructure</b>	There's no options for services and entertainment. We need some more people and stores and opportunities for those who have limited transportation	6/15/2022 4:43 PM
111	<b>Poor infrastructure</b>	Roads are not trimmed of weeds on a regular basis. and potholes on paved roads not repaired	6/15/2022 4:11 PM
112	<b>Development/change</b>	The expansion that is happening that isn't necessary	6/15/2022 2:41 PM
113	<b>Political divisions</b>	People have opinions. I understand that. But to publicly rant against folks without asking questions drives me nuts. Especially when the accusations are completely fictitious. Think Peter Velasquez...	6/14/2022 10:22 PM
114	<b>Few amenities+isolation</b>	Isolated	6/14/2022 8:20 PM
115	<b>Poor infrastructure</b>	lack of a bike path on south st	6/14/2022 4:27 PM

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116	Few amenities+isolation	Drive to Burlington daily.	6/14/2022 9:49 AM
117	Traffic/people	Heavy duty traffic on Rte. 2	6/14/2022 9:49 AM
118	Traffic/people	How hectic traffic gets in the summertime, especially with bikers	6/14/2022 8:40 AM
119	Development/change	Traffic/people	I fear the loss of community with uncontrolled growth making this just a tourists town or a place where money talks more than the values of a community's intentions to keep this a place where we try to live in harmony with the land.
120	No downside	Nothing	6/14/2022 6:15 AM
121	Development/change	I honestly can't think of anything but am aware of the fear South Hero becoming "too populated", too many commercial properties taking over the town.	6/13/2022 11:45 PM
122	Development/change	Not much. I do worry about the lack of sufficient zoning regulations, which could lead to irreparable damage to the "character" of the Town.	6/13/2022 8:59 PM
123	Poor infrastructure	scarcity of bicycle markings on roadways, bike paths and walking opportunities, sidewalks. disrespect for public lands	6/13/2022 8:30 PM
124	Development/change	Traffic/people	The tourist trap it becomes in the summer and all the bikers that ride three wide, especially coming off the bike ferry, there is no room on south street for bikers. I also feel like people moving here are trying to make it more like a "little city"
125	Few amenities+isolation	Lack of amenities	6/13/2022 6:18 PM
126	Environment/weather	Mosquitos ;-)	6/13/2022 6:17 PM
127	Taxes	Property taxes	6/13/2022 6:13 PM
128	Few amenities+isolation	Lack of businesses.	6/13/2022 6:08 PM
129	Development/change	Poor infrastructure	The absolute lack of planning. Is there no other place to build other than the scrambled buildings by Wally's?? Such poor planning! Who is giving permission for such a terrible first impression as you drive into town?
130	Few amenities+isolation	Having to go off-island for almost everything	6/13/2022 5:41 PM
131	Environment/weather	The farmers spreading manure and it eventually ending up in the lake. Yes, this does happen since we live near a farm and as soon as the hay is cut, manure is spread and if the ground is wet it ends up in the lake	6/13/2022 5:38 PM
132	Poor infrastructure	No Bike Lanes	6/13/2022 5:30 PM
133	No downside	Nothing	6/13/2022 2:05 PM
134	Few amenities+isolation	Poor infrastructure	That there are no sidewalks other than on route 2. There are not more public parks, or dog parks, no trails of substantial length where people could cross country ski in the winter, there are no gyms or recreational indoor spaces.
135	Few amenities+isolation	Lack of community recreation options, walking paths, pickle ball court, pool, town park. No grocery store	6/11/2022 8:43 PM
136	Few amenities+isolation	The lack of amenities closer to home.	6/11/2022 3:33 PM
137	Few amenities+isolation	The absence of a pharmacy.	6/11/2022 11:13 AM
138	Few amenities+isolation	Stores are too expensive.	6/11/2022 9:15 AM
139	Political divisions	Traffic/people	Too many virtue signaling liberal snobs. Too many bicyclists in the middle of the road.
140	Development/change	Developers	6/10/2022 5:01 PM
141	Few amenities+isolation	Lack of town center, grocery. More a drive by town because of rt 2 town charm is easily overlooked.	6/10/2022 3:05 PM
142	Poor infrastructure	The schools are bad. The drinking water is questionable.	6/9/2022 7:52 PM
143	Few amenities+isolation	I wish there were more opportunities for our kids participate in activities on the island.	6/9/2022 7:10 PM

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144	Development/change Taxes	Property taxes , and on going building and maintenance noise. Should consider, late day early evening use of power equipment . Too many people mow too much grass, just gives old farmers something they perceive as important. Waste of energy, noise and air pollution.	6/9/2022
145	Few amenities+isolation	Distance from the interstate	6/9/2022 6:47 PM
146	Poor infrastructure Traffic/people	The bike traffic / the bike path!!!	6/9/2022 6:39 PM
147	Environment/weather	Winter	6/9/2022 6:12 PM
148	Poor infrastructure	The lack of town water and sewer in our area of town.	6/9/2022 3:47 PM
149	Traffic/people	Rte 2 traffic	6/9/2022 3:22 PM
150	Poor infrastructure	No town center and crummy walkability.	6/9/2022 3:12 PM
151	Political divisions	The wokeness.	6/9/2022 11:02 AM
152	Development/change Traffic/people	growth -- increased traffic and development	6/8/2022 9:09 PM
153	Taxes	The high property taxes. For a small community, it does not feel like we get a lot for what we pay.	6/8/2022 5:47 AM
154	Development/change Taxes	Possibility of development and taxes	6/7/2022 8:04 PM
155	Poor Diversity+Inequality Traffic/people	Ferry traffic in the summer and very little diversity.	6/7/2022 9:46 AM
156	Traffic/people	Seasonal residents, 2nd homes. traffic on Rt 2, ferry road	6/6/2022 8:52 PM
157	Poor Diversity+Inequality Traffic/people	Recent influx of out of state buyers driving up property values. This is making it more difficult for less affluent people to afford to live here.	6/6/2022 8:15 PM
158	Traffic/people	Increasing traffic.	6/6/2022 8:02 PM
159	Traffic/people	Traffic.	6/6/2022 7:58 PM
160	Poor infrastructure	Not walkable	6/6/2022 3:39 PM
161	Few amenities+isolation Poor Diversity+Inequality	lack of diversity...bedroom community mentality; e.g. decisions concerning type of businesses "appropriate" to South Hero	6/6/2022 8:12 AM
162	Poor Diversity+Inequality	Lack of diversity in the population. It seems that most of the population that we interact with are rather well off.	6/5/2022 9:25 PM
163	Poor infrastructure	I would like a park but if what Nate Hayward has envisioned comes to life then I will be happy!	6/5/2022 4:53 PM
164	Development/change Taxes	Taxes are going up quickly over the past years. Paving all of the roads which has added to speeding and more road costs.	6/5/2022 2:58 PM
165	Poor infrastructure Traffic/people	Lack of walking/bike paths and traffic too fast between the lower and upper village.	6/5/2022 11:03 AM
166	Few amenities+isolation	Having to drive to Milton for large scale grocery shopping.	6/5/2022 8:03 AM
167	Mm		6/5/2022 6:46 AM
168	Poor infrastructure	Not enough public parks or public access to water. An easier way to travel down route 2 by foot and/or bike.	6/4/2022 10:48 PM
169	Traffic/people	New people moving in	6/4/2022 9:06 PM
170	Traffic/people	traffic	6/4/2022 5:01 PM
171	Political divisions Traffic/people	The acrimony between native-born islanders and those of us who chose to live here.	6/4/2022 4:42 PM
172	Development/change	Lack of aesthetics with current development. Also, a very loud business is obnoxious to hear all hours of the day, ruins the peace and is not a welcoming sight when approaching South Hero. We are losing the farms and the sense of our Island Paradise as it was once described.	6/4/2022 9:38 AM

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173	Poor infrastructure	No true community center	6/4/2022 9:11 AM
174	Taxes	Taxes	6/4/2022 9:11 AM
175	Development/change	increase in population	6/4/2022 9:02 AM
176	Environment/weather	Few amenities+isolation	6/4/2022 8:28 AM
Was thinking the other day that with the loss of our ash trees, the town center is looking less charming these days. We need trees lining route 2 - ASAP. It's looking ...stark. A little charm goes a long way. I'm looking forward to the new eateries. Not having to head to Burlington to eat will be lovely.			
177	Political divisions	Poor infrastructure	6/4/2022 7:44 AM
Resistance to change, lack of community resources and safe walking routes.			
178	Traffic/people	route 2 traffic, speed, noise	6/4/2022 7:28 AM
179	Poor infrastructure	The lack of municipal sewer system	6/4/2022 5:01 AM
180	Few amenities+isolation	Lack of a pharmacy.	6/3/2022 9:43 PM
181	Development/change	Getting over populated. All these condos popping up is ruining our "island living". Enough!	6/3/2022 8:20 PM
182	Few amenities+isolation	Poor infrastructure	6/3/2022 8:06 PM
There needs to be safer travel for walkers and bikers. Side walks, bike lanes. It would be nice to have a location for the youth to hang out outside of school property.			
183	Development/change	Sad Islanders have been displaced by non-Islanders.	6/3/2022 7:06 PM
184	Few amenities+isolation	Poor infrastructure	6/3/2022 6:35 PM
The lack of a welcoming, functional, town center with green space.			
185	Environment/weather	The cold winters.	6/3/2022 6:13 PM
186	Few amenities+isolation	Lack of a pretty, welcoming, and functional town center	6/3/2022 6:08 PM
187	Few amenities+isolation	Traffic/people	6/3/2022 6:01 PM
Rte 2 traffic in summer. Lack of gym/pool/walking facilities in winter. Loss of pharmacy.			
188	Development/change	I know this isn't just South Hero - but finding housing. We've been renting and would love to buy but keep getting outbid with cash offers by people who don't seem to be putting down roots here, but just buying a second or third home. We want to stay here and raise our family and it's been really frustrating to be shut out of the buying process because we're not wealthy people who can pay cash.	6/3/2022 5:57 PM
189	Few amenities+isolation	Taxes	6/3/2022 5:50 PM
Limit dining out options. The eye sore sight of the old Sandbar Motel. Taxation without representation for summer out of state property owners.			
190	Traffic/people	Firecrackers, Rte 2 traffic.	6/3/2022 5:46 PM
191	Political divisions	Too many people trying to make the town more inclusive	6/3/2022 5:40 PM
192	Few amenities+isolation	No good eateries: lunch and dinner	6/3/2022 5:31 PM
193	Few amenities+isolation	Lack of amenities drug store, grocery store, etc	6/3/2022 5:24 PM
194	Few amenities+isolation	Not having a drug store	6/3/2022 5:19 PM
195	Political divisions	Traffic/people	6/3/2022 5:16 PM
The traffic and the intolerance of change.			
196	Development/change	It has a feel of suburbia.	6/3/2022 5:04 PM
197	Environment/weather	Poor infrastructure	6/2/2022 1:52 PM
Worrying about the water quality of Lake Chaplain as it is my drinking water source.			



### Q3 If you could change one thing in South Hero, what would it be?

Answered: 187 Skipped: 20

#	RESPONSES	DATE
1	<b>More businesses+amenities</b> winter activities, indoor events (meeting house venue)	7/26/2022 5:05 PM
2	<b>Bike+walk infrastructure</b> Sidewalks!! Especially along Rte 2. My doctor wants me to walk, but I can only go to the end of my yard but if there were sidewalks I would get a good walk in!	7/26/2022 5:00 PM
3	<b>Change nothing</b> I (we) moved here because we liked what the town offered. Now some folks think the need to make changes for the future. Must be some are never satisfied with what are.	7/26/2022 4:13 PM
4	<b>Change nothing</b> We moved here because it is rural. No need to change	7/26/2022 3:54 PM
5	<b>Lower taxes</b> Lower taxes, if we weren't a "gold town" and sent less money to the state	7/26/2022 3:48 PM
6	<b>Conserve nature</b> Maintain open spaces. Provide incentives to attract young families to the community.	7/26/2022 3:27 PM
7	<b>Other</b> 1/2hr lunch for municipal offices	7/26/2022 3:11 PM
8	<b>Other</b> Turn off the lights at the opening of the fill during the winter, Keep P.O. and town office open during lunch hour	7/26/2022 3:04 PM
9	<b>Conserve nature</b> Incentivize transitioning farmers to organic and sustainable practices to minimize chemical inputs and environmental degradation	7/16/2022 10:06 PM
10	<b>More businesses+amenities</b> <b>More municipal services</b> I would like a town pool where water aerobics could be available year round for older people.	7/16/2022 3:47 PM
11	<b>Increase affordability</b> Options for affordable housing.	7/16/2022 2:27 PM
12	<b>Increase affordability</b> Affordable housing	7/16/2022 2:27 PM
13	<b>More businesses+amenities</b> <b>Nicer town center</b> A few more businesses in the village district.	7/16/2022 12:06 AM
14	<b>Limit development+change</b> I am ok with the development in the town/village area as it is now, but would hate to see more - we'll lose the small town feel. More development will also make the traffic situation worse than it is now.	7/15/2022 10:37 AM
15	<b>Change nothing</b> nothing stands out as needing to be changed.	7/15/2022 10:36 AM
16	<b>Limit development+change</b> Limited building and becoming "big city" like.	7/15/2022 7:26 AM
17	<b>Bike+walk infrastructure</b> a crosswalk to the school on south street	7/15/2022 6:16 AM
18	<b>Change nothing</b> don't change anything	7/15/2022 5:57 AM
19	<b>More businesses+amenities</b> Add restaurants on the water	7/14/2022 7:02 PM
20	<b>Boost engagement</b> Have more young families, more students at Folsom, more young, 30's and 40's residents to volunteer on the Selectboard, Fire, Rescue, 4th of July parade, Friends of the Worthen Library etc . The people doing all the work in town are almost as old as our representatives in DC !	7/14/2022 5:58 PM
21	<b>Bike+walk infrastructure</b> Better and safer biking/walking paths, especially along route 2 and south street	7/14/2022 2:49 PM
22	<b>More businesses+amenities</b> Encourage small businesses and light industry to come into town in order to provide improved tax base	7/14/2022 11:56 AM
23	<b>Public Transportation</b> Having a transportation hub in our little town center (bus to Burlington, multimodal paths to reach it, etc.)--however, I suspect the costs for something like that would be too high.	7/14/2022 11:26 AM

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24	Limit development+change	Better zoning	7/14/2022 9:15 AM
25	More businesses+amenities	Nicer town center	7/14/2022 9:15 AM
26	Bike+walk infrastructure	Add bike path on south street	7/14/2022 8:37 AM
27	Limit development+change	All of the out of towners who move into the mansions on the shore and try to change how the town is. Family camps and cottages make bring humble vacationing folks in not second homes that sit empty.	7/14/2022 8:20 AM
28	More municipal services	Town water	7/14/2022 4:16 AM
29	Improve roads	Public Transportation	7/14/2022 1:44 AM
30	More businesses+amenities	I would allow more businesses to flourish, I would make it feel safer like it used to be.	7/13/2022 11:38 PM
31	Change nothing	Nothing	7/13/2022 9:34 PM
32	Bike+walk infrastructure	Add a shoulder / bikeway to 314.	7/13/2022 9:26 PM
33	Change nothing	Not sure	7/13/2022 9:18 PM
34	Nicer town center	We need more of a village, away from the traffic on route 2	7/13/2022 9:06 PM
35	More businesses+amenities	More municipal services	7/13/2022 8:39 PM
36	Bike+walk infrastructure	More businesses+amenities	7/13/2022 8:21 PM
37	Bike+walk infrastructure	Regulation about dog leach and adding side walks and having real bike trails.	7/13/2022 7:54 PM
38	Limit development+change	Slowing down the building and construction in all the fields.	7/13/2022 7:27 PM
39	Limit development+change	Stop commercializing our small town! This is not Williston or another big area and we are losing what this town once was! I would also get rid of the bike ferry. This bring so many extra problems than what it's worth!	7/13/2022 6:58 PM
40	Change nothing	Nothing nice just the way it is	7/13/2022 6:51 PM
41	Limit development+change	Slow down development or put it in places not encroaching in camps and homes	7/13/2022 6:37 PM
42	Improve roads	A speed bump on West Shore coming from South Street before Whites beach. During summer and Wine concert fast drivers. It might help	7/13/2022 6:35 PM
43	Limit development+change	No over development of the center of town	7/13/2022 5:49 PM
44	Limit development+change	Disallow wealthy individuals to push their agenda that creates irreparable damage to our beautiful island.	7/13/2022 5:30 PM
45	More businesses+amenities	Food delivery	7/13/2022 5:29 PM
46	More municipal services	Being able to connect to town water. It's tough to believe that it hasn't made it to Martin Road and Sunset Beach	7/13/2022 5:20 PM
47	Increase affordability	That we do not become a town that all cannot live in within their means. We are not a cheap community to live in, taxes are very high and few services.	7/13/2022 5:14 PM
48	Nicer town center	Create more of a town center/destination in south hero.	7/13/2022 5:13 PM
49	More businesses+amenities	To add in a art community center!	7/13/2022 5:12 PM
50	More businesses+amenities	Better food.	7/13/2022 5:11 PM
51	Conserve nature	clean up our Lake!	7/11/2022 9:52 PM
52	Other	Establish acceptable decible limits (Island Racing is the glaring example)	7/11/2022 3:00 PM

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53	<b>Bike+walk infrastructure</b> widen South St for pedestrian traffic !	7/8/2022 7:35 PM
54	<b>Change nothing</b> I like it as is.	7/6/2022 7:35 PM
55	<b>More businesses+amenities</b> Perhaps update the town office. Even if that just means fresh paint etc We don't need another park! We have the walking field behind the school and the school playground. Also there is Whites Beach. They were hellbent on rerouting and changing it! I guess so the adults can use that grassy area...because they never put anything in for the kids!!!! How about adding a swing set and jungle gym there! No park! No dog park!	7/6/2022 4:22 PM
56	<b>Other</b> I'd add mountains. It would also be nice to have one town center.	7/6/2022 2:35 PM
57	<b>More businesses+amenities</b> More opportunities to keep people on the Islands instead of traveling off island. ex: more small businesses, public recreational areas other than just walking paths, park with tennis courts, basketball court, etc.	7/6/2022 10:40 AM
58	<b>Limit development+change</b> Controlled growth-adding services and facilities without stressing taxes	7/6/2022 10:32 AM
59	<b>Other</b> Let the Town know about what your doing to Town	7/6/2022 7:31 AM
60	<b>Lower taxes</b> Lower property taxes.	7/6/2022 12:00 AM
61	<b>Bike+walk infrastructure</b> Dog park and walking trails network	7/5/2022 9:46 PM
62	<b>Bike+walk infrastructure</b> <b>More businesses+amenities</b> development of shops and parks and sidewalks in town center.	7/5/2022 9:24 PM
63	<b>More businesses+amenities</b> Well, we need a pharmacy back.	7/5/2022 9:06 PM
64	<b>Increase affordability</b> <b>More businesses+amenities</b> <b>More municipal services</b> I would change the fact that people who live in the town now have to pay to use whites beach in the summer. We pay enough in taxes to not have free access to the town beach	7/5/2022 8:42 PM
65	<b>More businesses+amenities</b> We need a pharmacy (again)	7/5/2022 8:02 PM
66	<b>Bike+walk infrastructure</b> Would like to see better waking trails available for seniors.	7/5/2022 7:55 PM
67	<b>More businesses+amenities</b> More local businesses	7/5/2022 7:00 PM
68	<b>Lower taxes</b> <b>More businesses+amenities</b> Spur limited commercial development to reduce tax base, especially for residences on water	7/5/2022 6:41 PM
69	<b>More municipal services</b> I would get rid of the whites beach parking passes, or at least make them available to purchase online.	7/5/2022 6:39 PM
70	<b>Bike+walk infrastructure</b> When they rebuild and repaved South Street why in the world would you not include a bike lane and walking lane when it is so populated with bike traffic and walking traffic!	7/5/2022 6:39 PM
71	<b>More businesses+amenities</b> Allow Mfg to come offer jobs and help pay taxes	7/5/2022 6:27 PM
72	<b>More businesses+amenities</b> Add a public picnic spot on route 2 for travelers to stop and eat and rest, with a shady tree to keep them cool.	7/5/2022 6:22 PM
73	<b>Boost engagement</b> More community events and involvement. Rich people along the shorelines just aren't coming to the church or the town clerks. There is a major disconnect.	7/5/2022 6:13 PM
74	<b>Bike+walk infrastructure</b> Adding bike lanes on heavy trafficked bikes roads, south street and route 2 to name a few	7/5/2022 6:03 PM
75	<b>Other</b> Change is ineviatble, and I hope that I will always be able to embrace new ideas and/or developments as they occur. I would like to think that the community not only have a say in the direction of the future but a vote.	7/5/2022 5:55 PM
76	<b>Change nothing</b> I've got nothing!	7/5/2022 5:26 PM
77	<b>More municipal services</b> Having town water available to everyone	7/3/2022 2:18 PM
78	<b>Boost engagement</b> Require that all town boards represent all zoning districts--not just the shoreline.	7/2/2022 12:13 PM

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79	More businesses+amenities Nicer town center	A town park, with basketball courts, a soccer pitch, a track, and more.	6/30/2022 10:00 AM
80	Other	The weather	6/29/2022 6:05 PM
81	Conserve nature	Increase land conservation so we maintain our rural charm feeling.	6/29/2022 11:47 AM
82	Other	attract younger people	6/29/2022 8:56 AM
83	Bike+walk infrastructure Increase affordability	A sidewalk/designated walking/biking lane. Continue with the recreation paths so we have a community that doesn't require the internal combustion engine. Build some affordable housing for young families.	6/28/2022 11:03 AM
84	Bike+walk infrastructure	Mountain bike trails.	6/27/2022 7:52 PM
85	More businesses+amenities	A really good drugstore/pharmacy.	6/27/2022 4:30 PM
86	Other	winter	6/27/2022 10:26 AM
87	Public Transportation	Public transportation	6/27/2022 9:27 AM
88	Bike+walk infrastructure	Add safe biking paths that are not on the main highway.	6/26/2022 5:59 PM
89	Bike+walk infrastructure	Better connected through side walks and separate biking trails	6/24/2022 1:04 PM
90	Other	The old town meeting building is an expense with no real use and honestly is pretty ugly	6/24/2022 10:41 AM
91	Boost engagement	lack of community involent	6/23/2022 5:44 PM
92	Bike+walk infrastructure	Interconnected walking trails.	6/23/2022 8:03 AM
93	Bike+walk infrastructure More businesses+amenities Nicer town center	make route 2 more walkable, make it a "cuter" town center with center green, more country stores, brick buildings. Make it look more like a cute vermont tiny town.	6/22/2022 8:25 AM
94	Other	Have it become more diverse	6/21/2022 1:18 PM
95	Other	A more diverse population.	6/21/2022 9:05 AM
96	More businesses+amenities	I would continue to spotlight our small businesses and provide opportunities for people to connect in different ways!	6/20/2022 6:06 PM
97	Lower taxes	Lower property taxes	6/20/2022 10:32 AM
98	Lower taxes	Reduce property taxes so lifelong residents can afford to stay in their family homes if they choose to do so.	6/19/2022 8:21 PM
99	Bike+walk infrastructure	Create more bike paths.	6/19/2022 2:41 PM
100	More businesses+amenities	Community center	6/16/2022 3:50 PM
101	Change nothing	Nothing other than the wind!	6/16/2022 1:13 PM
102	Bike+walk infrastructure	A lot more pedestrian walk/bike paths connecting all parts of the islands	6/16/2022 12:33 PM
103	More businesses+amenities	Develop town recreation facilities that could be used as a geographical focal point, in addition to the Worthen Library resources/events, by residents of all ages to promote a more cohesive sense of community through healthy activities.	6/16/2022 8:25 AM
104	Other	Allow some more development.	6/15/2022 4:43 PM
105	Improve roads	Better road maintenance.	6/15/2022 4:11 PM
106	Limit development+change	Stop building apartments and condos. This town doesn't need that type of living. Stop turning South Hero into a commercial town.	6/15/2022 2:41 PM
107	More businesses+amenities	I would like to have our village centers be go-to destinations for all domestic needs. Keeler Bay Variety offers much of what anybody would want, but I would think some concentrated commercial and/or mixed commercial-residential development in these designated centers would go a long way toward sustaining our community as viable for years to come.	6/14/2022 10:22 PM

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108	More businesses+amenities	More winter town activities	6/14/2022 6:26 PM
109	Bike+walk infrastructure	bike/walking path on south st	6/14/2022 4:27 PM
110	More businesses+amenities	Add a grocery store. The small stores are friendly, but expensive.	6/14/2022 10:44 AM
111	Other	Muffle the dyno at the speed shop. Too noisy for residents nearby and sleeping babies at daycare.	6/14/2022 9:49 AM
112	More businesses+amenities	Make it less "touristy" and find ways to strengthen the economy locally within our own community	6/14/2022 8:40 AM
113	Conserve nature	I would like to see stewardship of the land become more prominent and our planning.	6/14/2022 6:44 AM
114	Improve roads	Increase channel under the causeway so we had easier Btv access from the inland sea	6/14/2022 6:15 AM
115	Other	Change the irresponsible Planing Commission decisions to allow Island Racing to conduct its operations where it is, and to allow the commercial storage units to be placed where they are in the middle of the Town center.	6/13/2022 8:59 PM
116	More businesses+amenities	More municipal services	Have a town meeting place and recreational facility with pools and spaces for exercise equipment
117	Lower taxes	outrageous taxes for farmers	6/13/2022 7:34 PM
118	Bike+walk infrastructure	Bike path through the old railroad path	6/13/2022 6:27 PM
119	More municipal services	Full town septic system	6/13/2022 6:18 PM
120	More businesses+amenities	Spruce up the town itself. It could be more like some of the small quaint towns in other parts of Vermont. Right now it feels very random and without design.	6/13/2022 6:17 PM
121	More businesses+amenities	More adult events	6/13/2022 6:13 PM
122	More businesses+amenities	Moderate growth to have more amenities on the island.	6/13/2022 6:08 PM
123	Other	The selectboard. We need new ideas with an outlook to the future...and accountability! I love this town but the development is questionable.	6/13/2022 5:51 PM
124	Nicer town center	The hodge-podge look of the town center. if there was ever a formula for buildings and landscaping it wasn't followed	6/13/2022 5:41 PM
125	Limit development+change	Keep new comers and all the changes they want out of South Hero	6/13/2022 5:38 PM
126	Bike+walk infrastructure	Connect the railroad line for the bikers so they don't take up all of south street all summer	6/13/2022 5:30 PM
127	More businesses+amenities	More community amenities	6/13/2022 2:05 PM
128	More businesses+amenities	More municipal services	It would be amazing to have a park in the center of town with substantial parking.
129	More businesses+amenities	Grocery store	6/11/2022 8:43 PM
130	Improve roads	The route 2 traffic flow.	6/11/2022 3:33 PM
131	More businesses+amenities	Restore a pharmacy.	6/11/2022 11:13 AM
132	More municipal services	Reduce costs to a store by allowing more products to be sold without higher costs. I am unsure why stores are charging more and only selling certain products at certain prices. Stores always tell me that for them to make profit they have to sell at this price. Unsure if that is the correct reason. There is not a good system set up to allow better stores for the area. Install better water systems. Install better septic systems for bathrooms.	6/11/2022 9:15 AM
133	Change nothing	Not sure	6/10/2022 9:06 PM

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134	Limit development+change	Stop further development	6/10/2022 3:05 PM
135	Nicer town center	A more central area that matches a more welcoming community not a drive-by community.	6/10/2022 3:05 PM
136	More municipal services	Improved the schools and drinking water quality.	6/9/2022 7:52 PM
137	Nicer town center	A more cohesive town center that really feels like a nice place to come together.	6/9/2022 7:10 PM
138	Change nothing	No idea	6/9/2022 7:01 PM
139	More businesses+amenities	A few more eateries and perhaps another grocery store	6/9/2022 6:47 PM
140	Bike+walk infrastructure	Minimize the bicycle traffic	6/9/2022 6:39 PM
141	Boost engagement	More community involvement.	6/9/2022 6:12 PM
142	More municipal services	Town water availability, especially considering how poor quality the well water in the area is.	6/9/2022 3:47 PM
143	More businesses+amenities	Nicer town center I would have a town center with sidewalks, small businesses, etc.	6/9/2022 3:12 PM
144	Limit development+change	There was nothing wrong with calling it The White Meeting House or White's Beach.	6/9/2022 11:02 AM
145	Limit development+change	restore farming as the primary use of the island	6/8/2022 9:09 PM
146	Other	I would ask the people born and raised in the Islands to make those moving here from other places feel a little more welcome.	6/8/2022 5:47 AM
147	Lower taxes	Tax structur	6/7/2022 8:04 PM
148	Improve roads	Add a stop light at the intersection of South St. and Rt 2. (Could be flashing yellow Labor Day-Memorial Day to re-adjust for local traffic in off-season).	6/7/2022 9:46 AM
149	Other	broader economic cross-section.	6/6/2022 8:52 PM
150	Other	Perhaps more housing, maybe smaller inland homes or apartments. Also more development in the villages area.	6/6/2022 8:15 PM
151	Nicer town center	Walkable village center.	6/6/2022 8:02 PM
152	Change nothing	Not much. Love it.	6/6/2022 7:58 PM
153	Bike+walk infrastructure	Sidewalks	6/6/2022 3:39 PM
154	Improve roads	The traffic in the summer (not sure if that's possible lol!)	6/5/2022 4:53 PM
155	Increase affordability	Keep costs down	6/5/2022 2:58 PM
156	Improve roads	Reduce the speed from 45 to 35 between the lower and upper village. This would be safer for pedestrians, bicyclists, people parked and accessing cars on the curve, and for beaver/turtles crossing the road. Plus, it would cut down on the noise level from Route 2.	6/5/2022 11:03 AM
157	Nicer town center	To have a town village away from route 2	6/5/2022 8:03 AM
158	Change nothing	Nnn	6/5/2022 6:46 AM
159	Bike+walk infrastructure	Nicer town center A downtown area that is walkable.	6/4/2022 10:48 PM
160	Improve roads	Have less Rt. 2 traffic	6/4/2022 9:06 PM
161	More businesses+amenities	more dining options	6/4/2022 5:01 PM
162	More businesses+amenities	Other Add a car wash/laundramat. Oh, and create a noise ordinance. I have new neighbors who like to make a lot of noise with machinery (ie, huge mower and leaf blowers) just when we want to sit down to dinner on our porch in summer.	6/4/2022 4:42 PM
163	Other	I dislike the new plan to turn the town center and surrounding residential area into a light industrial zone. Residents had little say.	6/4/2022 9:38 AM
164	Other	End additions to protected land that restrict development	6/4/2022 9:31 AM

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165	<b>Other</b> Taxes and updating appearance of town hall!	6/4/2022 9:11 AM
166	<b>Improve roads</b> unpave West Shore Rd	6/4/2022 9:02 AM
167	<b>Nicer town center</b> I would raze that AWFUL building that Nadias is in. Who the hell allowed that to be here?! It wrecks everything and is so far out of character with this town I'm disgusted!!! DRB should have strict rules about maintaining small town charm! Everyone loves Stowe for a reason. We don't need that type of development but that FEEL is not beyond us. Keep us small. Keep us pretty. A little charm.... Signage restrictions are important too! Nothing cheap or cheesy please!!!	6/4/2022 8:28 AM
168	<b>More businesses+amenities</b> <b>More municipal services</b> Community park and recreation fields. Sidewalks and paths to connect community resources.	6/4/2022 7:44 AM
169	<b>Improve roads</b> route 2 traffic, speed, noise	6/4/2022 7:28 AM
170	<b>More businesses+amenities</b> <b>More municipal services</b> Build an indoor rec center with pool, tennis & exercise facilities for all ages.	6/4/2022 5:01 AM
171	<b>Limit development+change</b> No more condos or apartments.	6/3/2022 8:20 PM
172	<b>Bike+walk infrastructure</b> Sidewalks and bike lanes for safer travel.	6/3/2022 8:06 PM
173	<b>Limit development+change</b> The rapid pace of population growth	6/3/2022 7:06 PM
174	<b>Improve roads</b> Traffic on route 2.	6/3/2022 6:35 PM
175	<b>Other</b> That it is more inclusive.	6/3/2022 6:13 PM
176	<b>Improve roads</b> The traffic on route 2	6/3/2022 6:08 PM
177	<b>More businesses+amenities</b> <b>More municipal services</b> Add a gym/pool/exercise facility.	6/3/2022 6:01 PM
178	<b>Change nothing</b> Nothing (except being able to find a house here).	6/3/2022 5:57 PM
179	<b>Other</b> Property taxes for nonVermont property owners!	6/3/2022 5:50 PM
180	<b>More municipal services</b> Expand the water system.	6/3/2022 5:46 PM
181	<b>Other</b> More openness from the select board and other governing associations	6/3/2022 5:40 PM
182	<b>More businesses+amenities</b> add a few restaurants	6/3/2022 5:31 PM
183	<b>More businesses+amenities</b> I'd like to see a larger grocery store.	6/3/2022 5:24 PM
184	<b>Other</b> No beach passes	6/3/2022 5:19 PM
185	<b>Other</b> The blow up the bridge attitude. I have mine and nothing else can change. The ever increasing income of the inhabitants.	6/3/2022 5:16 PM
186	More housing affordable by our youth, located in or near the villages.	6/3/2022 5:04 PM
187	I would love to see a safe, well-maintained sidewalk system. This includes winter snow removal by the Town.	6/2/2022 1:52 PM

# Q4 Median primary home sale prices in South Hero have increased by 74% since 2015. In your opinion, how does this impact the community?

Answered: 190 Skipped: 17

#	RESPONSES	DATE
1	<b>Prices out workers</b> <b>Prices out young ppl</b> Negatively. Workers need affordable housing as do young people	7/26/2022 5:07 PM
2	<b>Prices out SH natives</b> People who lived in this town from childhood are now having difficulties with the high cost of homes.	7/26/2022 4:15 PM
3	<b>Only rich can afford</b> <b>Prices out young ppl</b> There are more wealthy people moving here for the scenery - then they want to bring the city with them. Our young can't afford to stay here.	7/26/2022 3:59 PM
4	<b>Prices out workers</b> It makes it very difficult for low- and middle-income families to live here	7/26/2022 3:52 PM
5	<b>Prices out young ppl</b> The sale prices may discourage young couples and children from coming to town. That will be unfortunate	7/26/2022 3:29 PM
6	<b>No impact or not important</b> Probably no more impact than other towns in VT	7/26/2022 3:22 PM
7	<b>Tax increase</b> Same as other communities - of course it makes it harder to own/buy properties, taxes go up	7/26/2022 3:06 PM
8	<b>Only rich can afford</b> Housing is much less accessible to those without extraordinary means. Regular folks are unable to buy or rent these days.	7/16/2022 10:12 PM
9	<b>Only rich can afford</b> <b>Prices out SH natives</b> It is hard for 1st time home owners to find anyplace they can afford. It forces the town to be a gold community with many people who grew up here unable to buy a house.	7/16/2022 3:59 PM
10	<b>Only rich can afford</b> Fewer middle and low income	7/16/2022 2:31 PM
11	Yes	7/16/2022 2:30 PM
12	<b>Only rich can afford</b> <b>Prices out workers</b> Medium wage earners are being priced out of an opportunity to live in this community	7/16/2022 6:19 AM
13	<b>Prices out young ppl</b> There are fewer younger families in South Hero and most young people end up moving away after high school, since it is unrealistic for younger families to be able to afford to live here.	7/16/2022 12:06 AM
14	<b>Other</b> It seems like house prices in most able areas have gone up significantly in the last few years. In areas like South Hero where home sale prices have increased more than average, this puts pressure on raw land for new development and creates a situation where low cost housing is probably not ideally located because there could be more cost benefit to putting low cost housing where the land cost is lower.	7/15/2022 10:44 AM
15	<b>Prices out young ppl</b> <b>Tax increase</b> It prevents young families and retired folks from moving here since the cost of homes and the taxes are very high.	7/15/2022 10:44 AM
16	<b>Only rich can afford</b> Less people able to afford owning a home.	7/15/2022 7:30 AM
17	<b>Only rich can afford</b> <b>Prices out SH natives</b> This makes south hero a place where only certain people with certain incomes be able to live here. Which will in turn push out some of the locals who are looking to update the living situation but can't based on their income	7/15/2022 6:19 AM
18	<b>Other</b> It's happening everywhere. It results from supply and demand. In short, there are too many people and encouraging more people to move here will only make it worse.	7/15/2022 6:01 AM
19	<b>Other</b> Negatively. We need many more quality affordable housing options	7/14/2022 7:11 PM
20	<b>Only rich can afford</b> <b>Prices out SH natives</b> <b>Prices out workers</b> It prices out the middle class which we need more of. It creates absentee owners and landlords who i think dont care	7/14/2022 5:58 PM



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about the Town like year round residents do

21	Prices out SH natives	Reduces the diversity of our population and pushes long term elderly out	7/14/2022 11:59 AM
22	Only rich can afford	It will tend to make it more likely that new residents will be wealthy folks from other areas.	7/14/2022 11:29 AM
23	Prices out workers	Lower income people will be shit out	7/14/2022 9:24 AM
24	No impact omot important	Well, they've increased by that much just about everywhere...	7/14/2022 9:18 AM
25	Prices out SH natives	incredibly. No one who grew up here can afford to live here.	7/14/2022 8:22 AM
26	Prices out young ppl	makes it hard for young home buyers/families and also for older people on fixed incomes	7/14/2022 4:18 AM
27	Prices out SH natives	It becomes a destination town, if you've done well you move here. Not a very balanced economic town.	7/14/2022 1:58 AM
28	No impact omot important	It drives some people out, it drives some people in.	7/13/2022 11:39 PM
29	No impact omot important	Housing prices have increased significantly in Vermont and nationwide. I don't see how the impact is isolated to south hero, nor do I see this as a justification to build more housing that ultimately, at some point, will be unaffordable to those who first inhabit them.	7/13/2022 9:39 PM
30	Prices out young ppl	Too expensive for young families	7/13/2022 9:35 PM
31	Only rich can afford Prices out workers	We have less middle class families and more out of state wealthy retirees	7/13/2022 9:08 PM
32	Other Positive impact	Overall it does raise standards of living though of course makes home ownership harder for many.	7/13/2022 8:41 PM
33	Other	Makes it too congested and loses the South Hero appeal	7/13/2022 8:25 PM
34	Other	It makes it ripe for snow birds	7/13/2022 8:22 PM
35	Other	It limits the number of people who would live in South Hero. It also restrain people from getting a decent house ( not a shack.)	7/13/2022 8:10 PM
36	Prices out workers	This creates a bad situation for sustainability. Having such a large increase prevents access and sustainability for year round and the averge Vermonter. The working class has less chance of owning and living here.	7/13/2022 7:31 PM
37	Decreases diversity Prices out workers Prices out young ppl	Reduces the diversity in the town, making it difficult if not impossible for lower income and young folks to live here.	7/13/2022 6:54 PM
38	Other	Keeps the rift raft out	7/13/2022 6:53 PM
39	Prices out young ppl	Fewer young families can afford rent or house	7/13/2022 6:47 PM
40	No impact omot important	How is that different from the rest of the state?	7/13/2022 6:39 PM
41	Only rich can afford	Owning a home for some is not possible.	7/13/2022 5:52 PM
42	Other	Makes it harder for small businesses	7/13/2022 5:52 PM
43	Only rich can afford	It creates an environment where only the wealthy can buy or build here which drastically changes our communities	7/13/2022 5:32 PM
44	.		7/13/2022 5:30 PM
45	Only rich can afford	Only the people that can afford expensive homes , which then means higher taxes so thi drives people not to live here.	7/13/2022 5:27 PM
46	Only rich can afford	South Hero is no longer accessible to most people. It is simply a place to visit. Very sad.	7/13/2022 5:23 PM
47	Only rich can afford Prices out workers	It priced out most low and middle income persons/families	7/13/2022 5:16 PM

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48	Prices out SH natives	The people moving in aren't Vermonters	7/13/2022 5:12 PM
49		no idea	7/13/2022 5:12 PM
50	Prices out workers	prices out lower to middle income residents	7/11/2022 9:55 PM
51	Only rich can afford	people simply can't afford to live here !	7/8/2022 12:51 PM
52	Tax increase	It raises all of our education taxes as the education tax is set by the state based on property values of those that have been sold recently. South Hero has become unaffordable for the average family.	7/6/2022 7:40 PM
53		Negatively	7/6/2022 5:02 PM
54	Prices out SH natives	Prices out young ppl I'm concerned its becoming unaffordable for long-time residents and young families.	7/6/2022 2:45 PM
55	Tax increase	Gold Town Status, losing funds to other communities. Our schools are suffering, taxes are high discouraging people from buying properties and investing in our communities. Great disparities and for some its becoming unaffordable to live in the Islands.	7/6/2022 11:19 AM
56	Prices out SH natives	This is causing a disparity between people who are are native to South Hero and those who can now afford to move to the town. The locals are more opposed to seeing things change while those who move here may want some of the same amenities as the suburbs.	7/6/2022 10:46 AM
57	Tax increase	We pay more taxes and do not get additional services. Seems like more of our money goes to receiving towns.	7/6/2022 10:35 AM
58	Only rich can afford	Only high incomes are purchasing places to live.	7/6/2022 7:32 AM
59		Ok if you already own your property.	7/6/2022 12:10 AM
60	Prices out SH natives	Makes it difficult for Vermonters to stay here.	7/5/2022 9:49 PM
61	Tax increase	Property tax costs are driving my friends and family out of Vermont. Many of us have friends and family now living in other states as a result: they moved. It has undermined our community...	7/5/2022 9:28 PM
62	Only rich can afford	Well, I've noticed at school that there are more and more upper middle class kids. We are missing some diversity.	7/5/2022 9:10 PM
63	Only rich can afford	Prices out SH natives It negatively impacts the local community like myself who was born and raised here because now our taxes have gone up making it a lot less affordable to live here. And it brings in the rich out of staters buying up all the housing instead of allowing for the next generation islanders to stay here	7/5/2022 8:46 PM
64		See, Shelburne, Charlotte.	7/5/2022 8:08 PM
65		Fine with me. I feel like I spent too much building my home so values are catching up.	7/5/2022 7:58 PM
66	Other	Housing costs have deterred people I know from moving to South Hero.	7/5/2022 7:02 PM
67	Prices out young ppl	It's terrible for young people who are actually trying to stay in Vermont, and not just give up and move south where it's cheaper. It's a can of worms, but allowing for smaller than 1 acre building lots would probably help.	7/5/2022 6:46 PM
68	Other	Great I anticipate selling in 3 to 4 years and moving south.	7/5/2022 6:41 PM
69	Only rich can afford	Tax increase By allowing people to move here from the citys and out of state and by us allowing choice of high schools which increases our property taxes,	7/5/2022 6:35 PM
70	Prices out workers	Prices out young ppl This makes it impossible for young families with a moderate income to buy a home.	7/5/2022 6:25 PM
71	Prices out SH natives	Goodbye native Islanders	7/5/2022 6:15 PM
72	Other	We'll this is not just a south hero issue but statewide there is lack of housing in general and then affordable housing as well. It impacts the demographics of the community and perpetuates a lack of diversity within the community	7/5/2022 6:07 PM
73	Only rich can afford	A lot, homes in my neighborhood recently sold for over \$800,00!! I am	7/5/2022 6:03 PM

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sure my own home will be appraised accordingly. Sure I could sell, but where would I go?

74	Prices out SH natives Prices out young ppl	It may price out natives. The young people who were raised here may not be able to live comfortably in their own home after schooling.	7/5/2022 5:31 PM
75	Only rich can afford Prices out SH natives	Prices out average income long term residents and families in favor of older and/or wealthy people that only stay seasonally or a few weeks a year... result is generally less invested population on average.	7/3/2022 2:23 PM
76	Prices out SH natives	It prices out most Vermonters.	7/2/2022 12:16 PM
77	Only rich can afford	Brings in wealthier and older people.	6/30/2022 4:04 PM
78	Only rich can afford	Gentrification	6/29/2022 6:15 PM
79	Only rich can afford	It makes accessibility to living in SH limited.	6/29/2022 11:54 AM
80	Only rich can afford Prices out workers	working class can not afford to live here	6/29/2022 8:59 AM
81	Prices out SH natives Prices out young ppl	local families, young adults are unable to purchase real estate in their home town	6/28/2022 9:58 PM
82	Only rich can afford	Other than wealthy retirees and dual income, high end folks can afford to buy. We need to get creative about building housing that people can afford.	6/28/2022 11:10 AM
83	Only rich can afford	It could price people out of the market, leading to a decrease in diversity.	6/27/2022 7:54 PM
84	Prices out SH natives	Makes it harder for long-time residents to stay.	6/27/2022 4:32 PM
85	Prices out young ppl	fewer young people can afford to live here	6/27/2022 10:27 AM
86	Decreases diversity	It makes a community less diverse	6/27/2022 9:31 AM
87	Only rich can afford Prices out SH natives	Vermont and especially North Western Vermont is quickly becoming playground for the rich. The haves and have nots. This is especially true with housing. My children will not be able to afford to live here.	6/27/2022 8:04 AM
88	Prices out workers	Creates a community of haves and have nots; also limits restaurants and stores and services business from being able to hire locals if their income cannot afford housing.	6/26/2022 6:06 PM
89	Decreases diversity Tax increase	It doesn't allow for the wider economic diversity of people to live in SH, it increases property taxes putting long time residents at risk of non affordability. It increases the likely hood of second homes and airbnb ownership which destroys communities. Please don't turn SH into another Shelburne.	6/25/2022 4:56 PM
90	Only rich can afford	It brings in people with wealth	6/24/2022 1:07 PM
91	Tax increase	More Taxes	6/24/2022 10:43 AM
92	Decreases diversity Only rich can afford Prices out SH natives	The rapid rise in prices/values limits the ability of the children of current residents to live in South Hero. It also eliminates the availability of housing for low and middle income residents. This limits diversity and limits a healthy community.	6/23/2022 5:54 PM
93	Decreases diversity	Less diversity in town.	6/23/2022 8:07 AM
94	Only rich can afford Prices out SH natives	this changes the population of residences. The older residents are lured to cash in on their higher house value as more affluent people move in. The older residents are an important part of the social structure of south hero.	6/22/2022 8:32 AM
95	Other	Positively by bringing more resources into the community and negativity by limiting access to the community for people with less means.	6/21/2022 1:23 PM
96	Decreases diversity Only rich can afford	It impacts it negatively by limiting home sales to more affluent buyers which hinders diversity.	6/21/2022 9:17 AM
97	Other	I'm not entirely sure of how this has impacted our community as I know that minimum wage has increased, but as have gas prices and just about everything else. Hypothetically, I would expect this jump in median prices to make our housing less affordable and create a	6/20/2022 6:10 PM

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dynamic where housing is something more accessible for those who have an established and reliable income, but I still have yet to see how this looks for our community personally.

98	<b>Tax increase</b> Taxes are too high based on new assessed values	6/20/2022 10:34 AM
99	<b>Only rich can afford</b> This impacts the community by excluding lower/middle income people from living in South Hero and increases the likelihood that South Hero will become a town only for the rich.	6/19/2022 8:26 PM
100	<b>Prices out SH natives</b> <b>Prices out young ppl</b> The price of housing makes it unaffordable for Islanders to stay in their homes (year-round residents). It also makes it harder to draw young families.	6/19/2022 2:44 PM
101	<b>Other</b> Limited affordable housing	6/16/2022 3:52 PM
102	<b>Prices out workers</b> It's harder for middle income families to live here. The lake drives a lot of housing sales to 2nd and 3rd home owners.	6/16/2022 1:16 PM
103	<b>Decreases diversity</b> <b>Prices out young ppl</b> It keeps younger and older people of lower income levels from moving to South Hero. A community is a complicated ecosystem that requires not only safe affordable housing and healthy locally grown food easily available, but inclusive, diverse and equitable social activities and healthy indoor/outdoor exercise and fitness opportunities. People must feel like their town is for living in. They must feel welcome, feel as though they can walk or bike to get to the library, the post office or the grocery store easily without a car. The enormous highspeed highway in the middle of our living and socializing spaces really is unfortunate as it destroys the feeling of safety and calm required for a residential area. Traffic calming and slowing could be done in the village on rt. 2 by beautification of the central corridor with more shade trees, flowering shrubs and perennials and by keeping the existing natural habitat healthy and thriving. South Hero village will then remain a great place to visit and to live.	6/16/2022 1:02 PM
104	<b>Only rich can afford</b> Narrows to potential home buyers able to afford purchasing here to the wealthier end of the spectrum. I would prefer a broader range of potential residents.	6/16/2022 9:48 AM
105	<b>Decreases diversity</b> This trend makes it more difficult for people to buy either a starter home or move up to a larger house to accommodate a growing family. It also is a significant barrier to developing a more diverse population by age, ethnicity or racial background.	6/16/2022 8:39 AM
106	<b>Prices out SH natives</b> People are getting priced out of the county	6/15/2022 4:45 PM
107	<b>Prices out SH natives</b> <b>Prices out workers</b> <b>Prices out young ppl</b> housing not affordable for many people.	6/15/2022 4:14 PM
108	<b>No impact omot important</b> Home sales have increased everywhere not just South Hero. It is the same impact the entire nation is feeling. Nothing more so in South Hero	6/15/2022 2:43 PM
109	<b>No impact omot important</b> No different than any other community. We are in a housing bubble - that WILL pop, in my opinion - because current pricing is unsustainable with local residents.	6/14/2022 10:29 PM
110	<b>Prices out young ppl</b> Prices out newcomers	6/14/2022 8:22 PM
111	<b>Decreases diversity</b> Since most people can't afford to buy a house in South Hero, that limits the diversity of the community.	6/14/2022 4:29 PM
112	<b>Prices out workers</b> The median income in VT is \$33,000. 30% of this income is \$9900, divided by 12 months give the median household \$825 toward housing. The median cost of a home in the Grand Isle County is \$285,000. A mortgage and taxes against a \$285,000 home is \$2300. The median person cannot afford to buy a home in the Grand Isle County. Only the above average person can live in the Grand Isle County. I'm not saying this is unfair or bad, it's just a fact. You can't afford to do anything in the islands like go out to eat or enjoy a round of golf because it's so expensive. The local businesses cater to the tourist and treat the islands like a resort area when half the population lives in mobile homes. The impact of the 74% increase in home sales is driving the blue collar workers out of town leaving the more financially stable people here. This group of people are not interested in participating in doing anything to improve the area, they just complain about what the less advantageous people have to do to survive.	6/14/2022 11:50 AM
113	<b>Only rich can afford</b> Slows turnover. The only people who can buy here are wealthy.	6/14/2022 9:56 AM

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114	<b>Prices out SH natives</b> Local families are unable to find housing and homes are being bought as a rental or seasonal properties but out of staters	6/14/2022 6:56 AM
115	<b>Prices out SH natives</b> This means that people born and raised here can't afford to live here. This means that people can build a mansion next door to my small cottage and dynamite blast the natural ledge so they can have a better view of the lake. This is not land stewardship!	6/14/2022 6:56 AM
116	<b>Prices out SH natives</b> Strains the budget of all current residents	6/14/2022 6:17 AM
117	<b>No impact omot important</b> The market is the market. There is a very wide variety of residential housing in South Hero, from trailers to ranch houses to camps to duplexes to exquisite homes on the Lake. The market is affected primarily by supply and demand, and so, theoretically, if more housing is built in South Hero, prices would stabilize, However, we should not change the character of the Town for the sole purpose of enticing developers to create more housing. We don,t want the tail wagging the dog. If we changed the entire Town to a single residential zone, and every farm and open space was filled up with residential housing, it would take long for the masses from Burlington and Chittenden County to buy and fill up every parcel, turning South Hero into a residential suburb of Burlington— history tells us that that is the inevitable result of unrestricted property development sprawling out from burgeoning cities like Burlington.	6/13/2022 9:37 PM
118	<b>Other</b> fewer families can afford to live here	6/13/2022 8:32 PM
119	<b>Prices out SH natives</b> original owners can't afford to live here anymore	6/13/2022 7:36 PM
120	<b>Only rich can afford</b> <b>Prices out SH natives</b> I feel like the people who grew up here cannot afford to buy here and it brings in many rich people building million dollar homes and driving up our taxes even more	6/13/2022 6:29 PM
121	<b>Other</b> It makes it hard for people to buy houses. They are very expensive in south hero	6/13/2022 6:20 PM
122	<b>Prices out young ppl</b> It makes it harder for young people to move in.	6/13/2022 6:20 PM
123	<b>Other</b> Limits new home owners	6/13/2022 6:16 PM
124	<b>No impact omot important</b> All home values are relative. This increase is not unique to South Hero. I don't see much local impact that is unique.	6/13/2022 6:12 PM
125	<b>Only rich can afford</b> <b>Tax increase</b> Folks not in any way connected to this community move in because they can afford the ridiculous taxes. Many are not following the lakeshore protection rules or .the state's laws about cutting or property set backs. This population eliminates any community residents, who actually care about our lake, from ever owning.	6/13/2022 6:02 PM
126	<b>Only rich can afford</b> It restricts the market to higher income to some extent.	6/13/2022 5:44 PM
127	<b>Other</b> It impacts our school system making it crowded. People want South Hero to remain country, why all the developments and subdividing land to cause overcrowding and making changes to our town ie: increasing school size	6/13/2022 5:44 PM
128	<b>Only rich can afford</b> It brings in a lot of out of state owners who seem to have the most money which is only good for local business during a small amount of the year.	6/13/2022 5:37 PM
129	<b>Prices out SH natives</b> <b>Prices out workers</b> It prices out low to moderate income households	6/13/2022 2:07 PM
130	<b>Other</b> I am sure that it provides some positives like the ability to afford more lavish amenities to our town such as a new town hall; more land in town for parks and recreation. more facilities for winter time activity indoors.	6/11/2022 3:55 PM
131	<b>Decreases diversity</b> It degrades it, by making the population less diverse.	6/11/2022 11:17 AM
132	<b>Only rich can afford</b> It allows for fewer and fewer reasons to purchase in South Hero. Except for the wealthy.	6/11/2022 9:20 AM
133	<b>Only rich can afford</b> <b>Prices out SH natives</b> Locals are pushed out. Wealthy out of staters move in.	6/10/2022 9:11 PM
134	<b>No impact omot important</b> No impact	6/10/2022 5:03 PM
135	<b>Other</b> Given its location it makes sense that values have increased. Unfortunately, lack of resources (public transport, affordable grocery) will cause issues of those looking for affordable living to look elsewhere. Whereas, those who may have higher incomes will be fine either way.	6/10/2022 3:22 PM

## South Hero Town Plan 2022: Community Vision and Planning Survey

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The fear is South Hero becoming a second home community to the likes of Manchester, Woodstock, and Stowe where the full time home owners may eventually be pushed out.

136	<b>Other</b> Improves the community - more educated professionals.	6/9/2022 7:54 PM
137	<b>Decreases diversity</b> The community here seems to be more and more from out of state. The divide between the wealthy and...the rest of us... seems to be growing.	6/9/2022 7:13 PM
138	<b>Prices out workers</b> Fewer middle class folks can own a home anywhere in Vermont. I settled in NW Vermont in 1972, my starting salary was \$15,000 a year. After renting for 2 years purchased a nice home off South Propect in Burlington for \$45,000. Now asking price between \$ 800,000 and 1 Million, what kind of starting salary would a young family need to buy a home there today?	6/9/2022 7:10 PM
139	<b>Prices out SH natives</b> It hurts everyone, especially local Vermonters	6/9/2022 6:51 PM
140	<b>Only rich can afford</b> This has made our community turn into a vacation hotspot and for rich out-of-staters to move here ruining the quiet, small, home-like feeling South Hero has always been.	6/9/2022 6:46 PM
141	<b>No impact or not important</b> <b>Other</b> Name something that hasn't increased. The housing goals are artificial, along with other legislative "fixes" that don't reflect reality.	6/9/2022 6:20 PM
142	<b>Only rich can afford</b> <b>Prices out SH natives</b> The increase in property taxes has driven many long-time full-time residents out of town and encouraged purchases of property by wealthy, out-of-state residents.	6/9/2022 3:54 PM
143	<b>Other</b> It's not good.	6/9/2022 3:14 PM
144	<b>Tax increase</b> It increases property taxes. Even though taxes should stay relatively the same the state portion prevents that. Plus the town is constantly increasing spending. A little here, a little there. It's death by a thousand cuts.	6/9/2022 11:06 AM
145	<b>Only rich can afford</b> <b>Prices out SH natives</b> This makes housing less affordable for long-term residents and brings in out-of-state residents who can afford it.	6/8/2022 9:11 PM
146	<b>Prices out young ppl</b> It makes it harder for people to afford a home in Vermont, especially the younger generation. Although there have been large increases like this through VT and the country.	6/8/2022 5:54 AM
147	<b>Prices out SH natives</b> Difficult for children who grew up in the area to stay.	6/7/2022 8:09 PM
148	<b>Other</b> It makes it less affordable	6/7/2022 4:28 PM
149	<b>Prices out SH natives</b> Encourages seasonal home buying, limits local families ability to stay local.	6/7/2022 9:55 AM
150	<b>Only rich can afford</b> Only rich people can afford to live here, not middle or working class.	6/6/2022 8:55 PM
151	<b>Only rich can afford</b> <b>Prices out workers</b> It makes is harder for less affluent people to get by.	6/6/2022 8:19 PM
152	<b>Prices out SH natives</b> Has increased the wealth of longer term residents... and at the same time made it more challenging for locals to stay local.	6/6/2022 8:17 PM
153	<b>Only rich can afford</b> <b>Prices out SH natives</b> The rich are buying and locals are priced out of buying in the town.	6/6/2022 8:01 PM
154	<b>Other</b> Increase in personal assets	6/6/2022 3:41 PM
155	<b>Only rich can afford</b> <b>Prices out workers</b> What is "median" ...if it is not affordable for the average income family, it is not good	6/6/2022 8:21 AM
156	<b>Prices out young ppl</b> We already have a fairly well off tax base and this will prevent more people from moving here, particularly younger people. This means our population will be aging and not be replaced.	6/5/2022 9:26 PM
157	<b>No impact or not important</b> No impact, it I happening everywhere.	6/5/2022 6:05 PM
158	<b>Other</b> It makes moving to the islands/staying in the islands very challenging. We bought a very small starter home in 2018 in south hero. we were hoping to move to a bigger home with more land in south hero but unfortunately are not able to afford that now.	6/5/2022 4:59 PM

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159	<b>Only rich can afford</b> Middle class is closed out of coming to live here and perpetuates the image (and reality) that it's a place for rich people.	6/5/2022 3:00 PM
160	<b>Prices out SH natives</b> Definitely a negative impact. Local residents are being priced out and there is very little available. It's hard for people to upsize or downsize.	6/5/2022 11:10 AM
161	<b>No impact omot important</b> It doesn't	6/5/2022 8:08 AM
162	<b>Other</b> Mmmm	6/5/2022 6:47 AM
163	<b>Decreases diversity</b> Less diversity.	6/4/2022 10:56 PM
164	<b>Prices out young ppl</b> Keeps younger families from moving here, and we need them!!!	6/4/2022 4:45 PM
165	<b>Other</b> This has negative impact on our small community. Also, too many previously affordable homes have been bought up by landlords who have turned them into rental units.	6/4/2022 9:46 AM
166	<b>Prices out workers</b> It has priced out working people	6/4/2022 9:33 AM
167	<b>Only rich can afford</b> Gentrifies it	6/4/2022 9:04 AM
168	<b>Other</b> Yes hard to answer - especially in a lakeside community. I don't want exclusion but it's more imperative that we have places that aren't overdeveloped. Nature needs a place to be too -More now than ever! We can't destroy our future to address a buzzword.	6/4/2022 8:41 AM
169	<b>Other</b> More housing needed to support healthy school population	6/4/2022 7:47 AM
170	<b>Tax increase</b> there is no affordable housing in south hero and the recent rise in house prices will increase property taxes.	6/4/2022 7:34 AM
171	<b>Prices out workers</b> It burdens those on more limited incomes.	6/4/2022 5:04 AM
172	<b>Prices out workers</b> Median wage people cannot afford to buy.	6/3/2022 9:45 PM
173	<b>Other</b> It brings people who can truly afford to be here	6/3/2022 8:22 PM
174	<b>No impact omot important</b> Not sure	6/3/2022 8:08 PM
175	<b>Prices out workers</b> Negatively - forces low & mid income folks off the island.	6/3/2022 7:11 PM
176	<b>Only rich can afford</b> Only higher income people can live here.	6/3/2022 6:37 PM
177	<b>Prices out workers</b> I think it makes it difficult for families and individuals of low to moderate income to purchase homes.	6/3/2022 6:16 PM
178	<b>Only rich can afford</b> Only upper income people can live here.	6/3/2022 6:10 PM
179	<b>Only rich can afford</b> <b>Prices out SH natives</b> It seems to bring in wealthy people buying summer homes at the expense of affordable housing for year round residents.	6/3/2022 6:06 PM
180	<b>Decreases diversity</b> Changes small town diversity.	6/3/2022 6:05 PM
181	<b>Only rich can afford</b> That figure seems fishy to me. If it is true, it will end up being an exclusive community of rich folks who hire everything out. We will lose the down to earth folks who are the backbone of a community.	6/3/2022 5:57 PM
182	<b>Prices out SH natives</b> Adverse pricing out of housing for business employees and long time local residents and the associated property tax burden for home owners.	6/3/2022 5:56 PM
183	<b>Prices out SH natives</b> It makes it more expensive for old time residents to remain in their homes	6/3/2022 5:42 PM
184	<b>Decreases diversity</b> <b>Only rich can afford</b> limits community to mostly well off folks to the detriment of a mixed community of those with various incomes, points of view and interests	6/3/2022 5:37 PM
185	<b>Other</b> No effect	6/3/2022 5:30 PM
186	<b>Prices out SH natives</b> Those raised in SH can't live here as adults. That's sad!	6/3/2022 5:21 PM
187	<b>Positive impact</b> Brings growth to town	6/3/2022 5:20 PM
188	<b>No impact omot important</b> <b>Positive impact</b> Much is pandemic induced. Not unique to SH. As always, good if you are selling, bad if buying.	6/3/2022 5:15 PM

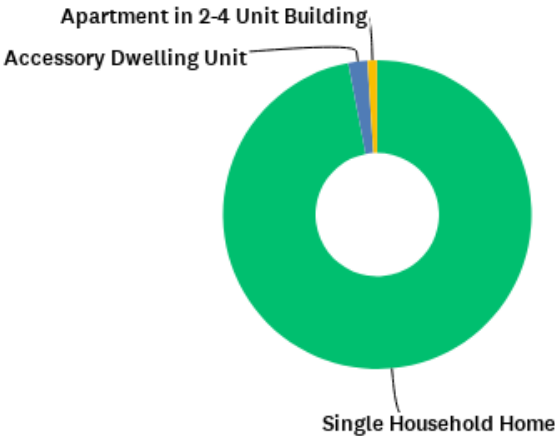
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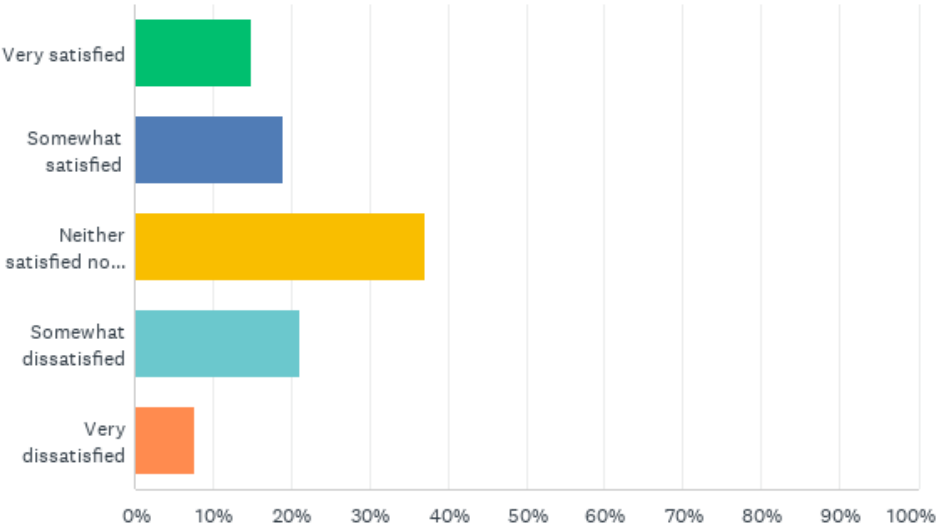
189	Absolutely.	6/3/2022 5:06 PM
190	Prices out young ppl Makes it harder for young people to afford to rent or buy housing here. Young people bring energy, kids, and excitement to town.	6/2/2022 1:58 PM



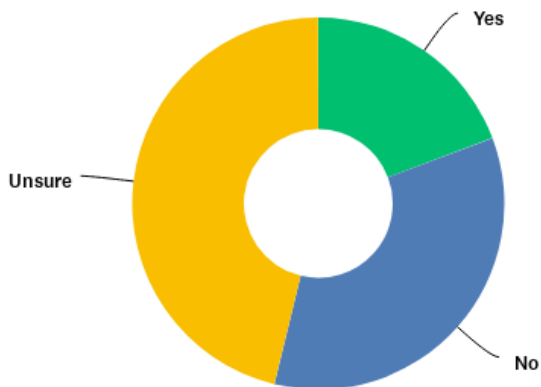
Q5 Which of the following best describes the housing you currently live in?



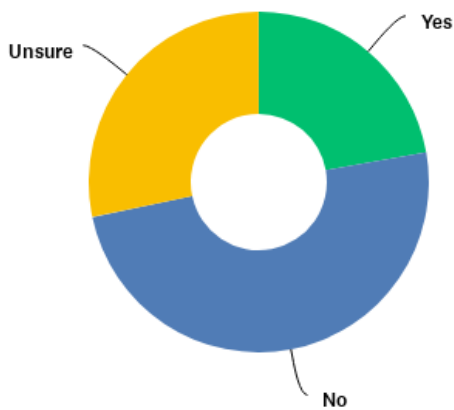
Q6 How satisfied are you with the housing options currently available in South Hero?



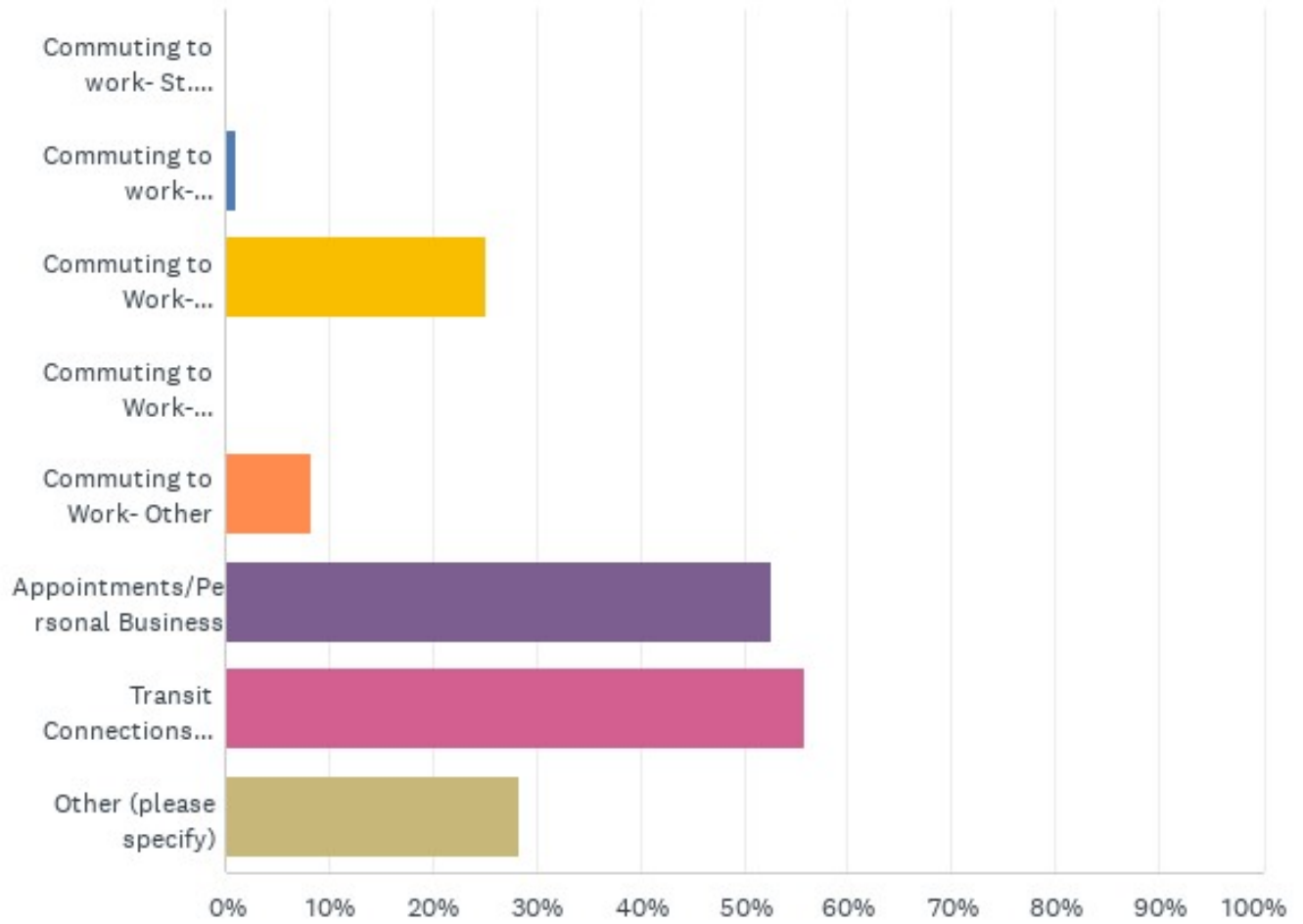
Q7 Short-term rentals (30 consecutive days or less) are regulated as a single-family property in South Hero. Do you think the Town should adopt more restrictions on short-term rentals?



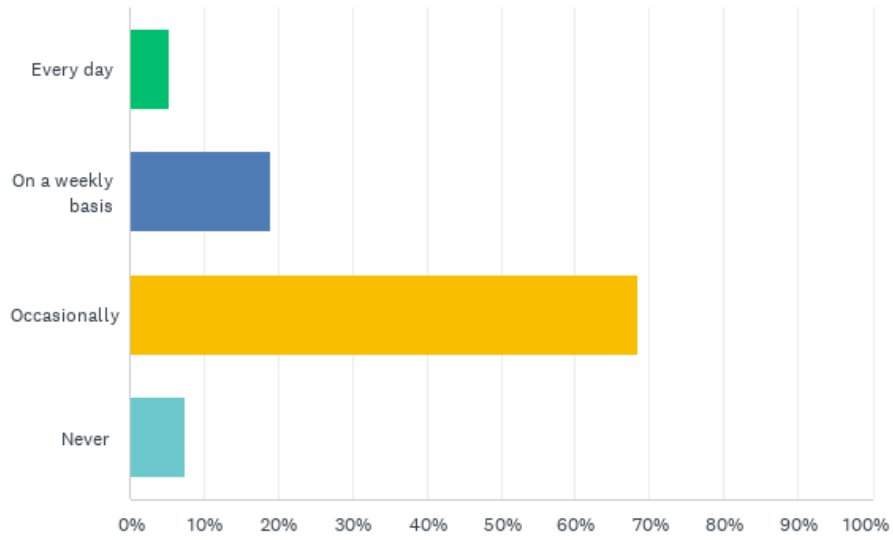
Q8 Would you use public transportation if it was available?



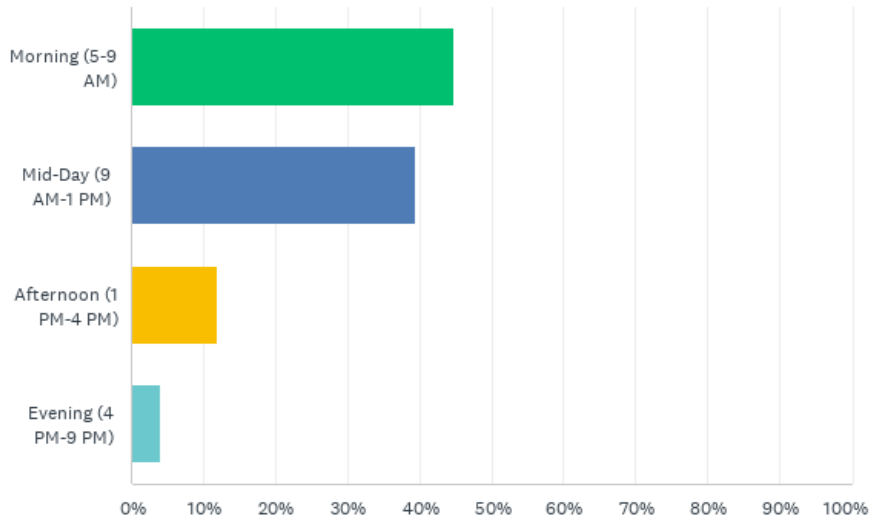
# Q9 How would you use public transit?



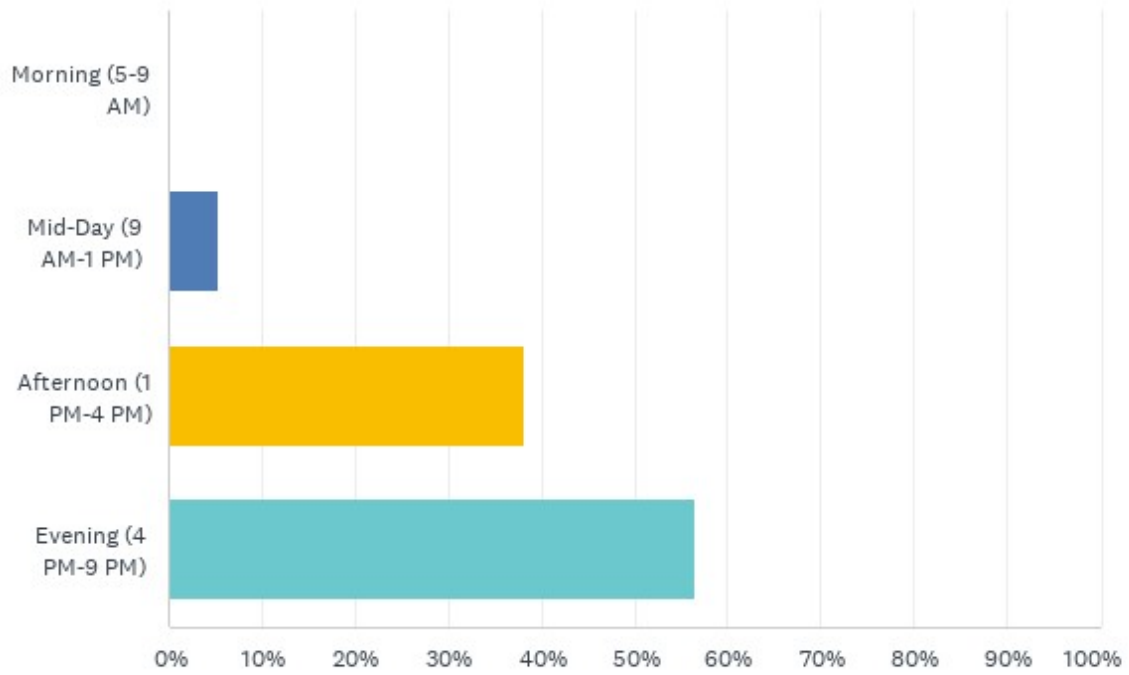
### Q10 How often would you use public transit?



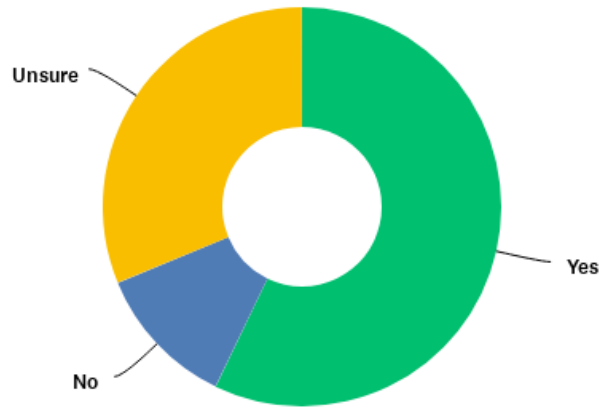
### Q11 What time of day would you use it (Leaving South Hero)?



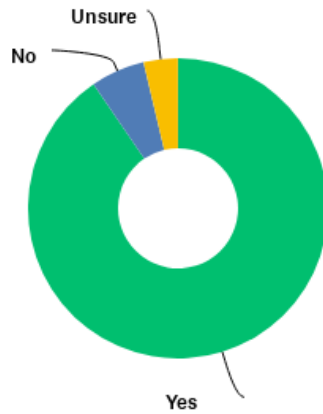
# Q12 What time of day would you use it (Returning to South Korea)



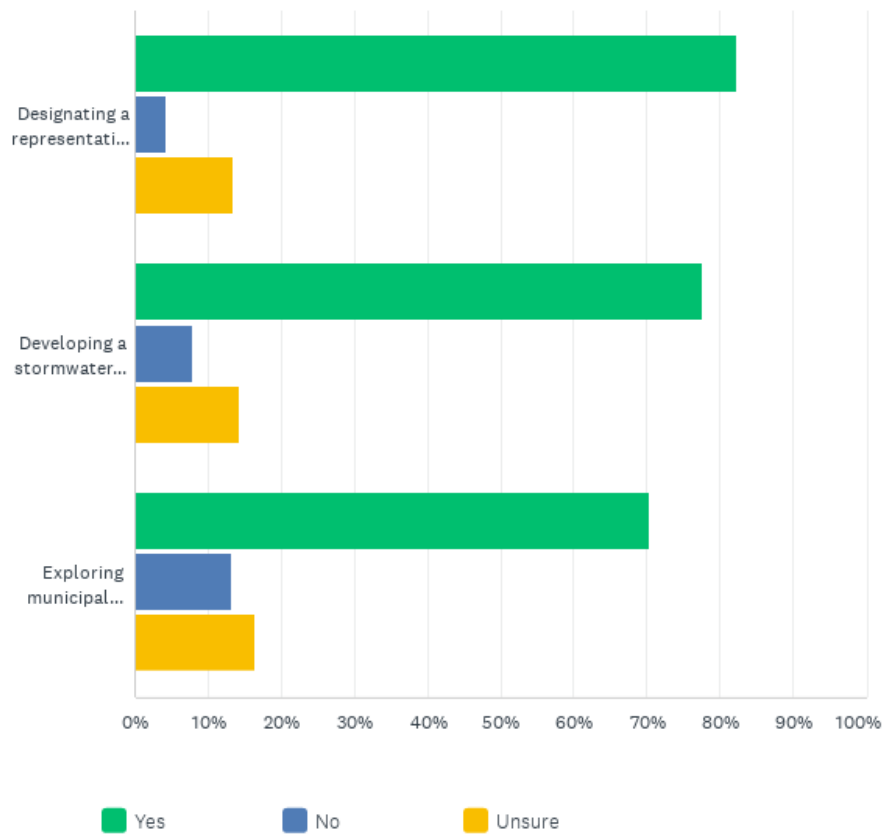
Q13 South Hero Fire District #4 provides potable drinking water to 320 households and businesses in and around South Hero Village and Keeler Bay. Do you support efforts to expand Fire District #4?



Q14 Should the Town of South Hero support efforts to improve the water quality of Lake Champlain?



Q15 Do you support the following efforts to improve the water quality of Lake



# Q16 What would help people on bikes be safer and more comfortable on South Hero roads?

Answered: 173 Skipped: 34

#	RESPONSES	DATE
1	<b>Other</b> <b>Shoulder/Bike Lane</b> Wider shoulders on roads, repair sidewalks	7/26/2022 5:08 PM
2	<b>Signage/Maps</b> Signs directed at bicyclists and bike lanes	7/26/2022 5:03 PM
3	<b>Better Biker Behavior</b> If the town would mandate wearing florescent vest or clothing of some type so they could be seen	7/26/2022 4:45 PM
4	<b>Wider Roads</b> Wider roads to accommodate bikes and drivers. It is a matter of time before there is an accident.	7/26/2022 4:02 PM
5	<b>Shoulder/Bike Lane</b> wider shoulders & possibly a bike lane on Rt 2	7/26/2022 3:53 PM
6	<b>Driver Behavior</b> <b>Signage/Maps</b> Encouraging drivers to be more patient and understanding. Town + county "bike maps" for visitors encouraging safe riding	7/26/2022 3:37 PM
7	<b>Bike Path</b> A bike path on South St. is needed for safety	7/26/2022 3:26 PM
8	<b>Shoulder/Bike Lane</b> <b>Signage/Maps</b> Duh... bike lanes, education on proper biking rules of the road - perhaps at rental areas + the ferry	7/26/2022 3:10 PM
9	<b>Driver Behavior</b> <b>Other</b> <b>Signage/Maps</b> Signage and shoulder mowing for better visibility. Lower the speed limit on South Street to 25 mph. The garbage trucks are always speeding which is dangerous for everyone!	7/16/2022 10:30 PM
10	<b>Shoulder/Bike Lane</b> Bike lanes should be available on all the public roads in So Hero	7/16/2022 4:30 PM
11	<b>Shoulder/Bike Lane</b> Well marked shoulders and reminder to car drivers that the road is shared	7/16/2022 2:41 PM
12	<b>Shoulder/Bike Lane</b> Better marked shoulders.	7/16/2022 2:39 PM
13	<b>Shoulder/Bike Lane</b> A designated bike lane on one side of the main bike paths.	7/16/2022 6:25 AM
14	<b>Better Biker Behavior</b> <b>Shoulder/Bike Lane</b> 1. Having a 3 ft shoulder on the roads would greatly increase safety for bikers/walkers/baby strollers. 2. Painted lines in the center and edges for all paved roads would also enhance safety. 3. Most bikers are good and move to single file when cars approach, but there are always those that don't and ride in the middle of the road which is frustrating to residents who have to drive to get to work, groceries, etc.. (I am a biker and a driver). If law enforcement, or bike rule enforcement officers were to enforce single file rules it would be helpful, as may residents end up feeling antagonistic towards bikers from the behavior of these few. 4. It is probably worth saying that the roads in South Hero are probably the safest in the state. Many other towns have higher speed limits, and not much more of a shoulder.	7/16/2022 12:06 AM
15	<b>Shoulder/Bike Lane</b> Fog line painted on the roads. South street has very bad white lines and probably has the highest pedestrian and bicycle traffic,	7/15/2022 10:59 AM
16	<b>Shoulder/Bike Lane</b> Designated bike lanes and more signage with rules for bikers.	7/15/2022 10:59 AM
17	<b>Bike Path</b> A specific bike path especially from bike ferry to Rt. 2 instead of using So. Street which is too narrow for bikes and traffic.	7/15/2022 7:48 AM
18	<b>Wider Roads</b> widen south street	7/15/2022 6:24 AM
19	<b>Shoulder/Bike Lane</b> bike lanes	7/14/2022 8:17 PM
20	<b>Shoulder/Bike Lane</b> Bike lanes, wide ones, especially on Rt 2 and South St	7/14/2022 6:03 PM
21	<b>Shoulder/Bike Lane</b> Bike lane on South Street Crossing for bikes traveling on route 2 east /	7/14/2022 12:18 PM



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or is it south? To get to the library and Wally's development

22	Bike Path	Shoulder/Bike Lane	Designated bike lanes and bike paths, to the extent they're feasible	7/14/2022 11:47 AM
23		Shoulder/Bike Lane	A designated bike lane through the village. Painted lines would help.	7/14/2022 9:38 AM
24	Other	Shoulder/Bike Lane	Wider shoulders on the roads, for sure. Bike racks in town.	7/14/2022 9:30 AM
25		Shoulder/Bike Lane	Larger shoulders on the roads.	7/14/2022 8:31 AM
26		Shoulder/Bike Lane	wider bike lanes or shoulders	7/14/2022 4:22 AM
27		Better Biker Behavior	educating the bikers on how to share the road with motor vehicles	7/14/2022 2:31 AM
28	Bike Path		An actual bike path.	7/13/2022 11:46 PM
29	Bike Path	Shoulder/Bike Lane	Bike paths and or widened shoulders — especially on 314.	7/13/2022 9:58 PM
30		Better Biker Behavior	Enforce single file	7/13/2022 9:37 PM
31	Driver Behavior	Signage/Maps	We just need more signage so bikers are aware of potential challenges. People do not obey speed limits in South Hero and it can be scary on a bike. Like really scary.	7/13/2022 9:18 PM
32	Better Biker Behavior	Shoulder/Bike Lane	A clearer line marking bike lane, with required/enforced helmets & lights/reflectors	7/13/2022 8:47 PM
33	Better Biker Behavior	Driver Behavior	Bikers should RESPECT the rules ( example one line only); drivers should RESPECT bikers by slowing down and leave a minimum of 3 feet from the bike. Having said that, I strongly believe that South Hero IS NOT a bicycle destination. The roads have not been built for this ( even the reconstruction of South Street a few years ago FAILED to implant a real bicycle trail.	7/13/2022 8:31 PM
34	Better Biker Behavior	Other	Not have the bike ferry. They don't obey the rules of the road.	7/13/2022 8:29 PM
35	Bike Path		A good bike path	7/13/2022 8:26 PM
36	Other		Single filesummer income	7/13/2022 7:48 PM
37	Better Biker Behavior	Driver Behavior	Education and common sense awareness for both the cyclists and motorists.	7/13/2022 7:35 PM
38	Better Biker Behavior	Signage/Maps	Bikers need to know the rules of safe biking and the ferry could publicize that. As a biker I support the bike path and Local Motion but I think they can do a better job of educating riders.	7/13/2022 7:21 PM
39	Other		Stay on the back roads	7/13/2022 6:57 PM
40	Wider Roads		That's a no brained. Widen south stteet	7/13/2022 6:46 PM
41	Driver Behavior	Wider Roads	The wide bike lanes throughout town. However, stiff fines for those who use those lanes to pass on the right!!	7/13/2022 6:04 PM
42	Better Biker Behavior		Oh do not get me started...the bikers have no respect for motorist. They are rude,and do not know the rules of the road . Maybe they ought to make them REGISTER their bikes.	7/13/2022 5:41 PM
43	Bike Path		Bike only roads for non residents	7/13/2022 5:33 PM
44	Shoulder/Bike Lane		Designated bike lane on South Street. Wider shoulders utilizing all of the legal ROW	7/13/2022 5:31 PM
45	Other		We need to purchase the old tracks land.	7/13/2022 5:28 PM
46	Shoulder/Bike Lane		Bigger bike lanes.	7/13/2022 5:21 PM
47	Shoulder/Bike Lane		A larger wider bike lane on the road with a walking sidewalk on south st, over the hill is completely unsafe when bikers and cars are traveling on both sides	7/13/2022 5:19 PM
48	Other	Shoulder/Bike Lane	designated bike ways, wider berms on roads	7/11/2022 10:03 PM
49	Bike Path	Driver Behavior	Enforce the speed limits we have. People are in a big hurry to	7/11/2022 3:30 PM

# South Hero Town Plan 2022: Community Vision and Planning Survey

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pick up their kids from school, daycares and hurry home. Again.. the hay and manure truck business are not above the law. Or maybe a bike path away from roads.

50	<b>Shoulder/Bike Lane</b> Bike (and pedestrian) lanes on South St ! South St. residents have a bad attitude toward expanding the pavement to accommodate bikes. But the town OWNS that land !	7/8/2022 1:11 PM
51	<b>Better Biker Behavior</b> Riding single file!	7/6/2022 7:45 PM
52	<b>Driver Behavior</b> Slower drivers	7/6/2022 5:11 PM
53	<b>Driver Behavior</b> <b>Shoulder/Bike Lane</b> Wider bike lanes/shoulders. Also car speed enforcement.	7/6/2022 2:49 PM
54	Seasonal Speed bumps on certain roads to slow vehicle traffic, ie West Shore Rd. Better signage to indicate pathways.	7/6/2022 11:01 AM
55	<b>Better Biker Behavior</b> <b>Driver Behavior</b> <b>Signage/Maps</b> More awareness to motorists AND cyclists that BOTH need to share the road. Signs on heavily travelled roads to be courteous to one another. Town police or another organization to occasionally monitor or just observe the behavior of BOTH motorists and cyclists and give feedback to those who are not courteous.	7/6/2022 10:56 AM
56	<b>Shoulder/Bike Lane</b> <b>Wider Roads</b> Wider roads with bike lane. Or not allowing bikes to use roads. I travel many miles and the South Hero bike usage is high but bike lanes are very poor	7/6/2022 7:39 AM
57	<b>Bike Path</b> A designated bike trail through town taking bicycle traffic off of route 2 as much as possible.	7/6/2022 12:19 AM
58	<b>Bike Path</b> <b>Shoulder/Bike Lane</b> <b>Signage/Maps</b> Separate cars and bicycles with wide bike lane on shoulder of pavement, a bike path (separate from road), and signage.	7/5/2022 9:46 PM
59	<b>Wider Roads</b> Wider roads	7/5/2022 9:45 PM
60	<b>Shoulder/Bike Lane</b> wider shoulders	7/5/2022 9:19 PM
61	<b>Better Biker Behavior</b> The bicyclists should be required to adhere to the traffic laws. All bicycles using the public roads should be registered and have proof of insurance	7/5/2022 8:19 PM
62	<b>Bike Path</b> bike paths designated to certain areas	7/5/2022 8:08 PM
63	<b>Better Biker Behavior</b> <b>Bike Path</b> If they would ride single file, instead of three abreast. If there was a continuation of the railroad bike path across what was the Corbin property. Now that he has died, maybe the land that he owned could be purchased from his estate. To be used for the bike path, which could bring the bikers to Route 2 directly from the bike ferry.	7/5/2022 7:34 PM
64	<b>Wider Roads</b> South street needs to be widened 2 feet on each side. When the road was redone 5 years ago I thought that was the plan, widen it by several feet and level out the hill near west shore. The hill is still very unsafe for cars and bikers. The town is so great and I love living here, but we could do better for our recreational guests.	7/5/2022 7:23 PM
65	<b>Better Biker Behavior</b> <b>Signage/Maps</b> Our roads are not big enough for bike paths, South st is a joke with the bikes , they dont follow biking rules, there isnt any signage , they stop in the rode 2 sometimes 3 wide	7/5/2022 6:49 PM
66	<b>Shoulder/Bike Lane</b> Like I mentioned above bike lanes on South Street.	7/5/2022 6:47 PM
67	<b>Shoulder/Bike Lane</b> Bike lanes and more shoulders	7/5/2022 6:19 PM
68	<b>Shoulder/Bike Lane</b> <b>Signage/Maps</b> A real bike lane and more signs	7/5/2022 6:13 PM
69	<b>Shoulder/Bike Lane</b> A wider bike lane after it narrows outside of the village would help, especially if it could continue north on route 2.	7/5/2022 6:01 PM
70	<b>Bike Path</b> More safe bike paths that are separated from cars or completely independent bike routes	7/3/2022 2:48 PM
71	<b>Driver Behavior</b> Enforce speed limits on Route 2 and other roads. Regulate truck traffic, especially on South Street. I support local farmers but the large diesel trucks that frequently haul liquid manure and silage up and down South Street at high speed are a danger to cyclists and pedestrians. These trucks also use jake breaks; this unsafe and unpleasant situation has	7/2/2022 12:55 PM

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increased over the past few years and it is not at all appropriate for a narrow road in a residential neighborhood.

72	<b>Shoulder/Bike Lane</b> <b>Wider Roads</b>	Expanding the roads; they're too narrow. At the very least, bike lanes should be added.	6/30/2022 4:16 PM
73	<b>Shoulder/Bike Lane</b>	Bike lanes along South Street from Martin Rd to Route 2, and along Route 2 through Keeler Bay Village	6/29/2022 6:33 PM
74	<b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	The area around the bike ferry has hills. It would be good for people to know that so they can gauge their ability to ride safely. Having bike lanes would improve sharing the road.	6/29/2022 12:09 PM
75	<b>Bike Path</b>	Create bike paths that do not go on RT2	6/29/2022 9:10 AM
76	<b>Shoulder/Bike Lane</b>	Bike Lanes!	6/28/2022 11:16 AM
77	<b>Better Biker Behavior</b>	I think the roads are pretty good. Most of the problems lie with the visiting cyclists. I'm a local and an avid cyclist. I'm frequently embarrassed by behavior I see. Perhaps some enforcement or cajoling of cyclists is in order.	6/27/2022 8:03 PM
78	<b>Shoulder/Bike Lane</b>	Adding a bike lane to 314.	6/27/2022 4:37 PM
79	<b>Bike Path</b> <b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	wider bike lanes with painted bike icons and "please ride single file when traffic present" signs. signage to encourage riding routes other than Rt 2 where possible. Signage or encouragement for bike ferry riders to ride single file especially up the south st. hill (near westshore turn) where vehicle traffic can't see them. Potentially an alternative route from Martin road to South to avoid the blind hill	6/27/2022 10:36 AM
80	<b>Bike Path</b>	Develop rail trail if possible with fish and wildlife . Consider Canadian Petite Train du Nord as example	6/27/2022 9:41 AM
81	<b>Other</b>	South Hero is one of the safest places to bike that I know of. Rt 2 has very generous and well maintained shoulders. And the side roads are also well maintained, safe and very enjoyable to ride on.	6/27/2022 8:14 AM
82	<b>Bike Path</b>	Create alternate bike paths that are not on route 2.	6/26/2022 6:20 PM
83	<b>Shoulder/Bike Lane</b> <b>Wider Roads</b>	To pass the original plan of truly widening the road for an actual bike lane.	6/25/2022 5:09 PM
84	<b>Bike Path</b>	A separate, paved, biking sidewalk	6/24/2022 1:20 PM
85	<b>Bike Path</b>	Actual bike path	6/24/2022 10:47 AM
86	<b>Driver Behavior</b>	If cars were made to slow down to 25 miles per hour when passing bike riders and walkers.	6/22/2022 8:45 AM
87	<b>Bike Path</b> <b>Shoulder/Bike Lane</b> <b>Wider Roads</b>	Dedicated bike lanes where possible, widening roads for more shoulders and expanding rail trails.	6/21/2022 5:01 PM
88	<b>Shoulder/Bike Lane</b>	Bike lanes	6/21/2022 1:31 PM
89	<b>Shoulder/Bike Lane</b>	Bike lanes	6/20/2022 10:38 AM
90	<b>Better Biker Behavior</b> <b>Shoulder/Bike Lane</b> <b>Wider Roads</b>	Widen the roads for a legitimate bike lanes. Have sheriffs visibly patrol the route from the bike path on to Martin Road and thru South Street to avoid bikers stringing themselves entirely across one lane of traffic.	6/19/2022 8:35 PM
91	<b>Bike Path</b> <b>Shoulder/Bike Lane</b>	Create designated bike paths on the main roads. That money spent to improve South Street was a waste - it is still too narrow and dangerous for kids to bike. I also think we should push to gain access to the rail bed for a true rail-trail (similar to Lamoille)	6/19/2022 2:52 PM
92	<b>Better Biker Behavior</b> <b>Bike Path</b> <b>Other</b>	Paving most roads. Asking bikers to follow the rules of biking and be aware that roads are for cars as well. Try to continue the bike path (along the old railroad) through south hero.	6/16/2022 1:22 PM
93	<b>Other</b> <b>Shoulder/Bike Lane</b>	A wide bike lane and sidewalk all the way from rt. 2 in the village to the end of South Street!!! Our lives and our long term health depend on walkable communities.	6/16/2022 1:17 PM

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94	Other Shoulder/Bike Lane	1) Widen shoulders for designated bike lines in each direction on Route 314 (coordinate with VT DOT and Grand Isle) from the ferry to the Route 2 junction (current construction site) and revisit grant funding for bike lanes on heavily travelled South Street north of the Martin Road (access to bike causeway) to Route 2 intersection as a critical safety issue for bicyclists and vehicular traffic. I feel that this is such an important town and regional planning issue that the town should pave part the road right of way land, using eminent domain laws if necessary to achieve the common good. I have been very upset that some private landowners on South Street we're able to prevent the development of bike lanes in the most recent repaving, with some idea that bike traffic would be reduced safety hazard presented by narrow travel lanes. If we want young children and families to be more physically active, we need to improve our bicycling infrastructure. The narrow lanes and poor lines of sight near the West Shore Rd intersection is very dangerous, especially because drivers may enter the oncoming lane when passing slow bicyclists pedaling up the hill. 2) provide town bike racks (perhaps with grant funding if necessary) at popular locations in town to allow people to lock their bikes securely when stopping for shopping, meals, or errands.	6/16/2022 10:00 AM
95	Driver Behavior Other Shoulder/Bike Lane	Enforcement of speed limits for automobiles and trucks, bike lanes or sharrows on main roads - connecting the ferries (bike and car) and the state parks (sandbar and grand isle and dunes)	6/15/2022 5:00 PM
96	Better Biker Behavior	Obey biking rules.	6/15/2022 4:20 PM
97	Other	Stop making it attractive to bike on roads that do not allow for sufficient bike lanes. Keep bikers on Route 2 only.	6/15/2022 2:50 PM
98	Other	Pavement.	6/14/2022 10:41 PM
99	Shoulder/Bike Lane	I live at the very end of South Street and would REALLY like to see a bike/walking path put in. It doesn't need to be on both sides of the street; it just needs to allow for 2-way bike/pedestrian traffic. It is very unsafe having to constantly drive over the double yellow line to pass walker/bikers.	6/14/2022 4:38 PM
100	Better Biker Behavior	Be required to take a bike safety course prior to using the roads for bike riding. Be required to wear reflective clothing with flashers on the back of the bike.	6/14/2022 12:11 PM
101	Driver Behavior	Get people to slow down	6/14/2022 10:12 AM
102	Better Biker Behavior	Fewer bikers Who tend to act as if they on the road, more police presence to ensure that bikers are obeying traffic laws	6/14/2022 8:51 AM
103	Shoulder/Bike Lane Signage/Maps	More signs indicating that drivers need to be aware of bikers. Whenever possible designated bike lanes.	6/14/2022 7:29 AM
104	Other Shoulder/Bike Lane	Larger bike lanes. Periodic edge cleaning	6/14/2022 6:23 AM
105	Better Biker Behavior Driver Behavior	Common sense and vigilance by both bikers and motorists.	6/13/2022 10:17 PM
106	Bike Path Signage/Maps	Clear markings on roadways, expansion of the Island Line trail	6/13/2022 8:36 PM
107	Shoulder/Bike Lane	bike lanes where possible	6/13/2022 6:37 PM
108	Bike Path	Putting a bike path through the old railroad path and keeping most of the bikes off our roads, especially south street and west Shore road	6/13/2022 6:35 PM
109	Shoulder/Bike Lane	More bike lanes	6/13/2022 6:23 PM
110	Other	Avoid main roads.	6/13/2022 6:23 PM
111	Other Shoulder/Bike Lane	Make wider shoulders and also require bike riders to register their bikes like cars. We have to make improvements, but the bikers aren't paying for it the tax payers are.	6/13/2022 5:52 PM
112	Bike Path Shoulder/Bike Lane	When South Street was rebuilt it should have included a bike lane on one or both sides, but connecting the old railway all the way into town with little off shoots to get to places like allenholm and sebs	6/13/2022 5:51 PM
113	Better Biker Behavior	If the bikers would follow the rules of the road - ie. ride single file especially on Rte 2!	6/13/2022 5:50 PM
114	Shoulder/Bike Lane	wider bike lanes	6/13/2022 2:50 PM

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115	<b>Bike Path</b> <b>Other</b> <b>Shoulder/Bike Lane</b>	designated bike lanes on all roads leading to and from the bike ferry . and extension of the bike path to connect directly to West shore rd. bike lanes on all of route 2 and Ferry Rd leading to the ferry. reduced speed limits on local town roads to 30mphs throughout the town and village areas.	6/13/2022 9:32 AM
116	<b>Shoulder/Bike Lane</b>	Add pedestrian paths along major roads	6/11/2022 8:54 PM
117	<b>Shoulder/Bike Lane</b> <b>Wider Roads</b>	Shoulders, wider roads.	6/11/2022 11:36 AM
118	<b>Shoulder/Bike Lane</b>	Sides of roads specified for bikes. Unsure if possible.	6/11/2022 9:33 AM
119	<b>Wider Roads</b>	If the roads were wider.	6/10/2022 9:29 PM
120	<b>Shoulder/Bike Lane</b>	Larger paved shoulders	6/10/2022 5:07 PM
121	<b>Better Biker Behavior</b> <b>Bike Path</b>	More designated paths for bikers. More enforcement of bikers - the # who go three + wide on South St is dangerous.	6/10/2022 3:36 PM
122	<b>Signage/Maps</b>	Clear bike lane markings on roads and crosswalks at key intersections	6/9/2022 8:10 PM
123	<b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	Bike lanes? More signage?	6/9/2022 7:31 PM
124	<b>Better Biker Behavior</b>	These bikers need to learn how to follow the rules of the road and pay attention to their surroundings! When there is a stop sign, they need to stop too! The issue is with the bikers not our community.	6/9/2022 7:23 PM
125	<b>Other</b>	no idea	6/9/2022 7:15 PM
126	<b>Other</b>	speed bumps on some of the newly paved roads, like WSR	6/9/2022 7:01 PM
127	<b>Bike Path</b>	Create bike paths away from vehicle lanes to reduce the possibility of accidents.	6/9/2022 6:26 PM
128	<b>Shoulder/Bike Lane</b>	Wide designated bike lanes would be very helpful.	6/9/2022 4:01 PM
129	<b>Driver Behavior</b> <b>Other</b>	Continued strict enforcement of speed limits, reduced limits on some roads, police presence throughout weekend	6/9/2022 3:28 PM
130	<b>Shoulder/Bike Lane</b>	Make sure the shoulders are wide enough.	6/9/2022 3:19 PM
131	<b>Better Biker Behavior</b>	Bikes (like cars) should be required to ride single file.	6/9/2022 11:34 AM
132	<b>Other</b> <b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	wide shoulders, free of debris with well painted fog lines. No curb bump outs. Signage to facilitate using back roads. Road signs with names for both directions at each intersection. Small rest stop parks with port-o-let and water fountain. That failing, an online and paper version map of bathroom facilities and free water sources.	6/8/2022 9:18 PM
133	<b>Other</b> <b>Shoulder/Bike Lane</b>	Maintain our current sidewalks and road shoulders. They are overgrown with weeds and dirt making them unsafe and less usable.	6/8/2022 6:05 AM
134	<b>Bike Path</b> <b>Signage/Maps</b>	Signs to encourage them to stay single file for safety. Landon Rd is a beautiful place to walk/bike but is very dangerous due to hills and curves. I doubt land-owners would agree but possibly a separate paved vs. well cared-for pebble bike/walk path for safety.	6/7/2022 10:27 AM
135	<b>Bike Path</b> <b>Other</b>	bike path on South Street and Ferry Road. Traffic calming measures in villages, medians, landscaping etc.	6/6/2022 9:06 PM
136	<b>Signage/Maps</b>	Better / More signage-- encouraging both bicyclists and drivers to share the road	6/6/2022 8:34 PM
137	<b>Better Biker Behavior</b>	Not ride three abreast...	6/6/2022 8:27 PM
138	<b>Bike Path</b>	Bike paths off roadway.	6/6/2022 8:11 PM
139	<b>Shoulder/Bike Lane</b>	Bike lane	6/6/2022 3:44 PM
140	<b>Better Biker Behavior</b> <b>Driver Behavior</b>	Educate bikers AND drivers of each other's risks and responsibilities keep roads in REASONABLE condition for biking	6/6/2022 9:01 AM
141	<b>Other</b> <b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	Wide shoulders, biking signs, lower speed limits	6/5/2022 9:31 PM

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142	<b>Bike Path</b>	Extend railroad path from Martin road to west shore, and improve rail road path width from west shore road north to route 2	6/5/2022 5:23 PM
143	<b>Shoulder/Bike Lane</b>	A bike lane	6/5/2022 5:23 PM
144	<b>Shoulder/Bike Lane</b>	dedicated bike lanes	6/5/2022 3:09 PM
145	<b>Better Biker Behavior</b>	Riding single file	6/5/2022 8:33 AM
146	<b>Other</b>	Wwe	6/5/2022 6:52 AM
147	<b>Bike Path</b> <b>Other</b>	A bike path or sidewalks	6/4/2022 11:13 PM
148	<b>Shoulder/Bike Lane</b>	bike lanes on South Street	6/4/2022 5:05 PM
149	<b>Shoulder/Bike Lane</b>	Wider shoulders.	6/4/2022 4:50 PM
150	<b>Better Biker Behavior</b> <b>Signage/Maps</b>	Clearly detailed signage detailing requirements for use of town roads and facilities.... Enforcement follow up!	6/4/2022 10:09 AM
151	<b>Bike Path</b>	Alternate trails.	6/4/2022 10:01 AM
152	<b>Shoulder/Bike Lane</b>	Bike lanes	6/4/2022 9:08 AM
153	<b>Other</b>	Well I would certainly forbid parking on the (rt 2) causeway in areas other than the cutouts. What a danger! Those sides serve as a bike lane and shouldn't be obstructed by parked cars over the bridge! Marking bike lanes on the sides of major routes would be a great idea but making bike lanes might be too expensive? I wouldn't vote it down but would try other options first	6/4/2022 9:08 AM
154	<b>Bike Path</b> <b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	Maintained bike lanes, recreational paths to connect resources. Better signage for bikers and motor vehicles	6/4/2022 7:53 AM
155	<b>Shoulder/Bike Lane</b>	bike lanes	6/4/2022 7:42 AM
156	<b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	Bike lanes and better signage reminders to stay single file.	6/4/2022 5:11 AM
157	<b>Better Biker Behavior</b>	Nothing. They are rude. They don't follow rules. They ride 2 wide. You see them laying down taking breaks on peoples lawns. What about helping the residents of South hero be able to enjoy their homes without all these bikers.	6/3/2022 8:30 PM
158	<b>Shoulder/Bike Lane</b> <b>Wider Roads</b>	Wider roads to make bike lanes	6/3/2022 8:13 PM
159	<b>Other</b>	Staying home	6/3/2022 7:20 PM
160	<b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	Wider shoulders and post more signs warning of riders. South St was redone a couple of years ago to make biker riders safer. We ended up with a joke, no improvements were made to make it safer for bikes or drivers.	6/3/2022 7:03 PM
161	<b>Bike Path</b> <b>Wider Roads</b>	South street needs to be wider or bike path.	6/3/2022 6:53 PM
162	<b>Bike Path</b> <b>Other</b>	Designated bike paths or sidewalks.	6/3/2022 6:39 PM
163	<b>Bike Path</b> <b>Shoulder/Bike Lane</b> <b>Signage/Maps</b>	Clear signage for bikers as they come off the ferry to ride single file. Obviously developing a better lane on South Street for bikers and walker would have been good. Getting access to the rail trail from Martin's road to west shore would great help with bike safety. And signage on all the roads to remind bikers to ride single file.	6/3/2022 6:22 PM
164	<b>Shoulder/Bike Lane</b>	More bike lanes! We just bought bikes - I haven't ridden in years but am trying to do better for the environment and bikes are a great way to do that.	6/3/2022 6:16 PM
165	<b>Other</b> <b>Shoulder/Bike Lane</b>	Designated bike lanes or sidewalks.	6/3/2022 6:15 PM
166	<b>Bike Path</b>	Move the path to the orchards.	6/3/2022 6:10 PM
167	<b>Shoulder/Bike Lane</b>	Designated bike lanes on the busier roads ie: route 2 etc.	6/3/2022 6:08 PM
168	<b>Shoulder/Bike Lane</b>	wider road with designated bike lane or shoulder	6/3/2022 5:53 PM
169	<b>Shoulder/Bike Lane</b>	A shoulder on South Street. Traffic calming and regulation on RT 2.	6/3/2022 5:29 PM

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170	<p><b>Driver Behavior</b> <b>Other</b> Identify parking areas. Bad driving is a huge issue. Drivers on Route 2 consistently drive on the shoulder rather than slow down behind a turning car. One day a biker will pay for that. Have never seen a police response to that.</p>	6/3/2022 5:24 PM
171	<p><b>Other</b> No parking along Route 2</p>	6/3/2022 5:24 PM
172	<p><b>Other</b> <b>Shoulder/Bike Lane</b> More opportunities to bike away from South St. It is sometimes dangerous when the ferry is running. Or put in a real bike lane.</p>	6/3/2022 5:15 PM
173	<p><b>Better Biker Behavior</b> If they rode in single file and stayed to the right. Also, if they used proper hand signals when turning.</p>	6/2/2022 2:06 PM

# Q17 What should the role of bike-centric tourism be in South Hero?

Answered: 146 Skipped: 61

#	RESPONSES	DATE
1	<b>Signage/Maps</b> More "share the road" signs	7/26/2022 5:08 PM
2	<b>Support</b> Friendly and encouraging	7/26/2022 5:03 PM
3	<b>Local Business</b> <b>Signage/Maps</b> Businesses providing clean places to stop + store bikes while visiting. Position signs to attractions via the safest routes	7/26/2022 3:37 PM
4	<b>Bike Path/Bike Lane</b> Start w/bike path on South st. to handle bike traffic	7/26/2022 3:26 PM
5	<b>Bike Path/Bike Lane</b> Provide bike paths first - then build on bike tourism The bike congestion can be overwhelming at times. This has caused a decrease in my own biking during summer months	7/26/2022 3:10 PM
6	<b>Support</b> It's a great boon to the Islands!	7/16/2022 10:30 PM
7	<b>Support</b> I think that the Town of South Hero should support bike tourism as this is a great place to bike and it gets people off the couch, helps them to be healthy, which helps all of us.	7/16/2022 4:30 PM
8	<b>Support</b> Support it	7/16/2022 2:41 PM
9	<b>Local Business</b> Increase revenue. Have Local Motion set up with the town places to stop,shop , and eat.	7/16/2022 2:39 PM
10	<b>Local Business</b> <b>Other</b> Not sure what this question is asking. People who bike to south hero are always looking for places to eat though, and we dont have many. Also public restrooms/port-o-lets are an issue.	7/16/2022 12:06 AM
11	<b>Support</b> Should be included as a key element in South Hero tourism	7/15/2022 10:59 AM
12	<b>Better Biker Behavior</b> <b>Support</b> Bikes are welcome but observe rules of the road. Example: ride single file, roads are narrow.	7/15/2022 7:48 AM
13	<b>Local Business</b> more tourists mean more spending at local businesses and adds to the 1% tax revenue	7/14/2022 6:03 PM
14	<b>Local Business</b> Increase income for restaurants and other business	7/14/2022 12:18 PM
15	<b>Local Business</b> <b>Other</b> <b>Support</b> If it makes sense financially, I would love to see us look toward increasing it by improving bike access to town, offering small conveniences along bike routes (e.g., portable toilets in certain locations, maybe access to water, etc.), and perhaps supporting businesses in catering to bike tourists.	7/14/2022 11:47 AM
16	<b>Signage/Maps</b> Maps/routes connecting to other towns and destinations.	7/14/2022 9:38 AM
17	<b>Support</b> We should welcome and support it, and publicly encourage motorists to be considerate of bikers.	7/14/2022 9:30 AM
18	<b>Bike Path/Bike Lane</b> <b>Support</b> Primary, Bikes are quiet, low carbon footprint, slow moving, healthy lifestyle. It would be great to have more bike lanes more bike racks and less cars in South Hero. Particularly on the back roads. keep the cars on Route 2.	7/14/2022 8:31 AM
19	<b>Support</b> it's a wonderful way to bring people to the islands	7/14/2022 4:22 AM
20	<b>Other</b> <b>Signage/Maps</b> educating bikers on heavy traffic areas and giving them options to avoid these areas	7/14/2022 2:31 AM
21	<b>Better Biker Behavior</b> Bikers need to learn how to share the road with cars.	7/13/2022 11:46 PM
22	<b>Support</b> It's become an important draw to the area and should remain.	7/13/2022 9:58 PM
23	<b>Other</b> Idk	7/13/2022 9:37 PM



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24	<b>Local Business</b> <b>Signage/Maps</b> We need more restaurants! We need signage - I bet most bikers would say South Hero isn't the friendliest place to be, as far as traffic, restrooms or options for food, hotel rooms, etc. It is beautiful though!	7/13/2022 8:31 PM
25	<b>Other</b> ?	7/13/2022 8:31 PM
26	<b>None/Do Not Support</b> There shouldn't be any.	7/13/2022 8:29 PM
27	<b>Better Biker Behavior</b> <b>Bike Path/Bike Lane</b> If you're going to advocate for it make it safe. Bikers do not respect the roads and need a dedicated bike path	7/13/2022 8:26 PM
28	<b>Other</b> Unsure	7/13/2022 7:35 PM
29	No opinion	7/13/2022 6:57 PM
30	<b>Bike Path/Bike Lane</b> <b>Support</b> Widening south street. You have a gold mine here. Stop Restricting it	7/13/2022 6:46 PM
31	<b>Support</b> Supporting those who utilize bicycles for exercise and commuting, in a non-polluting way! Admiration for the ability and motivation to get off the couch!!	7/13/2022 6:04 PM
32	<b>Local Business</b> <b>Other</b> I did not know but let me say this...they do not contribute a thing, maybe buy a ice cream, apple, donut or a lunch.	7/13/2022 5:41 PM
33	<b>Other</b> Pay to park somewhere. They use our roads, take our time while we're waiting to drive around them	7/13/2022 5:33 PM
34	<b>Support</b> Should play a major role	7/13/2022 5:31 PM
35	<b>Support</b> Very important	7/13/2022 5:28 PM
36	<b>Other</b> <b>Support</b> People love it and I think there should be bike pumps and water stations.	7/13/2022 5:21 PM
37	<b>Signage/Maps</b> More proper street signs and labels for where things are at- we're at the end of south st and answer questions just about every day about where things are for people Turning around	7/13/2022 5:19 PM
38	<b>Other</b> don't understand the question !	7/8/2022 1:11 PM
39	<b>Other</b> no comment	7/6/2022 7:45 PM
40	<b>Local Business</b> Promoting local businesses.	7/6/2022 2:49 PM
41	<b>Plan/Control Amount</b> Not sure of the question- I guess promote bike tourism but also control vai rules and safety guidelines.	7/6/2022 11:01 AM
42	<b>Plan/Control Amount</b> Understand the problems and a person to communicate problems to.	7/6/2022 7:39 AM
43	<b>Plan/Control Amount</b> Control of bike traffic.	7/6/2022 12:19 AM
44	<b>Bike Path/Bike Lane</b> <b>Signage/Maps</b> Promote ease use: Car Parking location to launch a bike ride from, bike path/lane separate from cars, accessible information on destinations / places to see and things to do.... destinations...	7/5/2022 9:46 PM
45	<b>Other</b> Unsure	7/5/2022 9:45 PM
46	<b>Support</b> I don't mind the bikes.	7/5/2022 9:19 PM
47	<b>Plan/Control Amount</b> limited	7/5/2022 8:19 PM
48	<b>Local Business</b> Visiting the orchards and other businesses that sell food & drinks.	7/5/2022 7:34 PM
49	<b>Bike Path/Bike Lane</b> If you commit to do this, widen south street. I think it's a great idea to make our little town as welcoming as possible, but we do a disservice with how narrow/dangerous south street is. Martin road is even wider than south street now! Make a bike path if a wider road is not an option!	7/5/2022 7:23 PM
50	<b>Local Business</b> What else but to take as much money out of their wallets as possible	7/5/2022 6:47 PM
51	<b>Other</b> transportation. tourists are much quieter when they are on bikes	7/5/2022 6:19 PM
52	<b>Support</b> Making biking safe and accessible	7/5/2022 6:13 PM

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53	<b>Support</b> It seems like something that ought to be encouraged and enhanced.	7/2/2022 11:36 AM
54	<b>Plan/Control Amount</b> Although it's annoying to drive around bikers, they certainly support our local economy. We should cater to bikers while ensuring that they aren't a pest to local drivers.	6/30/2022 4:16 PM
55	<b>Local Business</b> <b>Support</b> Should be encouraged to support local businesses	6/29/2022 6:33 PM
56	<b>Local Business</b> <b>Plan/Control Amount</b> I'm sure bikers bring business to our community. And the bring a challenge for sharing the road. Maybe we could use a permit system so we maintain the capacity that feels comfortable to our town.	6/29/2022 12:09 PM
57	<b>Support</b> Part of a Burlington to Montreal route	6/29/2022 9:10 AM
58	<b>Local Business</b> <b>Support</b> Make it pleasant and welcoming for bicyclists. My anecdotal evidence as a former village business owner is that it brought dollars to the town. And the bicyclists come back later by car and spend money.	6/28/2022 11:16 AM
59	<b>Better Biker Behavior</b> I'm glad that more people are on bikes, generally. There is a decent amount of negligent, unsafe, discourteous, etc. behavior by cyclists. I'm not sure what benefit I get from these folks coming to town and I think that the negative behavior ends up reflecting back on me as a local cyclist. A more tangible benefit for the town as a whole, rather than a small group of private businesses would be good.	6/27/2022 8:03 PM
60	<b>Bike Path/Bike Lane</b> <b>Support</b> Making sure there's adequate shoulder areas for bikes and encouraging bike traffic.	6/27/2022 4:37 PM
61	<b>Local Business</b> <b>Signage/Maps</b> <b>Support</b> It is a great way to explore this islands and have visitors support local businesses. Online bike maps of points of interest and	6/27/2022 10:36 AM
62	<b>Better Biker Behavior</b> Develop campaign for cyclists to take responsibility for their behavior when entering a community. We are not exhibits for them to invade	6/27/2022 9:41 AM
63	<b>Plan/Control Amount</b> It should be an important part of several attractions to South Hero but not interfere with the working agriculture.:	6/27/2022 8:14 AM
64	<b>Other</b> Safety for bikers and vehicles.	6/26/2022 6:20 PM
65	<b>Local Business</b> <b>Other</b> To encourage exercise and outdoor activity to residents as well as tourists. The bike tourists would help local businesses.	6/25/2022 5:09 PM
66	<b>Other</b> It should help contribute to the cost of creating separate paved bike roads	6/24/2022 1:20 PM
67	<b>Bike Path/Bike Lane</b> Bike path	6/24/2022 10:47 AM
68	<b>Other</b> not sure	6/22/2022 8:45 AM
69	<b>Local Business</b> <b>Other</b> Ensuring safety and encouraging use of local businesses.	6/21/2022 5:01 PM
70	<b>Other</b> To make roads safer for biking	6/21/2022 1:31 PM
71	<b>Bike Path/Bike Lane</b> Bike lanes	6/20/2022 10:38 AM
72	<b>Plan/Control Amount</b> It should be to provide necessary support seasonal income for local businesses but not to the exclusion of the needs/living quality of year round residents who live on/near the bike path and its main route in town.	6/19/2022 8:35 PM
73	<b>Support</b> I'm not sure what you're asking, but I support bike-centric tourism.	6/19/2022 2:52 PM
74	<b>Local Business</b> <b>Support</b> To provide safe space for bikers, pedestrians and cars alike. To allow bikers to access all island areas and businesses.	6/16/2022 1:22 PM
75	<b>Support</b> Of high value and high importance to the community. Bikes and walking paths are great and should be promoted as much as possible.	6/16/2022 1:17 PM
76	<b>Signage/Maps</b> Providing maps for safe access to points of interest and merchants in town. Developing and annually updating on line information for bicyclists, including restrooms available (Jolley's, Worthen library), food and meals, and information on merchants and weekly farmers' market.	6/16/2022 10:21 AM
77	<b>Support</b> Support - we need a northern hub for local motion, more support for the bike ferry and connecting the rail trail	6/15/2022 5:00 PM

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78	Better Biker Behavior	encourage bikers to ride safely.	6/15/2022 10:58 AM
79	None/Do Not Support	To not promote it. We don't have the roads for bikers. They are rude, take up the entire roadway and you see them laying down on peoples yards taking a break. Inconsiderate	6/15/2022 2:50 PM
80	Local Business	Signage/Maps We should direct bikeways through mapping and signage - and we should be encouraging business development along these bikeways to serve visiting bike enthusiasts.	6/14/2022 10:41 PM
81	Signage/Maps	Good signage	6/14/2022 8:29 PM
82	Local Business	Support i think it's a great idea and could help local businesses	6/14/2022 4:38 PM
83	Better Biker Behavior	It should be part of the safety course required for bikers.	6/14/2022 12:11 PM
84	Local Business	To bring in environmentally friendly commerce	6/14/2022 10:12 AM
85	Other	Accountability. Recognition that not every person in the Island bikes respond of the influx of bikers when some people are just trying to make it to work or appointments or where they need to go	6/14/2022 8:51 AM
86	Better Biker Behavior	Keeping the bikers aware that we are a community and they need to be aware that there are still working farms and people who live here. It doesn't exist for their pleasure. There is a respect for the community and its stewardship of our land.	6/14/2022 7:29 AM
87	Support	Keeping spring and fall access to bike ferry would increase the bike season. Encouraging bike tourism to visit our few local eateries should continue.	6/14/2022 6:23 AM
88	None/Do Not Support	Not sure that our tourism needs to be or should be "centered" on bicyclists. If someone thinks that day bicyclists add a substantial amount to our local economy, I think they are overrating it. My guess is that our local economy is affected appreciably more by fishing and by the variety of concerts, art shows and other cultural events that take place throughout the summer and fall.	6/13/2022 10:17 PM
89	Other	Not sure what you mean	6/13/2022 8:36 PM
90	Support	Not sure what this question means but bike centric tourism should be encouraged.	6/13/2022 6:37 PM
91	None/Do Not Support	Least amount possible, the bikers do not buy anything out here anyways	6/13/2022 6:35 PM
92	Support	Should be encouraged	6/13/2022 6:23 PM
93	Local Business	Pop up businesses, food trucks, bike centric businesses along bike routes.	6/13/2022 6:23 PM
94	None/Do Not Support	as it is now its only a nuisance and something needs to be done as its getting worse every summer, some of us have to work on these roads and the tourists just dont care, It really is the worst part of being and islander	6/13/2022 5:51 PM
95	Other	Supplemental	6/13/2022 2:50 PM
96	Plan/Control Amount	investment in infrastructure first, and then advertising support.	6/13/2022 9:32 AM
97	Plan/Control Amount	Embrace and control it so you can keep it beautiful	6/11/2022 8:54 PM
98	Other	Only available if better roads for South Hero.	6/11/2022 9:33 AM
99	Local Business	Bringing in money	6/10/2022 9:29 PM
100	Local Business	Ability to enjoy the views, beauty, and small business of South Hero.	6/10/2022 3:36 PM
101	Support	Supportive	6/9/2022 8:10 PM
102	Better Biker Behavior	None/Do Not Support We DONT NEED IT! Bikers completely block Martin Road with their vehicles to use the bike path and it is UNSAFE for residents. They are rude, leave trash, don't obey the laws, and this town/county does NOT have the law enforcement resources to fix these issues. Enough with the bikers! They need to park their vehicles in Burlington, come visit here, then go back!	6/9/2022 7:23 PM
103	Other	not sure	6/9/2022 7:15 PM

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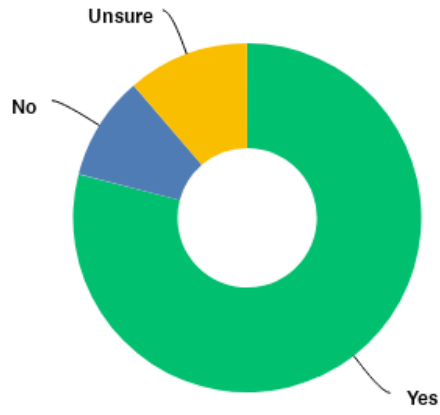
104	Local Business Support	It's a good thing to have bikers come, but they need food options, restrooms and places to park	6/9/2022 6:26 PM
105	Other	Advisory only	6/9/2022 6:26 PM
106	Other	Just what it is now, a summer influx of limited numbers of tourists.	6/9/2022 4:01 PM
107	Support	Seems pretty successful	6/9/2022 3:28 PM
108	Local Business	It's good for small businesses.	6/9/2022 3:19 PM
109	Local Business	to keep Vermonters on the move, to bring business to local businesses, to showcase the beauty of these islands	6/8/2022 9:18 PM
110	Other	Safety	6/8/2022 6:05 AM
111	Other	I have no idea. All the riders are somewhat of a nuisance, but we like riding our bikes also so...	6/6/2022 9:06 PM
112	Local Business	Encourage local businesses to offer cyclist oriented services...e.g. free water refills, way-stops, tire pumps, ???	6/6/2022 8:34 PM
113	Other	No sure	6/6/2022 8:27 PM
114	Plan/Control Amount	Controlled.	6/6/2022 8:11 PM
115	Support	Drive people to the islands	6/6/2022 3:44 PM
116	Other	Would need to know what that involves to comment	6/6/2022 9:01 AM
117	Bike Path/Bike Lane	See 16, keep bike tourism off local roads by leveraging better path on Rail bed.	6/5/2022 6:27 PM
118	Bike Path/Bike Lane	dedicated bike lanes	6/5/2022 3:09 PM
119	Local Business	Economic stimulation. It also creates a recreational atmosphere.	6/5/2022 8:33 AM
120	Plan/Control Amount	Planned	6/5/2022 6:52 AM
121	Other	I don't know but it would be great to make it safer to bike on the roads, I would invite more friends up to bike.	6/4/2022 11:13 PM
122	Better Biker Behavior Other	it should be encouraged as long as bikers ride single file Rentals of e-bikes	6/4/2022 5:05 PM
123	Support	Welcoming.	6/4/2022 4:50 PM
124	Plan/Control Amount	Clearly defined town requirements.	6/4/2022 10:09 AM
125	Support	To reduce our carbon footprint while encouraging tourism.	6/4/2022 10:01 AM
126	None/Do Not Support	Very limited	6/4/2022 9:39 AM
127	None/Do Not Support	minimal	6/4/2022 9:08 AM
128	Other	I just read that Burlington is removing parking spaces on Main St to accommodate bikers which is such a dumb and hostile idea. So nice to want to be bike friendly but that's too extreme and hostile to cars that need a place to be. If parking is difficult, people won't go there. I'm all for bike improvements that aren't stupid. :)	6/4/2022 9:08 AM
129	Support	Bikers should feel welcome and want to return.	6/4/2022 7:53 AM
130	Better Biker Behavior Signage/Maps	many cyclists are not very good about sharing the road. They often ride 4 abreast and stop in the middle of the road to look at phone, directions, take photos ... so cyclist education/signs , bike lanes ... might help.	6/4/2022 7:42 AM
131	None/Do Not Support	To get bikers to go elsewhere.	6/3/2022 8:30 PM
132	Support	It's pretty good right now, I think	6/3/2022 8:13 PM
133	None/Do Not Support	None	6/3/2022 7:20 PM
134	Local Business Other	Safe conditions. access to businesses.	6/3/2022 6:53 PM

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135	<b>Bike Path/Bike Lane</b> Connecting to bike paths in other counties.	6/3/2022 6:22 PM
136	<b>Other</b> Not sure what this is asking?	6/3/2022 6:22 PM
137	<b>Support</b> I think it should play an important role. Biking is a healthy and environmentally friendly activity, so it's good to encourage in general - and the bike ferry makes this a great place to capitalize on bike-centric tourism without creating lots of extra car and truck traffic.	6/3/2022 6:16 PM
138	<b>Bike Path/Bike Lane</b> Connecting the bike paths in county to those in other counties.	6/3/2022 6:15 PM
139	<b>Other</b> Explore the island and leave enough energy in the biker to get back to Burlington or spend the night at a campsite.	6/3/2022 6:10 PM
140	<b>Support</b> Encouraging. Minimal enviromental impacts from bike traffic. Economic plus.	6/3/2022 6:08 PM
141	<b>Support</b> What is bike-centric tourism??? Bikers from other areas are and should be welcome in South Hero. I dot believe we are overrun with bike visitors in the summer - I bike often and enjoy seeing others on the road sight seeing & visiting various stops along the common biking roads. This is still the country, not a overly managed town with so many rules & regulations that discourage people from enjoying themselves.	6/3/2022 5:53 PM
142	<b>Local Business</b> <b>Support</b> Bikes are here, the summer businesses need to solicit their business. It's a major summer business base.	6/3/2022 5:29 PM
143	<b>Other</b> Other than parking, I don't see a problem. No action needed	6/3/2022 5:28 PM
144	<b>Support</b> Encouraged	6/3/2022 5:24 PM
145	<b>Local Business</b> <b>Support</b> Permitting people to enjoy the beauty of South Hero and connect them to local businesses.	6/3/2022 5:15 PM
146	<b>Local Business</b> To increase our local businesses' revenue. To increase awareness of South Hero's things to see & do such as visiting the Bicentennial Museum (a little gem in my opinion).	6/2/2022 2:06 PM

Q18 Would you or your family use a multi-use recreation path that was designed for walking/running, biking, etc.?



# Q19 How can South Hero be welcoming all people regardless of age, race, ethnicity, sexual orientation, gender identity or disability?

Answered: 144 Skipped: 63

#	RESPONSES	DATE
1	<b>Affordable Housing</b> More affordable housing	7/26/2022 5:08 PM
2	<b>Already Welcoming</b> I thought we were. Not sure why this is a question.	7/26/2022 4:45 PM
3	<b>Already Welcoming</b> I think we already are - maybe I am wrong?	7/26/2022 4:02 PM
4	<b>Events</b> <b>Other</b> Perhaps a welcome committee for all new residents to answer questions and extend invitations to cultural + related events	7/26/2022 3:37 PM
5	<b>Already Welcoming</b> I thought we were.	7/26/2022 3:26 PM
6	<b>Already Welcoming</b> Just be... don't make a big deal about it	7/26/2022 3:10 PM
7	<b>Accessibility</b> <b>Events</b> <b>Flags Signage Art</b> Accessible parking and accommodations whenever feasible, encouraging pride flags year round, cultural events and speakers at the library and at Folsom	7/16/2022 10:30 PM
8	<b>Kindness</b> <b>Other</b> Kindness and welcoming to all people, signage of speed limits so drivers also will be kind to bikers and walkers and private road owners.	7/16/2022 4:30 PM
9	<b>Kindness</b> Be nice	7/16/2022 2:41 PM
10	<b>Kindness</b> Be nice to all.	7/16/2022 2:39 PM
11	<b>Town Names</b> I personally think that White's beach should be re-named the South Hero Town Beach. It would be fine to have a historical sign discussing the White Family farm. I saw that this was very controversial last year, but I don't understand why some people get so upset over a name. I read a very compelling story how a visitor to South Hero felt that he was not welcome because the the name on the sign. I know the person who wrote the piece and it was eye-opening to me. I feel the same way about the old white meeting house, but again people seem to get very passionate about names.	7/16/2022 12:06 AM
12	<b>Already Welcoming</b> I think it already is and should continue to be.	7/15/2022 10:59 AM
13	<b>Other</b> Treat all people equally.	7/15/2022 7:48 AM
14	<b>Already Welcoming</b> I think the town does a good job here	7/15/2022 6:24 AM
15	<b>Other</b> I dont think its the Town of South Hero's role to do any "welcoming". Public policy makers like select boards for example should be very wary of picking winners and losers from lists like the one noted above	7/14/2022 6:03 PM
16	<b>Events</b> <b>Other</b> We need to stand up to the voices of hate I referenced earlier Parade themes Continue library focus on diversity Town wide events like Cheers and Cheese	7/14/2022 12:18 PM
17	<b>Other</b> <b>Town Names</b> I'm not sure where the renaming of White's Beach to South Hero Town Beach is, but if we're far enough along, it would be great to change the signage. (To be clear, I don't feel like there's anything inherently wrong with the name "White's Beach" except that it can feel unwelcoming to people of color even if it's not misunderstood, which I feel is plenty of reason to change it.) Other than that, perhaps the town could create a welcoming/diversity committee of community volunteers (easier to say than to get the right people for, I know) to advise on these issues going forward--unless there already is such a body?	7/14/2022 11:47 AM
18	<b>Already Welcoming</b> It already does	7/14/2022 9:38 AM
19	<b>Town Names</b> Changing the name of the Old White Meeting House... Seriously, anyone clinging to that needs to ask themselves why, and if the only answer is "that's what it's always been called" then it's time for a change.	7/14/2022 9:30 AM

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20	Already Welcoming	I do not think this is an issue. Our community is currently inclusive.	7/14/2022 2:31 AM
21	Already Welcoming	I think south hero is a pretty welcoming town to anybody.	7/14/2022 2:31 AM
22	Already Welcoming	I think South Hero is already welcoming.	7/13/2022 11:46 PM
23	Already Welcoming	This is a very broad question - we have no amenities or gathering places to be more welcoming that I can think of. The library is welcoming... Wally's is welcoming ... KBV is welcoming... Sebs is welcoming... The teachers at Folsom are amazing and welcoming and wonderful.	7/13/2022 9:18 PM
24	Other	Advertise in a variety of media.	7/13/2022 8:47 PM
25	Other	Stop saying "I am a fifth generation " or whatever number of generations. Each time I hear this makes me feel NOT included in this community. Furthermore, the select board should take into consideration the opinions of "non-natives", that would make us feel more welcome and respected.	7/13/2022 8:31 PM
26	Already Welcoming	I think it's fine the way it is. Too many people keep wanting to change it which then it's no longer South Hero.	7/13/2022 8:29 PM
27	Already Welcoming	This is not relevant people are people	7/13/2022 8:26 PM
28	Already Welcoming	Money talks. The color is green. We are welcoming. Designations causes problems	7/13/2022 7:48 PM
29	Other	Provide curriculum in the school and through the library and other available venues to promote awareness about the above.	7/13/2022 7:21 PM
30	Other	Really ????	7/13/2022 6:57 PM
31	Kindness	Just be kind	7/13/2022 6:46 PM
32	Other	Why is anyone not welcoming?!?!?	7/13/2022 6:04 PM
33	Already Welcoming	I think we do welcome many people and I feel we are a welcoming community.	7/13/2022 5:41 PM
34	Already Welcoming	Stay as is	7/13/2022 5:33 PM
35	Events	Hold forums at various location such as Library and Folsom School	7/13/2022 5:31 PM
36	Other	We have work to do. Not easy, but so important	7/13/2022 5:28 PM
37	Flags Signage Art	Post a sign that says we love all people.	7/13/2022 5:21 PM
38	Town Names	Eliminate potentially racist sounding names like old "white" meeting house.. whites beach etc.	7/11/2022 3:30 PM
39	Other	I don't know ! There is definitely a negative insular attitude of 'islanders' against 'outsiders' , visitors, summer people. That has not changed in the last 40 years !	7/8/2022 1:11 PM
40	Already Welcoming	I think we already do.	7/6/2022 5:11 PM
41	Already Welcoming	I hope we already are	7/6/2022 2:49 PM
42	Other	Have a welcome booth, create a map of businesses and sights to see.	7/6/2022 11:01 AM
43	Other	Lower cost property tax and better use of schools. I had my 2 children attend Folsom for 8 years and they were poorly educated, so I had to educate them with better usage of computers, math and reading	7/6/2022 7:39 AM
44	Other	Not necessarily.	7/6/2022 12:19 AM
45	Other	Bike path, separate from cars, with walking lanes and bike lanes (in both directions) like Canada has accomplished.....Networks of trails that connect communities (see Route Verde, Eastern Townships, Canada)	7/5/2022 9:46 PM
46	Already Welcoming	Don't change too much because then the quaintness will be gone. Don't change the history--(White's Beach or White Meeting House--educate instead.)	7/5/2022 9:19 PM
47	Already Welcoming	Laws already exist that protect those with these and other charecteristics, if need be.	7/5/2022 8:19 PM



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48	<b>Already Welcoming</b>	I assume there are no housing restrictions for any of these groups. clean that up if there is.	7/5/2022 8:08 PM
49	<b>Flags Signage Art</b>	Put up a sign welcoming all people to South Hero.	7/5/2022 7:34 PM
50	<b>Already Welcoming</b> <b>Events</b>	I think we do a pretty good job. Our community seems to be very kind to all people. I'm not sure what could be done. Maybe something at the library for the groups mentioned.	7/5/2022 7:23 PM
51	<b>Other</b>	By having more things like health care, pharmacy, major grocery store, business opportunities,	7/5/2022 6:49 PM
52	<b>Other</b>	Oh for god sake's just hang a rainbow flag and be done with it.	7/5/2022 6:47 PM
53	<b>Other</b>	First change this statement/question. It's othering. South hero has to have resources, education and opportunities for all peoples who want to live here. And we need to elect representatives that have dei as a focus of their work	7/5/2022 6:13 PM
54	<b>Affordable Housing</b>	Affordable housing, and by this I mean homes in the range of \$300,000-\$350,00	7/5/2022 6:07 PM
55	<b>Other</b>	I wish I had an answer.	7/5/2022 6:01 PM
56	<b>Town Names</b>	Remove the current sign at the town beach and put a new one up that says simply "South Hero Town Beach." Those who are partial to the name "White's Beach" can still refer to the beach by this name. The paranoid white folks should not get in the way of our town installing a sign that is welcoming and more accurate.	7/2/2022 12:55 PM
57	<b>Other</b>	Get the younger generations involved.	6/30/2022 4:16 PM
58	<b>Other</b>	not sure	6/29/2022 12:09 PM
59	<b>Events</b>	Community events	6/29/2022 9:10 AM
60	<b>Already Welcoming</b>	I think we do our best. We have a little of everything, albeit most people are white. But we are in Vermont...	6/28/2022 11:16 AM
61	<b>Affordable Housing</b>	Take actions to keep at least some housing affordable.	6/27/2022 8:03 PM
62	<b>Other</b>	Ban confederate and Trump flags.	6/27/2022 4:37 PM
63	<b>Other</b>	Zero tolerance for behavior that is not, education around these issues including redlining etc	6/27/2022 9:41 AM
64	<b>Other</b>	As an old white guy, I have no opinion.	6/27/2022 8:14 AM
65	<b>Events</b>	Support diverse events; recognize businesses that are welcoming,	6/26/2022 6:20 PM
66	<b>Affordable Housing</b> <b>Other</b>	By getting the housing prices to go down and increasing recreational options with adequate parking.	6/25/2022 5:09 PM
67	<b>Other</b>	Be sure everything in the bylaws or legislation from the past or current is inclusive	6/24/2022 1:20 PM
68	<b>Already Welcoming</b>	We are welcoming to everyone	6/24/2022 10:47 AM
69	<b>Events</b> <b>Flags Signage Art</b>	Thru the arts and perhaps events that focus on individual groups.	6/23/2022 8:16 AM
70	<b>Flags Signage Art</b>	fly inclusion flags along with the America Flag	6/22/2022 8:45 AM
71	<b>Flags Signage Art</b>	A public mural celebrating diversity and inclusion. Flying the progress Flag like the one at the Grand Isle School.	6/21/2022 5:01 PM
72	<b>Events</b>	Encourage diversity. Increase number of events related to diversity.	6/21/2022 1:31 PM
73	<b>Already Welcoming</b>	Already does	6/20/2022 10:38 AM
74	<b>Events</b>	Host events that would promote inclusion/tolerance such as Pride Month celebrations, Juneteenth observances, etc.	6/19/2022 8:35 PM
75	<b>Other</b>	Community organizations and boards should seek to include diverse viewpoints and membership.	6/19/2022 2:52 PM

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76	<b>Other</b> <b>Town Names</b> Continuing to provide access for all races, genders and humans with disabilities. And, be sensitive about when certain names offend groups, despite their history in the town.	6/16/2022 1:17 PM
77	<b>Flags Signage Art</b> <b>Other</b> Make it well known. The village center could have solar powered street lights that go off at 9 or 10 pm to support star gazing and other wildlife needs. Beautiful flags could be flown to support national holidays such as Black lives matter, LGBTQ+ pride days, Suffrage events, etc. Let's make it known that we welcome diversity	6/16/2022 1:17 PM
78	<b>Other</b> This is a very important priority for the town plan. Rather than having the ideas generated by older white males like me, the survey team needs to reach out to a diverse set of individuals who can articulate how a town can create a welcoming and affirming environment for all. I'm sure we can get input from organizations in Burlington and check with other towns who are working on diversity and inclusion.	6/16/2022 10:21 AM
79	<b>Other</b> Statements that we're welcoming and of support for everyone; prioritizing disadvantaged and minority and marginalized peoples access to services	6/15/2022 5:00 PM
80	<b>Already Welcoming</b> We are welcoming - look at the business owners we have right in town. Many are all of what is listed above.	6/15/2022 2:50 PM
81	<b>Already Welcoming</b> We already are. This is a stupid question.	6/14/2022 10:41 PM
82	<b>Kindness</b> Be accepting of each other	6/14/2022 8:29 PM
83	<b>Other</b> Figure out a way to increase the diversity of South Hero.	6/14/2022 4:38 PM
84	<b>Other</b> Lower the taxes to make housing more affordable. Raise taxes to short term property owners. Invite reasonably priced restaurants/cafes to the area	6/14/2022 12:11 PM
85	<b>Already Welcoming</b> We are	6/14/2022 10:12 AM
86	<b>Town Names</b> Our public beach named Whites beach needs to be made clear that it is open to all! Perhaps a sign which reads: "Welcome all the South Hero, a diverse community" or some such.	6/14/2022 7:29 AM
87	<b>Already Welcoming</b> Not sure why this question is even being asked. I view the South Hero community as generally a very upstanding group of citizens with good character and decent morals, who are already "welcoming" to everyone but criminals.	6/13/2022 10:17 PM
88	<b>Town Names</b> Change the beach's name!!!	6/13/2022 8:36 PM
89	<b>Kindness</b> Remind people to be friendly to everyone.	6/13/2022 6:37 PM
90	<b>Already Welcoming</b> I believe that it already is	6/13/2022 6:35 PM
91	<b>Already Welcoming</b> It already is	6/13/2022 6:23 PM
92	<b>Affordable Housing</b> More affordable housing	6/13/2022 6:23 PM
93	<b>Other</b> Eliminate discriminatory policies, if any.	6/13/2022 6:23 PM
94	<b>Already Welcoming</b> WE do not need to actively be inviting them, they can come and freely move about town without harassment or discomfort already. I dont think South hero needs to be a place waving flags for every different type of person. We are all humans and we are all welcome here and everyone who comes here and lives here already knows that.	6/13/2022 5:51 PM
95	<b>Already Welcoming</b> Do we not welcome them now?	6/13/2022 5:50 PM
96	<b>Other</b> Use common sense	6/13/2022 2:50 PM
97	<b>Other</b> continue to teach our youngsters about inclusion, about being sensitive to how we are viewed by others who have experienced less inclusive enviroments.	6/13/2022 9:32 AM
98	<b>Flags Signage Art</b> Add a ally flag in the village (the rainbow chairs at the library carry a great gentle message)	6/11/2022 8:54 PM
99	<b>Other</b> Upgrading water, sewage, education, better small stores.	6/11/2022 9:33 AM
100	<b>Other</b> This is not even an issue. Just stop.	6/10/2022 9:29 PM
101	<b>Other</b> Just don't actively discriminate	6/10/2022 5:07 PM

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102	<b>Events</b> Community events, constant endorsement of the events occurring. Exposure is the best road to acceptance.	6/10/2022 8:00 PM
103	<b>Already Welcoming</b> We already are. We don't need to do anything different. Stop trying to make issues out of nothing. Let's keep this town the way it is. We have a very diverse store ownership in this town (lesbian, gay, male, female, Indian, Vietnamese,) we don't need to do anything different.	6/9/2022 7:23 PM
104	<b>Other</b> of course	6/9/2022 7:15 PM
105	<b>Already Welcoming</b> It is welcoming	6/9/2022 7:01 PM
106	<b>Kindness</b> By being the good people that we are, and not buying into the decisive hype that this topic usually generates.	6/9/2022 6:26 PM
107	<b>Other</b> No opinion.	6/9/2022 4:01 PM
108	<b>Other</b> Being more walkable!	6/9/2022 3:19 PM
109	<b>Already Welcoming</b> It can't. There are enough laws and regulation in place at the state and national levels.	6/9/2022 11:34 AM
110	<b>Already Welcoming</b> I think we already do this. We wave to people who drive by, we stop to help motorists who look confused, we offer employment based on ability rather than age, race, etc., we offer (via CIDER) rides to seniors and disabled. Public transportation would help.	6/8/2022 9:18 PM
111	<b>Kindness</b> Be kind to one another and treat others the way you want to be treated.	6/8/2022 6:05 AM
112	<b>Other</b> Grants for local (living in islands) business owners from BIPOC, etc communities.	6/7/2022 10:27 AM
113	<b>Already Welcoming</b> I think we are...but I don't know how to encourage people to move here if they are not seeing representation/community already?	6/6/2022 9:06 PM
114	<b>Already Welcoming</b> Isn't it already welcoming ?	6/6/2022 8:34 PM
115	<b>Already Welcoming</b> Not sure. I think we are pretty open now.	6/6/2022 8:27 PM
116	<b>Kindness</b> <b>Other</b> Be mindful	6/6/2022 9:01 AM
117	<b>Already Welcoming</b> I think we are already inclusive community. Don't see anything critical that needs to be done	6/5/2022 6:27 PM
118	<b>Affordable Housing</b> Lower housing prices	6/5/2022 3:09 PM
119	<b>Already Welcoming</b> This is not an issue	6/5/2022 8:33 AM
120	<b>Other</b> Mmmm	6/5/2022 6:52 AM
121	<b>Affordable Housing</b> <b>Events</b> <b>Other</b> More community events that don't cost money, a town "square" or gathering space, participation in pride month, allow development of multifamily house units, public transportation.	6/4/2022 11:13 PM
122	<b>Other</b> Follow the laws and the constitution!	6/4/2022 4:50 PM
123	<b>Other</b> Follow Constitution and current laws!	6/4/2022 10:09 AM
124	<b>Kindness</b> Simple civility.	6/4/2022 10:01 AM
125	<b>Already Welcoming</b> Aren't we already??	6/4/2022 9:08 AM
126	Community program and events	6/4/2022 7:53 AM
127	<b>Already Welcoming</b> I feel like South Hero is welcoming.	6/4/2022 7:42 AM
128	<b>Flags Signage Art</b> <b>Kindness</b> Ensure we all understand that we are all humans and must behave in a kind and civil manner towards each other. A sign would be nice too.	6/4/2022 5:11 AM
129	<b>Already Welcoming</b> By doing what we do now. We welcome everyone.	6/3/2022 8:30 PM
130	<b>Other</b> Having a community center	6/3/2022 8:13 PM
131	<b>Other</b> Any attempt would be lip service only.	6/3/2022 7:20 PM
132	<b>Other</b> <b>Town Names</b> Change name of town beach. Economic diversity in housing.	6/3/2022 6:53 PM

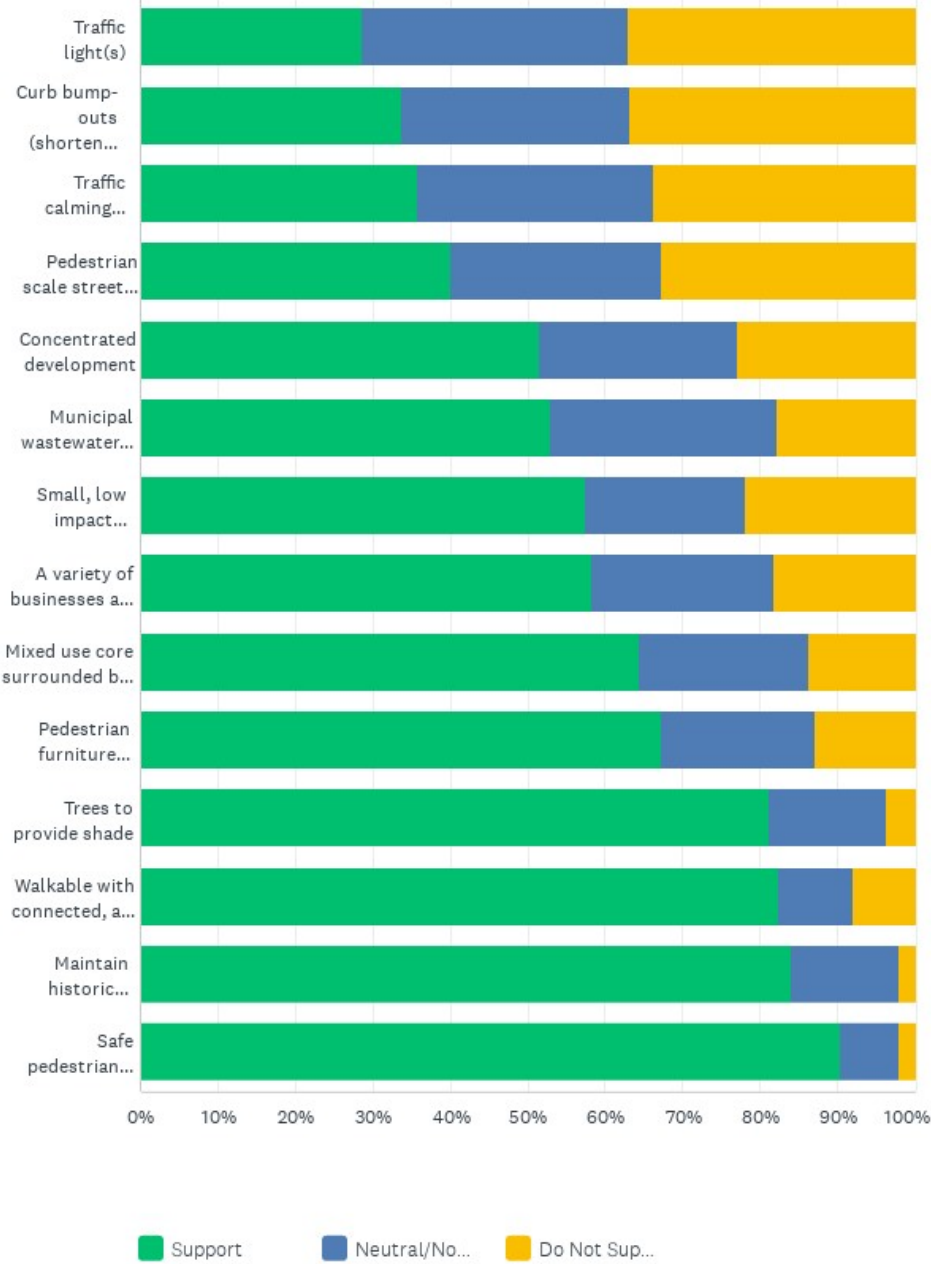
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recreational facility and other places to meet, get to know others.

133	<b>Events</b> Host festivals to celebrate PRIDE, Juneteenth, Abenaki culture... etc.	6/3/2022 6:39 PM
134	<b>Flags Signage Art</b> <b>Town Names</b> South Hero could make clear statements about its commitment to inclusion. A Black Lives Matter flag at town hall, changing the name of the town beach, symbols are important.	6/3/2022 6:22 PM
135	<b>Flags Signage Art</b> I see a lot of signs around town welcoming everyone - I don't know if the town needs to mandate that but I appreciate that this is an inclusive community.	6/3/2022 6:16 PM
136	<b>Events</b> Support community outreach opportunities like a Pride Day.	6/3/2022 6:15 PM
137	<b>Flags Signage Art</b> signage?	6/3/2022 6:10 PM
138	<b>Other</b> Eliminate any existing barriers.	6/3/2022 6:08 PM
139	<b>Already Welcoming</b> <b>Other</b> For the most part I believe the residents of South Hero are welcoming to all - there are and will always be those who are not as friendly as we would like them to be - those people will not change - that is a societal issue and South Hero will not be part of that change process independently of the rest of VT and the nation.	6/3/2022 5:53 PM
140	<b>Other</b> No answer. Except the same issues every where- listen to the issues those feeling slighted have.	6/3/2022 5:29 PM
141	<b>Already Welcoming</b> Isn't it already?	6/3/2022 5:28 PM
142	<b>Other</b> Obviously not too	6/3/2022 5:24 PM
143	<b>Affordable Housing</b> Reduced cost of housing. All the DEI statements do little if there's no meaningful opportunity to live here.	6/3/2022 5:15 PM
144	<b>Town Names</b> First thing I would do is update the Town Beach sign to read, "South Hero Town Beach". Include a separate sign providing the history of the beach.	6/2/2022 2:06 PM

Q20 What elements of the vision for the village zoning districts do you support? (Check all that apply)



## Q21 Do you have any other comments or concerns you would like to share with the Planning Commission?

Answered: 90 Skipped: 117

#	RESPONSES	DATE
1	<b>Cluster Development</b> Encourage PUD	7/26/2022 5:08 PM
2	<b>No Changes-No Density</b> I know many folks located here because they liked small town living. WE did as well. Why do we need to even think about changing our way of life?Some folks are just never satisfied. IT'S NOT BROKEN DON'T FIX IT.	7/26/2022 4:45 PM
3	<b>Town Infrastructure</b> There are many dog owners that would enjoy a fenced area for dogs to run free.	7/26/2022 4:02 PM
4	<b>No Changes-No Density</b> I would like to see the 25 foot set back reestablished in all of the town. Being an island town we should not get into the density discussion with the state. Density has environmental and safety drawbacks and island town does not need to digest	7/26/2022 3:37 PM
5	<b>No Changes-No Density</b> A municipal sewer necessitates development! Let's TRY to keep it rural!	7/26/2022 3:26 PM
6	<b>Other</b> See above. I was unable to check the ?'s which read across as Support, Neutral, Do not support. No checks available???	7/16/2022 4:30 PM
7	<b>Cluster Development</b> I think that it is important to have some business to provide jobs, which would attract residents in a wide age range. I think this should be limited to the villiage centers and there should be rules to proper environmental plans and hours of operation as well as asthetics, with landscaping to blend into the character of the town. There appear to be some people who would like to have south hero be populated only by retired people with no business, but this would not be a very inclusive or sustainable situation in my opinion.	7/16/2022 12:06 AM
8	<b>No Changes-No Density</b> Maintain small town atmosphere, that's why most people who live here moved here. We can go to Burlington or Milton for "big box necessities".	7/15/2022 7:48 AM
9	<b>Other</b> We have a ton of restaurants but yet nothing for the kids to ride their bikes to. Nothing for the kids ages 11-15	7/15/2022 6:24 AM
10	<b>No Changes-No Density</b> South Hero is a beautiful and healthy rural community. High-density development will destroy what makes this a great place. It makes absolutely no sense to want to destroy our community.	7/15/2022 6:08 AM
11	<b>Other</b> Thank you for your efforts. Its a lot of work and it is appreciated .	7/14/2022 6:03 PM
12	<b>Town Infrastructure</b> Parking is a problem. Out of town cars bring bikes and leave their cars in the library lot which isn't large enough even for library patrons. Perhaps signage to direct cars to park in the school lot would help since most of this issue arises in the summer when school is not in session. Or perhaps we need a new parking lot like the park and ride. I appreciate the commission's hard work !	7/14/2022 12:18 PM
13	<b>Other</b> Thank you for running this survey.	7/14/2022 11:47 AM
14	<b>Other</b> More attention must be paid to the architecture in creating new buildings. People with design/architectural backgrounds need to weigh in. A hodge podge is being created here and it is not attractive. A better plan and stricter standards need to be developed. Nobody will look back in 100 years and say how attractive South Hero is. Let's get on it!	7/14/2022 9:38 AM
15	<b>No Changes-No Density</b> Things are pretty perfect in our island paradise, don't try to change it too much. More community events more family owned businesses, less Dollar Generals and Jolley's more Keeler Bay Variety's, Hacketts & Allenholm Orchards, Snow Farm Vineyards, Green Frogs, Parent Child Centers, even Mckees and friendly businesses where you know the owners and they know your name. You can tell who is community and who is here just because it's a nice mansion on the lake.	7/14/2022 8:31 AM

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16	<b>Other</b> A traffic study on why so many vehicles from new York travel through our town. Is it because Vermont is to expensive to live here?	7/14/2022 8:01 PM
17	<b>Cluster Development</b> It would be a shame to see the agricultural character of our island change in favor of gridded out fields densely packed with homes. Prioritize growth to where it's already happening in the South Hero Village. Add sidewalks, trees, and focus efforts on making a connected mixed use Main Street through the village.	7/13/2022 9:58 PM
18	<b>Other</b> I'd love to see Apple Fest come back, with live music and a flea market.	7/13/2022 9:18 PM
19	<b>Other</b> Always keep being the best stewards of our land in mind with all growth!	7/13/2022 8:47 PM
20	<b>Other</b> Good luck and thank you.	7/13/2022 8:31 PM
21	<b>No Changes-No Density</b> Let's remember we are a vacation community not Colchester	7/13/2022 7:48 PM
22	<b>No Changes-No Density</b> Keep south hero the way it is stop changing a great thing	7/13/2022 6:57 PM
23	<b>No Changes-No Density</b> Just use some common sense and move at a slow Pace so there isn't an abomination like the brewery, Senior housing, and all	7/13/2022 6:46 PM
24	<b>Other</b> I know that the sheriffs department has had a rough go with little help. Having said that...better control on our SPEEDERS. SOMEONE IS GOING TO BE KILLED THE WAY THE PEOPLE ARE SPEEDING ON OUR ROADS. Not just route 2 but side roads are worse... I believe there is trouble ahead. Maybe the town can help in this matter as well.	7/13/2022 5:41 PM
25	<b>Cluster Development</b> I support residential, light commercial and industrial development. Our town should not be a nimby community. Growth can be controlled by the permitting process. It is unfortunate that future town has lans must be approved by town wide voting.Our elected and dedicated appointed officials are highly qualified to steer our future.	7/13/2022 5:31 PM
26	<b>Other</b> I applaud your efforts ! not easy !	7/8/2022 1:11 PM
27	<b>Other</b> Get more p[people involved in the planning process.	7/6/2022 11:01 AM
28	<b>Other</b> Better understanding of singles and owning lake front property	7/6/2022 7:39 AM
29	<b>Other</b> RT 2 is too busy and too fast	7/5/2022 9:19 PM
30	<b>Other</b> thank you all for your time and efforts here	7/5/2022 8:19 PM
31	<b>Other</b> plantings and park areas( no matter how small) in commercial areas	7/5/2022 8:08 PM
32	<b>Other</b> <b>Town Infrastructure</b> There is talk of a possible new recreation park on the Property that belonged to the Fifield family and is now owned by Nate Hayward. My family is strongly against having big concerts on this property. In CT we lived in a neighborhood where an amusement park about two miles from our house started having big concerts and the traffic and noise was horrible. Please, please, do not allow this to happen in that new recreation park. It will make life miserable for the residents of this town.	7/5/2022 7:34 PM
33	<b>Town Infrastructure</b> Please call me if I'm able to get on the water system <del>XXXXXXXXXXXX</del> south street south hero. Community garden Dog park Bike path You are all doing great work and I can't say thank you enough for allowing public comment on these issues! I love living in south hero and feel like we are a great little community. We have a fantastic starting point, but we also have some work to do! Let's get after it :)	7/5/2022 7:23 PM
34	<b>Other</b> <b>Taxes</b> My family pays extremely high taxes on Keeler Bay. My family has never burdened the town for schooling for my children. I am on a dirt road that is not supported by the town. It is infuriating to see Keeler Bay choked with weeds, while the Town sticks their collective heads in the sand, doing nothing and still expecting my family to pay high taxes because we live on the water. I will not continue to pay this level of taxes if the quality of the water environment continues to deteriorate.	7/5/2022 6:49 PM
35	<b>Other</b> Lets get with the times, we have to travel away from the islands for far too many things	7/5/2022 6:49 PM
36	<b>Taxes</b> Please don't raise the taxes anymore	7/5/2022 6:19 PM
37	<b>Other</b> The current Village Zoning District boundaries were a really poor idea. They are unfair and need to be revisited.	7/2/2022 12:55 PM

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38	<b>Other</b> <b>Town Infrastructure</b> Any plans should keep in mind what we want future South Heroins to look like. If we want younger families, we should build recreation centers/parks.	6/30/2022 11:00 AM
39	<b>Cluster Development</b> 1. Carve an agricultural zone out from the rural residential area with minimum 10-acre zoning, to prevent chewing up the landscape with single family homes. 2. Implement a greenspace plan and viewshed regulations to preserve views of the lake and rural scenery, similar to that in Hinesburg. 3. Funnel development into the village districts by taking measures to reduce and cluster development in the rural-residential and lakeshore areas. 4. Eliminate industrial uses - this is a lakeshore community. There is plenty of more appropriate space for industry in adjacent communities.	6/29/2022 6:33 PM
40	<b>Other</b> Planning commission needs to be ACTIVELY in weed/invasive species mitigation. Lake Champlain is the reason most of us are here.	6/29/2022 9:10 AM
41	<b>Other</b> You guys are doing a great job. Keep up the good work.	6/28/2022 11:16 AM
42	<b>Other</b> That agriculture and the environmental impacts are both valued in any plan	6/27/2022 9:41 AM
43	<b>Other</b> I don't think that SOuth Hero Village center has many good looking historic buildings. I would love to see new development made to look like the older historic brick buildings that you see in the other villages in Vermont. The Nadia brick building is an abomination. The Arbor Store is great. The town clerks office could use a remake. Grannies attic should be restored. The small houses in the village center are confusing. Blue Paddle is adorable. but so many of the other businesses look shabby and junky.	6/22/2022 8:45 AM
44	<b>Other</b> You do great work. Keep it up.	6/16/2022 1:22 PM
45	<b>Town Infrastructure</b> Dogs and other domestic animals are essential for mental health and are part of being human. They should be welcomed and loved and be considered as much a part of the community as people. Dog parks and other safe, smart off leash areas would be wonderful.	6/16/2022 1:17 PM
46	<b>Town Infrastructure</b> We need to support our road crew whose plow trucks have been damaged by branches hanging over the pavement a breaking mirrors and antennas. In order to maintain the attractiveness and the health of trees and bushes growing over public roads, there needs to be a budget for hiring tree professionals to do the branch trimming properly. Several weeks ago a road department employee used the drainage ditch clearing attachment on the town tractor vertically to shred tree branches back from West Shore Rd between Sunset View Rd and Meadow Lane. I invite you to see the example of this damage to trees next to the utility pole between #416 and #418 West Shore Rd on the inland side of the street. I contacted the select board and also called town hall requesting corrective action but the shredded damage remains to several trees in this area. Can you facilitate any action on this please? We have a budget for removing ash trees from the roadside but no budget to hire a tree company to keep tree growth trimmed to the needs of our Road Department. Please build this into the town plan. Recent pavement in town is breaking up (ie West Shore Rd) and getting worse before the topcoat layer is done. This is a hazard to cars and bikes and gives the appearance that we don't provide enough resources to maintain our roads properly. Is there a more organized system ( on line 311 or town hall service request log) that we can develop to stay on top of infrastructure maintenance?	6/16/2022 10:21 AM
47	<b>No Changes-No Density</b> Our town has plenty to offer. Stop over crowding it with people in low income housing - that is for other surrounding towns, not the Islands.	6/15/2022 2:50 PM
48	<b>Other</b> I would caution the Commission to be wary of a few loud voices, and I would well guess that the predominance of residents are quiet only because they do not disagree with the direction the Planning Commission has cast vision for our great community. Thank you volunteer Commissioners for your time and efforts to steer our wonderful little town.	6/14/2022 10:41 PM
49	<b>Town Infrastructure</b> Need for tennis courts in town	6/14/2022 8:29 PM
50	<b>Town Infrastructure</b> I really think that the parking lot that is located next to Folsom (but owned by the Town) should be paved. It's in terrible condition and never maintained. The teachers and parents have to drive through that parking lot every day and the potholes are destroying their cars.	6/14/2022 4:38 PM
51	<b>No Changes-No Density</b> Keep So Hero simple, rural and beautiful. Tax people for the services they use.	6/14/2022 12:11 PM
52	<b>Other</b> Self-interested developers should not be developing our town plans.	6/14/2022 10:12 AM



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53	<b>Other</b> Please consider that South Hero should be more than "a playground for tourists" or others who fail to understand the importance of a rural community of people who have lived here for generations, including those who have been returning for generation to enjoy the benefits we had to offer.	6/14/2022 10:17 PM
54	<b>Other</b> Now that you allowed Island Racing to be placed where it is, on the approach to our historic, quaint Village, please enforce a modicum of reasonable restrictions on the noises levels generated by that business, as well as the amount of boats and vehicles that are stored there, ostensibly as part of its business operations, in addition to banning the firing range they placed on their property ( in close proximity to many residential homes). Secondly, it would be a great benefit to the Town for you to promptly approve the proposed redevelopment of the Sandbar Inn & Restaurant.	6/13/2022 10:17 PM
55	<b>No Changes-No Density</b> Revert to the previous zoning along South Street. Do not allow for more density in this area.	6/13/2022 6:37 PM
56	<b>No Changes-No Density</b> I think we need to slow down on the abundance of development in town, it is visibly changing our "small town" feel	6/13/2022 6:35 PM
57	<b>Other</b> No	6/13/2022 6:23 PM
58	<b>Other</b> I think there should be an increased level of freedom for small business owners who own their land to do what they need on their property, 100sqft sheds are useless and it looks terrible when someone has four of them in order to be within the parameters of over reaching local government regulations	6/13/2022 5:51 PM
59	<b>Other</b> Nope	6/13/2022 2:50 PM
60	<b>Town Infrastructure</b> I think the results of the park and recreation survey involving wintertime facilities for continued physical activity without extensive travel to other towns/communities is vital. Rather than a focus on local industrial development it would be valuable to facilitate locally run businesses that would support indoor physical activities for the health of our overall community. This would also support enviromental efforts to reduce carbon emmissions from cars traveling off island for these services.	6/13/2022 9:32 AM
61	<b>Other</b> <b>Town Infrastructure</b> Concerned about water, sewage, education and stores.	6/11/2022 9:33 AM
62	<b>Town Infrastructure</b> Pave the remainder of the roads to save on maintenance YOY	6/10/2022 9:29 PM
63	<b>No Changes-No Density</b> It seems the attention of the town has been how to make more money and tax revenue as judged by the recent support for large development. We chose to move to south hero because it was quiet and quaint. Adding commercial strip malls and complexes as has been supported these last few years is the opposite of what we want to see in this town. Raise our property taxes if you are so desperate for money.	6/9/2022 8:10 PM
64	<b>Other</b> I hope there is a way to be selective about which businesses come to the Islands. Please, no chains...	6/9/2022 7:31 PM
65	<b>No Changes-No Density</b> <b>Town Infrastructure</b> As a life long resident, if you need to do anything with grant money, focus it on First Responders and our road safety. We do NOT have adequate first response (fire/rescue/law) to service more people/bikers/business/etc! Leave this community alone. We are small, keep us rural, and let us be the true Islanders we are. The South Street/Route 2 intersection is dangerous as it is a no passing zone and all people do is pass. Martin Road is an issue because of the bikers, and lastly - the SnowFarm Winery Thursday Night Concerts is TOO BIG NOW. Why would this town support drunk driving? Everyone leaves after drinking, they speed down our roads, and the community members know they need to be careful those nights because of this. It's only a matter of time before we have a fatal accident. We are not the Champlain Valley Fair. This is not the town I grew up in and it is very sad. If I wanted the South Burlington feel of living I would of went there. But I want to be a forever South Hero resident because I'm proud of this town, our heritage, and our past. Please listen, do not expand this community housing wise anymore. Fix the roads. Support First Response	6/9/2022 7:23 PM
66	<b>Other</b> thanks for your efforts keep up the good work	6/9/2022 7:15 PM
67	<b>Other</b> I like this survey, please listen to everyone, not just the loud ones, and even less the newest ones that are most likely not in touch with the needs of the everyday people who live here.	6/9/2022 7:01 PM

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68	<b>Other</b> Appreciate the opportunity to be involved.	6/9/2022 3:19 PM
69	<b>Other</b> I think this place would be much improved with a nice center.	6/9/2022 3:19 PM
70	<b>Other</b> I did not identify myself in this survey. What is to prevent someone with an agenda from just filling out multiple surveys?	6/9/2022 11:34 AM
71	<b>No Changes-No Density</b> I like the agricultural and rural/residential vibe of South Hero. South Street is a quiet and quaint country road that you are offering up for dense development. I oppose dense development. Zoning should support residents' choices, not state and regional goals for development.	6/8/2022 9:18 PM
72	<b>Other</b> Rules and Regulations are in place for a reason. The boards (SB and DRB) need to follow them and not alter decisions made that differ from the rules just because someone complains.	6/8/2022 6:05 AM
73	<b>No Changes-No Density</b> Focus commercial development only along Routes 2 and 314. Do not allow any industry along South St.- only small family owned shops, etc like how it was prior to unpopular change in 2020. And even in those areas please have restrictions on noise, lighting, signage. And if they back up to any residential areas please make sure they additionally provide green screens/hedges to reduce impact. Preserve forests and wildlife corridors. Keep farmland in agriculture -- not sold off and subdivided for housing development. Remove from the "village zoning districts" any streets where residents don't want to be engulfed by dense development--namely South St! Restore the one-acre minimum lot size for new development! Restore the 25-foot sideline setback for new buildings throughout South Hero!	6/7/2022 10:27 AM
74	<b>Cluster Development</b> I think it would be great to keep the development focused in the village areas. It would be nice for people to have walkable destinations. I think we should have stricter regulations in terms of appearance.	6/6/2022 9:06 PM
75	I feel that smaller setbacks are very important in the Village districts, and going back to 1 acre zoning would be a a negative.	6/6/2022 8:27 PM
76	<b>No Changes-No Density</b> I'm concerned about parcels of land that are currently multiple acres being divided up into smaller packages so that people can build.	6/5/2022 9:31 PM
77	<b>No Changes-No Density</b> <b>Taxes</b> Would prefer not to see changes that require more infrastructure and cost to taxpayers. Not in favor of village growth in any form.	6/5/2022 6:27 PM
78	<b>Town Infrastructure</b> Consider having pedestrian/bicyclist bridges in some busy locations.	6/5/2022 11:20 AM
79	<b>Cluster Development</b> We'd like to see more logically oriented development that's conducive to a village. So far we are failing to achieve that.	6/5/2022 8:33 AM
80	<b>Taxes</b> Recognizing high property taxes driven by Education formulae & procedures and that our no population currently is significantly split between Village Center and the rest of the town and will be ever evolving it will be most important to carefully define allocation of the costly expense associated with these primarily Village Center items! In addition to being an affordability issue for South Hero should this expense be carefully weighed based on user application!	6/4/2022 10:09 AM
81	<b>Other</b> All residents should have a say in passing changes to the town plan. This should be by popular vote.	6/4/2022 10:01 AM
82	Would love to see tennis courts, Pickleball courts and other recreational activities have a place here somewhere. Thank you for the survey!!!	6/4/2022 9:08 AM
83	<b>No Changes-No Density</b> Stop growing our town. Stop allowing alcohol facilities. Way too many in our town. Work of preserving what we have instead of commercializing it.	6/3/2022 8:30 PM
84	<b>No Changes-No Density</b> Don't be in a hurry to bring more business that will bring more population.	6/3/2022 7:03 PM
85	<b>Other</b> The town plan is 7 years old and a lot of development has taken place since then. How relevant is the data?	6/3/2022 6:39 PM
86	<b>Town Infrastructure</b> Crosswalks needed for Rte 2	6/3/2022 6:10 PM
87	<b>Town Infrastructure</b> Improve traffic flow at route 2 and South Street.(traffic light?). Control	6/3/2022 6:08 PM

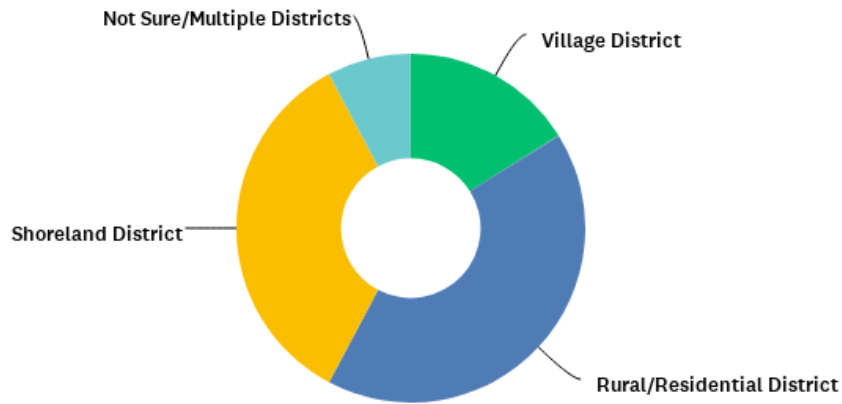
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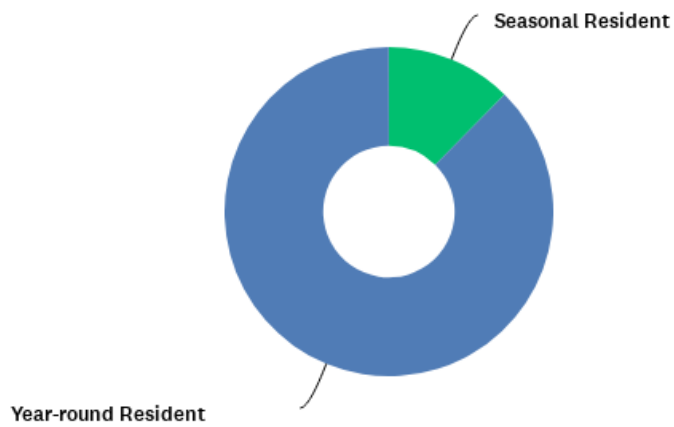
traffic along west shore road on Thursday concerts at the winery.

88	<b>Other</b> <b>Taxes</b> We need to reduce spending. People are hurting. Town seems to just look for ways to spend.	6/3/2022 5:28 PM
89	<b>Other</b> Thank-you for this survey.	6/3/2022 5:15 PM
90	<b>Other</b> I think they are a swell group of volunteers! ;)	6/2/2022 2:06 PM

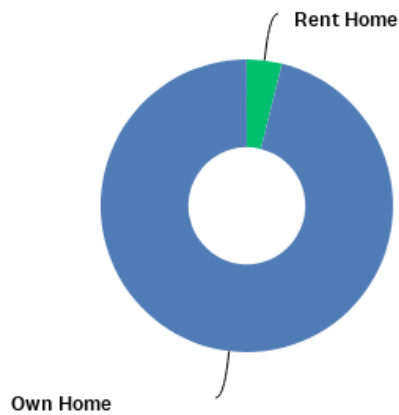
Q22 What zoning district do you reside in? Please reference the South Hero found on the project website here: [www.nrpcvt.com/south-hero-project-documents](http://www.nrpcvt.com/south-hero-project-documents).



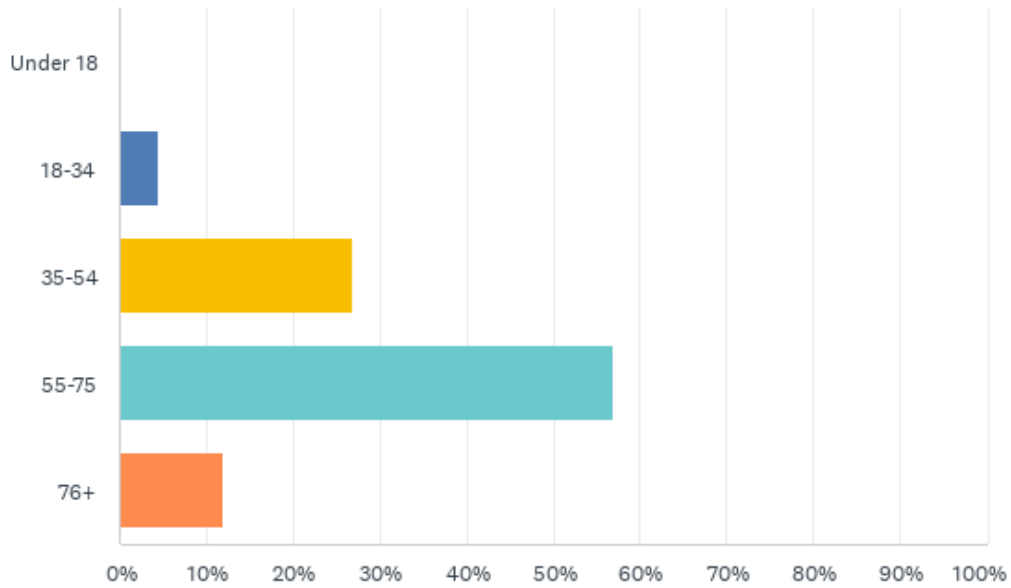
Q23 Are you a seasonal or year-round resident?



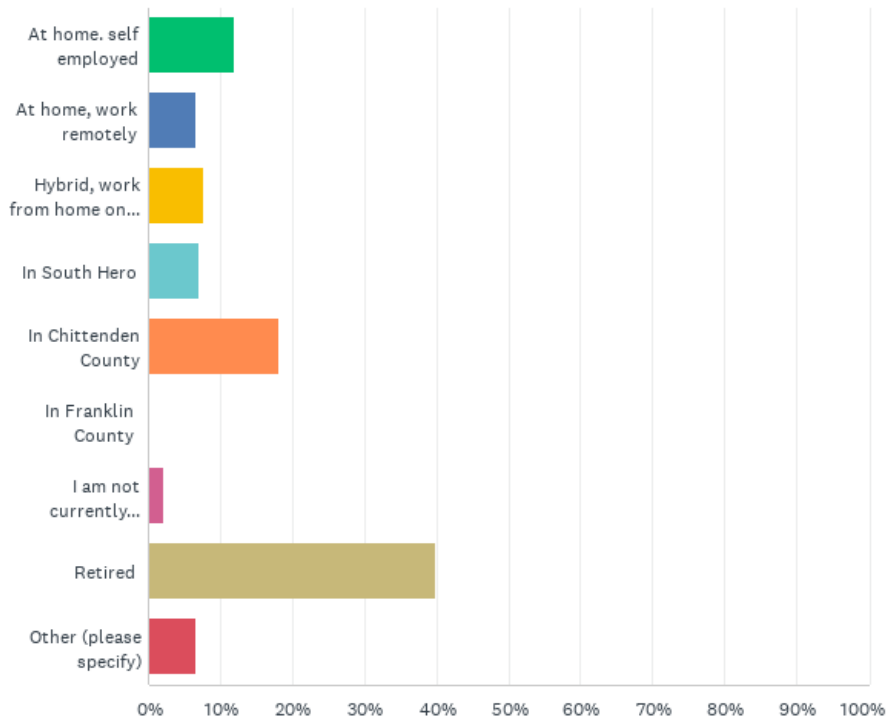
Q24 Do you rent or own your home?



### Q25 How old are you?



### Q26 What is the location of your employment?



**South Hero Town Plan – Detailed Outline**

- 1. Introduction
  - a. Vision
  - b. Equity and inclusion
  - c. community engagement
  - d. Town Data Profile
  - e. Compatibility with Neighboring Municipalities
- 2. Village Centers, Land Use and Natural Resources
  - a. Land Use
    - i. Current Land Use
    - ii. Future Land Use
  - b. Village Center Designation
  - c. Natural Resources
    - i. Scenic Areas
    - ii. Wetlands & Streams
    - iii. Lake Champlain
    - iv. Habitat Blocks, Corridors & Other Natural Areas
    - v. The Outer Islands
- 3. Transportation and Complete Streets
  - a. Roads & Vehicle Traffic
  - b. Bicycle and Pedestrian Facilities
  - c. Community Transportation
- 4. Municipal and Community Facilities and Services
  - a. Tax Base & Cost of Services
  - b. Recreation
    - i. Current Recreational Facilities
      - 1. State Parks
      - 2. Public Trails
      - 3. Access to the Lake
    - ii. Future Recreation Planning
      - 1. Future Trail Planning
      - 2. Future Park Plans
  - c. Education & Childcare
    - i. Education
    - ii. Childcare
  - d. Municipal & Community Facilities
    - i. Solid Waste
    - ii. Fire Department & Rescue Squad
    - iii. Law Enforcement
    - iv. Library
    - v. Water & Wastewater
    - vi. Cemetery
    - vii. Meeting House
  - e. Community Health
  - f. Telecommunications
- 5. Housing
  - a. Current Housing Stock
  - b. Housing Affordability
  - c. Future Housing Needs
- 6. Local Economy
  - a. Employment & Incomes

- b. Local Businesses
- 7. Climate & Flood Resilience
  - a. Flood Resilience
    - i. Floodplain
    - ii. Stream Corridor
  - b. Climate Resilience
- 8. Implementation Program
- 9. Appendices
  - a. History
    - i. Historic Sites
  - b. Demographics and Community Data (not otherwise included)
  - c. Enhanced Energy

# Fletcher Town Plan 2021 - 2029



(Photo Credit: Timothy Carpenter)

*Adopted by the Fletcher Select Board  
September 20, 2021*



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# SECTION 1 – THE PLANNING PROCESS

## Why Plan?

The intent of the planning process is to encourage the development of land, facilities and services located within the Town of Fletcher, in a manner which will promote the health, safety and general welfare of its residents. A comprehensive plan for the town provides a framework for the achievement of recognized community goals and policies. The planning process serves to coordinate public and private actions with these goals and policies, and the town plan provides the guide upon which decisions may be based logically and intelligently.

Vermont municipalities like Fletcher plan to protect community interests, to retain a measure of local control, to promote desired forms of growth and development, to target public investment, to protect scarce public resources, and to help build and sustain a sense of community, and a sense of place.

## The Plan: Purpose and Design

The Fletcher Town Plan, prepared under the Vermont Municipal and Regional Planning and Development Act or "the Act" (24 VSA, Chapter 117), presents a description of the town and a vision for its future, including a comprehensive look at how the town may grow and prosper in the coming years.

Planning is not new to Fletcher. This plan is the most recent product of an ongoing process, which, as noted in the accompanying narrative, had its start when Fletcher was first laid out and chartered as a town in 1781. Fletcher was one of the first towns in Franklin County to formally adopt a local plan and related regulations. Zoning was initially instituted by the Select Board in August of 1967 prior to a statutory requirement that planning precede zoning. The first town plan, and a new zoning bylaw based on the plan, were adopted in 1972. Subdivision regulations were then adopted in 1974. Since that time local plans and bylaws have been updated and revised periodically to reflect changing conditions and needs. This plan supersedes the plan that was last updated and adopted in 2013.

The plan is laid out topically by section. Each section is followed by goals and policies. A summary of proposed implementation actions is included in this section. Supporting information is provided in the appendices.

## The Planning Process

Because change is inevitable and ongoing, the plan by law must be updated and readopted every eight years to remain in effect. It also may be amended at any time to deal with unanticipated or dramatic changes that may be affecting the community.

The plan is adopted by the town Select Board following public hearings as outlined in "the Act". With plan adoption, the town has a general blueprint for growth and development over the next eight years and beyond.

The Select Board has the option of submitting the plan to the regional planning commission for regional review and approval. Regional approval would ensure that Fletcher retains all the benefits under the law that are afforded municipalities with approved plans - including the ability to receive state funds for local planning and to assess impact fees.

The plan is most useful when viewed as a living document that offers a path to follow, a vision to be achieved over many years. It's a work in progress that serves as a reference and guide for use by local officials, area residents, and others with an interest in the community. It is the responsibility of the town's planning commission to maintain the plan, and to work with the Select Board, other town boards, and local citizens to ensure that key goals and policies are translated into action.

The plan frames a vision for the town: a vision of its future built on the past, a vision that sets forth goals to be achieved and ways to achieve them. The underlying intent is to bring some order to change, to coordinate independent decisions and actions into a cohesive whole, and to look to the long term to the benefit of the entire community. Turning vision into reality is challenging at best; it requires strong leadership and the efforts of many dedicated individuals. The plan simply offers a beginning—its success lies in the journey ahead.

**Participation in Regional and State Efforts**

The plan also provides a basis for local participation in regional and state planning efforts and state regulatory proceedings. As noted, if the plan receives regional approval, it must be in conformance with regional and state plans. This is a powerful tool that may assist in targeting state funding for locally needed infrastructure and improvements.

The plan also offers an opportunity for local involvement in Act 250—criterion 10 specifically requires that development subject to Act 250 be in conformance with the local plan. The town planning commission and the town Select Board have separate party status under all ten criteria of Act 250. The town and the town plan also have status under Vermont Public Utility Commission (Section 248 and Section 248a) proceedings.

Participation in other regional and state planning efforts is recommended as time and available resources permit to ensure that Fletcher's interests, as defined in the plan, are adequately represented. This is typically achieved through membership on the boards of the Northwest Regional Planning Commission, Regional Transportation Advisory Committee, the Northwest Solid Waste Management District, and other planning related advisory groups and organizations.

**Consistency with State Planning Laws**

The Fletcher Town Plan has been prepared with careful attention to the requirements of Vermont enabling legislation at the time of adoption. This plan for the town is consistent with state planning requirements and goals as outlined in the Act. State planning goals (under Section 4302) and plan elements (under Section 4382) have been incorporated into the goals and elements of the town's comprehensive plan. Public participation has been actively sought throughout the planning process through public meetings and hearings.

**Plan Compatibility**

It has been recognized throughout this process that Fletcher does not exist apart from its neighbors. The plans of adjoining communities were reviewed as part of the planning process; this plan is harmonious with neighboring municipal plans.

In Franklin County, Fletcher adjoins the Towns of Fairfax, Fairfield, and Bakersfield. All three municipalities have regionally-approved municipal plans. Each municipality has a future land use map that has land use districts located along the border with Fletcher that are rural and

conservation-oriented. These districts are compatible with Fletcher’s land use districts. Each municipality also has development regulations.

To the south and east in Lamoille County, Fletcher adjoins the Towns of Cambridge and Waterville. Waterville does not have development regulations, however it does have a town plan adopted on May 27, 2014. The Town Plan Land Use maps shows land adjacent to Fletcher as “Conservation” and “Resource” areas slated for only low-density development. On Cambridge’s Future Land Use Map, land in the “Rural Residential” area is adjacent to Fletcher and is compatible with Fletcher’s land use goals.

As a growing bedroom community, Fletcher residents need to be aware of development trends in Northwest Vermont (e.g., Chittenden, Franklin and Lamoille Counties), which create secondary demands for housing and related public services in outlying rural communities.

**Plan Implementation (Work Program)**

The planning commission's role does not end with plan development, update and adoption, but continues through all stages of implementation. The planning commission will need and actively seek the ongoing support of the Select Board, local officials, and town residents to ensure effective plan implementation.

A variety of tools and techniques are available to implement the plan. The plan forms the legal basis for the adoption and amendment of local development regulations. The Town of Fletcher intends to additionally implement this plan through the following Work Program Appendix C.

**GOALS:**

1. To provide a coordinated, comprehensive planning process and policy framework that guide decisions made by public officials and private interests, and will promote that which is in the best interests of the residents of the Town of Fletcher and encourage citizen involvement at all levels of the planning process to ensure that decisions having local impact are made with as much local input as possible.

**POLICIES:**

1. The Selectboard shall provide the planning commission, development review board and zoning administrator with the administrative, program, and technical support necessary to sustain an effective, comprehensive local planning process, and to carry out their duties as assigned or otherwise mandated by statute.
2. The planning commission, development review board and zoning administrator will adhere to the highest standards of openness, fairness and honesty in their planning and review efforts, particularly when acting in a quasi-judicial capacity on behalf of the public and the town.
3. The planning commission will coordinate its work with those of town officials, town boards, and other local, regional and state interests as appropriate.
4. All decisions or actions by public officials or private interests which may affect the Town of Fletcher will be made with due consideration of the goals and policies of the Fletcher Town Plan.
5. The planning commission recognizes the rights of all citizens to participate in the planning process, and has a responsibility to actively seek input from those most affected by programs or policies



under consideration by the planning commission. The planning commission will make an effort to regularly inform town residents of its activities and to provide opportunities for public input in its planning process.

## SECTION 2 - COMMUNITY PROFILE

### Overview

The town of Fletcher, located in the southeast corner of Franklin County among the western foothills of the Green Mountains, is true Vermont hill country. The Lamoille River, which once separated the southern tip of Fletcher from the rest of town, now forms its southern boundary. Fletcher shares its western border with the town of Fairfax; the towns of Fairfield and Bakersfield lie to the north. The Franklin County line separates the town from Cambridge and Waterville, its Lamoille County neighbors to the south and east.

Fletcher is one of Franklin County's uniquely configured towns, incorporating 38 square miles of rolling hills and valleys, bottomlands, and areas of steep and rugged terrain. The town's topography lends much to its natural beauty, rural character and the quality of life enjoyed by its residents. Historically, however, Fletcher's hills and hollows also served to isolate local residents from their neighbors. Topography limited available transportation routes and defined early settlement patterns. Even today, because of the lay of the land, few roads lead directly to or through town.

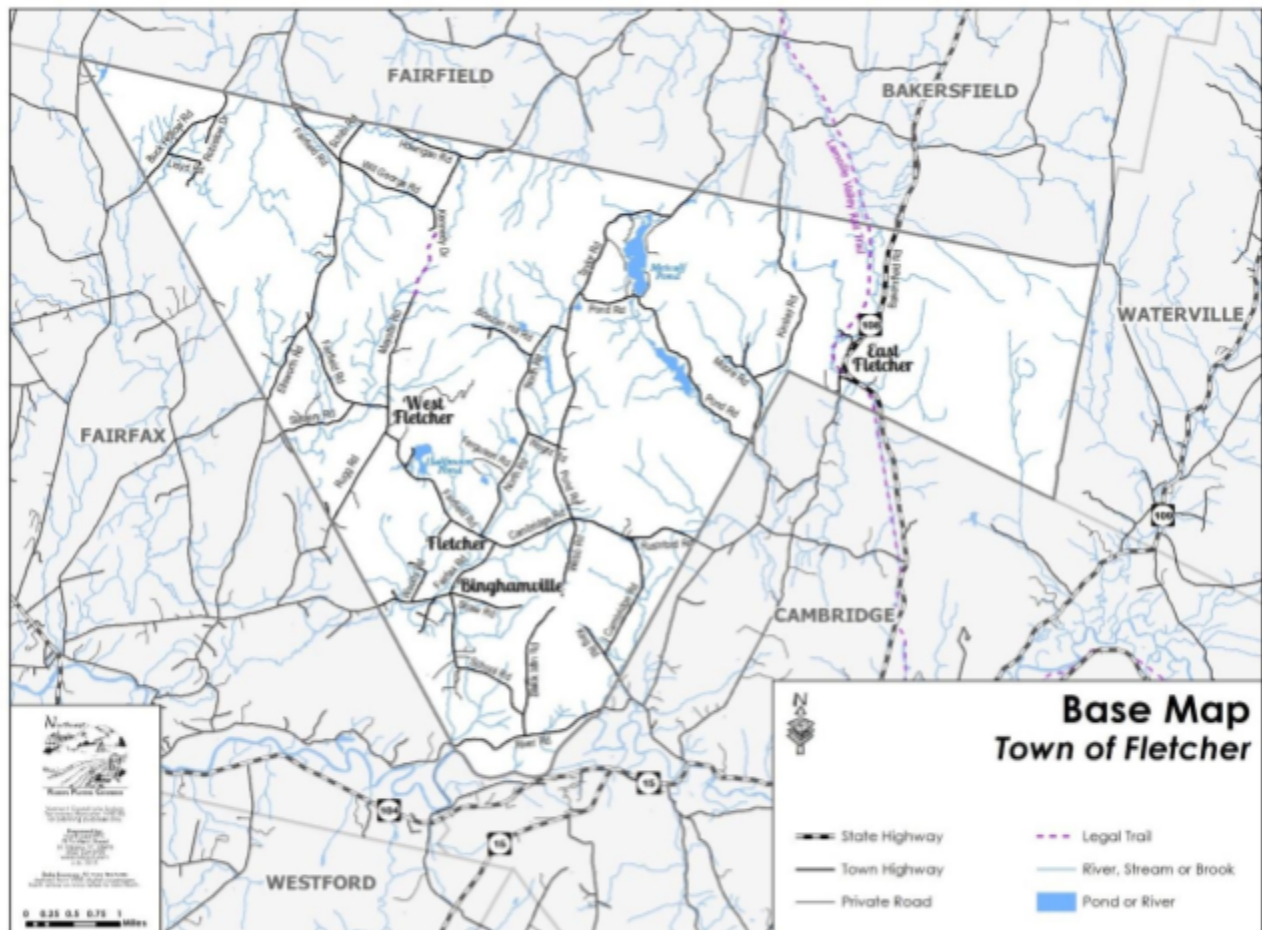


Table 2.1 – Fletcher Base Map

### Historic Development

For more information about the historic development of Fletcher, please see Appendix A – History of Fletcher.

## Population

As illustrated Table 2.1, by 2000, Fletcher’s population surpassed the historic peak population of 1,084 reached in the mid-1800s. As of the 2016 2012-2016 American Community Survey (ACS), the town’s total population totaled 1,345. The population density is approximately 35 persons per square mile.

	1980	1990	% Change 1980-2000	2000	% Change 1990-2000	2010	% Change 2000-2010	2016	% Change 2010-2016
<b>Vermont</b>	511,456	562,758	10.00%	608,827	8.20%	625,741	2.80%	626,249	0.08%
<b>Franklin County</b>	34,788	39,980	14.90%	45,417	13.60%	47,746	5.10%	48,625	1.84%
<b>Waterville</b>	470	532	13.20%	697	31.00%	673	-3.40%	705	4.75%
<b>Cambridge</b>	2,019	2,667	32.10%	3,186	19.50%	3,659	14.80%	3,776	3.20%
<b>Fairfield</b>	1,493	1,680	12.50%	1,800	7.14%	1,891	5.10%	1,877	-0.74%
<b>Fairfax</b>	1,805	2,486	37.70%	3,765	51.50%	4,285	13.80%	4,513	5.32%
<b>Bakersfield</b>	852	977	14.70%	1,215	24.40%	1,322	8.80%	1,298	-1.82%
<b>Fletcher</b>	626	941	50.32%	1,179	25.30%	1,277	8.30%	1,345	5.32%

**Source:** U.S. Census Data, American Community Survey 2012-2016

Year	Total Population	10-year Change	% Change	% Natural Increase
<b>1970</b>	456	57	14.30%	89.10%
<b>1980</b>	626	170	37.30%	17.10%
<b>1990</b>	941	315	50.30%	33.30%
<b>2000</b>	1,179	238	25.30%	56.50%
<b>2010</b>	1,277	98	8.30%	42.90%

**Source:** US Census, VT Dept. Of Health Vital Statistics

The rate of local populations growth between 2010 and 2016 (5.3%) exceeded that of the county (1.84%), and the state (0.8%). This is due in part to Fletcher’s relatively smaller base population, but it is also indicative of the effect of prevailing outside growth pressures on Fletcher and other adjoining communities such as Fairfax due to their location within the greater Burlington commuter shed.

Historically, much of Fletcher’s growth could be accounted for through a natural increase in the population, wherein the number of births exceeded the number of deaths. As indicated in Table 2.2, between 1970 and 1990, however, a net influx of people into the community was largely responsible for the more substantial population increases experienced during these decades. This trend has reversed since 2000.

Population projections can be invaluable to the planning process. Table 2.3 displays population projections for Fletcher and Franklin County available from the Vermont Agency of Commerce and Community Development. Scenario A project’s future population based on higher growth rates seen in the 1990s. Scenario B projects future population based on more moderate growth rates seen in the 2000s. Both scenarios show Fletcher gaining several hundred new residents by 2030.

	Fletcher			Franklin County		
	2010 (Census)	2020	2030	2010 (Census)	2020	2030
<b>Scenario A</b>	1,277	1,561	1,695	47,746	51,810	55,647
<b>Scenario B</b>	1,277	1,354	1,412	47,746	49,253	50,739

**Source:** Vermont Agency of Commerce and Community Development Population Projections 2010-2030

	2000	2010	2016
Fletcher	34.7	40	40.8
Franklin County	35.7	39.6	39.7
Vermont	37.7	41.5	42.6

**Source:** US Census, 2012-2016 American Community Survey

	% HS graduates	% College Graduates
<b>Fletcher</b>	96.30%	29.40%
<b>Franklin County</b>	89.70%	23.50%
<b>Vermont</b>	91.90%	36.20%

**Source:** US Census Data

**Population Characteristics**

**Age Distribution**

Fletcher, like much of Vermont, has an aging population. The median age in Fletcher has risen from 34.7 in 2000 to 40.8 in 2016. The percentage of individuals 65 years of age and over in Fletcher has increased slightly from 6% in 2000 to 7.3% in 2010. The percentage of individuals less than 25 years of age has also decreased from 29% in 2000 to 25% in 2010. The majority of Fletcher’s population is between 25 and 64 years of age.

**Educational Levels**

According to 2012-2016 ACS data, over 96% of Fletcher residents over the age of 25 are high school graduates and over 29% hold college degrees (bachelor’s or higher). Table 2.5 shows that Fletcher’s population is comparably educated relative to Franklin County and Vermont residents.

**Income**

Comparative income information for the years 1990, 2000, 2010 and 2016 is provided in Table 2.6 below. In 2016, Fletcher residents had a higher per capita and median household than those reported for the county, and a smaller percentage of Fletcher’s population lived below the poverty line. The Town per capita and median household income values were also higher than those of the state. Fletcher reported a lower percentage of its population below the poverty level than did the state of Vermont overall.

The 2012-2016 American Community Survey indicates that 6% of Fletcher residents live below established poverty levels including 5.6% of children under the age of 18, and 17.5% of persons aged 65 and over.

Table 2.6: Income Level Comparisons								
	Per Capita Income				Median Household Income			
	1990	2000	2010	2016	1990	2000	2010	2016
<b>Fletcher</b>	\$11,314	\$20,498	\$33,350	\$33,582	\$30,074	\$46,146	\$64,276	\$85,313
<b>Franklin County</b>	\$11,678	\$17,816	\$24,700	\$28,892	\$28,401	\$41,659	\$52,398	\$58,884
<b>Vermont</b>	\$13,527	\$20,625	\$26,876	\$30,663	\$34,780	\$40,856	\$49,406	\$56,104

Source: US Census Data, 2012-2016 American Community Survey

**Tax Base**

As all communities in Vermont, Fletcher relies heavily on its property tax base to fund needed community facilities and services. The local grand list thus provides information not only about properties in town, but also about tax burdens and trends that may change over time as the community grows and develops.

The total number of parcels listed increased by 17% between 2000 and 2017, suggesting that a significant amount of land subdivision and development occurred during this period. By far, the greatest increase in parcel numbers was due to residential development. The number of year-round residential homes on 6 acres or less increased by 33%, while residential properties of more than 6 acres increased by 44% between 2000 and 2017. The number of vacation properties has remained steady in recent years. Overall, the number of farm parcels experienced a decline, while woodland parcels have recuperated from previous reductions, and the town has not gained an industrial tax base. Eight commercial properties account for less than 1% of the local tax base. This confirms that the town is largely and increasingly dependent on its residential tax base to fund needed community services and facilities.

Parcel Type	1980	1990	2000	2010	2017	% Change (1980-90)	% Change (1990-00)	% Change (2000-10)	% Change (2010-2017)
Residence, ≤ 6 Acres	70	111	175	210	233	58.60%	57.70%	20.00%	10.95%
Residence, 6+ Acres	75	133	162	219	234	77.30%	21.80%	35.19%	6.86%
Mobile Home, w/o land	6	6	11	5	5	0.00%	83.30%	-54.54%	0.00%
Mobile Home w/ land	24	36	43	37	34	50.00%	19.40%	-13.95%	-8.11%
Vacation, ≤ 6 Acres	56	54	48	46	46	-3.60%	-12.50%	-4.17%	0.00%
Vacation, 6+ Acres	20	20	17	18	16	0.00%	-17.60%	5.88%	-11.11%
Commercial	0	0	1	2	8	0.00%	100%	100%	300%
Industrial	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%
Utilities	0	2	3	2	2	200%	50.00%	-33.33%	0.00%
Farm	22	25	24	22	17	13.60%	-4.20%	-8.33%	-22.73%
Woodland	34	26	31	36	36	-23.50%	19.20%	16.13%	0.00%
Miscellaneous	105	107	104	101	95	1.70%	2.90%	3.85%	-5.94%
<b>Total Parcels</b>	<b>412</b>	<b>520</b>	<b>619</b>	<b>692</b>	<b>726</b>	<b>26.00%</b>	<b>19.00%</b>	<b>11.79%</b>	<b>4.91%</b>

**Source:** 2017 Fletcher Grand List

A comparison of Fletcher's tax rate with those of surrounding communities is given in Table 2.8. Fletcher's common level of appraisal is lower than most surrounding communities, meaning that the appraised value of homes tends to be lower than the state average. This may provide some of the reasoning why the homestead rate and nonresidential rates for education property tax rates are slightly higher than those surrounding communities with a higher common level of appraisal.

Town	Common Level of Appraisal	Homestead Rate	Nonresidential Rate
Bakersfield	99.29	1.4252	1.5460
Fairfax	95.94	1.3681	1.6000
Fairfield	93.65	1.5823	1.6391
Fletcher	93.78	1.5212	1.6368
Cambridge	102.56	1.4355	1.4967

**Source:** Vermont Department of Taxes

### Recent Development Trends

The number and type of zoning permits issued each year, listed in the accompanying table, give an indication of the amount and type of development occurring in Fletcher. Not all permitted development is constructed, however, permit information is useful in looking at local development trends.

Fletcher has developed parcel maps, which makes it easier to identify and locate specific subdivision and development trends. Permitting activity further validates the fact that land use is largely residential.

The pattern of development in Fletcher to date has been largely low density, single or multiple lot subdivisions of land along existing rights-of-way (including some Class 4 roads) for year-round residential use. If this pattern is maintained through the next decade, Fletcher's open land will continue to be subdivided for residential use.

Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Single Homes	15	10	15	8	8	7	4	8	1	7	4	4	2	10	7
Mobile Homes	2	0	3	3	2	1	3	0	0	0	0	0	0	0	0
Camps	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Additions /Sheds/ Garages	18	42	24	25	18	30	23	23	20	23	17	18	14	23	15
Other	38	42	43	52	27	7	15	12	16	6	6	9	3	0	2
<b>TOTAL</b>	<b>73</b>	<b>94</b>	<b>86</b>	<b>88</b>	<b>56</b>	<b>45</b>	<b>45</b>	<b>43</b>	<b>37</b>	<b>36</b>	<b>27</b>	<b>31</b>	<b>19</b>	<b>33</b>	<b>24</b>

Source: Fletcher Town Report 2003-2017

	2012	2013	2014	2015	2016	2017
Two Lot Subdivision	2	4	0	1	3	1
Three Lot Subdivision	0	1	2	0	0	1
Other Subdivision	0	0	0	0	0	0

Source: Town of Fletcher

**GOAL:**

1. To pursue a course to best understand the community, resident population and existing conditions.

**POLICIES:**

1. The most current data available will be pursued and applied to planning activities.

## SECTION 3 – NATURAL AND CULTURAL RESOURCES



(Photo Credit: Timothy Carpenter)

### Overview

Fletcher is a rural community, with a particular “sense of place” that has developed over time through the integration of the town’s natural, cultural or built environment. This blending, unique to each community, gives rise to special qualities and a distinct character, which is recognized and valued by local residents, but not always easily defined or preserved. Increasingly, many towns are losing their sense of place, their uniqueness, their character and their identity through nondescript patterns of development, including lower density residential sprawl in rural areas. In doing so, these communities lose many of the very qualities that make them attractive places in which to live and work. Further, what resource-based economy exists is continually being challenged as the town continues to shift into a bedroom community.

Giving due consideration to Fletcher’s natural and cultural features, and the qualities of life these afford, is of major consequence for the continued growth and development of the town. Protecting that which is unique or special about the town promotes quality development, increases property values, has direct economic benefits, and may form the basis for a shared, positive local image and greater sense of community. Fortunately, Fletcher retains much of what makes it an attractive place to live and work.

In this section, important natural and cultural features found in Fletcher which contribute to its rural character and sense of place are noted, along with related goals and policies concerning their protection, preservation and/or enhancement.



<b>Table 3.1 – Land Use/Land Cover in Fletcher</b>	
<b>Land Use</b>	<b>Sum of Acres</b>
Barren Land (Rock/Sand/Clay)	1.16
Cultivated Crops	630.83
Deciduous Forest	14,674.50
Developed, High Intensity	5.82
Developed, Low Intensity	129.59
Developed, Medium Intensity	20.03
Developed, Open Space	543.84
Emergency Herbaceous Wetlands	224.70
Evergreen Forest	2,186.54
Grassland/Herbaceous	36.28
Mixed Forest	2,770.71
Open Water	143.91
Pasture/Hay	2,254.83
Shrub/Scrub	114.40
Woody Wetlands	875.86
<b>Grand Total</b>	<b>24,612.99</b>
<b>Source:</b> Vermont Land Use/Land Cover Datum 2011	

**Natural Features**

Fletcher’s most prominent natural features and attributes are locally recognized. Others are less apparent, but nevertheless important to the health of the environment and the community. According to the Vermont Land Use/Land Cover (LULC) Datum, 2011, the land use/land covers outlined in Table 3.1 exist in Fletcher.

**Climate and Air Quality**

Climate represents the normal or average weather conditions that are characteristic of an area over a long period of time. Typical weather conditions are an important part of the planning and design process because they affect such things as soil erosion, plant growth, air quality, storm water runoff and flooding, groundwater levels, road maintenance, and access to solar or wind energy.

Vermont’s northern climate is dominated in winter months by cold dry air from Canada, and in the summer by warm moist air from the Gulf of Mexico. Occasionally the state also feels the effects of damp, cold air moving inland from the north Atlantic. Vermont experiences violent thunder and windstorms with shifting weather patterns; tornadoes and hurricanes are rare but episodes of heavy rainfall and flooding may occur during these periods.

Fletcher’s climate is especially pleasant in the summer months when the average daily temperature fluctuates around 80° F. Winter months, when temperatures may fall well below 0° F, present a different set of circumstances. Buildings must be constructed with sufficient insulation and heating to fend off the cold, and with the structural integrity and roofing to withstand heavy snowfalls. Winter snows also contribute to expensive winter road maintenance costs. Fletcher tends to receive more precipitation in the form of rain and snow than towns in the Champlain Valley. The freeze-thaw cycles that bring spring sap runs also buckle poorly drained foundations, pavements, and roads; and “mud season” may result in nearly impassible dirt roads and driveways.

Given the lack of industrial development in town, local air quality concerns are limited mainly to pollutants generated by vehicles, heating systems (e.g., wood stoves), and some agricultural practices. These types of low-level emission sources are coming under increased scrutiny statewide.

**Geology and Earth Resources**

For information about Fletcher’s geology and earth resources, please see Appendix B – Geology and Earth Resources.

**Topography**

Fletcher’s topography and drainage patterns reflect the differential erosion of underlying bedrock, and the effects of more recent glaciation. The result is a geologically mature, hilly, sometimes mountainous landscape cut by small stream valleys. Because topography provides natural barriers to movement and often influences the accessibility and use of land, topographic information is important in planning for different types of land use, transportation routes, and the location of public facilities and infrastructure.

Elevations in Fletcher range from lows of 430 to 440 feet above mean sea level (msl) along Black Creek and the Lamoille River, to 2,140+ feet atop Fletcher Mountain, east of Route 108. Most development in Fletcher, including Binghamville and Fletcher Center, is located between 500 and 700 feet, along the valleys and hollows that cut through surrounding uplands.

One of the most important factors controlling the potential use of land is slope or steepness. Slope is an important consideration not only because of associated constraints including drainage, erosion, and bearing capacity, but also because of the damage that may result from slope destabilization. Major causes of slope destabilization include vegetation removal and undercutting of slope faces. Slope destabilization may result in accelerated runoff and soil loss, septic system failure, foundation shifts, and in the extreme, landslides and building collapse. According to state soil data, 32% (7,761 acres) of the town consist of topography greater than or equal to 25% slope. This means that a significant amount of land area is unsuitable for structural development.

**Upland Areas**

Areas of higher elevation (here defined as 1,000’ or more) include most of the town’s mountains, ridgelines and hilltops, such as Gilson Mountain. Many are highly visible from public vantage points and contribute significantly to the scenic beauty of the town. Drainage divides, steep slopes, shallow soils and exposed, fractured bedrock are common in upland areas, which allow for upland drainage groundwater recharge, wildlife habitat, forestry and outdoor recreational activities, but make these areas highly sensitive to most forms of development. As such, upland areas deserve adequate protection from improperly sited and potentially harmful development.

Fletcher’s drainage includes a complex network of streams, rivers, overland, and subsurface flow. Locally, Fletcher lies within two drainage basins: the Missisquoi River basin, including Black Creek and the headwaters of the Fairfield River which drain northward; and the Lamoille River basin, including Wilkins Brook, Stones Brook and local tributaries which flow south into the Lamoille River. The major drainage divide runs roughly northwest to southeast through the middle of town. Both basins lie within the Lake Champlain watershed. Fletcher is unusual in that most of the town’s drainage originates locally; apart from the Lamoille River, many local headwaters are located in upland areas above 1,000 feet. (see Figure 3.1)

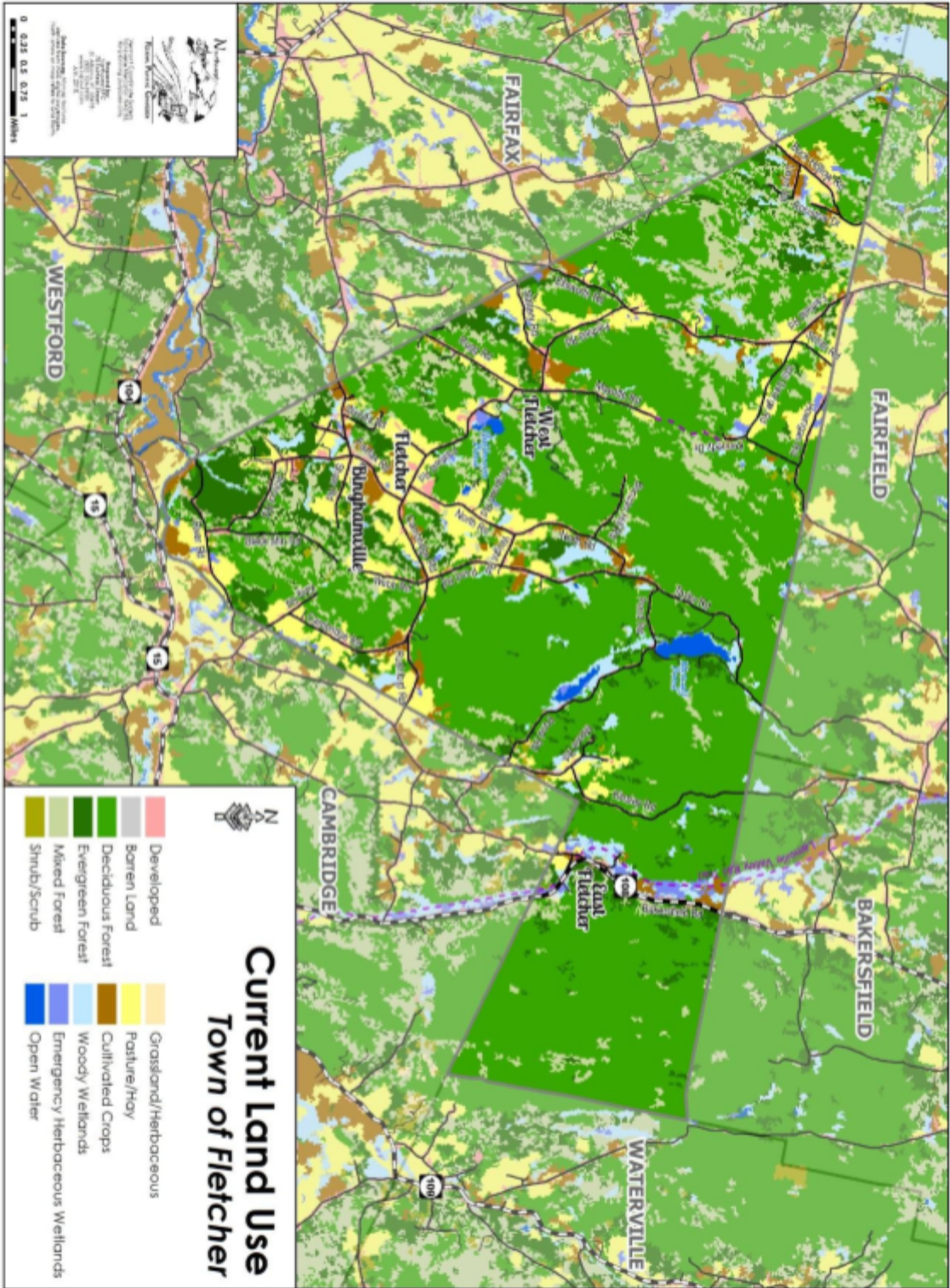


Figure 3.1 - Current Land Use Map

## Soils

Soil is perhaps the most important physical factor governing the use of land in rural areas. Soils are classified on the basis of their structure, form, composition, and suitability for various types of development. The most widely used classification system is that of the US Natural Resource Conservation Service (NRCS formerly the Soil Conservation Service). The NRCS has produced detailed soil survey maps for Fletcher, which is included in their publication Soil Survey of Franklin County, Vermont, issued in 1979. Components of the survey including suitability ratings for agricultural, forestry and on-site sewage disposal systems have since been updated. A map depicting soils particularly suited for agriculture and on-site septic systems is included for planning purposes (see appendices).

### **Primary Agricultural Soils**

“Primary agricultural soils” as defined under state law includes soils which, based on their chemical and physical properties, are considered especially suited for agricultural use. These are subdivided into “prime” soils having very high potential for and few limitations for agricultural use, and “secondary” soils of statewide significance that have good potential but may have one or more limitations that restrict crop selection or require more management.

In the rolling hills and mountains of Fletcher, primary agricultural soils, and “prime” soils in particular, are a very limited and valuable resource. Agriculture depends on the availability of high quality soils, in large enough acreage, to make crop production economical. However, many of the best agricultural soils are also well suited for other types of development, including the subdivision of land for the construction of houses and related infrastructure. Fletcher is no exception; new homes in town have been built on some of Fletcher’s best farmland.

The conversion of good farmland effectively takes it out of production over the long term and reduces an already limited resource base. In Fletcher, much of the best farmland, located in valleys along local roads and drainage, remains in production. Historically, more agricultural land has been abandoned to shrub and forest than has been lost to development; however, given the importance of agriculture to the community, now and in the future, farmland conversion and fragmentation remains a local as well as regional and statewide concern. It is necessary to retain sufficient acreage of all types of agriculture for sustainable production for the continuation of agricultural practices in Fletcher.

### **Primary Forestry Soils**

“Primary forestry soils” have also been identified by NRCS and the state according to their productivity for commercial forestry. Similar concerns exist regarding the development and fragmentation of commercial forestry soils; though these soils are more widespread and are often found in the more remote upland locations in town. Primary forestry soils include many soils, which, because of slope and drainage, are not suitable for intensive development. This reduces development pressures on this resource base, but even low-density development, including seasonal camps, may result in fragmentation and limited access to good forestland.

In all, few soils in Fletcher are suitable for high density development. Limited areas of good development soil (e.g. Windsor-Missisquoi soils) are located on sandy terrace deposits in the vicinity of and to the south of Binghamville. Given these soils’ suitability for different, often competing uses, and the amount of development pressure in this area of town, careful planning is needed to resolve existing and potential land use conflicts.

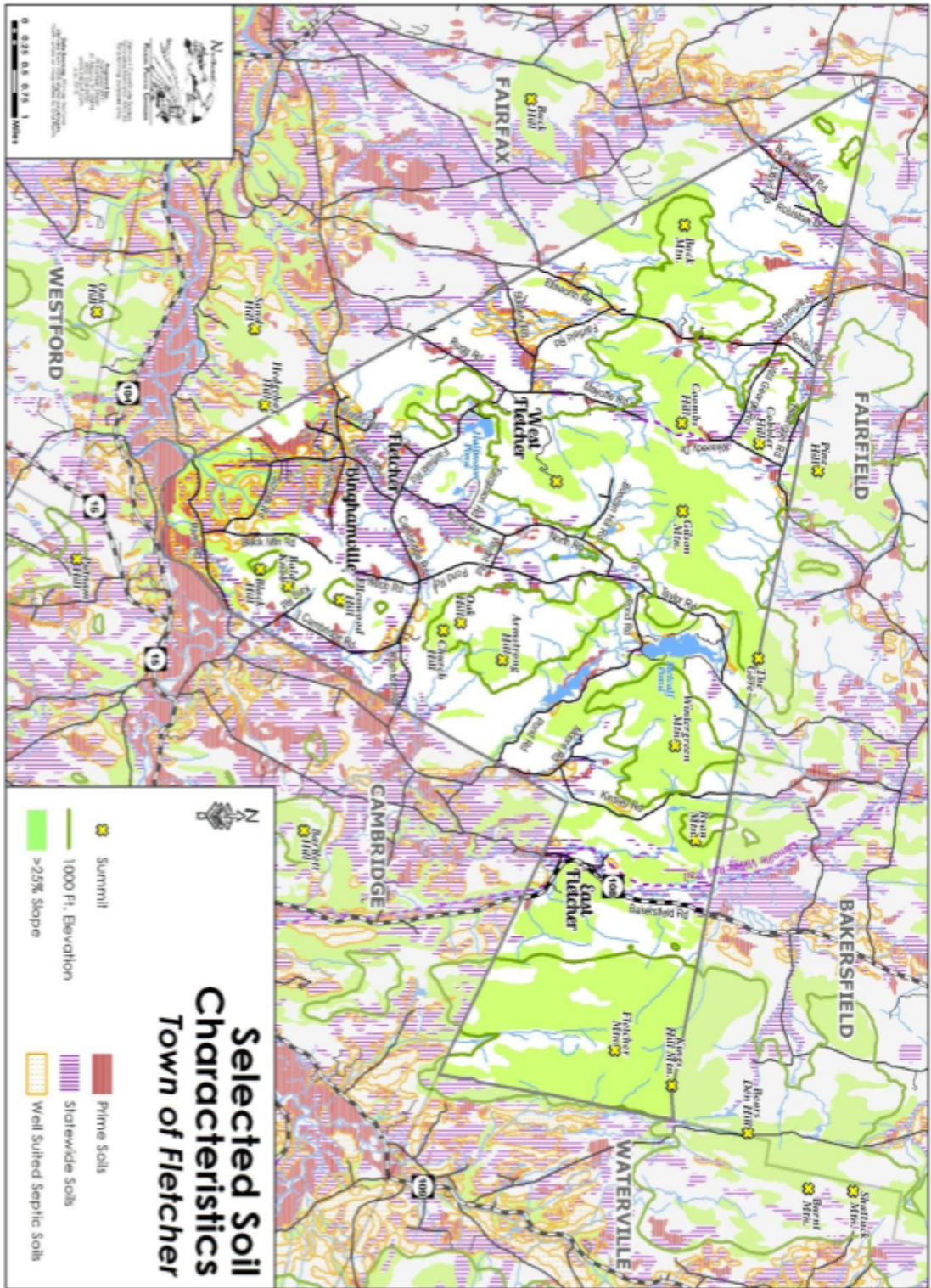


Figure 3.2 – Selected Soil Characteristics

**Surface Waters**

Fletcher’s principal surface waters include Metcalf and Half Moon Ponds, the Lamoille River, Black Creek, Wilkins Brook, Stones Brook, and the upper reaches of the Fairfield River. These waters, as well as other local streams and brooks, provide drainage for surrounding lands, important wildlife habitat, recreational opportunities, scenic views and individual water supplies. Any of these functions may be impaired by land uses within local watersheds, particularly in the vicinity of stream banks and shorelines.

Given that most drainage in Fletcher originates locally from upland areas of town, Fletcher is in a unique position to protect and enhance the quality of its surface and ground water resources. Pristine headwaters, located in the upper reaches of watersheds, are extremely sensitive to sedimentation and pollution. Inappropriate development within riparian zones and shore land areas may also significantly impair water quality.

Metcalf Pond is the town’s most notable surface water feature. Located between steep, forested slopes in the north central part of town, Metcalf Pond is a naturally occurring pond roughly 71 acres in size, and has a maximum depth of 25 feet. The pond drains through a southern outlet, which serves as the source for Black Creek.

The pond’s watershed has been mapped at 801 acres, 96% of which is undeveloped. Forested land extends over 84% of the basin. There is a significant amount of shore land development. Seasonal camps and year-round homes served by private, dirt roads and individual septic systems line the southern and parts of the western shores. Steep slopes and wetlands have limited development along much of the remaining shoreline, associated wetlands are found along the north shore and at the southern outlet.

Metcalf Pond is public water regulated by the state. Public access is limited to a small, undeveloped parcel of town land located along the road at the south end of the pond. The pond has been identified by the state as a warm water fish habitat. Fishing, boating, and swimming are popular activities locally.

Water quality is generally good and supports existing uses. There are problems with Eurasian Milfoil, an introduced aquatic weed first documented locally in 1984. Infestations are currently being controlled by manual harvesting. Local residents also have complained of reduced water clarity due to algae and siltation, resulting primarily from localized non-point sources of pollution. Increased development around the pond, including new or expanded seasonal structures or the conversion of seasonal homes to year-round uses, could impair water quality further if shore lands are not properly managed and protected. Given steep slopes and poor soil conditions around the pond, on-site sewage disposal and runoff have been of particular concern. For these reasons, the town has included the shoreland-residential district in its local zoning bylaw.

Half Moon Pond is a smaller (21 acre), naturally occurring water body located south of West Fletcher. The pond’s outlet feeds into Stones Brook. Half Moon Pond is also public water regulated by the state, and a designated warm water fish habitat, but at present there is no access that permits public use. The pond’s watershed area is 194 acres, of which 80% remains undeveloped. Most of the watershed (70%) is forested; roughly 20% is in agricultural use. One farmstead and a small number of homes are located in the vicinity. The shore land remains largely undeveloped and wetlands are located around the southwest end.

Half Moon Pond played an important role in Fletcher’s history, supporting a local ice harvesting industry, and it remains an important aesthetic resource to the town today. It would serve the public interest for the town to negotiate limited public access to these waters.

Fletcher is one of three Franklin County towns that border the Lamoille River; as noted, much of the southern half of the town drains into this river through Stones and Wilkins Brooks, and other local drainages. The Lamoille River is a river of statewide significance for municipal and individual water supplies, power generation, fisheries and wildlife habitat. It is also a culturally significant historic, recreational and scenic corridor. Currently, the river in Fletcher is bordered by farmland; there is no direct public access.

The Vermont Agency of Natural Resources has a Tactical Basin Plan for the Lamoille River and its tributaries. A Tactical Basin Plan has been developed in each large watershed in Vermont “to protect, maintain, enhance, and restore the biological, chemical, and physical integrity, and public use and enjoyment of Vermont’s water resources, and to protect public health and safety.” The plans also identify specific projects in the basin that could be constructed to improve water quality. The Missisquoi River watershed, which covers part of Fletcher, also has a Tactical Basin Plan.

Black Creek, Wilkins and Stones Brook also are important locally. The headwaters of all three are within the town. Black Creek flows south from Metcalf Pond, feeding a significant wetland area that supports a variety of wildlife. In Cambridge, the creek turns northward and reenters East Fletcher along Route 108, then flows northward through wetlands, deer yards and farmland into Bakersfield and Fairfield.

The headwaters of Stones Brook, located along the drainage divide south of Metcalf Pond, also feed wetland areas to the east of North Road. Historically, Stones Brook provided power for local mill operations in Fletcher Center and Binghamville before winding its way south to the Lamoille River. Old dam sites and millponds are still evident.

Other local streams and brooks serve important functions beyond local drainage. Pristine headwaters flowing into larger streams and rivers contribute significantly to their improved water quality. Many local waters are ephemeral and very sensitive to disturbances resulting from housing, forestry, agriculture and other forms of development.

As previously observed, most of the town’s drainage originates locally, therefore Fletcher is in a position to protect and enhance the quality of its surface waters. The headwaters that contribute to East Fairfield’s public water supply are already included in a Source Protection Area (SPA) designated by the state and shown on the accompanying maps (see appendices).

**Groundwater**

A large majority of Fletcher residents depend on groundwater for their individual water supplies. At present, there are no public water supply systems in town. Fletcher’s aquifer recharge areas include many upland areas where bedrock is exposed (as evidenced by the number of springs that flow seasonally), and sand and gravel deposits, which allow for a significant amount of infiltration. Groundwater is generally abundant, though depth and quality vary from place to place depending on local geology and sources of contamination. Contaminants of particular concern include road salt, agricultural chemicals, leaking fuel tanks and failing septic systems. Because of the low density of settlement in Fletcher, groundwater contamination, when it occurs, is limited and isolated.



There is concern regarding groundwater contamination in the Binghamville area, including the potential contamination of the school's water supply, which is tested regularly. Given the higher density of settlement in this area, continued reliance on on-site septic systems, sandy soils, and increased development activity, any future community water supply to serve this growing area will require an abundant source of potable groundwater. It therefore makes sense for the town to identify, designate, and protect such a source before it is developed for other purposes.

**Wetlands**

Wetlands are not typically suited for development, but serve a variety of other important functions, including flood regulation, water purification and wildlife habitat. They also add to the scenic quality of the rural landscape. The National Wetlands Inventory (NWI), conducted by the U.S. Fish and Wildlife Service in the 1970's, identified 782 acres of palustrine (upland) wetlands in the Town of Fletcher. This information is dated and by no means definitive, since wetland boundaries fluctuate from season to season.

Major wetland complexes are located along Black Creek, Stones Brook, and along the shorelines of Metcalf and Half Moon Ponds (see appendices). Wetlands are also scattered through upland areas where drainage is poor, or beavers have been at work. For development and permitting purposes, wetland boundaries are delineated through survey plats. Many wetlands in Fletcher (those designated as Class II wetlands) are now protected by the state and local regulation.

**Flood Resiliency**

Flood plains include areas along streams and rivers that experience frequent flooding and for obvious reasons are poorly suited for most types of development. "Open space" uses, including agriculture, forestry, and outdoor recreation are most suited to these areas.

Flooding is a natural occurrence and can occur in two ways: inundation and fluvial erosion. Inundation flooding is when water rises and covers the adjacent low-lying land. The Federal Emergency Management Agency (FEMA) defines a floodplain as an area of land adjacent to lakes and streams that is subject to recurring inundation or high water. There are several areas of floodplain in Fletcher. This includes areas along the banks of the Lamoille River and Black Creek. The Town of Fletcher has adopted floodplain regulations as part of its zoning bylaw, which conforms to federal requirements for participation in the National Flood Insurance Program (NFIP). Restrictions are intended to protect life and property, and to allow property owners to obtain flood insurance, and mortgages, at affordable rates. These regulations restrict development in 100-year flood zones, as mapped on federal Flood Insurance Rate Maps (FIRMs) available for review at the town clerk's office. While this information is the best available, the hydrology that these maps are based on has not been updated since the 1980s and therefore does not account for shifts in shoreline or effects of development. The FIRMs were digitized by the Northwest Regional Planning Commission in 1999 to assist in planning efforts and are used to determine approximate locations. The digital version is not used for regulatory rulings.

Flooding can also occur through fluvial erosion, a condition that occurs when fast moving flood waters, typically in steep areas, cause erosion of areas surrounding streams and rivers. To identify areas prone to fluvial erosion hazards, the Vermont Agency of Natural Resource has identified River Corridors in all Vermont municipalities. River Corridors are based on the individual conditions of streams and rivers including topography and the existence of public infrastructure. River Corridors are not mapped for

streams that have a watershed of less than 2 square miles. Instead, the Agency advises using a buffer of 50-feet on each side of a stream with the intention of protecting stream stability and natural flow.

The Critical Areas map shows all mapped River Corridors in Fletcher. River Corridors regulations currently apply only to Act 250-related land development and land development not regulated by municipalities (like agriculture). Municipalities may adopt River Corridor maps and regulation as a part of their development regulations. Fletcher has adopted a stream buffer regulation that is similar to state administered River Corridor regulation to ensure that land development does not occur in areas prone to erosion.

Planning for future flooding events is important to ensure that a community is flood resilient. Development and adoption of a local hazard mitigation plan can help a community identify potential hazard risks to the community. Local hazard mitigation plans can also identify projects in the community that can decrease the effects of potential hazards, such as the replacement of culverts or buyouts of properties with repetitive flood risk. Approval of local hazard mitigation plans by FEMA may also lead to increased grant opportunities for communities to implement identified projects. Fletcher may want to develop a local hazard mitigation plan in the future.

**Wildlife Habitat and Forest Blocks**

Fletcher’s environment supports many types of wildlife habitat, including upland areas, wetlands, forests, streams and ponds, which in turn support a variety of wildlife. Protecting habitat resources, often accomplished through the protection of other features and values, is critical to sustain local wildlife populations and to maintain and enhance local biodiversity. The protection of wildlife habitat in support of traditional hunting and fishing activities, other forms of outdoor recreation, and to maintain biodiversity, has been identified as a local concern. The primary threats identified include habitat encroachment, fragmentation, water pollution and over hunting. Certain critical habitat areas have been identified for protection by the state. These include winter deer yards, critical bear habitat, and habitats of rare or endangered species or natural communities.

To date, five deer yards (5,955 acres +/-) have been identified in Fletcher (see map figure 3.3). The largest is located in the southwest corner of town in a forested area between Fairfax and River Roads, which extends westward into Fairfax. Development south of Binghamville, and in parts of Fairfax, has begun to encroach on this area. The second largest deeryard is located on the western slopes of Fletcher Mountain along the valley of Black Creek, east of Route 108. Other smaller deer yards are found in eastern sections of town, mainly along Black Creek. These areas provide winter shelter and are critical to the long-term survival of the local deer population.

The state has established the Gilson Mountain Wildlife Management Area on the north slopes of Gilson Mountain through the transfer of rights on 380 acres of private land. Limited public access is permitted, but to date no wildlife management plan has been developed for this area.

The upland areas of Fletcher east of Route 108 are considered important bear production habitat. This region, which consists mainly of contiguous and remote forestland, is part of a larger area that supports relatively high densities of cub producing females. Other upland areas in the eastern half of town are considered important seasonal bear habitat, which include feeding areas and travel corridors. The black bear is a sensitive indicator of the health of Vermont’s forest; these areas are considered critical to the black bear’s long-term survival in Vermont.

To date, no rare, threatened or endangered plant or animal communities have been identified in Fletcher. This is in part due to the fact that no extensive field inventories have ever been conducted in town. If such communities are located in the future, appropriate measures should be taken for their protections.

Maintaining adequate habitat for the protection of local wildlife requires not only the protection of core habitat areas from fragmentation and encroachment, but also the protection of travel corridors, which connect these core areas and allow for seasonal and local movement of wildlife populations.

As of January 1, 2018, all municipal plans must address how “Vermont's forestlands should be managed so as to maintain and improve forest blocks and habitat connectors.” Habitat blocks are areas of contiguous forest unfragmented by public or private road infrastructure.

Fletcher contains two large, significant forest blocks. These two forest blocks are over 5,000 acres in size and extend into the surrounding towns. They are the two largest forest blocks in Franklin County and provide habitat connection between Lake Champlain and the Green Mountains. There are additional forest blocks located in other areas of town, but these forest blocks tend to be much smaller and fragmented by agriculture.

**The Working Landscape**

As a rural community, Fletcher’s rural character is most visually defined, and its history most evident, in its working landscape represented by small, compact settlements such as Fletcher Center and Binghamville surrounded by open countryside. It was noted in the 1981 Department of Historic Preservation Survey that the incremental changes, which are affecting Fletcher’s historic buildings, are overshadowed because as individual structures they are dominated by their agricultural setting. Greater concern expressed by local residents in prior surveys, including the 1981 Historic Preservation Survey and in the municipal survey, was not the condition of existing buildings. It was, rather, the development of open space, in particular a concern that the rapid rate of new construction, rising tax rates, and the lack of adequate zoning regulations would encourage the further subdivision of farm and forest land. It is evident that Fletcher’s working landscape, as identified by its residents, has economic, fiscal and cultural significance, and contributes significantly to the rural and scenic character of the town. Since 2000, there has been a significant increase in both multiple and single lot subdivisions in Fletcher. More specifically, single lot subdivision is the most widely applied form of subdivision in Fletcher. New construction has been located mainly on large lots, carved from larger farm holdings.

Efforts to counteract the challenges that face the working landscape can only be achieved through multiple approaches whether provided on a state, federal or local level. Currently there exist only a few mechanisms, which may enable property owners to work their land for viable economic returns. Land trusts and the Current Use Program are the two most widely applied programs.

For more information about Fletchers historic and cultural resources, see Appendix A.

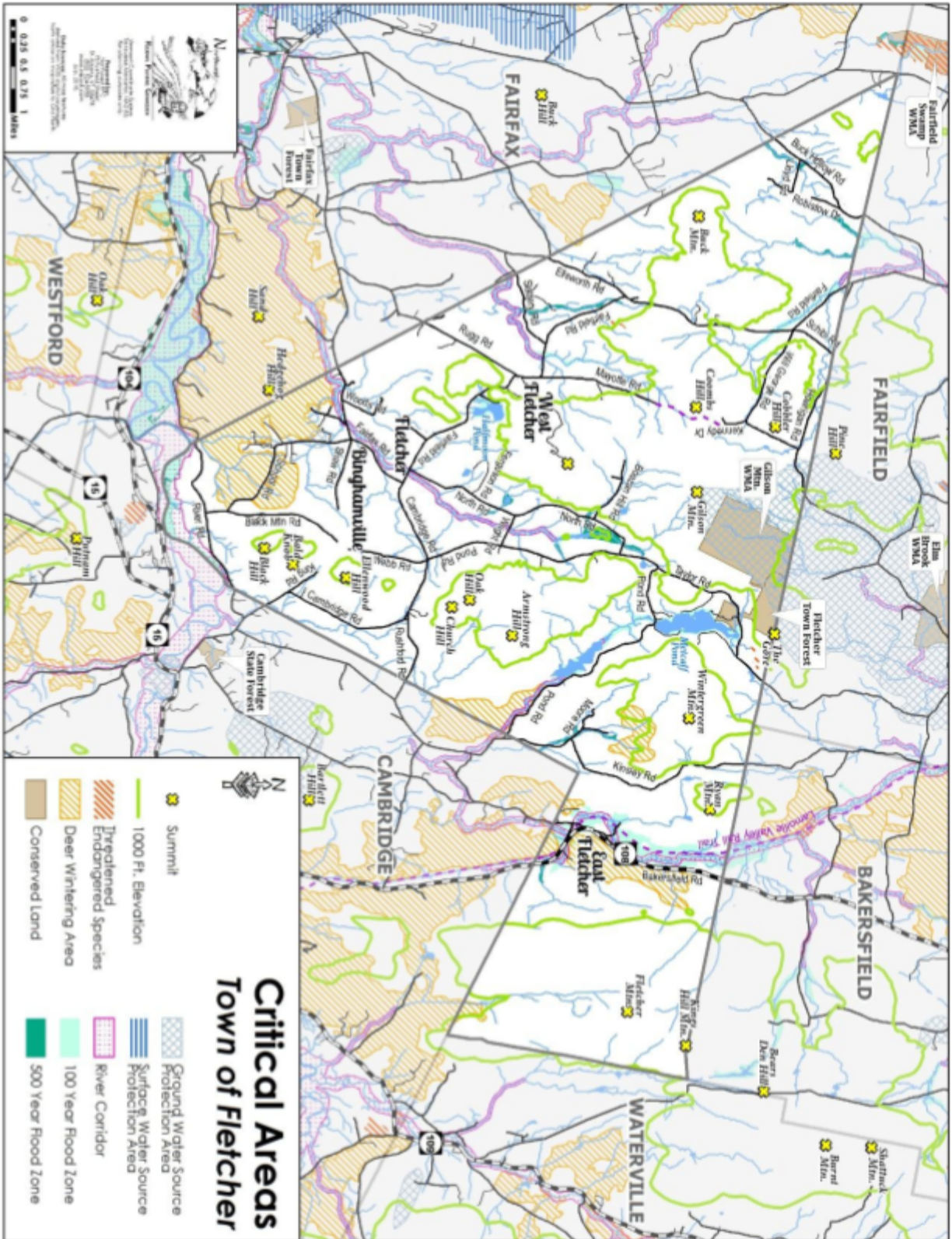


Figure 3.3 – Critical Areas

### Scenic Features

A Design Issue Committee put together by the Vermont Agency on Natural Resources identified six types of “sensitive” landscapes that deserve special consideration in planning, design and project review, along with associated guidelines (Vermont’s Scenic Landscapes: A Guide for Growth and Protection, VANR, 1991). These landscape types, as viewed from public vantage points, include the following:

- Foregrounds of distant views
- Steep slopes
- Shorelines
- Ridgelines and hilltops
- Open fields and meadows
- Historic settlements and gateways

Examples of each type are readily apparent in Fletcher. Specific scenic features identified by Fletcher residents included views of Mount Mansfield from a variety of vantage points; views of other mountains, hilltops and ridge-lines throughout town; views of wooded hillsides, farmland and open space (including the Tinker and Mayotte Farms); Half Moon Pond; Metcalf Pond and the surrounding hillsides, including “the Gore” to the north, and scenic views from the major roads in town, including the Fairfield and the Fairfax/Cambridge roads (TH 1 (Cambridge Rd) and TH 2 (Fairfield Rd)).

With appropriate sighting and design, even the most sensitive landscape types may be developed and still retain much of their intrinsic character. Landowners and developers should be encouraged to use creative development techniques, including open space and community design that respect traditional development patterns and enhance the rural character of the community. Even small subdivisions of four or five lots (the size of many local hamlets) may incorporate traditional patterns.

### GOALS:

1. To discourage development in areas which are hazardous to human health and safety, or which are otherwise unsuited for this purpose;
2. To protect and enhance resource lands in the Town of Fletcher, including productive farm and forest lands and available earth resources, in order to maintain an adequate land base to sustain agriculture, farming and forestry operations and to secure needed supplies of sand and gravel for the benefit of existing and future generations;
3. To protect, conserve and maintain access to Fletcher's significant natural areas and unique or irreplaceable natural features for environmental, ecological, educational and/or recreational purposes; and
4. To ensure that Fletcher is a flood resilient community.

**POLICIES:**

1. Site disturbance for the construction of buildings, roads, basins and other improvements shall be kept at a minimum. Development shall be sited so as to avoid undue adverse impacts to important natural or manmade features, including but not limited to shallow or highly permeable soils, steep slopes, ground and surface waters, wetlands, river corridors and/or floodplains.
2. Development on slopes greater than 15% will be carefully performed in order to minimize site disturbance and the potential for erosion and runoff. Slopes in excess of 25% will be protected from development.
3. The use of Required Agricultural Practices (RAPs) for farms and Accepted Management Practices (AMPs) for silviculture, and associated management plans, as defined, administered and enforced by the Vermont Commissioners of Agriculture and Forests, Parks and Recreation, are encouraged locally to ensure sustainable use of the town’s resource lands. Fletcher supports the “current use” program to maintain resource lands in active production.
4. Extraction and related processing operations will be permitted only when it has been demonstrated that there will be no undue adverse impacts on the town or its residents. Potential conflicts between current land use and proposed extraction operations shall be minimized.
5. The introduction of pollutants, permanent encroachments and exotic and/or nuisance species to the public waters of the town shall be prevented.
6. Adaptive reuse of historic structures, including barns and other agricultural outbuildings, is encouraged and will be supported as feasible through provisions in local bylaws and available incentive programs.
7. The efforts of the Fletcher Historic Society will be supported to preserve and maintain the Fletcher Union Meeting House for public use and to preserve and promote the town's history.
8. Structures, including telecommunication towers, shall not be placed on ridgelines or mountain tops. With the exception of telecommunication towers or wind generation, structures shall not extend above the elevation of the crown line of mature trees. Telecommunication towers may be permitted to extend above the crown line only to the minimum extent required for functional operation.
9. Utility lines and associated rights-of-way are to be developed and/or extended in a manner which minimizes adverse impacts on the town's scenic and land-based resources.
10. Town Highways and public rights-of-way are to be maintained in a manner which, to the extent feasible, preserves and enhances their scenic and historic features. The impact of development on scenic roads will be minimized through appropriate sighting, landscaping and screening.
11. Outdoor lighting shall be designed and installed to not project glare upward or onto adjoining properties.
12. New development in identified flood hazard, fluvial erosion, and river corridor protection areas shall be avoided. If new development is to be built in such areas, it shall not exacerbate flooding and fluvial

erosion. Fletcher will encourage protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion. Fletcher will also encourage flood emergency preparedness and response planning.

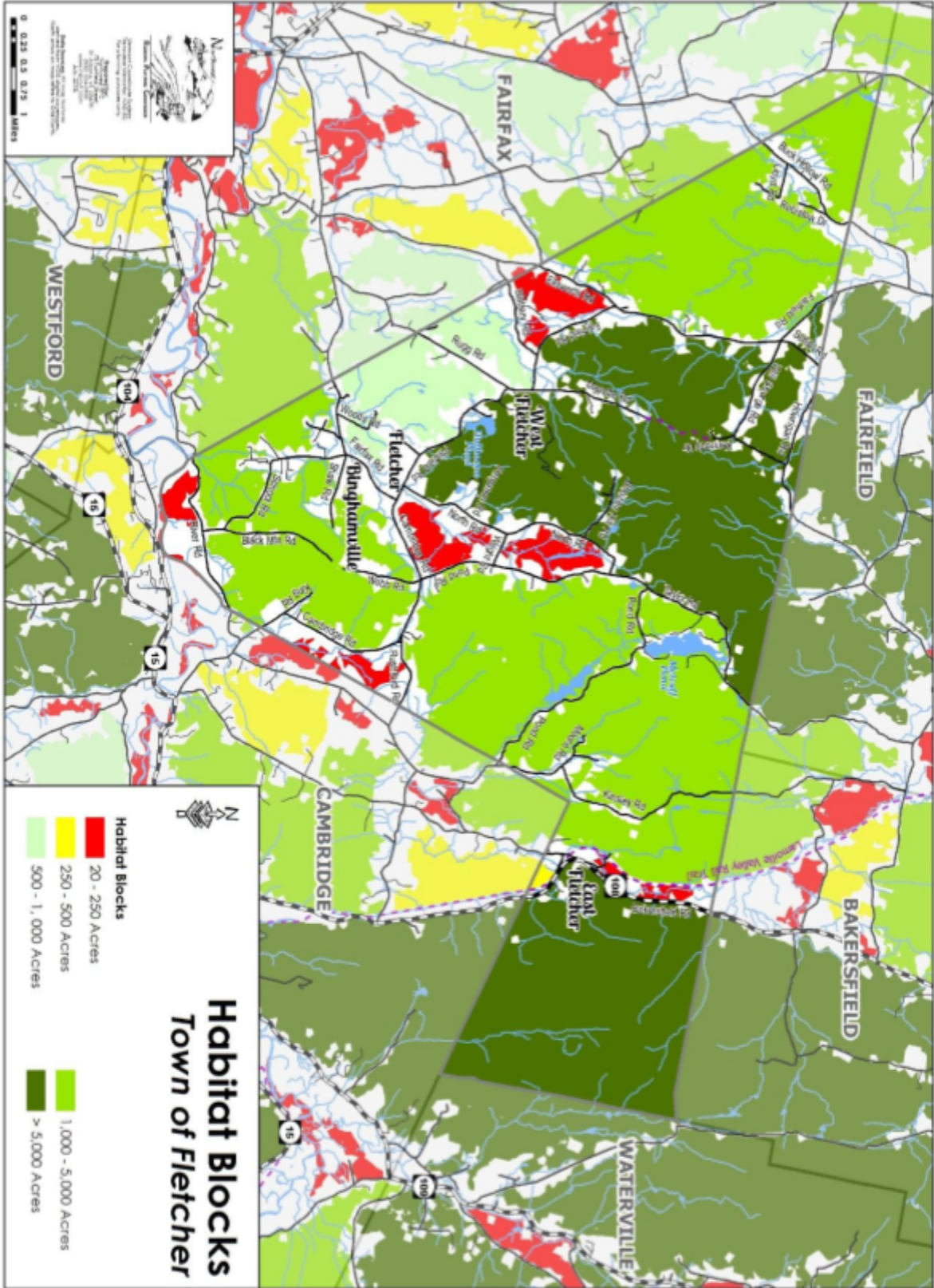


Figure 3.4 – Habitat Blocks



## SECTION 4 - HOUSING

### Overview

Shelter is a basic need of everyone in the community. For this reason, one of the main goals of planning is to ensure sound, healthy and affordable housing for all residents, now and in the future. In rural communities such as Fletcher, housing contributes significantly to the town’s appearance, its ability to attract other forms of growth, and the local property tax base. Insufficient housing stock often results in increased housing demand and cost, which in turn limits the availability of affordable housing and shifts the burden of providing shelter to adjoining towns.

On the other hand, housing that is poorly planned, sited, designed and constructed can overburden public services, destroy natural resources and cultural amenities, and require significant maintenance over time. Planning to meet community housing needs requires a look at the characteristics of local households and housing needs, the condition and availability of housing stock, housing affordability and anticipated need.

### Household Characteristics

The way the local population is organized into households affects the demand for housing, community services and employment opportunities. Locally and nationwide, the size of households has declined dramatically since the 1970s. For instance, in 1980 there was an average of 3 persons per household in Fletcher. By 2016, the average persons per household had decreased to 2.6 people. A decrease in the average household size generally corresponds with an increase in the number of households. The number of households in Fletcher, and statewide, is increasing more rapidly than the population, which contributes to the demand for additional housing. In Fletcher there has specifically been a rise in the number of households composed of married couples without children.

	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2016</b>
<b>Family</b>	78.70%	76.70%	75.90%	74%	78%
<b>Non-family</b>	21.30%	23.30%	24.10%	26%	22%
<b>Married, with children</b>	42.50%	39.70%	35.30%	25.20%	31.70%
<b>Married, without children</b>	33.30%	26.40%	31.10%	36.20%	53.60%
<b>Single householder, with children</b>	1.00%	7.30%	4.20%	9.30%	12.80%
<b>One person</b>	11.1%	14.50%	18.50%	17.90%	16.40%
<b>One person, 65+ years</b>	N/A	5.40%	4.70%	5%	5%
<b>Total Households</b>	207	330	428	497	517

**Source:** US Census and 2012-2016 American Community Survey

### Housing Stock

In 2016, Fletcher had 608 housing units, the second smallest housing stock of any municipality in Franklin County after Bakersfield. The relatively few number of units, however, belies the dramatic growth in housing that the town has been undergoing since the 1970s. Between 1970 and 1980, Fletcher’s housing stock increased by 46.1%; it grew another 41.3% between 1980 and 1990; it grew another 20.2% between 1990 and 2000. However, growth has slowed and housing stock only grew by 7%

between 2010 and 2016. Local zoning permits for new residential development for 2013 -2017 average 5 permits per year (Table 2.9). This is down from previous trends including 11 per year average between 1995 and 2000, 7 per year from 2000-2005, and 8 per year from 2005-2010.

As noted in preceding sections, because Fletcher is located within expanding Burlington and St. Albans “commuter sheds,” the town has become an attractive bedroom community for those who work outside Fletcher. As noted elsewhere, many towns’ people are concerned that a high rate of housing growth may negatively impact municipal and educational facilities and services. However, with the cost of fuel rising in the last five (5) years to record levels, the commuter sheds may become less attractive.

**Table 4.2: Changes in Local Housing Stock, 1980-2016**

	1980	1990	2000	2010	2016
<b>Total Units</b>	288	407	510	569	608
<b>Total Occupied</b>	208	330	428	497	517
<b>Owner Occupied</b>	174	287	378	440	485
<b>Renter Occupied</b>	34	43	50	57	32
<b>Total Vacant</b>	80	77	82	72	91
<b>Source:</b> U.S. Census Data, 2012-2016 American Community Survey					

Fletcher’s housing stock consists mostly of detached, single family dwellings; housing units in 2000 through 2010 had an average of 6 rooms. Mobile homes make up 7% of the local housing stock, and provide an affordable alternative to other types of new construction. At present, there are no mobile home parks, condominiums, group quarters (e.g., retirement homes), town houses, apartment buildings, or subsidized housing units in town. There is, however, a growing trend to add an accessory dwelling (apartment) to current single-family dwellings. Given that the housing stock consists predominantly of owner-occupied single-family homes, rental opportunities for smaller units are limited. In 2016, rental units comprised only 5% of housing.

**Table 4.3 – Types of Housing Structures**

	1980	1990	2000	2010	2016
<b>Seasonal</b>	61	62	77	62	62
<b>Single, detached</b>	182	338	443	519	560
<b>2 Units</b>	4	6	2	4	0
<b>3,4 Units</b>	4	3	4	0	3
<b>5+ Units</b>	2	0	0	0	0
<b>Mobile Home / Trailer</b>	34	55	53	51	43
<b>Avg.# Rooms/Unit</b>	5.9	5.8	6	6	6
<b>Source:</b> U.S. Census Data, 2012-2016 American Community Survey					

Seasonal homes account for the majority of vacant housing in town; at any given time, very few units are available on the market for sale or rent. A vacancy rate of 5% is considered sufficient to take care of short term housing demands. According to local realtors, generally fewer than 5 to 10 units (.8% to 1.6% of Fletcher housing stock) are listed for sale in Fletcher at any given time.

Fletcher does not have a local housing or building code, and no detailed inventory of housing conditions has been made to date. Given that the majority (69%) of Fletcher’s housing stock has been built since 1970, and is therefore 40 years old or less, it is assumed that the majority of housing is generally in good repair.

Like most Vermont communities, however, Fletcher also has a significant number of dwellings that were constructed prior to 1940. This is indicative of both the historic value of the housing stock, as previously noted, and also the potential need for repair and rehabilitation. Apart from structural concerns, older homes often have problems with heating insulation, efficiency and ventilation, wiring, lead paint, asbestos and inadequate water supplies and septic systems.

**Housing Affordability**

Affordability is a relative measure. Under state and federal guidelines, housing is considered affordable when households at or below the median income level pay no more than 30% of their gross income on housing costs.

Data from the 2010 Census indicates that the median housing costs for home owners was \$1,327 per month, while the median for renters was \$663.00 per month. Typically, homeowners spend less of their income on direct housing costs than do renters; but they spend more on indirect costs, including repair, maintenance and taxes. In 2010, 35.6% of Fletcher homeowners and 26.5% of renters were spending 30% or more of their household income on mortgages and rent, excluding other housing costs. This suggests that for a segment of Fletcher’s population housing is unaffordable.

The property tax burden to residents also makes local housing less affordable, especially for those on fixed incomes; however, the State of Vermont currently offers an adjustment of the school taxes based on household income on primary homes and two acres. Given that Fletcher is a small community, without a viable commercial or industrial tax base, land based and/or residential properties bear most of the burden of paying for municipal facilities and services.

As noted, no subsidized units for low income or elderly residents currently exist in Fletcher. Over half of Fletcher’s residential properties are on six or more acres. Large lots, however, often needlessly fragment land, taking it out of use for farming and forestry, and serve to increase the overall cost of housing. Given Fletcher’s current fiscal situation, the lack of centralized facilities and services, and the distance from major employment centers, the town can be expected only to provide for affordable housing to meet local, rather than regional, needs.

Any long-term growth management program considered by the town to remedy the fiscal impacts of recent residential development should also make provisions for the development of new types of housing which may require fewer services, including accessory apartments, additional rental units, and possibly elderly housing in order to help meet local needs.

Any local strategy to provide affordable housing, particular for special needs populations (elderly, handicapped, low/moderate income, etc.), should include the elements outlined below.

Programs and organizations are available locally, such as the Champlain Housing Trust (CHT), which can assist municipalities and/or landowners in developing, funding or managing affordable housing units.

**GOALS:**

1. To encourage the availability of safe, attractive and affordable housing for all Fletcher residents.
2. To promote the development of new housing which avoids environmentally sensitive areas and resource lands, reinforces existing or creates new, integrated residential neighborhoods, and provides a diversity of housing types (e.g. single household homes, duplexes, apartments, etc.).

**POLICIES:**

1. The rate of housing development shall not exceed the ability of the town to provide and maintain associated infrastructure and services.
2. Housing should be safe and sanitary, energy efficient, and satisfy the day-to- day living requirements of its inhabitants.
3. Fletcher shall accommodate a diversity of housing types, including its fair share of affordable housing, based on identified local need and the town’s ability to support it; and strive to maintain existing affordable housing stock where feasible. Housing developed as “elderly housing,” should be designed specifically to accommodate the needs of elderly residents. The development of affordable and/or elderly housing should be provided with an opportunity to access appropriate density bonuses and/or waivers under development regulations to ensure that affordable and/or elderly housing can be developed in Fletcher.
4. New housing development shall minimize impacts to resource and conservation lands, and designated natural, cultural, scenic features and productive agricultural land. Clustered forms of residential development are encouraged and may be required to maintain the town’s agricultural and forest resource base, to protect rural and scenic character, to avoid impacts to natural resources, and to allow for traditional “hamlet” forms of residential development, and related infrastructure and services.
5. High density, multifamily residential development should be located within existing and/or expanded village areas and reinforce traditional patterns of residential development.
6. The sighting and conversion of seasonal homes shall be regulated to ensure adequate access.
7. The development of small mobile home parks in appropriate locations shall continue to be supported.

## SECTION 5 - ECONOMIC DEVELOPMENT

### Overview

The term “economy” for purposes of municipal planning refers to resources, production, jobs, income and activities in the town and region that contribute to the economic well-being of local residents, businesses and industries. Economic planning can assist in providing jobs commensurate with the skills and aims of local residents, a more balanced tax base to meet community needs, the protection of important economic resources, and the provision of services and products to support the local community. Poorly planned economic development can adversely affect the local environment, strain municipal services, cause dislocations of businesses and labor, and adversely impact community character.

Fletcher’s local economy remains predominantly rural, agrarian, and resource based. Planning for other forms of economic development in small, relatively isolated communities such as Fletcher, which have limited infrastructure to support business, retail and industrial growth, is a challenge; but such planning can help highlight local needs, strengths and opportunities.



(Photo Credit: Timothy Carpenter)

### Economic Base

#### Labor Force

Fletcher’s labor force in 2016 (including persons 16 years and over in the workforce) numbered 1,082. Approximately 848 persons were actively participating in the labor market and 811 persons (95%) were actively employed. According to the Census Longitudinal Employer-Household Dynamics (LED) data, the

majority of Fletcher’s employed residents worked outside of the community. This qualifies Fletcher as a bedroom community. Fletcher residents are highly dependent on the regional economy for employment opportunities.

<b>Table 5.1: Occupational Comparison, Pct. Of Labor Force</b>			
<b>Occupational Category</b>	<b>Fletcher</b>	<b>Franklin County</b>	<b>Vermont</b>
<b>Management, business, science &amp; art</b>	43.00%	35.40%	40.30%
<b>Service occupations</b>	10.70%	16.50%	17.40%
<b>Sales and office occupations</b>	18.00%	21.50%	21.60%
<b>Natural resources, construction, maintenance</b>	14.30%	12.20%	10.70%
<b>Production, transportation, &amp; material moving</b>	14.00%	14.30%	10.80%
<b>Source: US Census Data, 2012-2016 American Community Survey</b>			

The industries in which the most local residents worked in 2016 included educational services, health care and social services; manufacturing; and construction (Table 5.2).

**Local Employment**

Fletcher’s labor force is relatively well educated and well trained. As noted in the accompanying tables, the top three occupational categories in 2016, representing 75% of the local labor force are: management, business, science, arts and professional; natural resources, construction and maintenance; sales, office occupations. According to the Vermont Department of Labor, in 2017 there were approximately 49 non-agriculture and non-forestry-related jobs in Fletcher at 9 different work establishments. Fletcher’s economy has traditionally been agrarian, which contributes significantly to its rural character. However, Table 5.2 notes that only a small percentage of Fletcher local labor force is involved in Fletcher’s resource-based industries, including farming and, to a lesser extent, commercial forestry. Despite shrinking numbers, farming and related activities remain the mainstay of the local economy. Dairy, beef, horse and other livestock farming, the production of lumber, firewood, maple syrup, honey and eggs, and related farm service and equipment sales contribute significantly to local wages, incomes and to the larger cash economy of the town.

**Economic Outlook**

The national and state economies are now recovering from the recession of 2007-2008 that has affected local residents both directly and indirectly. Of particular concern for Fletcher’s resource-based economy are national and regional trends affecting the agriculture and forestry industry. Economic forces, largely beyond local control, will continue to affect the long term economic viability of local farming and timber operations.

Fletcher does not have the population base or infrastructure (municipal water and sewer, three phase power, transportation infrastructure) to support large scale commercial and industrial development. Increasingly, however, the focus statewide is on the promotion, development and expansion of small businesses (20 employees or less) to generate jobs.

<b>Table 5.2: Industry Comparison, Pct of Labor Force</b>			
<b>Industry Category</b>	<b>Fletcher</b>	<b>Franklin County</b>	<b>Vermont</b>
<b>Agriculture, forestry, fisheries and hunting and mining</b>	3.40%	3.60%	10.80%
<b>Construction</b>	15.10%	8.50%	7.40%
<b>Manufacturing</b>	13.70%	14.80%	10.90%
<b>Wholesale trade</b>	2.70%	2.70%	2.20%
<b>Retail Trade</b>	8.70%	11.00%	11.50%
<b>Transportation and warehousing and utilities</b>	3.60%	3.80%	3.20%
<b>Information</b>	0.50%	1.20%	2.00%
<b>Finance, insurance, real estate and rental and leasing</b>	3.00%	2.80%	4.80%
<b>Professional, scientific, management, administrative and waste management services</b>	11.10%	7.90%	8.80%
<b>Educational, health and social services</b>	21.40%	24.50%	28.10%
<b>Arts, entertainment, recreation, accommodation and food service</b>	4.80%	6.90%	9.30%
<b>Other services (except public administration)</b>	5.90%	3.50%	4.30%
<b>Public administration</b>	6.00%	8.70%	4.80%
<b>Source: U.S. Census Data, 2012-2016 American Community Survey</b>			

As a small, rural bedroom community, the town will remain tied to the regional economy for high quality, high paying jobs, and for many needed goods and services. Fletcher nevertheless can support its existing economic base and promote increased diversification through the protection of the town's natural resources in support of sustainable, resource-based industries, and also related tourism and outdoor recreational opportunities. Fletcher can also support future development of home occupations, home-based businesses, or even cottage or light industries in appropriate locations which require minimal services and facilities.

These forms of economic development can be supported locally through provisions for their appropriate development in local bylaws (farming activities are currently exempt from local regulation); through tax

incentives, particularly in support of the resource-based economy; and through the promotion of local businesses, products and services, for example through business guides, directories, community fairs, bulletin boards, farmer’s markets and on-line services. It should be noted that additional cell phone towers may be needed in order for Fletcher residents to take advantage of telecommuting. State of the art broadband is anticipated to be available in 2021.

In decades to come (beyond the scope of this planning period), if the town’s population base has grown sufficiently to support a viable local market area and labor force, the town may consider investing in additional, more costly improvements to local infrastructure (e.g., community water and sewer systems, high speed internet and utility line upgrades, road improvements) that are necessary to attract and support higher density and higher impact forms of development. At present, however, this is fiscally unrealistic.

**GOALS:**

1. To promote and sustain the local agricultural and forestry economies;
2. To encourage a diverse and stable local economy through promotion of business activities, including home-based businesses of a type and scale which are compatible with the town’s rural character and quality of life, promote value added production, and provide employment opportunities and needed goods and services to the benefit of all Fletcher residents.

**POLICIES:**

1. Support incentives and other available means to keep farm and forest lands in sustainable production. This may include tax stabilization and other programs that provide incentives to landowners to maintain large tracts of agricultural land in sustainable use.
2. The development of support businesses, cooperatives and value-added manufacturing will be encouraged as a means to stimulate the agricultural and forestry economy.
3. Right to farm provisions will be respected; the town will not act upon nuisance complaints having to do with normal farming operations using accepted or best management practices unless a specific health risk is demonstrated.
4. The development and expansion of home occupations, home-based businesses and cottage industries will be encouraged and accommodated in the development regulations.
5. The development of rural recreation, tourist and communication/information-based businesses that will take advantage of and have minimal impact on Fletcher’s rural character and environment will be encouraged.
6. The development of compatible commercial businesses will be encouraged in suitable locations, in particular to provide for locally needed goods and services and to protect the vitality and importance of the village of Binghamville as the community’s commercial center. The clustering of related and compatible commercial uses is encouraged; strip development along public highways shall be prohibited.
7. Compatible light industry, which requires no centralized services or facilities, will be accommodated as appropriate under local zoning bylaws.



## SECTION 6 - TRANSPORTATION



### Overview

Transportation planning is vital to any community. The local transportation network provides for the movement of people and goods within the town to places beyond its borders. Patterns of growth, development and land use are strongly tied to the network, which is maintained at considerable public expense.

Traditionally, in our automobile-oriented culture, transportation planning has been concerned mainly with roads, specifically their design, construction, maintenance, and sufficiency. In recent years, planning in this area also includes consideration of other aspects of the road network, including its scenic, recreational, environmental and cultural components, relationship to adjoining land uses, and other types of transportation and infrastructure, including recreation paths and ridesharing opportunities.

It is unlikely that in the foreseeable future Fletcher residents will be any less dependent on the automobile to get around. There is, however, growing interest among residents of rural communities in road and bridge design, maintenance and access issues, programs to reduce commuting expenses, and in the development of recreational opportunities located close to home. Recent federal and state initiatives have decentralized the transportation planning process, giving more responsibility to local governments working in close association with regional planning commissions, to determine transportation priorities for available state and federal funding. Good local planning and the active participation of town officials are essential to this effort.

### Travel Patterns

A majority of Fletcher residents work, shop and obtain needed services outside of the community. US Census data from 2010 indicate that for workers 16 years and older (numbering 784), only 11.1%

worked at home or walked to work. Sample commuter flow data indicate that of 639 total work trips to places of employment, only 1.3% were within Fletcher’s borders, and only 23% were within Franklin county (mostly to St. Albans, Fairfax and Georgia). According to 2016 Local Employment Dynamics (LED) Census data, the largest share of work trips (60%) had Chittenden County destinations; another 5.6% ended in Lamoille County.

Although census data does not track travel patterns related to retail commerce, Burlington, St. Albans, Essex and Morrisville have been identified by citizens as primary shopping destinations. Public transit is not available in Fletcher for commuters. It is notable, however, that despite the large number of commuters traveling from Fletcher each day, especially to points south, few share rides. According to 2010 Census data, 72.8% of Fletcher commuters drove to work alone and only 16.1% carpooled.

Fletcher residents will continue to be highly dependent on their vehicles and the local and regional road network to meet their needs for employment, goods and services. For this reason, attention needs to be given to both the local and regional road network in planning for the needs of the community.

**Table 6.1: Fletcher Road Classification**

Roads	Surface	Mileage	Aid
<b>Route 108</b>	Paved	2.332	Federal, Primary
<b>Class 2</b>	Paved	12.5	Federal, secondary
<b>Class 3</b>	Gravel	29.91	State
<b>Class 4</b>	Gravel	7.91	State
<b>Source:</b> VT Agency of Transportation			

**Road Network**

**Existing Conditions**

Given local topography, the phrase “you can’t get there from here” generally sums up the road network in Fletcher, though the addition of road signs as part of the E-911 program together with GPS has made navigating around town easier. For residents of East Fletcher or the Buck Hollow Road to get to Binghamville or Fletcher Center, they have to go around mountains and through neighboring towns. East Fletcher residents have easy access to other parts of the county via Route 108, the only state highway in town. This route, however, is located away from more populated areas of town, and is not used much by most Fletcher residents. Regional roads of more importance locally include Routes 104, 104A, and 128, reached through Fairfax, which provide the easiest access to I-89 and points north and south.

There are approximately 44.7 miles of traveled, public roads in Fletcher which are maintained year-round (Class 2 and Class 3 town highways), and approximately another 7.91 miles of road that are not maintained by the town (Class 4 town highways). For planning and funding purposes, the road network is described using statutory and functional classifications. The road network also incorporates intersections, access points (curb cuts) and related infrastructure, including but not limited to bridges and culverts, swales and guardrails.

A road erosion and culvert inventory for local roads was completed in 2017 and 2018 through cooperation with Northwest Regional Planning Commission.

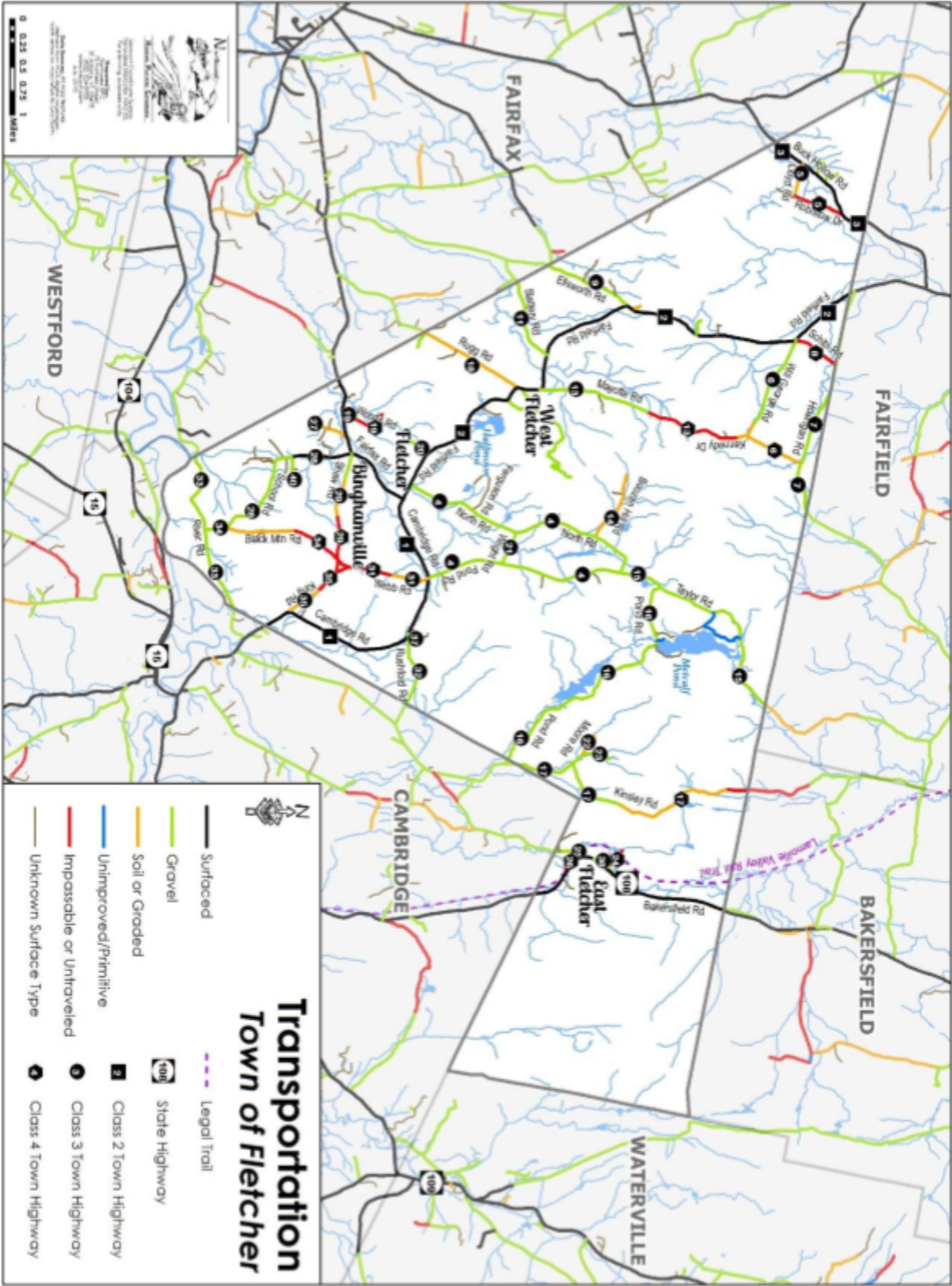


Figure 6.1 - Transportation

**State Routes**

Fletcher’s road network includes approximately 2.3 miles of state highway (Route 108). As part of the state’s road network, this road is designed to state specifications, and is eligible for state and federal funding. Route 108 is considered a major artery, intended mainly to move traffic through the region. Average annual daily traffic along Route 108 through Fletcher is estimated around 1,200 trips per day. Though this road is the responsibility of the state, local officials have input with regard to needed improvements through the regional transportation planning process. Other improvements needed along this route include general preservation of the character of the road, access management along the corridor, limited lane widening and shoulders on sections having poor visibility or alignment, and “share the road” signs which designate Route 108 as a regional bicycle route.

**Town Roads**

Fletcher’s town road network includes four major collectors, TH 1 (Cambridge Rd, Fairfax Rd), TH 2 (Fairfield Rd) and TH 3 (Buckhollow Rd), which carry the largest volume of internal traffic and also provide links to state roads in neighboring communities. These Class 2 town roads are included in the regional road network; TH 1 (Cambridge Rd) and TH 2 (Fairfield Rd) also are included in the state’s secondary system. Town Class 3 roads, TH 15 (Taylor Rd) (and a portion of TH 4 (North Rd & Pond Rd)), and TH 32 (Rushford Rd) serve as minor collectors, which also provide connections to neighboring communities.

The majority of roads in town are gravel roads, most of which are maintained by the town for year-round use and serve mainly to provide access to adjacent collector roads. Class 3 roads make up the bulk of the local road network, for which the municipality has responsibility. Some state assistance for repair and maintenance is available, based upon an annual road plan; however, the maintenance and upkeep of Class 3 roads accounts for the largest share of the town’s road budget. Class 3 roads require significant local public investment.

Fletcher also has jurisdiction over a number of Class 4 roads. The primary responsibility for the upkeep of Class 4 roads under Fletcher’s current road policy lies with adjoining landowners, with the exceptions of road sections that must be maintained in order to comply with the Municipal Roads General Permit standards per Vermont Department of Environmental Conservation. Some Class 4 roads are untraveled, impassable, and/or unmaintained. To date, no legal trails, in which the town retains rights-of-way but has no legal maintenance requirements, have been designated within the community.

**Needed Improvements**

Specific policies regarding private road acceptance by the town have been developed; any road acceptance or reclassification must also be done in accordance with the legal process for the laying out of public highways.

A more comprehensive list of needed improvements should be identified through an update of road inventory. These may then be prioritized in an overall road management plan, and associated costs included in a capital budget and program. In this way scarce resources may be used most effectively. Assistance with the development of a Road Surface Management System (RSMS) that is adapted for local needs is available through the Vermont Better Roads Program and the Northwest Regional Planning Commission.

### Other Considerations

Road improvements, and the laying out and development of new public and private roads, should be done so that they are in keeping with Fletcher’s rural and scenic character. Fletcher’s back roads contribute much to its rural character and scenic beauty, as evidenced by the increasing number of motorists and bicyclists touring through town.

To date there have been no scenic inventories or designations of local roads in town. Given the importance to the community of maintaining Fletcher’s rural character, a scenic road survey may be in order, particularly along major routes (TH 1 (Cambridge Rd), TH 2 (Fairfield Rd)). Additional standards relating to the design and layout of new roads, and the repair and maintenance of existing roads for better incorporation in the landscape, also should be developed. All new roads and driveways shall:

- Follow existing topography and linear features (e.g., tree lines, rights-of-way, stone walls,) wherever feasible;
- Avoid cutting through open areas or scenic vistas;
- Be designed to minimize access points (e.g., through shared driveways and/or development roads) particularly on collector roads; and
- Not be overly designed for their intended use and volume of traffic.

The repair and maintenance of existing roads and related infrastructure should also accommodate natural and cultural features within and /or adjacent to the right-of-way (e.g., historic structures, tree lines and stonewalls).

### Access and Parking

Access onto Fletcher roads from adjoining properties is typically a single driveway and curb cut per parcel for residential lots and access areas/curb cuts for public and commercial uses. Private, minimally maintained dirt roads provide access to camps along Metcalf Pond and may be contributing to runoff and sedimentation.

A growing number of subdivision roads are being developed in town in accordance with common standards (e.g., 50 foot rights-of-way), which may be excessive for the volume of traffic generated from these developments. The over-design of access roads in rural areas is common, and often required in anticipation of possible acceptance by the town, but the over-design of roads may also adversely affect both rural and village character, increase speeding, and result in unnecessary expense.

The town should review its access policies in local bylaws and ordinances to ensure that the number of curb cuts, particularly along major collector roads (TH 1 (Cambridge Rd), TH 2 (Fairfield Rd), and TH 3 (Buckhollow Rd)) is minimized, and clearly defined. Access points, roads, and driveways should be shared by neighboring parcels; inter-parcel access should be required where feasible, off-road connections linking adjoining parcels for pedestrian and vehicular traffic should be required where feasible (e.g., through designated easements and rights-of-way), in order to maintain the functional integrity of the local road network.

Farm and logging roads, maintained by private landowners, provide access to interior, landlocked holdings. Temporary access across adjoining private land for logging operations, which may be granted by the Select Board under state law, has been an issue in upland areas of Fletcher. Because of the

environmentally sensitive and often highly visible nature of these areas, landowners should be encouraged to use or share existing access routes and rights-of-way wherever feasible. Provisions also should be made for the reclamation of temporary roads into these areas once operations are completed.

Public parking areas in town, like their associated curb cuts, are generally poorly defined and maintained. These areas have been identified as needing improvements: the Fletcher Union Meeting House, and the parking area at Metcalf Pond. It is strongly recommended that all parking areas intended to serve the public be shared where feasible, be located to the rear of or adjacent to buildings, and be adequately screened and buffered from adjoining land uses.

**Rail, Air and Bus Service**

The Lamoille Valley Railroad Line (LVRL) no longer runs through East Fletcher, though it was rail banked by the state in 2004. The federal rail banking program reserves the right-of-way for future rail use, if it again becomes feasible, while providing for interim uses such as recreation paths. When this takes place Fletcher will be linked to a network of regional, state and international trails currently under development. Funding for the section located in Fletcher is in place as of 2021.

Fletcher residents now have access to passenger and freight rail service through the New England Central Railroad, located in St. Albans. At present, the “Vermont,” the state subsidized Amtrak line runs between St. Albans and Washington D.C.

Most air services required by Fletcher residents are available at the Burlington International Airport which is conveniently reached via I-89. Fletcher residents also may schedule international flights through Trudeau airport in Montreal. Non-scheduled passenger and freight service are also available at the Franklin County Airport in Highgate and at the Morrisville-Stowe State Airport in Morrisville.

Limited long-distance commercial bus service is available through Vermont Transit in St. Albans, and the greater Burlington area.

**Public Transportation**

At this time there is no bus or van service that serves the needs of the general public. Past regional transit studies have indicated that there is not enough demand or ridership within Franklin County to support a fixed-route system. Since 2005 the Green Mountain Transit provides transportation from St. Albans, Georgia, and Milton to Burlington and Jeffersonville to Burlington. Currently, people with special needs may qualify for transportation assistance through social service providers and volunteer organizations. The town also contracts school bus services for the transport of local students.

**Ridesharing**

Ridesharing, including car and vanpooling, helps to significantly reduce the expense and negative aspects of automobile-oriented transportation for both the rider and society as a whole. Given the number of Fletcher residents that commute to work, local participation in existing ridesharing programs should be encouraged through local advertising and the designation or development of a small, centrally located park-and-ride lot. State maintained park-and-ride lots are available for use by Fletcher residents in Cambridge, Georgia and St. Albans.

**Recreation and Pedestrian Paths**

At present there is no municipally developed and maintained recreation, bike or pedestrian paths in

town. As noted, a number of local roads are used for recreational use, including Class 4 roads, which provide access to Fletcher’s countryside for hunting, mountain biking, hiking and cross-country skiing. These, however, are not linked together in any formal trail network. Paved roads in town increasingly are being used by bicyclists, including organized touring groups. A network of snowmobile trails in town is privately maintained by local clubs and the Vermont Association of Snowmobile Travelers (VAST) through agreements with local landowners. This may serve as a useful model for other forms of recreation path development in the community.

Given the costs of maintaining the local road network, sidewalks and trail development have received little consideration. Paved roads, popular with tour groups, also could be designated as bike routes under share-the-road policies. This may require minor improvements, such as the widening of shoulders along segments having poor visibility in order to ensure road safety.

There are no sidewalks in Fletcher at present; however, given the increasing amount of development in and around Binghamville, sidewalks may be warranted in this area at some time in the future. A study of existing and projected needs could aid local officials in identifying feasibility and determining approximate costs and available sources of funding.

**GOALS:**

1. To ensure reasonable, functional and orderly development of local transportation systems for pedestrians, cyclists, motorists or other relevant public transportation use as feasible and appropriate;
2. To maintain and improve the town highway system for safe use in an efficient and cost-effective manner, while preserving, as feasible, associated cultural and scenic character of the road system; and
3. To improve and expand alternative, non-automobile transportation and transit modes as feasible, including the promotion of ridesharing programs.

**POLICIES:**

1. The primary objective of the town highway program will be the provision of a safe, efficient, and convenient road network for use by local residents and the traveling public. The function and safety of the town highway system will be maintained through appropriate access management techniques, including limitations on the number of access or curb cuts permitted. Shared access is encouraged and may be required as appropriate.
2. New road construction and major improvements to existing roads is to balance capacity and safety needs with the need to minimize cultural, scenic, resource and environmental impacts and to ensure that rural roads and infrastructure are not overbuilt to urban or otherwise inappropriate standards. All private roads and rights-of-way shall be constructed to standards set forth in the road policy. All expenses, legal and otherwise, shall be borne by the applicant in the process of laying out and constructing proposed development roads and related infrastructure. The town will not accept any private rights-of-way into the town highway system unless it is demonstrated that there is clear public benefit, and the costs to upgrade the road to standard are not borne by the town.

3. Carpooling or vanpooling by local commuters to reduce transportation costs and impacts is encouraged.
4. Land use and development activities should not adversely impact traffic safety and the condition of town roads and rights-of-way.
5. Parking areas for commercial and public buildings where feasible will be sited adjacent or to the rear of structures, and be buffered and screened as appropriate. Shared off-street parking is encouraged and may be required as appropriate.
6. State proposed and initiated transportation improvements in Fletcher should be considered in accordance with the goals and policies of the town plan.
7. The Town of Fletcher will provide no services on Class 4 town roads beyond those required by statute. Class 4 roads may be maintained by landowners, with Select Board approval, only to the degree necessary to provide simple access to property. If future conditions warrant, Class 4 roads may be considered for upgrade to Class 3 roads in accordance with state law. Costs associated with upgrade are to be borne by adjoining landowners as appropriate.
8. No permanent access roads shall be permitted in the forest district except as needed to access essential public services, including utility rights-of-way.
9. The town will support the development of the LVRL (Lamoille Valley Rail Line) right-of-way for recreational use.
10. Documentation and assurance shall be provided that all proposed roads and rights-of-way will be adequately maintained either by the applicant, a homeowners association or through other legal mechanisms. Such documentation shall be in a form approved by the DRB and filed in the Fletcher Land Records.



## SECTION 7 - ENERGY

### Enhanced Energy Plan

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further local, regional, and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (90 x 50 goal), and the following:

- A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
- B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
- C. Vermont's building efficiency goals under 10 V.S.A. § 581;
- D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
- E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005; and

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Fletcher to achieve “substantial deference” instead of “due consideration” in Certificate of Public Good (CPG) proceedings for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that Fletcher will have a greater “say” in CPG proceedings before the Vermont Public Utility Commission about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and contain the following information:

- A. An analysis of current energy resources, needs, scarcities, costs, and problems.
- B. Targets for future energy use and generation.
- C. “Pathways,” or implementation actions, to help the municipality achieve the established targets.
- D. Mapping to help guide the conversation about the siting of renewables.

This section will include the required analysis, targets, and mapping. The “pathways,” or actions, have been included in Section 1 under the Work Program.

### Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each sector of energy use (thermal, transportation, electricity) and electricity generation in Fletcher. Several different units of measurement are used in this section. Please refer to Table 7.13 for more information about unit conversions.

#### **Thermal Energy**

Table 7.1 shows an estimate of current residential thermal energy demand in Fletcher, based on data from the American Community Survey (ACS 2011-2015). The data shows that 43.5% of households in Fletcher depend on wood as their primary source for home heating. Wood includes both cord wood and wood pellets. Fuel oil and wood sources combined are estimated to be the primary heating source for 81% of homes in Fletcher. The remainder of homes heat primarily with propane and electricity. The

nearest natural gas pipeline is located in Georgia and is not likely to be extended to Fletcher in the future.

**Table 7.1 - Current Fletcher Residential Thermal Energy Use**

<b>Fuel Source</b>	<b>Fletcher Households (ACS 2011-2015)</b>	<b>Fletcher % of Households</b>	<b>Fletcher - Households Square Footage Heated</b>	<b>Municipal Thermal Energy Use in British Thermal Units (BTUs) BTU (in Billions)</b>
Natural Gas	0	0.0%	0	0
Propane	85	16.3%	155,504	9
Electricity	8	1.5%	15,232	1
Fuel Oil	195	37.5%	367,056	22
Coal	0	0.0%	0	0
Wood	226	43.5%	422,560	25
Solar	0	0.0%	0	0
Other	6	1.2%	11,424	1
No Fuel	0	0.0%	0	0
<b>Total</b>	<b>520</b>	<b>100.0%</b>	<b>971,776</b>	<b>58</b>

Estimates for commercial and industrial thermal energy use are more difficult to calculate due to the lack of accurate information available. Table 7.2 provides an estimate of total commercial energy use (thermal and electricity). The estimate is based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 4 billion BTUs per year, is used as thermal energy for commercial uses.

**Table 7.2 - Current Fletcher Commercial Energy Use**

	<b>Commercial Establishments in Fletcher (VT DOL)</b>	<b>Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)</b>	<b>Estimated Thermal Energy BTUs by Commercial Establishments in Fletcher/year (in Billions)</b>
Municipal Commercial Energy Use	5	0.725	4

**Electricity Use**

Table 7.3 shows 2017 electricity use in Fletcher per date available from Efficiency Vermont. Fletcher’s total electricity use has increased since 2015 from 5.3 million kWh in 2015 to about 5.5 million kWh per year in 2017. According to Efficiency Vermont, the average residential usage per household has decreased from 7,703 kWh per year to 7,434 kWh per year between 2015 and 2017. During the same period, overall commercial and industrial electricity usage increased. Fletcher’s average residential usage in 2017 was about 500 kWh higher per year than the average residential kWh use in the Northwest Region.

Fletcher is served by two electric utilities. Green Mountain Power provides service to the central part of town along Fairfax Rd and North Rd including the villages of Fletcher and Binghamville. Vermont Electric Cooperative provides service to the most rural parts of eastern and western Fletcher.

<b>Table 7.3 - Current Fletcher Electricity Use</b>		
<b>Use Sector</b>	<b>Current Electricity Use in Fletcher - 2017 (Efficiency Vermont) (kWh)</b>	<b>Current Electricity Use (in Billion BTUs)</b>
Residential	4,422,998	15.09
Commercial and Industrial	1,156,499	3.95
<b>Total</b>	<b>5,579,496</b>	<b>19.03</b>

<b>Table 7.4 – Current Fletcher Transportation Energy Use</b>	
<b>Transportation Data</b>	<b>Municipal Data</b>
Total # of Passenger Vehicles (ACS 2011-2015)	1,216
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	13,808,896
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
<b>Total Gallons Use per Year</b>	<b>742,414</b>
<b>Transportation BTUs (Billion)</b>	<b>89</b>
Average Cost per Gallon of Gasoline in 2016 (NRPC)	\$2.97
<b>Gasoline Cost per Year</b>	<b>\$2,204,969</b>

<b>Table 7.5 – Existing Renewable Electricity Generation</b>		
<b>Generation Type</b>	<b>kW</b>	<b>kWh</b>
Solar	110	134,904
Wind	0	0
Hydro	0	0
Biomass	0	0
Other	0	0
<b>Total Existing Generation</b>	<b>110</b>	<b>134,904</b>

**Transportation**

Table 7.4 contains an estimate of transportation energy use in Fletcher. NRPC estimates that Fletcher residents drive personal vehicles approximately 13.8 million miles per year and spend about \$2.2 million on transportation fuel expenses per year. This calculation does not include expenses for commercially owned and operated vehicles.

It is difficult to track electric and hybrid vehicle registrations in Fletcher. This is because vehicle registrations with the Vermont Department of Motor Vehicles are based on zip codes and there are three zip codes that cover the Town of Fletcher. It is unknown how many electric vehicles are currently registered in Fletcher.

**Electricity Generation**

There is currently 110 kW of electricity generation capacity from renewable generation facilities located in Fletcher. This capacity results in approximately 134,904 kWh of electricity generation per year. All of this generation is from net-metering solar facilities located in Fletcher. The amount of electricity generation in Fletcher is roughly equal to the annual electricity use of about 20 households in Vermont based on information available from the U.S. Energy Information Administration (6696 kWh per VT household per year).

Table 7.5 organizes information about existing generation in Fletcher by type of facility. Map 7.4 shows the location of all electricity generators in Fletcher with a capacity greater than 15 kW. A full list of electricity generators in Fletcher can be found at the end of this section (Table 7.12).

Fletcher has extremely limited access to electric transmission and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. The lack of access to this type of infrastructure in Fletcher may make development of renewable energy facilities harder and less cost-effective than in other surrounding communities with more existing grid infrastructure.

Table 7.2 shows the electricity transmission and three-phase distribution infrastructure in Fletcher. The map shows a three-phase distribution line in the town along Fairfax Rd and North Rd There is also a three-phase distribution line that serves northwest Fletcher along Buck Hollow Road. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

**Targets for Use and Generation**

The second required element of an enhanced energy plan is creation of targets for future energy use. Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and renewable electricity generation to meet the State of Vermont’s 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan ([www.nrpcvt.com](http://www.nrpcvt.com)).

Regional targets for energy use and renewable electricity generation were disaggregated to create municipal targets. These municipal targets were also designed to ensure compliance with the Department of Public Service’s Municipal Determination Standards. Tables 7.6, 7.7 and 7.8 show the targets for future energy use for Fletcher by sector (totals are cumulative).

One thermal target for Fletcher in 2050 is to have 89.2% of structures be heated by renewable energy sources. Much of this transition is likely to come from conversion to electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. Regionally and locally the target also relies on wood heating being a continued source of residential heating with points of purchase rebates, bill credits and federal tax credits. Although there is no target, Fletcher strongly encourages residents’ conversion of existing wood heating systems to more advanced wood heating systems. Newer wood heating systems are more efficient and have less greenhouse gas emissions than older wood heating systems. Table 7.6 also includes targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

<b>Table 7.6 - Thermal Targets</b>			
<b>Thermal Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	47.3%	61.2%	89.2%
New Efficient Wood Heat Systems (in units)	0	0	0
New Heat Pumps (in units)	62	142	265
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	25%	73%

The transportation energy targets for Fletcher are similarly ambitious. By 2050, almost 85.9% of transportation energy will need to come from renewable sources in order to meet the 90 x 50 goal. This will primarily be done through the conversion of light-duty passenger vehicles from fossil fuels energy sources to renewable electric energy. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. Biodiesel technology and infrastructure will certainly need to advance tremendously in coming years to meet this ambitious target.

<b>Transportation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	4.5%	21.9%	85.9%
Electric Vehicles	106	797	1895
Biodiesel Vehicles	58	113	211

Targets for electricity use are complex to interpret. Electricity use in Fletcher is targeted to double by 2050 (Table 7.8). This increase in use will likely be driven by conversions to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels.<sup>1</sup>

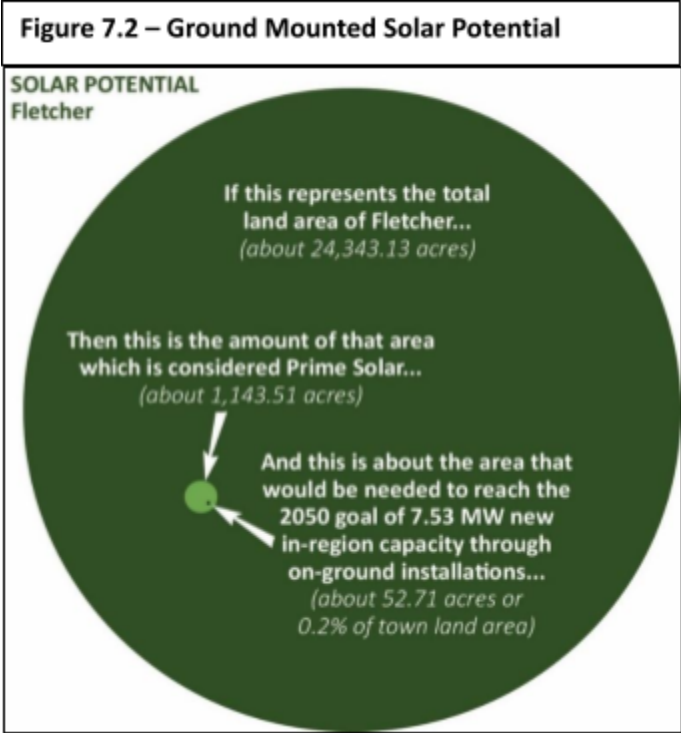
<b>Electricity Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Increased Efficiency and Conservation (BTUs)	25.2%	48.3%	100.7%

Table 7.9 shows the electricity generation targets for new electricity generation in Fletcher in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (12,147.17 MWh) is about 90 times more than the current generation capacity (134 MWh) within the Town of Fletcher.

<b>Renewable Generation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Total Renewable Generation Target (in MWh)	4,008.57	8,017.13	12,147.17

<b>Resource</b>	<b>MW</b>	<b>MWh</b>
Rooftop Solar	1	668
Ground-mounted Solar	320	392,168
Wind	69	211,937
Hydro	0	0
Biomass and Methane	0	0
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>389</b>	<b>604,773</b>

<sup>1</sup> Vermont Comprehensive Energy Plan - 2016, page 44.



Based on mapping and calculations completed by NRPC (Figure 7.2), Fletcher has sufficient land to meet the above electricity generation targets. Fletcher has access to the renewable electricity generation capacity outlined in Table 7.10. This estimate shows that Fletcher has considerably more potential for renewable electricity generation than what is needed to meet the renewable electricity generation targets in Table 7.9. This generation capacity was calculated using the “base” layers for solar and wind. For an explanation of what constitutes a “base” layer, please see the mapping subsection below.

The NRPC Regional Plan finds that the construction of new “industrial” or “commercial” wind facilities within the region does not conform to the Regional Plan (NRPC

considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an “industrial” or “commercial” wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Fletcher encourages the use of these sources for electricity and thermal energy generation, especially on farms.

**Mapping Energy Resources and Constraints**

The third required element of an enhanced energy plan is the inclusion of maps that will provide guidance to the community and developers regarding the location of new renewable generation facilities. Fletcher has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Municipal Determination Standards, including access to energy resources and constraints to renewable development. All maps may be found at the end of this section.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable electricity generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When an electricity generation facility is proposed, the presence of all natural resources constraints on site shall be verified as a part of the application.

**Mapping Methodology**

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass “potential” in Fletcher based on information provided by the Vermont Sustainable Jobs Fund. “Known” and “possible” constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable electricity generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable

generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table 7.11. The known constraints and possible constraints used to create the maps include constraints that are required per the Municipal Determination Standards from the Department of Public Service and regional constraints selected by NRPC. The Forest District in Fletcher was included as a regional known constraint and the Conservation District in Fletcher was included as regional possible constraint.

**Solar and Wind**

The solar and wind maps show both “base” and “prime” areas. Base areas are areas with electricity generation potential, yet may contain possible constraints. Prime areas are areas that have electricity generation potential that do not contain known or possible constraints. Areas that do not contain electricity generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general concentration of base and prime solar areas in a few areas: in central Fletcher along Fairfax and North Roads, along Cambridge Road, along River Road, between Ellsworth and Slattery Roads, and northwest of Buck Hollow Road. The following preferred locations for solar generation facilities by the Town of Fletcher: rooftops, parking lots, and former landfill sites. Brownfield sites located outside of the village areas of Binghamville and Fletcher are also considered preferred locations.

Fletcher has a strong preference for solar facilities that have less than 5 MW in generation capacity. This preference is a reflection of the community’s dedication to preserving the aesthetic and rural qualities of Fletcher by restricting the geographic size of solar facilities. In addition, Fletcher prefers that solar facilities greater than 149 kW in generation capacity be sufficiently separated from other similarly sized solar facilities to “break up” the visual impact of two or more solar facilities located next to each other and to preserve Fletcher’s rural character. It is expected the most solar facilities proposed in Fletcher in the future will be small net-metered projects due to the fact that the town lacks three-phase electric distribution and electric transmission infrastructure.

All solar facilities to be sited in Fletcher shall include proper screening. The Town of Fletcher hopes to adopt a municipal solar screening ordinance in the near future.

There generally isn’t much land available in Fletcher that has base and prime wind resources. The small areas that do exist are generally concentrated in the northwest Fletcher along Rugg Road, Fairfield Road, Will George Road and in the extreme northwest along the border with Fairfax and Fairfield.

**Hydro and Biomass**

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays “base” and “prime” areas. However, these categories are not necessarily indicative of electricity generation potential. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but



could be retrofitted to provide electricity generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites. Fletcher has no existing dam sites and the development of new dam sites is extremely unlikely due to Fletcher’s upland location and the extensive regulatory process involved in developing new dams.

**Conclusion**

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Fletcher is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, affordable, and secure energy future.

**GOALS:**

- 1. Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
- 2. Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- 3. Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
- 4. Focus growth within and adjacent to the villages.

**POLICIES**

- 1. Fletcher supports energy conservation efforts and the efficient use of energy across all sectors.
- 2. Fletcher supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
- 3. Fletcher supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from Fletcher to other parts of the region.
- 4. Fletcher supports the development and siting of renewable electricity generation resources in the town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of electricity generation in identified preferred locations shall be favored over the development of other sites.
- 5. Fletcher supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
- 6. Support local farms and the local food system.

<b>Table 7.11 – Mapping Constraints</b>		
<b>Solar, Wind and Biomass Maps - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>Confirmed and unconfirmed vernal pools</b>	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
<b>River corridors</b>	Only “mapped” River Corridors were mapped (those River Corridors with a drainage area over 2 square miles in size). Does not include the River Corridor for streams with a drainage area less than 2 square miles (50 foot buffer from top of bank or slope).	VCGI
<b>National wilderness areas</b>		VCGI
<b>FEMA Floodways</b>		VCGI/NRPC
<b>Class 1 and Class 2 Wetlands</b>		VCGI
<b>Designated Downtowns, Designated Growth Centers, and Designated Village Centers</b>	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas</b>	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain -500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>Ground and surface waters drinking protection areas</b>	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR

<p><b>Vermont Conservation Design Highest Priority Forest Blocks</b></p>	<p>The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)</p>	<p>ANR</p>
<p><b>Public water sources</b></p>	<p>A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.</p>	<p>ANR</p>
<p><b>Municipal Conservation Land Use Areas</b></p>	<p>Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. The Forest District as identified in the Fletcher Town Plan was included in this category.</p>	<p>NRPC</p>
<p><b>Solar, Wind and Biomass Maps - Possible Constraints</b></p>		
<p><b>Constraint</b></p>	<p><b>Description</b></p>	<p><b>Source</b></p>
<p><b>Protected lands</b></p>	<p>This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements held by non-profit organizations.</p>	<p>VCGI</p>
<p><b>Deer wintering areas</b></p>	<p>Deer wintering habitat as identified by the Vermont Agency of Natural Resources.</p>	<p>ANR</p>
<p><b>Hydric soils</b></p>	<p>Hydric soils as identified by the US Department of Agriculture.</p>	<p>VCGI</p>

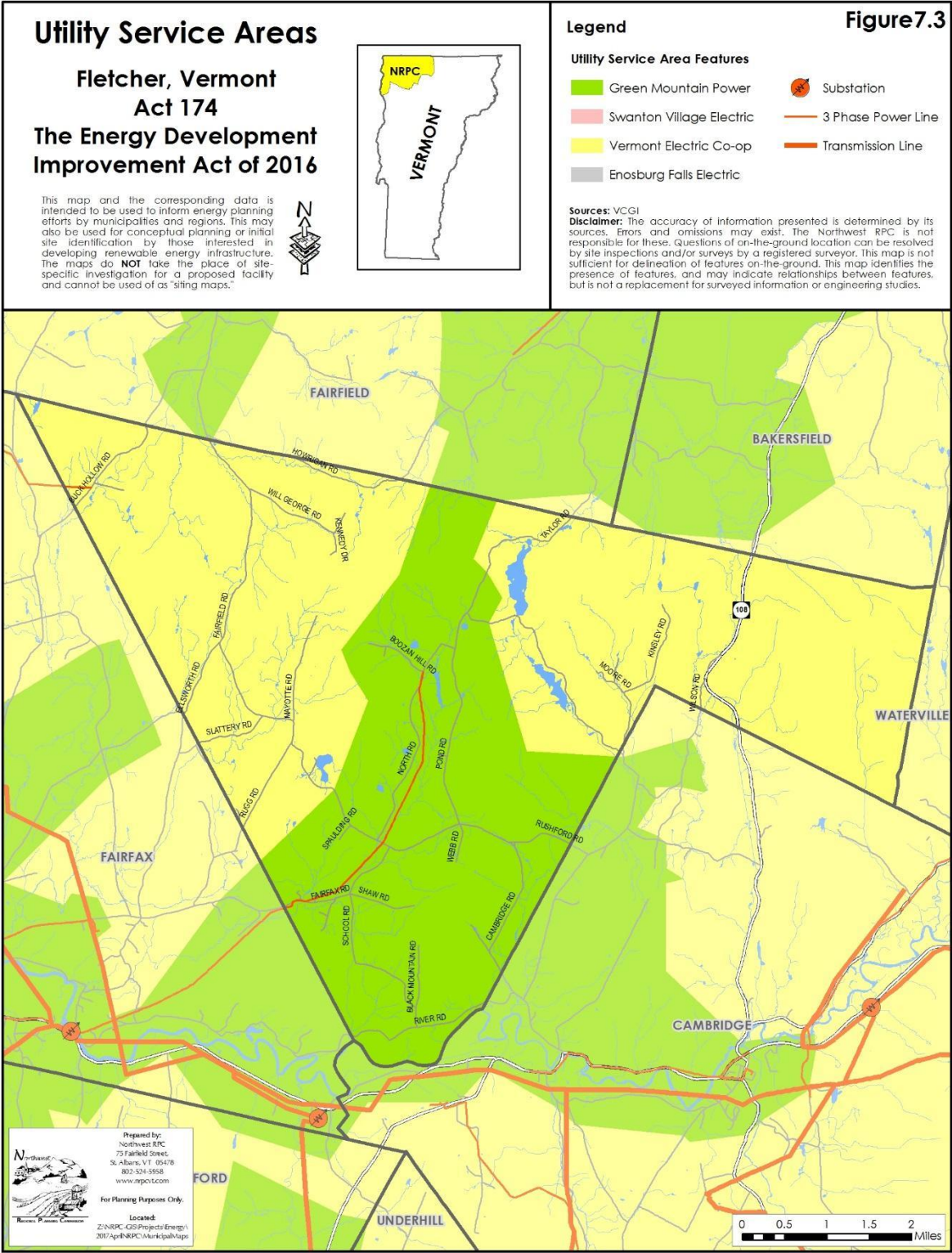
<b>Agricultural soils</b>	Local, statewide, and prime agricultural soils are considered.	VCGI
<b>Act 250 Agricultural Soil Mitigation Areas</b>	Sites conserved as a condition of an Act 250 permit.	VCGI
<b>Class 3 wetlands</b>	Class 3 wetlands in the region have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
<b>Municipal Conservation Land Use Areas</b>	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. The Conservation District as identified in the Fletcher Town Plan was included in this category.	NRPC
<b>Hydro Map - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
None		
<b>Hydro Map - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>"303d" list of stressed waters</b>		ANR
<b>Impaired waters</b>		ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI

The date in Table 7.12 displays facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of Fletcher recognizes that some of the data in the table may be out of date or incorrect. The Town of Fletcher also recognizes that some identified facilities may no longer generate electricity.

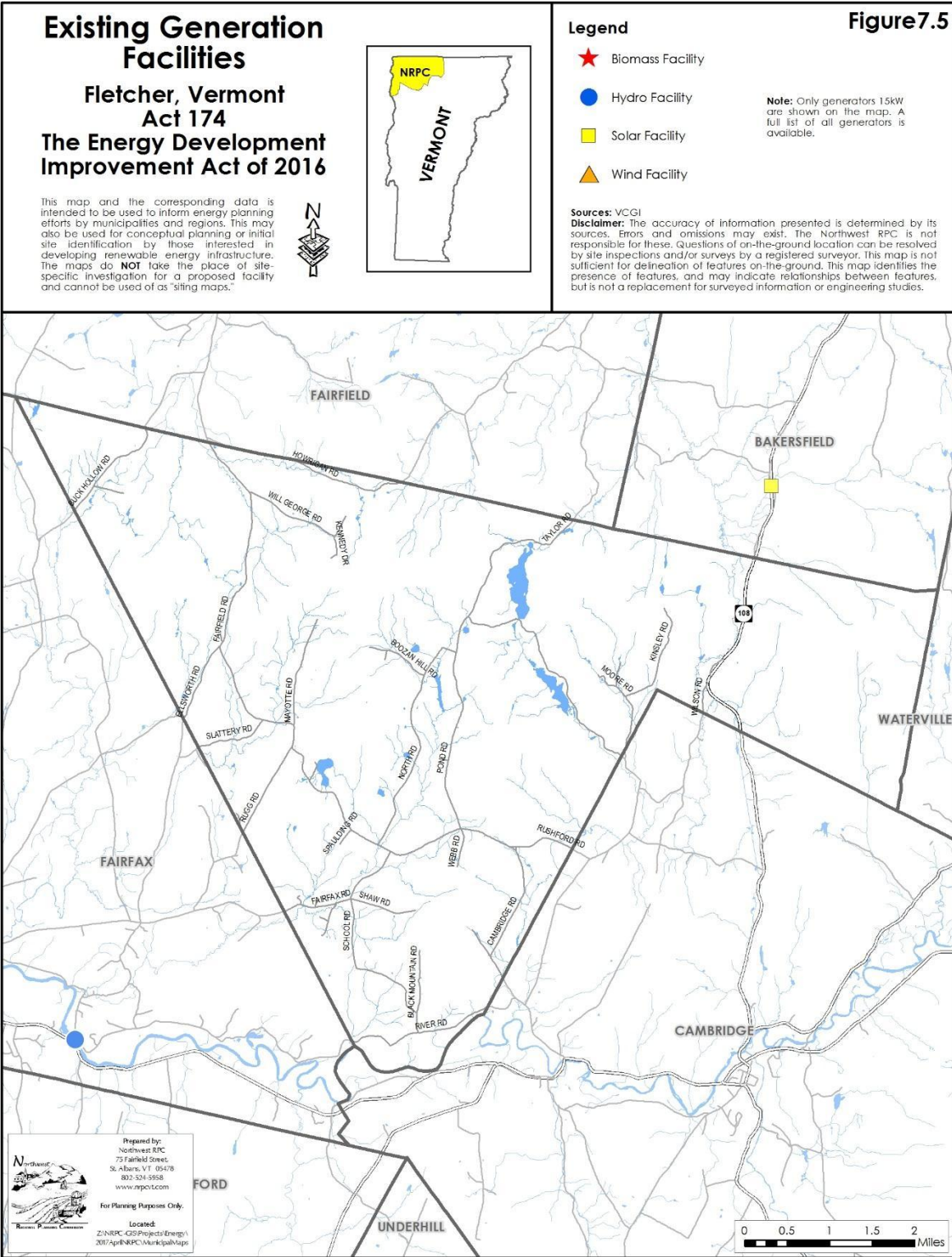
Table 7.12 - Fletcher Electricity Generators (8.17.18)						
Category	Sub Category	Address	CPG Number	Electricity Type	Utility	Capacity kW
Solar	Ground-mounted PV	567 Rugg Rd	5502	Net Metered	Vermont Electric Coop	10.8
Solar	Ground-mounted PV	706 School Rd	3461	Net Metered	Green Mountain Power	6.8
Solar	Ground-mounted PV	246 Drinkwine Road	7005	Net Metered	Vermont Electric Coop	7.6
Solar	Ground-mounted PV	1199 Taylor Road	7275	Net Metered	Vermont Electric Coop	7.6
Solar	Ground-mounted PV	86 Taylor Rd	17-2114	Net Metered	Green Mountain Power	3.8
Solar	Ground-mounted PV	1228 Cambridge Rd	16-2936	Net Metered	Green Mountain Power	7.6
Solar	Ground-mounted PV	960 Pond Road	17-3258	Net Metered	Green Mountain Power	10
Solar	Ground-mounted PV: Tracker	658 Ellsworth Rd	3828	Net Metered	Vermont Electric Coop	6.4
Solar	Ground-mounted PV: Tracker	221 Black Mountain Rd	3884	Net Metered	Green Mountain Power	9
Solar	Roof-Mounted PV	2150 Buck Hollow Road	549	Net Metered	Vermont Electric Coop	11.9
Solar	Roof-Mounted PV	17 Rushford Rd	4018	Net Metered	Green Mountain Power	5
Solar	Roof-Mounted PV	495 Lloyd Road	3310	Net Metered	Vermont Electric Coop	2.9
Solar	Roof-Mounted PV	1078 River Rd	1881	Net Metered	Green Mountain Power	3.6
Solar	Roof-Mounted PV	271 Wright Rd	3161	Net Metered	Green Mountain Power	3.1
Solar	Roof-Mounted PV	819 Fairfax Road	16-0231	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	168 Stone Lane	7353	Net Metered	Green Mountain Power	3.6

Solar	Roof-Mounted PV	172 Oustinoff Road	7199	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	523 Shaw Road	16-0974	Net Metered	Green Mountain Power	6
Solar	Roof-Mounted PV	160 Whitetail Way	7270	Net Metered		7.6
Solar	Roof-Mounted PV	78 Oustinoff Road	16-0818	Net Metered	Green Mountain Power	3.6
Solar	Roof-Mounted PV	2895 Pond Road	7269	Net Metered		4
Solar	Roof-Mounted PV	50 Mountain View Dr	17-4260	Net Metered	Green Mountain Power	5
Solar	Roof-Mounted PV	1541 Fairfax Road	16-1487	Net Metered	Green Mountain Power	3
Solar	Roof-Mounted PV	1175 School Road	17-3999	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	282 Wright Rd	16-2864	Net Metered	Green Mountain Power	3
Solar	Roof-Mounted PV	1126 School Road	18-0149	Net Metered	Green Mountain Power	3.8
Solar	Roof-Mounted PV	5555 Fairfield Road	3798	Net Metered	Vermont Electric Coop	12.77
Solar	Roof-Mounted PV	81 Oak Hill Road	3422	Net Metered	Green Mountain Power	5.13
Solar	Roof-Mounted PV	78 Oustinoff Road	17-4722	Group Net Metered	Green Mountain Power	6

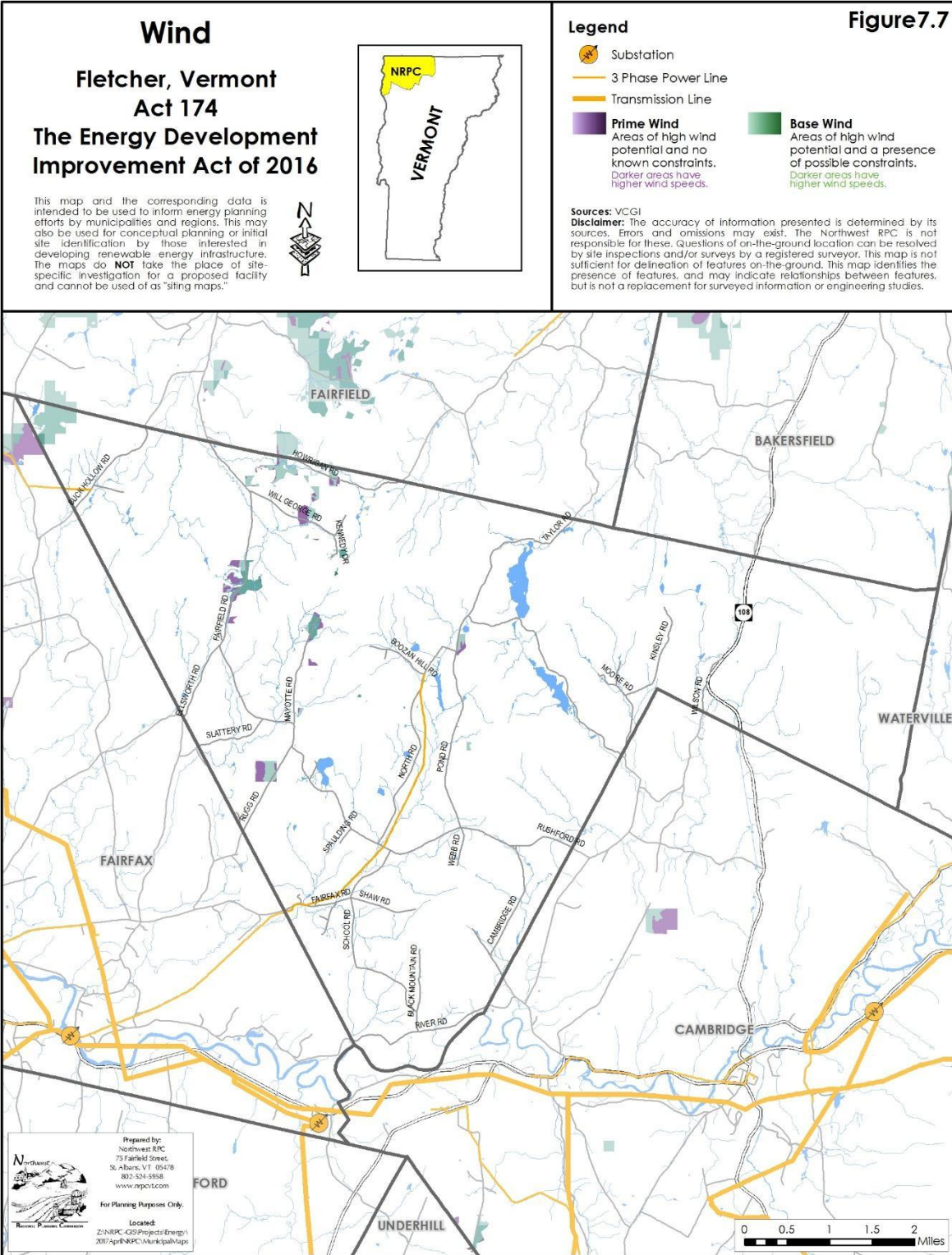
<b>Table 7.13 Standard Conversions - BTU to Unit</b>		
<b>Unit</b>	<b>Unit Type</b>	<b>British Thermal Units</b>
Kilowatt	Kilowatt	3,412
Gasoline	Gallon	120,404
Ethanol	Gallon	84,714
Diesel Fuel	Gallon	137,571
Heating Oil	Gallon	137,571
Residual Fuel Oil	Gallon	149,690
LPG	Gallon	84,738
Kerosene	Gallon	135,000
Biodiesel	Gallon	127,595
Wood Pellets	Ton	16,500,000
Cord Wood	Cord	20,000,000
Wood	Pounds	8,000
Natural Gas	Cubic Feet	103,200
Compressed Natural Gas	Pounds	20,160
Coal	Short Ton	19,490,000

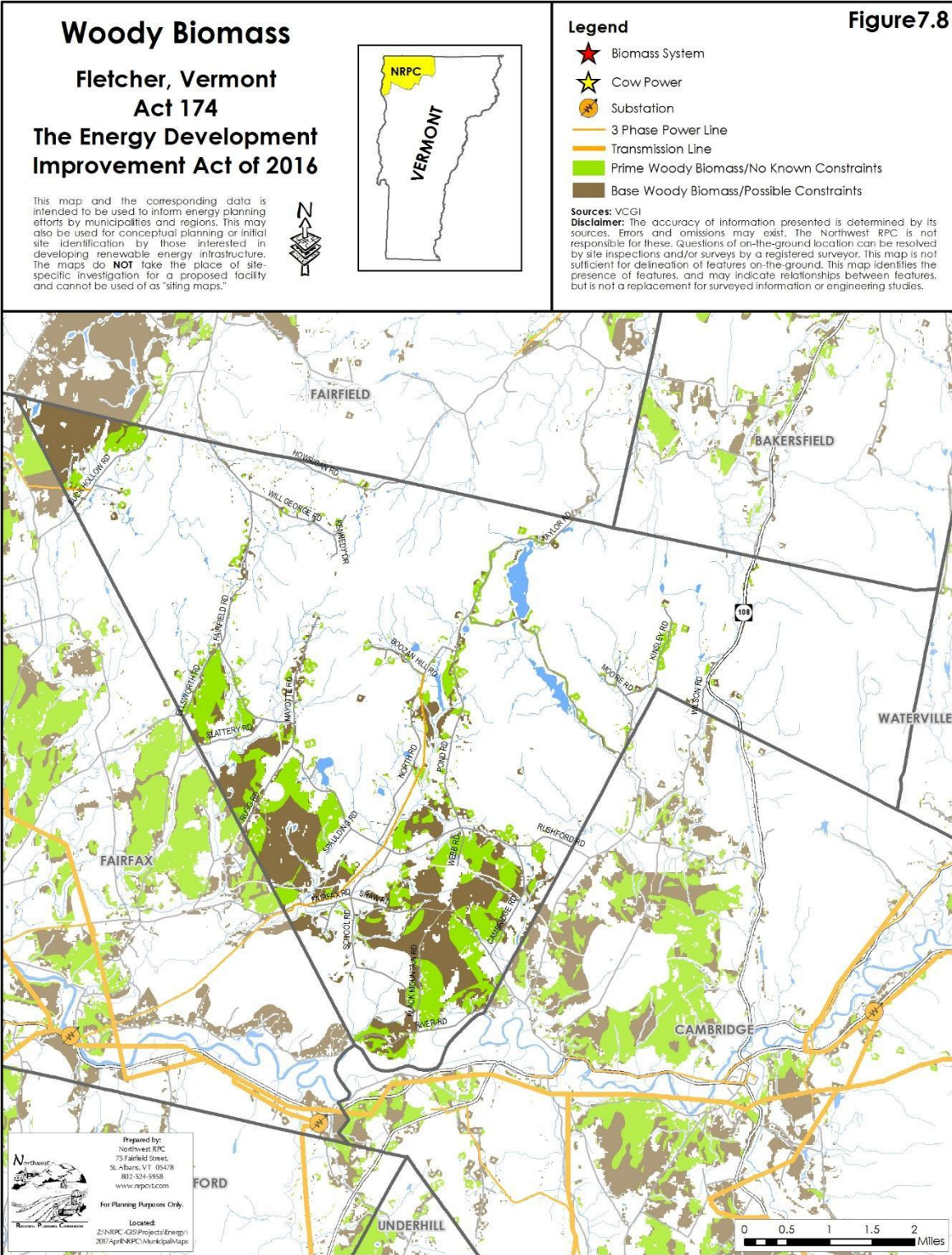


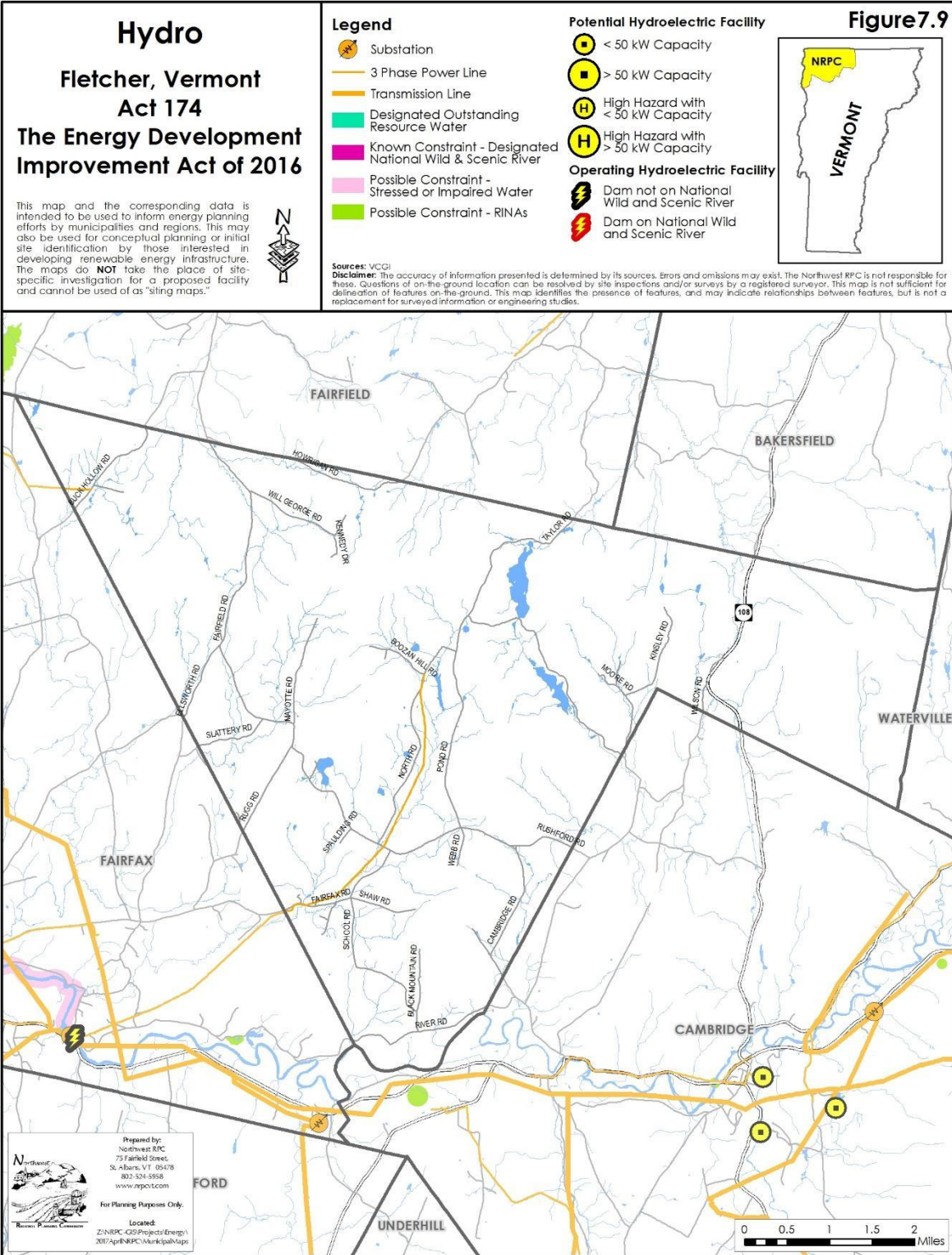












## SECTION 8 – FACILITIES AND SERVICES

### Overview

Facilities and services are provided by a municipality for the benefit of its residents, but at cost to local taxpayers. Those facilities and services supported by the community as a shared responsibility, including local government, education, health, recreation, infrastructure, and public safety, are easily taken for granted. At the same time, the type and quality of services available depend in large part on the community’s desire and ability to support them financially and through volunteer efforts.

In small, rural communities such as Fletcher, which are dependent largely on the local property tax to finance the public realm, the ability of the community to support a broad range of municipal services is limited. Because Fletcher is a growing bedroom community with a large commuter population, the ability to provide services through volunteer efforts is also increasingly limited.

For these reasons, the focus in town has been to provide the basics: accessible local government, which relies largely on elected and appointed officials, some of whom volunteer their time; a quality education for local students, which also involves a significant amount of volunteer labor; maintaining the town’s road network; and providing for public health and safety to the extent the town can afford. The facilities and services that are available in Fletcher reflect the rural character of the town, the community’s fiscal abilities, and the dedicated efforts of its residents.

### Public Buildings

The town of Fletcher owns and maintains three public buildings: the Fletcher Elementary School, the town office, and the town garage, as noted in the accompanying table and map (appendices). These three facilities are funded primarily through property tax revenues. The Fletcher Union Meeting House (the Grange) and the Binghamville Church are the two other facilities in town, which, though privately owned, support public functions.

### *Fletcher Elementary School*

The elementary school, located on the School Road just south of Binghamville proper, was originally constructed in 1962. In 1988 an addition was added to accommodate a growing elementary student population including the addition of a kindergarten class, and to meet state educational requirements. A modular building is used as a classroom and an outdoor classroom has recently been added. Because of the school’s small population, the standard state education projection formula produces unrealistic results. This makes it inadequate for Fletcher Elementary projections.

There were 93 students enrolled at Fletcher Elementary for the 2020/2021 school year. The school now houses grades Pre-K through 6, and has an overall capacity of approximately 200 students, though varying class sizes may affect classroom capacities (12-20 students) for particular grades. The school is sited on 9 acres; 10 or more acres will be required should the school need to expand. Capital improvements are done on an annual basis as needed.

In an effort to reduce costs, streamline resources and expand educational opportunities, the Fletcher, Georgia, and Fairfax school districts have continuously researched the possibility of merging the three districts. Most recently, in 2016 both Fletcher and Fairfax voted against an Act 46 merger. The districts then had to apply to remain “alternative structures” under State Board of Education rules and stay under Franklin West Supervisory Union. Although both towns chose not to merge, this, as well as other options, will need to be re-examined in the future as pressures to reduce costs and improve efficiency increase.

The elementary school includes 6 regular classrooms and one special education classroom, a library, which is also open for small meetings, an AV room and conference room, office space for administrative and health personnel, and storage and maintenance rooms. The school building also includes a multipurpose gymnasium/cafeteria which is used by the community for town meetings and social events, and is available for a fee (to help cover utility costs) in the evenings for nonpublic events. The school grounds include a playground and recreational fields.

**Fletcher Town Office**

The town office is currently located on the corner of Cambridge and Shaw Roads. The building is approximately 2,600 square feet. Construction on the town office building began in November 2015. Town land was sold in October of 2013 to offset the costs for the creation of the new town office. The town offices were moved to the new location in May 2016. The computer systems for both the town clerk and the listers were upgraded during the move.

The town office has space for the town clerk and administrative offices. There is also a title research area, a large vault, and a meeting room that is available for community use. Updated furnishings were donated to the building by Champlain College.

The previous town office has reverted back to the original land owner, as per an agreement made 46 years ago by the town.

**Town Garage**

The Fletcher Town Garage is located at the end of Oustinoff Road approximately one-quarter mile from the Fletcher Elementary School on 6 acres, more or less. The site consists of a 6,000 square foot structure. This building has septic and water. Another building, used for the storage of salt is 20 feet x 30 feet, and closed on three sides. The sand and salt mixture is stored outdoors.



**Fletcher Union Meeting House**

The Fletcher Union Meeting House, also known as the Grange or Community House, is located in Fletcher Center and as discussed previously, is one of the town’s most notable and readily recognized historic buildings. Originally constructed as a church, the Meeting House has been used for public gatherings, town meetings, and community events throughout the years. Long maintained by the Fletcher Grange, the building is now owned and managed by the Fletcher Historical Society, a private nonprofit incorporated in 2008 to promote the building’s restoration, maintenance and continued use. Fletcher residents recognize the historic value of the Meeting House, and its importance to the community. The town has made an annual contribution in support of restoration and maintenance. Through fundraising and grants in recent years, several major restoration projects have been completed. These include a new roof, repairs to the foundation and chimneys, siding, painting, and insulation.

**Binghamville Methodist Church**

The Binghamville Church, centrally located in Binghamville on 2 acres of land, also has considerable historic significance and value to the community at large. Many church sponsored events, including

church suppers and ice cream socials, are open to and attended by Fletcher residents. A fund drive was held to help pay for a new roof, which is now complete, and repairs have been made to the clock. The foundation will need repairs in the near future. At present the building is privately owned, operated, and maintained by the Regional Methodist Church Conference.

**Public Lands**

The Town owns several parcels of land. A parcel of land bordering Metcalf Pond, including a small undeveloped stretch of shoreline within the road right-of-way, provides access to the pond. An additional 1.5 acres across the road is designated for public parking. Another parcel of land bordering Metcalf Pond is privately owned, but subject to a conservation easement requiring public access.

The state owns rights to 380 acres on Gilson Mountain, accessed through Fairfield, which comprise the Gilson Mountain Wildlife Management Area. This land is under the management of the Vermont Department of Fish and Wildlife, but to date no management plan has been prepared. The land is open to area residents for hunting and other recreational uses.

**Public Services**

***Educational Services***

As noted, Fletcher elementary students (K-6) receive their education locally at the Fletcher Elementary School in Binghamville. Contrary to state trends, Fletcher Elementary annual enrollment is increasing. The busing of Fletcher elementary students is provided by the school district under an annually negotiated contract.

The Fletcher School District is currently a member of the Franklin West Supervisory Union, which provides supervisory and administrative services. The school district is overseen locally by the Fletcher School Board, consisting of five elected school directors.

Fletcher does not have a middle or high school in town and offers school choice. Many families choose to send their children in grades 7-12 to Bellows Free Academy Fairfax or other area schools. Secondary enrollments have been on the rise, and are expected to continue to increase.

There are no adult or alternative educational opportunities available within the community; however Fletcher residents may attend classes at the Community College of Vermont (CCV) and the Northwest Technical Center, both located in St. Albans; Northern Vermont University in Johnson, or a number of colleges in the Burlington area, including the University of Vermont.

***Road Services***

The second most costly service provided by the municipality is road management and maintenance. As discussed in more detail under the transportation section, Fletcher maintains over 44 miles of roads within its borders. The summer and winter maintenance of roads is the responsibility of one full-time road foreman and two full time crew members.

An equipment replacement schedule has been in place now for several years. A listing of present road equipment and the anticipated replacement dates is included annually in the Town Report. Estimated amounts of road material used per year include 3,500 yards of sand, 7,000 yards of gravel, and 80 tons of salt. People have asked that winter roads be as clear as possible, which has increased the amount of salt used in recent years. The amounts listed here may vary significantly in any given year depending upon



the weather (e.g. heavy snows, flash flooding). The town currently gets sand and gravel from local sources (Waterville, Fairfield) depending upon availability and price. The town also purchases asphalt for the maintenance and upgrade of its paved roads.

**Administrative Services**

Fletcher is governed by a local Select Board consisting of five elected members. The Select Board meets on a regular basis, and members receive nominal payment for their services. The town employs a full-time, elected Town Clerk (and Treasurer) to manage the town office, records and accounts. The position is assisted by a part-time Clerk. Financial records for the town are checked by three elected town auditors.

The town also employs a part-time Zoning Administrator, selected by the Planning Commission and approved by the Select Board, to administer and enforce its Development Regulations. Septic regulations are governed by the State.

The town has a five member planning commission and a five member development review board, both of which are appointed by the Select Board. These boards meet monthly, or as needed, and receive some administrative support from the Zoning Administrator. Planning, zoning and subdivision records are maintained in the town office. The town’s grand list is maintained by an elected board of three Listers. The town last completed an in-house reappraisal of all listed property in 2005. Another reappraisal is currently underway.

Town officers include a number of other elected and appointed officials (e.g., justices of the peace, animal control officer, fire warden, constable, emergency coordinator, pound keeper, inspector of lumber, weigher of coal, fence viewers, etc.), whose duties vary with their positions. Although some of these positions are now more in name only than substantive, local officials provide much needed services to the community, often at their own expense.

The town government of Fletcher, as in many rural Vermont communities, depends largely on local residents who are willing to volunteer their time and talents. Though Fletcher is a growing bedroom community, it continues to be fortunate in having residents who are willing to serve in the town’s and the public’s interest. The Town of Fletcher’s tradition of local volunteerism has in the past and will in the future continue to be a valuable resource in meeting the town’s long term needs.

Fees for other organizations, including assessments from the Northwest Solid Waste Management District, the Northwest Regional Planning Commission, fire and rescue services, and a number of other organizations which the town supports also come from the administrative budget. The town collects permit fees, and other nominal fees to help offset the costs of administration.

**Public Health and Safety**

Fletcher, as a small, rural, isolated community, has little ability on its own to support public health and safety services. The enhanced 911 program has been active for several years now, and the town is divided fairly evenly geographically for emergency services, which are provided by neighboring towns. An annual retainer is paid to both Cambridge and Fairfax, for both fire and emergency medical services. A number of Fletcher residents actively serve on fire and rescue squads.

Fletcher has one elected constable, but law enforcement in town is generally the responsibility of the

state police and the county sheriff. The town also has an appointed health officer and an appointed animal control officer. The town owns a large generator for emergencies, which is currently housed at the school that serves as an emergency shelter. There is also a generator at the Town Garage and the Town Office.

**Water and Sewer Services**

At present, there are no municipal or community public water and sewer systems in Fletcher. All Fletcher residents, farms, and businesses are served by individually owned systems, which are the responsibility of the owner to install and maintain.

**Solid Waste Management**

Under state regulations passed in recent years (Act 78), municipalities are now responsible for the waste generated within their borders. In response to the passage of these regulations, Fletcher was one of several Franklin County communities to form the Northwest Vermont Solid Waste Management District (NWSWD) in 1987. The town appoints a supervisor to serve as a voting member of the District’s governing board, and pays an annual assessment to help offset administrative costs. The District has taken a collective, regional approach to planning for the reuse, recycling and ultimate disposal of the solid waste generated by its member municipalities.

Locally, trash pickup and curbside recycling services are available on an individual basis through private haulers. The District offers regional solid waste and recycling drop-off located in Bakersfield and Georgia.

**Communication Services**

Fletcher is served by Consolidated Communications for its local phone service, and by a number of long-distance providers. The phone services available to local residents have increased markedly in recent years, but at additional expense to the consumer. Fletcher has three local phone exchanges (849 and 827 in Franklin County and 644 from Lamoille County). Cell phones are common, but because of Fletcher’s topography, do not work well in certain locations.

The town is also served by a number of post offices, none of which are located in Fletcher. Although Fletcher does not have “last line identity” from the U.S. Postal Service, it would be beneficial to pursue it. Residents would be able to reference their own town in their address (e.g., “Fletcher” instead of East Fairfield or Cambridge) while keeping the same zip code for sorting purposes. The advantages of last line identity include less duplication in street names and addresses, greater ease in locating an address, and perhaps most importantly, community identity.

At present, very few commercial and national internet service providers are available in the local area. Broadband internet is not widely available in town. The town is beginning to work with broadband providers to develop a plan for faster internet services in Fletcher. The plan is estimated to have broadband service town wide by the end of 2022. Given the potential importance of online services to local businesses and area residents, affordable local access is necessary.

Due to Fletcher’s topography, relative isolation and low population density, there are limited television and radio services available to residents. Most households in Fletcher have antennas or satellite dishes. The nearest radio stations serving the local community are located in St. Albans, and the reception varies around town.

The development of new or expanded telecommunications facilities, including radio, television and telephone towers are permitted based on Fletcher’s Development Regulations. While the need for telecommunication facilities is obvious, the development must be done in a manner that is aesthetically pleasing as well as functional.

**Childcare Facilities**

Although not a service provided by the community, childcare can be a community issue. Childcare can be a growing concern for existing and prospective families, whether in regards to finding quality services or the costs associated with securing these services.

According to State data, Fletcher currently has one registered childcare home and one childcare center (preschool), with a total capacity of 25 children. There are two registered childcare facilities in Fletcher. The Fletcher Elementary School Pre-School program functions as a part of Fletcher Elementary School and offers early education in a classroom setting. The other childcare facility in town operates out of a home. The 2016 American Community Survey indicates that there are 210 children from birth to age 12 in Fletcher. Data on other options such as stay at home parents, family care providers, unregistered homes, or other in-home childcare options is not available. The question remains whether the needs of the remaining children are being met.

**GOALS:**

1. To plan for, finance, and provide an efficient system of public facilities and services and to meet the needs of the community in a fiscally responsible manner with appropriate public facilities and services that support residents’ livelihood and lifestyles.
2. To maintain and enhance recreational opportunities in the Town of Fletcher.
3. To ensure that Fletcher residents have access to high quality education in cooperation with the Franklin West Supervisory Union.
4. To promote the availability of safe and affordable childcare and to integrate child care services into the planning process, including child care financing, business assistance for child care providers, and childcare workforce development.

**POLICIES:**

1. Public and semi-public facilities will be located to reinforce traditional settlement patterns, and to avoid or otherwise minimize impacts on resource and conservation lands and natural, cultural and scenic features. New buildings intended for broad-based public access and use, including new governmental and educational facilities, will be centrally located within or immediately adjacent to existing village areas in order to concentrate public functions, reinforce village character, and strengthen community identity (see attached land use map).
2. The town will ensure the supply of safe drinking water and adequate wastewater disposal through the administration and enforcement of local health regulations.
3. Emergency response and public safety services, including fire, ambulance and policing services will be provided through cooperative agreements with neighboring towns, agencies and/or private organizations as appropriate, based on available funding. Volunteer efforts, including volunteer

service and community-based programs, will be supported as appropriate.

4. All new development will be located and sited to be accessible to emergency response vehicles.
5. Public recreational areas and facilities for the use and enjoyment of Fletcher residents will be provided in convenient and suitable locations to the extent available funding and resources permit. The maintenance and improvement of existing facilities will receive priority.
6. Telecommunication facilities shall be located only in areas specifically designated for these uses, and shall be co-located on existing sites unless such sites are demonstrated to be unsuitable or unavailable. The town will encourage affordable local access to telecommunication services, including on-line services, and support upgrades in telephone and electric services to meet telecommunication needs, to the extent feasible.
7. Participate in regional solid waste planning, recycling and disposal efforts as a member of the Northwest Vermont Solid Waste Management District.
8. Support the Fletcher internet presence (<http://www.fletchervt.net>, which also provides links to the public Google group and Facebook page).

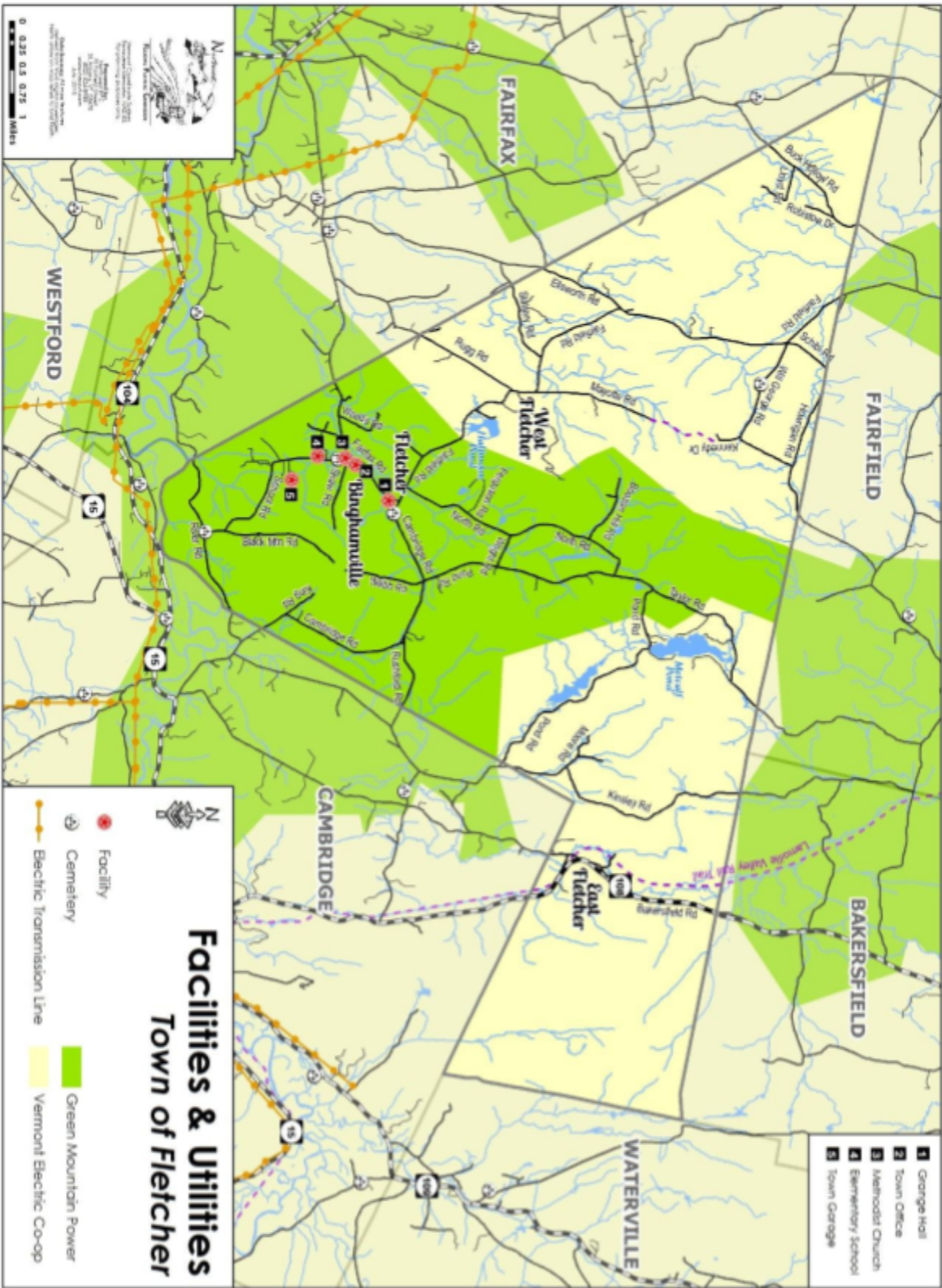


Figure 8.1 – Facilities and Utilities

## SECTION 9 - LAND USE

### Overview

Land use is more often than not the most difficult planning issue faced by most communities. Through effective planning, a reasonable balance can be maintained between the public interest and the interests of private landowners.

Land use planning integrates all other aspects of the planning process: defined goals, policies, and policies; physical factors and limitations; historic patterns of development; projected and accepted rates of growth; existing and proposed facilities and infrastructure; and the ongoing need to provide housing, jobs, services and a quality environment for present and future generations.



(Photo Credit: Timothy Carpenter)

The following provides a description of existing land use in Fletcher, a description of the types of land uses appropriate for Fletcher, and recommendations for facilitating the appropriate use of land through planning in order to meet the town’s goals and policies.

### Current Land Use

The Town of Fletcher covers approximately 24,608.75 acres. The various land uses/land covers that comprise this total acreage are listed in Section 3 and are illustrated in the Current Land Use Map in Figure 3.1. The most prevalent land cover by far is forest, comprising approximately 79% of Fletcher’s total acreage. In contrast, the acreage devoted to agricultural uses comprises only about 10% of Fletcher’s land base, and residential use comprises only about 1% of the land base.

### Land Use Districts

This plan establishes six different land use districts for the Town of Fletcher. These are:

- The Village District
- The Rural Residential Agriculture District
- The Conservation District
- The Forest District
- The Shoreland-Recreation District
- The Flood Hazard Overlay District

Below is the purpose statement for each of the land use districts in the Town of Fletcher:

#### ***The Village District***

The Village District includes all lands within and adjacent to the historic settlements of Binghamville and Fletcher Center, as depicted on the zoning map attached in the Appendix. This district is meant to encourage the development of village areas as the focus of social and economic activities in the community and to provide for residential, commercial and other compatible development that serves the needs of the town. Such development should occur at densities and reflect uses which will maintain the traditional social and physical character of the villages, including their historic and scenic resources, and which will not exceed the capability of the town’s lands, waters, services and facilities to absorb such densities.

#### ***Rural Residential/Agricultural District***

The Rural Residential/Agricultural District includes lands within 1,500 feet of maintained (Class I, II, or III) public roads. These lands are intended to be used primarily for residential, agricultural, and forestry uses. The purpose of this district is to provide for and protect residential, agricultural, forestry and compatible commercial and recreational uses in accordance with the Town Plan. Development densities must be in keeping with the physical capabilities of the land and the availability of planned community facilities and services. Development methods to preserve the rural character and protect the agricultural resources of these areas are encouraged.

#### ***Conservation District***

The Conservation District includes all lands that are further than one thousand five hundred (1,500) feet from a maintained (Class I, II or III) public roadway, and are not in any other zoning district, as depicted on the Official Zoning Map. Most are remote upland areas and other conservation lands. Designation within this district is specifically intended to protect the scenic and natural resource value of these lands for forestry, ground and surface water recharge, wildlife habitat and outdoor recreation. Due to their remote locations, extreme topography and/or severe limitations for buildings, roads, utilities and sewage disposal, these areas of town are poorly suited for future community growth and development. Due to an abundance of natural resources, physical limitations for development and the cost of providing public services to these areas, only limited, low-density land development that is compatible with this district’s purpose will be permitted.

#### ***Forest District***

The Forest District includes all lands eleven hundred (1,100) feet or more in elevation on Wintergreen Mountains, and all lands on Gilson Mountain one thousand four hundred (1400) feet elevation and

above. This district includes the upland areas without roads on Fletcher Mountain and all lands east of Route 108, but not including the area within one (1000) feet of the road, which is in the Rural Residential/Agriculture District.

As provided by the Act (24 V.S.A. §4413), this district is established to protect remote lands that are essentially undeveloped, lack direct access to public roads, are critical wildlife habitat, are currently used for commercial forestry and/or have high potential for commercial forestry use, and have severe physical limitations for development. Because environmental considerations and potential expenses for community services make such areas unsuitable for most types of development, all but uses exempted by statute shall be subject to conditional use review by the Development Review Board.

***Shoreland-Recreation District***

The Shoreland-Recreation District includes all lands within five hundred (500) feet of the shoreline of Metcalf and Half Moon Ponds. This district protects areas which have present or potential capability for water-based recreation in accordance with the Act [24 V.S.A. §4414].. Development in this district must be carefully controlled to protect water quality and scenic beauty.

***Flood Hazard Area Overlay District***

The Flood Hazard Area Overlay District includes identified areas subject to a one percent or greater chance of flooding in any given year (i.e., 100-year flood plains) as depicted on the Federal Insurance Administration’s current set of Flood Insurance Rate Maps (FIRMs) for the Town of Fletcher. The purpose of this district is to prevent increases in flooding caused by development in flood hazard areas, to minimize future public and private losses due to floods, and to promote public health, safety and welfare. Designation of this district is also required for continued town eligibility in the National Flood Insurance Program.

**Development Regulations**

Fletcher’s current development regulations incorporate each of the above referenced land use districts in the land use map. The current development regulations have been in effect since March 19, 2018.

**GOALS:**

1. To maintain a reasonable balance between the limitations imposed on land use in the public interest, and the rights of individual land owners.
2. To maintain and preserve the rural character of the town, including its resource-based economy, natural environment, cultural landscape, and the rural lifestyle enjoyed by its residents;
3. To provide for orderly development in suitable locations in order to enhance the quality of life of all Fletcher residents, and to ensure that local taxpayers are not overburdened by the costs of unanticipated, inefficient and unmanaged growth and development; and
4. To require that all development be pursued with strict regard to the capability of the land to support it.



**POLICIES**

1. To ensure that future development complies with the land use districts established in this plan.
2. Development is to be excluded from areas which are particularly unsuited for it, including those areas which have natural development limitations, and limited or no access. Land use and development densities will reflect topography, site conditions, proximity to town roads and commercial centers, and requirements for the economic and efficient provision of public services. Higher densities of development will be accommodated only where they can be properly served.
3. Land subdivision within all districts will be designed to ensure that the pattern of future land use and development does not adversely impact significant natural, cultural or scenic features, or result in the further fragmentation of resource and conservation lands.
4. Strip development along town roads will be prohibited. New development will maintain traditional, clustered forms of land use and development (e.g., farmsteads, hamlets, villages) with access to existing town roads.
5. Federal and local conservation efforts will be encouraged and supported.

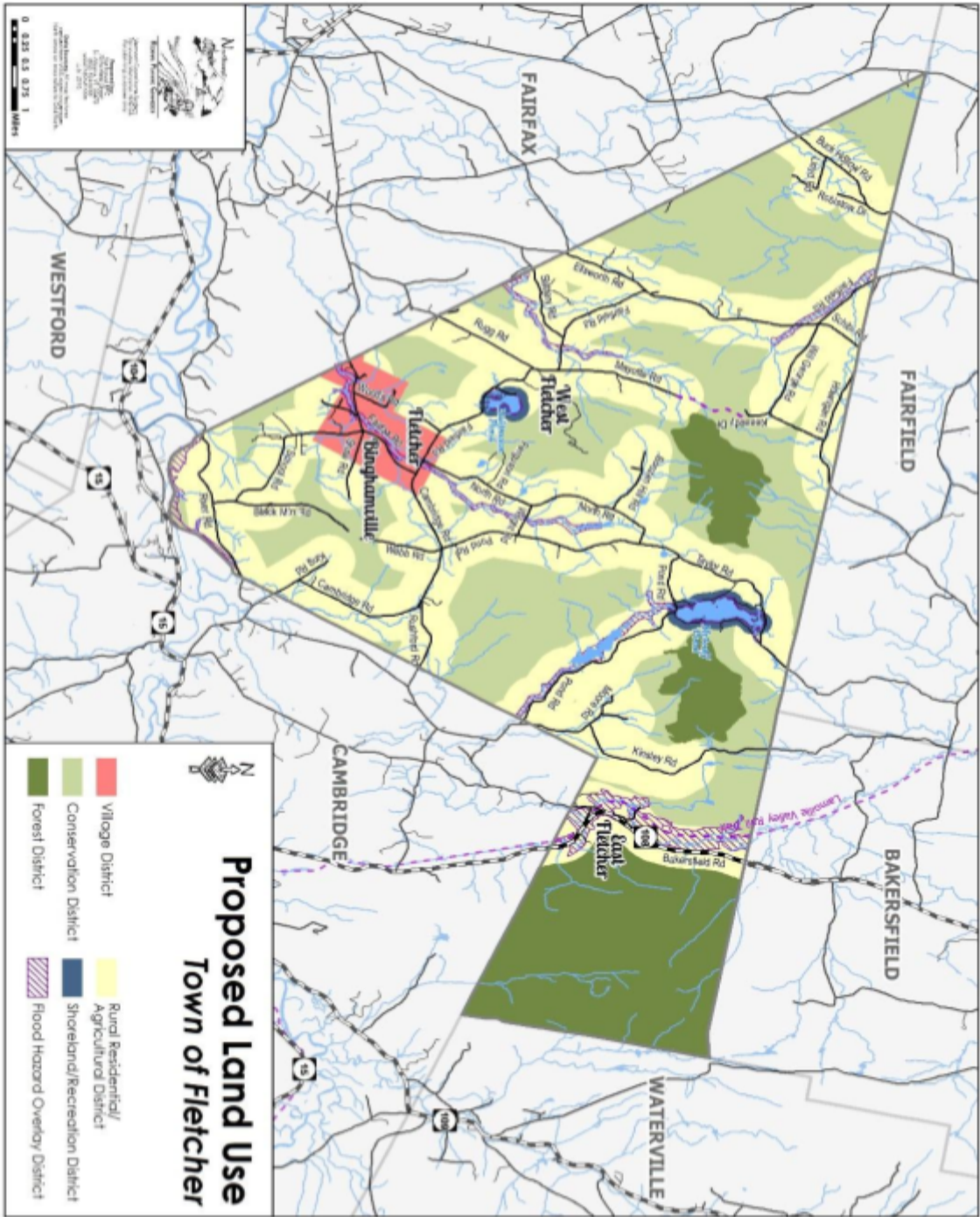


Figure 10- SEQ Figure \ \* ARABIC \s 1 1 - Proposed Land Use Map/Zoning Map

# APPENDIX A – HISTORIC AND CULTURAL RESOURCES

## Archaeological Resources

Archaeological resources include both prehistoric and historic sites, which often are no longer visible on the land. These include prehistoric settlements, hunting and fishing camps, trails, quarries, and burial grounds, as well as remnants of historic use, such as old foundations and cellar holes, dams, kilns and forges, unmarked cemeteries, and roads.

Archaeological sites, when found intact, provide a wealth of information about past ways of life; but because they are not readily apparent, these sites may be easily disturbed or destroyed. It is often not the artifacts themselves (arrowheads, pots, etc.) that are important (though these may attract interest for their historic or commercial value), but rather the context in which they are found.

The Vermont Division for Historic Preservation (VDHP) maintains information of known sites, which is provided on a need to know basis (to avoid scavenging). For planning purposes they have described more broadly defined “sensitive areas” in which archaeological sites are known or expected to occur. In Fletcher, sensitive areas have been delineated along the Lamoille River and its tributaries, and along the upper reaches of the Fairfield River in the northwest part of town. Delineations following two hundred foot setbacks along existing drainage ways are common; however, given the movement of streams and rivers over time, many early sites may be located farther away. Development proposals in these areas should be reviewed with particular attention given to the possibility of buried sites. Assistance with the identification, protection and/or excavation of sites is available from VDHP staff.

## History of Fletcher

Original inhabitants of the area, including the Abenaki and their predecessors, traveled the Lamoille and Missisquoi Rivers, and followed tributaries inland in seasonal subsistence cycles. Known sites of prehistoric settlement and use are generally located in the vicinity of major waterways in the region, including the Lamoille River drainage.

Fletcher's town charter was granted by Thomas Chittenden in 1781 while Vermont was still an independent republic. Sixty-five original proprietors were responsible for bringing new residents to the area. The first recorded settlement was made by the family of John Fullington, a New Hampshire man who built a log home here in 1787. The following year Fullington embarked with his family to settle in town, but died in transit following a meal of bad turnips. Mrs. Fullington continued on to make her home in Fletcher with her four children, and lived to the ripe old age of ninety-five.

Others soon followed. The town was officially organized in 1790, and the first town meeting was held on March 16th of that year. By 1791, when the first census count was taken, 47 people lived in town. Early families in Fletcher depended on the land for their livelihood. Most either worked farms and related enterprises, including logging, cider and syrup operations; farmsteads grew up along a developing a network of roads. Large tracts of land were cleared, first for subsistence, then for commercial sheep and dairy farming. By the end of the nineteenth century, only the town's steepest and rockiest slopes remained forested.

Since Fletcher was located a considerable distance from existing markets, small industries and businesses were established to serve the needs of a growing community. These included potash and lye manufacturers, sawmills, tanneries, bucket and blacksmith shops, a wheelwright shop, a brickyard, starch factories, cider presses, skimming stations and creameries, and a number of stores. Ice harvesting

for refrigeration was a lucrative business prior to electrification; up to 27,000 blocks of ice were cut from Half Moon Pond in one year. Small hamlets, including Fletcher Center, Binghamville, and East Fletcher, grew up in strategic locations. Fletcher Center was the center of local government and commerce for much of the town's history. The first store opened here in 1820. Another store built in the Center in 1839 (which burned in 1979) also served for many years as the post office, town clerk's office, and town library. Binghamville developed from 1830 on as a traditional mill town, with Stone's Brook providing a source of power for sawmills that remained in operation until 1927.

By 1880, Fletcher had been divided into ten school districts to serve the needs of local children. Schools were located in convenient locations around town.

Telephones arrived in Fletcher in 1908 through the Farmers Mutual Telephone Company. New England Telephone expanded into the area in the 1930s. Electricity first reached Fletcher in 1923 when the Fairfax Falls generating station was constructed. East Fletcher was hooked up in 1939 through the Vermont Electric Cooperative; Binghamville and surrounding areas were not electrified for another year or so.



By the mid-1800s, Fletcher's settlement pattern and road network were well established. Fletcher was served by several stage coach routes until these were replaced by a rail line completed through the east side of town in 1877. East Fletcher grew as a station stop on the Montpelier and St. Johnsbury line (now the Lamoille Valley Rail Trail), and during the height of the railroad years had a weigh station, stockyard, and general store which sold grain and goods carried in by rail.

The same improvements which served to spur and support community growth also exposed Fletcher residents to the wider world, and to inevitable change. Fletcher's population initially peaked around 1850, when it numbered 1,084 (not to be reached again until the modern era). The Civil War years marked the beginning of a steady population decline, which continued well into the twentieth century. Fletcher's hill farmers, finding it increasingly difficult to make a living from rocky slopes, went west for cheaper, more productive land, or to urban areas for more gainful employment.

As the twentieth century progressed, the coming of the automobile and changing farming technologies and balance sheets encouraged more people to move on. Farms, fields and isolated stretches of road were abandoned and many former fields have reverted to forest, and others have given way to houses.

As the number of farms decreased, so did the number of businesses supported by the farming community. Fletcher Center, Binghamville and East Fletcher lost their importance as local commercial, manufacturing and rail centers in relation to growing regional centers in St. Albans and Burlington. One room schools and post offices were closed and consolidated while today Fletcher has one elementary school and one store, both located in Binghamville, and no local post office.

Residents who chose to remain in Fletcher adapted and persevered for many reasons, including strong ties to the land, family, community, and a way of life particular to the area. Beginning in the 1960s, they were joined by newcomers migrating north in search of affordable land and a more rural lifestyle. The town's long-standing population decline finally reversed, and the repopulation of the town has

continued unabated for the last several decades.

Fletcher remains a relatively isolated, rural, resource-based community. The farms still in operation have grown to absorb neighboring lands, and stand out as the principal land-based industry in town. The town's woodlands continue to support maple syrup production and a commercial logging industry. Sand, gravel and rock quarrying operations are scattered throughout. Small, home-based businesses also contribute to the local economy.

Fletcher also increasingly serves as a bedroom community for people who choose to make their home in town, but work elsewhere. Located within easy commuting distance of St. Albans, Milton and the greater Burlington area, much of Fletcher's recent growth may be attributed to its proximity to these employment centers. Many town residents no longer depend directly on the land for their livelihood, but their ties to the community are no less strongly held. Most residents appreciate Fletcher's rural setting, and have learned to adapt to the realities of rural life. The town's natural amenities also attract a seasonal community at Metcalf Pond.

Fletcher continues to grow and develop at a significant pace. The impacts of growth on the town's rural character, community services and facilities have been a concern locally since the 1960s. Due to the keen foresight of town officials and residents, Fletcher was one of the first communities in Franklin County to begin an ongoing process of planning for its future. This process continues today through periodic updates to the municipal plan and zoning and subdivision bylaws (2002).

To better implement the plan and bylaws, in 2002 the town shifted from a Zoning Board of Adjustment (ZBA) to a Development Review Board (DRB). This change affords the town improved efficiency in planning and policy implementation; a more consolidated and comprehensive planning and review process.

### Historic Resources

Historic resources, including historic sites, structures and districts, are more easily identified and surveyed. An initial survey of the town conducted in 1981 by the VDHP identified many structures, which have historic significance, as well as the two historic districts of Binghamville and Fletcher Center. More detailed survey information is available at the town office.

The **Binghamville Historic District** is listed as “an outstanding example of a typical mill town” that has undergone relatively little change in the 20th century. Architecturally, the village contains mid- 19th century to early 20th century 1-story frame houses with clapboard siding and gabled roofs. The Binghamville Church located at the intersection of two roads, stands as a focal point that defines the village center. Older houses are located on small village lots and are oriented in relation to each other and the road, with minimal setbacks. Stone’s Brook, which provided the source of power for the sawmills located along its banks, is identified as the outstanding natural feature in this district. In 1981, the Binghamville Historic District contained no nonconforming buildings. Since that time a store and a few more modern homes have been located here, but the district retains much of its original character.

The **Fletcher Center Historic District**, once Fletcher’s primary commercial center, includes the Fletcher Union Meeting House (Grange or Community House) and a number of historic structures near the intersection of the Fairfax and Cambridge roads. This too reflects a traditional settlement pattern of structures on small lots, oriented to each other and the road.

The **Fletcher Union Meeting House**, originally constructed in 1871, is listed on the National Register of Historic Places, and is now maintained by the Fletcher Historical Society as of November 2010. Their current plans are to continue with the efforts that have been made to keep the building going and incorporate some new ideas. In recent years, the Meeting House has been used for town meetings and community events, but the building's use is limited due to the septic system. Poor septic conditions also have limited the amount of new development in Fletcher Center.

Not identified on the state's survey, but nevertheless of historic as well as local importance, are Fletcher's four cemeteries; the **Pioneer Cemetery** (Fletcher Center), the **Fletcher Cemetery** (in Binghamville), the **Bailey Cemetery** (on the Will George Road), and **River Road Cemetery**. The Fletcher Cemetery is the only remaining active cemetery. The Pioneer Cemetery is actively maintained while the other two historic cemeteries are showing signs of long term neglect. Farms and farm buildings were identified by local residents in the municipal survey as having historic significance. Also not inventoried, but increasingly considered of historic importance, are landscape features associated with past or abandoned uses, including old foundations and cellar holes; dams, quarry and mill sites; stone walls and wire fences marking old field and property boundaries; stone posts, "witness trees" and other boundary markers; and old orchards, sugar bushes, woodlots, and logging sites. Unfortunately, these features often are not viewed as having any value and are readily disturbed, removed or demolished.

**Cultural Features**

Cultural features are community resources that help us understand our shared past. These include archaeological sites, historic sites, structures and settlements, and larger cultural landscapes that reflect the character of a particular place, time, or lifestyle. Fletcher's cultural resources offer a link to the past, help define the town's present character, and provide a context for future growth and development. As such, the town's cultural features lend much to its identity, character, and sense of place and deserve consideration for preservation. The following includes a brief description of the town's cultural resource base; it is not intended to represent a complete inventory.

## APPENDIX B – GEOLOGY AND EARTH RESOURCES

### Bedrock Geology

Geologic events of the distant past have directly affected Fletcher’s topography, soils and drainage patterns, which in turn have influenced patterns of local development. Fletcher is underlain by bedrock formed from sediments and volcanic materials deposited some 600 million years ago, which were then altered and hardened from the heat and pressure of mountain building. Over the millennia, the weathering and erosion of less resistant rock resulted in Fletcher's existing relief. Locally, bedrock consists mainly of highly metamorphosed greywacke, phyllite, gneiss and schist associated with Green Mountain formation.

Geologically speaking, northwestern Vermont has been relatively inactive in recent decades. Over the long term, this region is susceptible to earthquake activity centered mainly to the north and west. Seismic events, such as the April 20, 2002 magnitude 5.1 earthquake centered 15 miles southwest of Plattsburgh, NY show that the region is susceptible to quake activity. On a more local level, occasional shifts in underlying bedrock have resulted in minor tremors that have been felt locally, but have caused no damage.

### Surficial Geology

Periods of glaciations, the most recent ending approximately 11,000 years ago, also dramatically affected the look and lay of the land. Glacial materials deposited during periods of advance and melt including glacial tills, outwash sands and gravels, and lake bottom sediments cover underlying bedrock to varying depths. These are the parent materials from which most of Fletcher’s soils have developed. Also found on the surface in isolated locations are organic peat and muck that have accumulated in upland low lying areas, along Black Creek south of Metcalf Pond, and more recent flood deposits along local rivers and streams.

Glacial tills consist largely of unsorted, poorly drained materials. Exposed bedrock, boulder surfaces, and shallow soils are common, particularly in the hilly and mountainous upland areas of town. The suitability of tills for forestry, farming, and development varies widely depending on depth to bedrock, slope and drainage. Till soils often have fragipan layers which impedes drainage. Where tills are thin, water is allowed to infiltrate into underlying bedrock and recharge local ground-water supplies.

Level terraces of well sorted, well drained sands and gravels deposited during glacial melt are found mainly along the Lamoille River valley, including an extensive area south of Binghamville. Smaller kame terrace deposits are scattered throughout town. These deposits are often good sources of sand, gravel and groundwater, are fairly good farmland, and are well suited for development. As such, they represent an important resource to the town that may be subject to competing but not always compatible uses.

Lake bottom silts and clays, located in the vicinity of Fletcher Center and at greater depths in the Binghamville area, are poorly drained and generally unsuited for most types of development. Well log data suggest, however, that when left intact, these clays may cap and provide some protection to underlying bedrock aquifers.

### Earth Resources

No commercial mineral deposits have been located in Fletcher; however, outcrops near West Fletcher

and Binghamville have been quarried for crushed stone. Sand and gravel deposits scattered throughout town also have been worked over the years.

There is a growing demand throughout the county for sand and gravel for use in construction and road maintenance. As larger deposits are depleted, smaller deposits may become more economically viable, and more important to the town. These deposits are a valuable resource.

The environmental and social impacts of quarrying and extraction operations also need to be considered prior to development.

Many adverse impacts can be minimized through appropriate site planning, development and reclamation.

**Geologic Features**

Also of note are two geologic features located in Fletcher that were identified as part of a statewide natural resource inventory conducted in the 1970s. The West Fletcher Esker, a 400 acre glacial feature of statewide significance, extends 1.5 miles along a tributary of Wilkins Brook. Sections of this sand deposit have been subject to extraction, but it retains its integrity as a significant glacial feature.

The second feature is a naturally occurring Rock Cave located in the vicinity of Metcalf Pond. This cave, surrounded by forestland, is historically renowned as a fugitive hideout.



## APPENDIX C – WORK PROGRAM

Task	Responsible Party
<b>Planning and Implementation Process</b>	
Maintain and update the Fletcher Town Plan as the town's official policy document with regard to growth, development and the preservation of Fletcher's rural character. At minimum the plan shall be updated for readopting every eight years in accordance with statute. Seek regional approval of the Fletcher Town Plan in order to retain related benefits under state law, including the requirement that other local, regional and state plans be compatible with regionally approved municipal plans.	Planning Commission and Selectboard
Participate in regional and state planning and permitting. This includes participating as a statutory party in state Act 250 and Public Utility Commission (Section 248) proceedings as appropriate.	Planning Commission and Selectboard
Provide annual reports of planning and permit activities for inclusion in the town report.	Zoning Administrator
Provide updates of planning commission activities in the town newsletter, website, and other social media.	Planning Commission
Submit a yearly planning program budget request to the town Select Board for inclusion in the town budget and consideration by voters.	Planning Commission
Seek, in association with the Selectboard, administrative fees, planning funds, grants, and other sources of funding as appropriate to carry out the planning program, including plan implementation efforts.	Planning Commission and Selectboard
Review and update planning commission bylaws and rules of procedure as necessary to ensure openness, fairness and accountability.	Planning Commission
Conduct a yearly meeting between the Planning Commission and the Development Review Board to ensure communication about planning and zoning issues in the community. Encourage attendance from representatives of the Selectboard and Regional Commissioners.	Planning Commission, Development Review Board and Selectboard
Maintain contact and communication between Fletcher's local officials, boards, and the planning commissions of adjoining municipalities.	Planning Commission and Selectboard
<b>Community Profile</b>	
Current and recent trends will be periodically reviewed and discussed with town residents.	Planning Commission and Selectboard
<b>Natural and Cultural Resources</b>	
Review land trust and similar applications for conformance with the goals and policies of the town plan.	Planning Commission and Selectboard
Form a municipal conservation commission and/or land trust to assist with the identification, inventory, management and protection of important resource lands within the community.	Selectboard

Develop watershed management plans and monitoring programs for Metcalf and Half Moon Ponds.	Planning Commission and Selectboard
Request completion of and participate in the development of a state wildlife management plan for the Gilson Mountain Wildlife Management Area.	Planning Commission and Selectboard
Fletcher will work with Cambridge, Northwest Regional Planning Commission, and Lamoille County Planning Commission to extend the Lamoille River model of the Main Stem, and support Cambridge’s efforts to reduce flood related closures on Pumpkin Harbor Road/Cambridge Road.	Planning Commission and Selectboard
<b>Housing</b>	
Review Fletcher’s Development Regulations to eliminate any provisions and or practices that may exclude affordable housing.	Planning Commission
<b>Economic Development</b>	
Inventory and survey home-based occupations and businesses within the community to identify needs and resources to encourage growth compatible with the rural landscape.	Planning Commission
<b>Transportation</b>	
Study the designation of on-road bike routes in town, including the adoption of “share the road” policies and signing.	Selectboard
Participate on the Regional Transportation Advisory Committee (TAC) to coordinate transportation planning, road maintenance and improvements with adjoining towns, and to ensure that the interests of the town are adequately addressed by the region and state.	Selectboard
<b>Energy</b>	
Coordinate annually with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fletcher residents.	Planning Commission and Selectboard
Promote the use of residential and commercial building energy standards by distributing code information to permit applicants.	Zoning Administrator
Determine if there is a need to create a municipal Energy Committee, appoint an Energy Coordinator, or provide greater funding and support to existing municipal boards to coordinate energy-related planning in Fletcher and to educate residents about the goals of this plan.	Selectboard
Conduct an energy audit of municipal and other public buildings to identify weatherization retrofits.	Selectboard
Promote and provide information about the GoVermont website ( <a href="https://www.connectingcommuters.org/">https://www.connectingcommuters.org/</a> ) which provides information to citizens about rideshare, vanpool, and park-and-ride options.	Selectboard
Plan for and install electric vehicle charging infrastructure on municipal property.	Selectboard

Review municipal road standards to ensure that they reflect the “complete streets” principles as outlined by Vermont Agency of Transportation and Vermont Department of Health ( <a href="http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPD_P_PA&amp;N%20Complete_streets_guide_for_VT_communities.pdf">http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPD_P_PA&amp;N%20Complete_streets_guide_for_VT_communities.pdf</a> ).	Selectboard
Investigate the installation of a municipal solar and/or wind net-metering facilities to off-set municipal electric use.	Selectboard
Investigate installation of a community-based renewable energy project.	Selectboard
Provide firefighters with training in fighting fires on structures that have solar installed.	Selectboard
Develop and adopt a municipal solar screening ordinance.	Planning Commission and Selectboard
Investigate the need for a municipal park and ride facility.	Planning Commission and Selectboard
<b>Facilities and Services</b>	
Develop a capital budget and program, and impact fee ordinance, for the financing of public facilities and infrastructure as part of an overall growth management strategy.	Planning Commission and Selectboard
Invite NRPC staff and Agency of Commerce and Community Development staff on a site walk of Binghamville. Determine if Binghamville would be eligible for state’s Village Center designation program.	Planning Commission and Selectboard
Identify and protect a public water supply source design to serve the Binghamville area.	Selectboard
Find opportunities to better use the Fletcher Elementary School as a community resource; develop and expand existing library holdings at the Fletcher school for community use.	Planning Commission and Selectboard
Provide financial support for educational opportunities for town health officer.	Selectboard
Continue to investigate options for the cost-effective provision of emergency services and police protection as appropriate; support the development of a local community watch program.	Selectboard
Make needed improvements to the Metcalf Pond beach and parking areas; acquire additional public access to Metcalf Pond; provide other amenities (e.g., picnic tables, trash cans) as appropriate.	Selectboard
Petition the US Postal Service for the use of “last line identity” (the use of “Fletcher” as the resident town) in local mailing addresses.	Selectboard
Maintain the inventory of all public lands to assess most appropriate use (firewood, wildlife habitat, recreation, education, sale, etc.); develop management plans as appropriate.	Planning Commission and Selectboard

Fund maintenance of parcel mapping to strengthen community services such as permit review, listing and tax services and general planning efforts.	Selectboard
Develop a maintenance program for town cemeteries.	Selectboard
Plan for the development of a small town green or common and public bulletin board to be centrally located in the Binghamville area.	Selectboard
Develop policies to govern the selection and timing of sale of town owned properties to ensure consistency.	Selectboard
<b>Land Use</b>	
Conduct a review of the Town Plan.	Planning Commission
Conduct a review of Fletcher Development Regulations and update regulations, including district land use designations, for conformance with the updated town plan. Also review for simplicity, clarity, ease of use, and effectiveness.	Planning Commission
Utilize GIS-based parcel maps to track changes in land use and subdivision patterns over time.	Planning Commission
<b>Other</b>	
Adopt a Local Emergency Operations Plan each year.	Selectboard
Adopt a Hazard Mitigation Plan (HMP) .	Planning Commission and Selectboard
Adopt Vermont Road and Bridge Standards.	Selectboard

# **Town & Village of Enosburgh, Vermont Comprehensive Municipal Plan 2020**



**Prepared by the  
Enosburgh Planning Commission**

**Adopted by the Town Selectboard on April 20, 2020**

# Acknowledgements

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## Visions for the Future of Enosburgh

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The following visions serve as a guideline for the future of Enosburgh. These visions are reflective of the input received by the Planning Commission in the surveys and public meetings.

- ◆ *The preservation of the character of Enosburgh and the protection of our natural resources will remain foremost in the plan for the growth of the Community.*
- ◆ *The rural character of Enosburgh is defined by its focus on agriculture, forest resources, and scenic vistas.*
- ◆ *A commitment to our children, families, land, water, and natural beauty will continue to make our community a special and unique place to the year-round residents as well as to our tourists and visitors.*
- ◆ *The provision of varied recreational opportunities is vital in promoting the community's quality of life.*
- ◆ *Community character will be a factor in the businesses that look towards Enosburgh as not only a good location for their business, but also as a place that offers a good way of life for their employees.*
- ◆ *Encouraging environmentally sound, clean businesses, new technology, home-based businesses, and enhancement of our tourist trade will lead to a more stable tax base and help in reducing dependence on residential property taxes.*
- ◆ *Encouraging diverse agricultural practices will help maintain the rural landscape of the community and help the local economy.*
- ◆ *Our young people should have employment opportunities and the ability to live near their families which can strengthen the family unit.*
- ◆ *New development in Enosburgh should occur at a rate which does not exceed Enosburgh's ability to accommodate population growth and the ability to provide essential services. The majority of new housing and commercial development is encouraged in the Village of Enosburg Falls.*

## Chapter 1: Purpose

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### ***Why plan?***

The primary purpose of any plan is to be a guide for the achievement of goals. In our personal lives this could entail financial planning, retirement planning, or planning for next months' vacation. In principle, town plans are no different. In very basic terms, a town plan is a community statement describing where you came from, where you are now, and where you want to go in the future.

Land use, the focus of town planning, impacts the world in a myriad of ways. Each development has cultural, environmental, and economic costs and benefits that need to be weighed by the community. Is there enough space available in the elementary school to accommodate the additional children from more residential development? How can we conserve our best agricultural lands without unnecessarily taking away peoples' property rights? These are the kinds of questions that can be addressed in town plans.

Vermont municipalities are not required to plan, but most do – to protect community interest, to retain local control, to promote desired forms of growth and development, to target public investment, to protect scarce public resources, and build and sustain a sense of community.

***What is a Municipal Plan?***  
*The Municipal Plan evaluates data and trends relating to growth and development, village character, the provision of facilities and services, and compatibility with adjacent municipalities and the region, identifies goals and policies to guide community decision making, and sets forth an implementation program.*

### ***How are municipal plans used?***

There is a range of ways in which a town plan can be used, from simply a source of information to a foundation for regulations. The community itself determines what is important and how it will be used.

At the most basic level the document can be used to catalogue what is known about the municipality. This collection of information could serve to familiarize residents, potential residents, and development interests about Enosburgh and its resources. Good information is essential to wise decision making whether for municipal planning or investing in a home, farm, or business.

The plan may also be used to evaluate development proposals for conformance with the Enosburgh's goals and policies. Determination of a specific project's conformance, or otherwise, with the municipal plan is one method of participating in the Act 250 process.

Municipalities that have adopted plans are eligible for certain State planning grants. In most cases, planning grants require a municipal plan to be adopted. This money can be used to update zoning bylaws, conduct feasibility studies for projects, or purchase development rights of a parcel of land.

Beyond this purpose, the Enosburgh Municipal Plan serves as the legal basis for land use regulations and capital budget programs, which the municipalities may wish to adopt. Municipal plans, in general, state community goals and chart the course while zoning or capital budgets are the vehicles to get there.

The Enosburgh Municipal Plan was developed with the following purpose in mind: to guide municipal officials, residents, and persons contemplating actions involving land use on matters of land development, the economic provision for facilities and services, resource use and conservation, and public health, safety, and welfare.

***What is required in a plan?***

Under current law, a municipality must address twelve (12) elements in their plans, which are the following:

- A statement of objectives, policies, and programs of the municipality to guide the future growth and development of land, public services and facilities, and to protect the environment;
- A land use plan;
- A transportation plan;
- A utility and facility plan;
- A statement of policies on the preservation of rare and irreplaceable natural areas, wildlife habitat and habitat connectors, and scenic and historic features and resources;
- An educational plan;
- A recommended program for the implementation of the objectives of the development plan;
- A statement indicating how the plan relates to development trends and plans for adjacent municipalities, areas and the region developed under this title;
- An energy plan;
- A housing element that shall include a recommended program for addressing low and moderate income person’s housing needs;
- An economic development element that describes present economic conditions and identifies policies, projects, and programs necessary to foster economic growth; and
- A flood resiliency plan.

These represent minimum requirements required by Title 24 Chapter 117 (the Vermont Municipal and Regional Planning and Development Act).

***How does the planning process work?***

A municipal plan is arrived at by: identifying community issues and needs; collecting and analyzing background information about the community; and combining them into a vision (statement) of how the community should develop. Goals, policies, and actions or recommendations are formulated to address specific elements such as land use, housing, or education.

The need for involvement of residents in the planning process cannot be overstated. While it is the responsibility of the Planning Commission to develop the plan, citizens and citizen committees can have an active role in gathering information and formulating plan policies for

guiding development. A better plan will be the result of a group effort. Without the participation of residents, the balancing of needs, values, and resources can be difficult to achieve.

Finally, planning is a continuous process, and plans can be amended to meet new challenges or situations. The Plan must be updated every five years or it expires. This provides opportunity for citizen involvement, and it acts as a review of the effectiveness of the Plan and its policies.

***Jurisdiction.***

Enosburgh—as it is referred to within this plan and as it exists in the minds of residents—is a single, unified community that includes both a chartered Town and incorporated Village. For political purposes, both the Town of Enosburgh and Village of Enosburg Falls are independent, sovereign municipalities under state statute. The Town is governed by a five-member Board of Selectmen; the Village is governed by a five-member Board of Trustees. Each board has the authority to execute administrative, legislative and quasi-judicial functions within its respective municipal boundaries. Historically, across the state and region, many incorporated villages were established for the purposes of creating municipal water and light districts. It was to this end that the Village of Enosburg Falls was incorporated in 1888, more than 100 years after the Town was chartered in 1780.

While the Town and Village remain separate political entities, they share many public services and governing functions and are working towards the same goals with respect to economic development, residential growth, energy conservation, environmental protection and farmland conservation. This is the basis for the creating a **unified plan** developed by a **joint, municipally-appointed Planning Commission**. The Enosburgh Planning Commission is delegated this responsibility jointly by the Town Selectboard and Village Trustees to plan for all of Enosburgh. Members of the Planning Commission include residents of the village and town. Ultimately, residents of the town frequent businesses and public facilities within the village, while residents of the village likewise enjoy the scenic character and rural amenities available throughout town. Citizens do not identify as a resident of one municipality over the other, but rather as residents of Enosburgh—singularly.

In the past, the local planning process involved maintaining separate municipal plans for the Town and Village. However, in recognition of the long-term vision for prosperity and sustainability shared by all Enosburgh residents, the Planning Commission, Selectboard and Village Trustees agreed to establish a single, comprehensive plan for the community. Going forward, this unified document will be updated with input from both municipalities to promote consistent, community-wide development goals for all of Enosburgh.

***Role of the Enosburgh Planning Commission.***

The Planning Commission is empowered to formulate goals and objectives toward plan development. The Commission is responsible for the review and revision of the Municipal Plan and to propose amendments to the zoning bylaws and regulations in an effort to implement the plan.

The role of the Commission is ongoing. Changing community conditions, preferences and priorities call for consistent monitoring of plan objectives. Amendments to the plan may, from time to time, be necessary and the Commission has responsibility for this task.

***Past Planning Efforts and Citizen Participation.***

Municipal Plans are intended to be "living" documents which have been, and will continue to be, updated many times to reflect the ever-changing conditions in Enosburgh. The 2020 Enosburgh Municipal Plan builds on the previous plans and furthers the effort to maintain a strong, vibrant community.

Enosburgh has led many efforts to gain citizen participation and input to inform current and prior municipal plans. The Village conducted community surveys in 2002 and 2007 and the Town conducted a survey during the 2001 plan development; these efforts were aimed at gathering input to provide guidance on specific planning issues. In 2003, the Vermont Council on Rural Development sponsored an Enosburg Community Visit, which was an expansive opportunity for a community wide discussion on overcoming challenges and achieving community goals. Many of the priority challenges and opportunities are still relevant today although significant progress has been made.

The 2014 Enosburgh Plan is a result of a planning process initiated in the summer of 2013. This planning process began with the formation of a Town and Village joint Planning Commission. The Planning Commission reviewed the similarities and differences between the two municipal plans and developed a combined draft plan to address them. A survey was conducted in March 2014 and more than 70 Enosburgh residents responded to the survey and provided the planning commission with valuable input on their goals and visions for the community. Residents were invited to participate in regular joint planning commission meetings and at the April 2014 meeting to review the survey results; Front Porch Forum is used to keep residents informed of the status of plan.

The 2019 Enosburgh Plan is an update to the 2014 Enosburgh Plan that includes adding current data, updates to comply with Vermont statutory changes, including an enhanced energy chapter, editing policies and implementation strategies based on progress and new information and incorporating the Vital Village master planning effort. The 2019 Vital Village master plan involved a robust community engagement program related to village revitalization, physical streetscape improvements, access to the Missisquoi Valley Rail Trail and economic development.

***The Structure of the Enosburgh Municipal Plan.***

The Enosburgh Municipal Plan is divided into 14 chapters that address both the required elements Act 200 and other key areas of concern. Each subject is then addressed in detail including past conditions, current status, and future needs.

Based on the findings in the discussion, one or more goals are then developed for the subject. **Goals** can be defined as “the desired future condition” although some may not be attainable for many years. For example, the goal for education is “to provide high quality, broad-based educational services for the people of the community.”

**Policies** are those features that describe how to attain our goals, are a guide for homeowners and developers, and a means for the Planning Commission to evaluate projects. For example, “ensure that rapid development will not inflict undue impacts and hardships upon the ability of the municipality to provide adequate educational services.”

The following action to then implement the goals and policies are the **Recommendations**; these statements extend beyond that of the Planning Commission to incorporate the communication and cooperation of municipal staff, partner organizations (schools, economic development groups) and residents to achieve the outcome. For example, “Consider applying for grant funds, such as the Community Development Block Grant, for renovation or rehabilitation of buildings for housing or economic development.”

**Authority.**

Vermont municipalities are authorized to prepare and adopt a Municipal Plan via Chapter 117, Title 24 of the VSA (Vermont Municipal and Regional Planning and Development Act). Section 4382 of the Act dictates what needs to be included in a plan. The intent of the law is to encourage a municipality to “engage in a continuing planning process that will further several stated goals.” The Act further states that municipal plans shall be re-examined, updated, and re-adopted every five years. This process should be ongoing, whereby the Plan is continually reassessed and revised to meet the changing needs of the community. Consequently, there will be future opportunities to review and amend the Plan. Residents, community groups, and anyone with an interest are encouraged to provide input into this ever-continuing process to the Enosburgh Planning Commission.

**Goals, Policies and Recommendations.**

**GOALS**

- To create a document that represents the collective vision of the Enosburgh community for the future.

**POLICIES**

- Encourage citizen involvement at all levels of the planning process.
- Ensure that decisions having local impacts are made at the most local level possible and with local input.
- Continue to represent and advocate local interests, as time and resources permit, through participation in regional, state, and federal planning, legislative efforts, and/or regulatory proceedings that may affect Enosburgh and the interest of its residents.
- Participate as a statutory party in state Act 250 proceedings as appropriate.

## Chapter 2: Community Profile

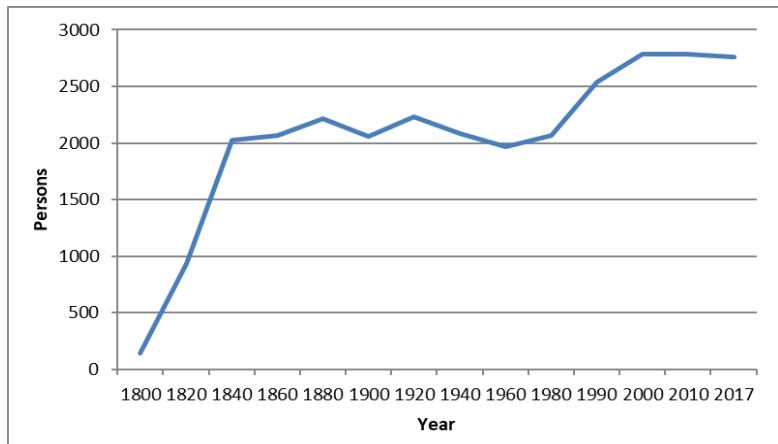
The Town of Enosburgh is located in the northwestern part of the State of Vermont in Franklin County and is bordered by seven towns: Montgomery to the east; Richford to the northeast; Berkshire to the north; Franklin to the northwest; Sheldon to the west; Fairfield to the southwest; and Bakersfield to the south. Enosburgh covers a total of 30,925.29 acres or approximately forty-eight square miles. Enosburgh is around 20 miles to the City of St. Albans, the regional growth center, and approximately 45 miles from the City of Burlington, Vermont’s largest City.

### Population.

#### Past and Present Population.

In the year 1800, shortly after being settled, Enosburgh had 143 persons. Figure 2.1 shows how the population for Enosburgh has changed since that year. The Town experienced its greatest population boom between 1800 and 1840 when the population climbed to 2000 residents. Between the years 1840 and 1980, the population remained steady with only slight fluctuations around 2000 persons. In 1990, the population rose above the 2500 mark for the first time (2535) and by 2000 the population had reached 2788 where it has generally remained in 2017 (2758).

Figure 2.1. Population of Enosburgh, VT 1800-2017



Source: Vermont Indicators Online, U.S. Census Decennial and American Community Survey

Table 2.1 shows the population for Enosburgh Town, Enosburg Falls, and all of the bordering communities. Between 1960 and 2017, the population of Enosburg Falls did not add additional population, while the population of Enosburgh Town more than doubled. Between 2000 and 2017, Enosburgh experienced a population loss of 30 people despite previously gaining population between 1980 and 2000. All of the surrounding communities experienced population growth between 2000 and 2017.



<b>Year</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2017</b>
<b>Enosburgh Falls</b>	1,321	1,266	1,207	1,350	1,473	1,329	1,306
<b>Enosburgh Town</b>	645	652	863	1,185	1,315	1,452	1,452
<b>Enosburgh Falls &amp; Enosburgh Town</b>	1,966	1,918	2,070	2,535	2,788	2,781	2,758
<b>Montgomery</b>	876	651	681	823	992	1,201	998
<b>Richford</b>	2,316	2,116	2,206	2,178	2,321	2,308	2,458
<b>Berkshire</b>	965	931	1,116	1,190	1,388	1,692	1,711
<b>Franklin Town</b>	796	821	1,006	1,068	1,268	1,405	1,411
<b>Sheldon</b>	1,281	1,481	1,618	1,748	1,990	2,190	2,317
<b>Fairfield</b>	1,225	1,285	1,493	1,680	1,800	1,891	1,899
<b>Bakersfield</b>	664	635	852	977	1,215	1,322	1,230
<b>Franklin County</b>	29,474	31,282	34,788	39,980	45,417	47,746	48,816
Source: Vermont Indicators Online, U.S. Decennial Census, 2013-2017 American Community Survey							

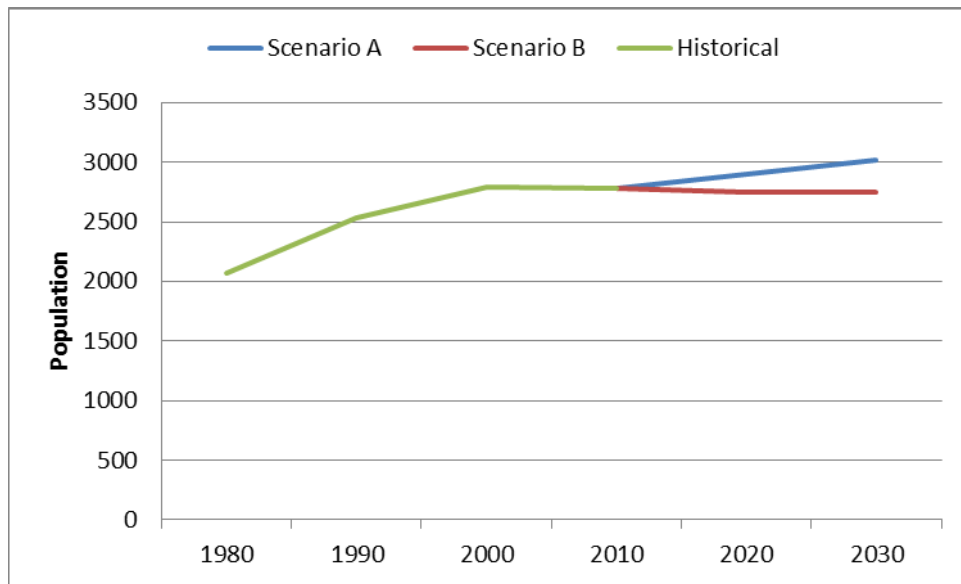
Table 2.2 shows the percent change within each decade for Enosburgh Town, Enosburgh Falls, and Franklin County from the year 1960 to the year 2010, and the percent change from 2010 to 2017. Though many residents (47.4%) live in the Village of Enosburgh Falls, the majority of population growth in recent decades has occurred outside of the Village. From 1980-2017, the Village population grew 8.2%, while the population outside of the Village grew by 68.3%. There is evidence to indicate that this growth is slowing in the Town perhaps because the best development sites have now been used. The growth of the Village in the 1980’s simply replaced the losses found in the previous decades.

<b>% Change</b>	<b>1960-1970</b>	<b>1970-1980</b>	<b>1980-1990</b>	<b>1990-2000</b>	<b>2000-2010</b>	<b>2010-2017</b>
<b>Enosburgh Falls</b>	-4.2%	-4.7%	11.9%	9.1%	-9.8%	-1.7%
<b>Enosburgh Town</b>	1.1%	32.4%	37.3%	11.0%	10.4%	0.0%
<b>Enosburgh Falls &amp; Enosburgh Town</b>	-2.4%	7.9%	22.5%	10.0%	-0.3%	-0.8%
<b>Franklin County</b>	6.1%	11.2%	14.9%	13.6%	5.1%	2.2%
Source: Vermont Indicators Online, U.S. Census, 2013-2017 American Community Survey						

*Projected Populations.*

The small size of the population base makes long-term forecasting difficult especially at the local level. The projections shown here were developed by the Vermont Agency of Commerce and Community Development based on the 2010 Census data. Figure 2.2 shows the population projections for Enosburgh and for Franklin County through the years 2020 and 2030. Two projections are shown: Scenario A and Scenario B. Scenario A is based on higher economic growth and in-migration patterns that were seen in the state from 1990 to 2000. Scenario B is based on lower economic and in-migration patterns that were seen in the state from 2000 to 2010. Scenario A shows the population of Enosburgh increasing from a 2010 population of 2,781 to a 2030 population of 3,020. However, Scenario B sees the population of Enosburgh decreasing slightly from 2,781 in 2010 to 2,750 in 2030. As of 2017, Enosburgh total population has decreased to 2,758 suggesting that Scenario B, in which Enosburgh would have a total population of 2,753 by 2020 may be more likely than the growth predicted in Scenario A. New population projections will be developed based on the 2020 Census data and will provide a more updated future population projection.

**Figure 2.2. Enosburgh Population 2020 and 2030 Projections**



Source: Vermont Agency of Commerce and Community Development

**Age Distribution.**

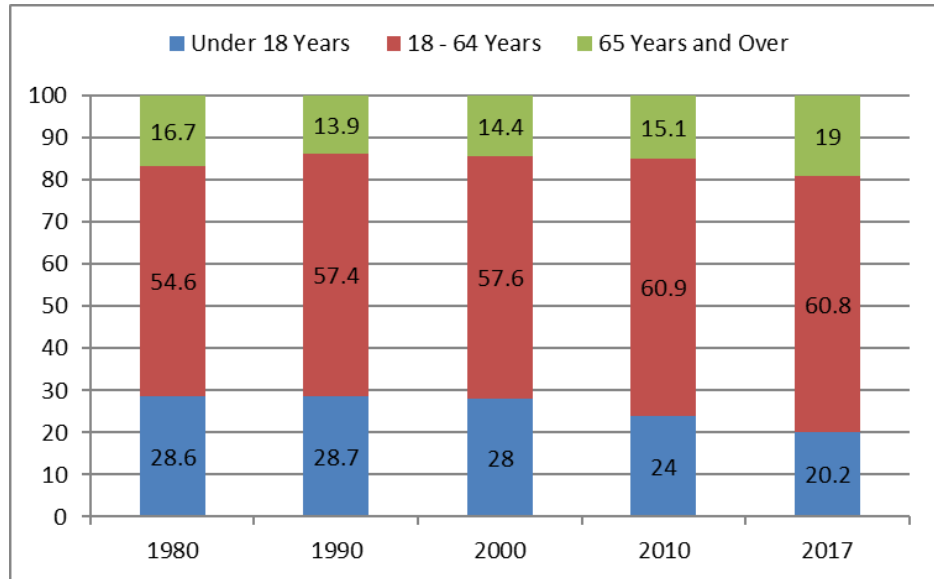
The median age in 2017 for the residents of Enosburgh was 43.0 years, up from 36.9 years in 2000. This is similar to the State of Vermont’s median age of 42.8 years and higher than Franklin County’s median age of 39.9 years. Enosburgh, Franklin County, and the State of Vermont have all seen an increase in their median ages since 1980.

Median Age (yrs)	1980	1990	2000	2010	2017
<b>Enosburgh</b>	32.0	33.1	36.9	40.0	43.0
<b>Franklin County</b>	28.9	31.7	35.7	39.6	39.9
<b>State of Vermont</b>	29.4	33.0	37.7	41.5	42.8

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

Figure 2.3 shows the percent of population for the different age groups for Enosburgh. Enosburgh saw a drop in its under eighteen population in 2010 and 2017. The percentage of population between the ages of eighteen and sixty-four increased slightly from 2000 to 2010, but stayed stable from 2010 to 2017. The elderly population has increased by 3.9% since 2010; in 2017 the percent of the population 65 or older is higher in Enosburgh (19%) than Franklin County (14.5%) and the State (17.5%).

**Figure 2.3. Age Distribution of Enosburgh Residents**



Source: Vermont Indicators Online, U.S. Decennial Census, 2013-2017 American Community Survey

**Special Populations.**

The 2013-2017 American Community Survey provides information about the number of people with various levels and types of disabilities. Enosburgh has a slightly greater percentage of people with disabilities than Franklin County, but a similar percentage of people to the state overall. As of 2008, the census categorizes disabilities into six categories: hearing, vision (blind or having serious difficulty seeing, even when wearing glasses), cognitive, ambulatory (mobility), self-care difficulty, and independent living difficulty.

% of Persons with a Disability	Total	Persons 5-17 Years	Persons 18-64 Years	Persons 65 Years & Over
<b>Enosburgh</b>	13.2%	1.2%	10.3%	37.6%
<b>Franklin County</b>	12.4%	4.9%	10.7%	33.96%
<b>Vermont</b>	14.2%	7.2%	11.8%	33.1%

**Household & Household Types.**

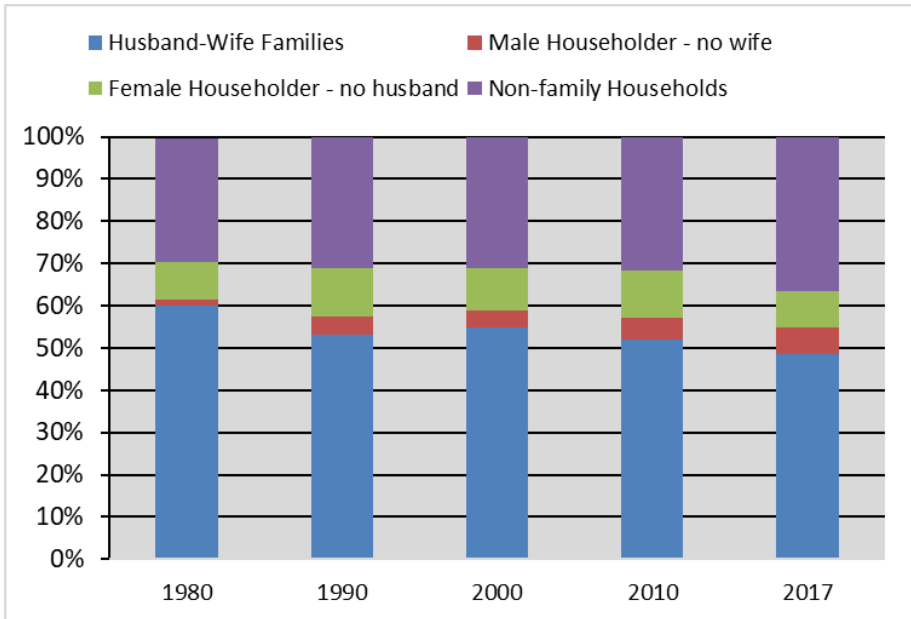
The way the population groups itself into households affects the demand for housing, community services, and employment. Figure 2.4 shows the percentages of households in Enosburgh from 1980 – 2017. While the number of households continues to grow (Table 2.5), the distribution of household types remained very similar. Enosburgh continues to have a high percentage (just under 50%) of traditional (husband-wife) households.

Year	Total Households
<b>1980</b>	783
<b>1990</b>	979
<b>2000</b>	1058
<b>2010</b>	1108
<b>2017</b>	1,128

**Education Level.**

In 2017, 87.9% percent of Enosburgh residents were high school graduates or higher while 90.7% of Franklin County residents and 92.3% of Vermont residents overall were high school graduates or higher. The community also had a lower percentage of people with a Bachelor’s degree than either the County or the State. Table 2.6 shows the percentages of residents who attained high school diplomas and levels of higher education in 2000 and 2017.

**Figure 2.4. Types of Households in Enosburgh**



Source: U.S. Decennial Census, 2013-2017 American Community Survey

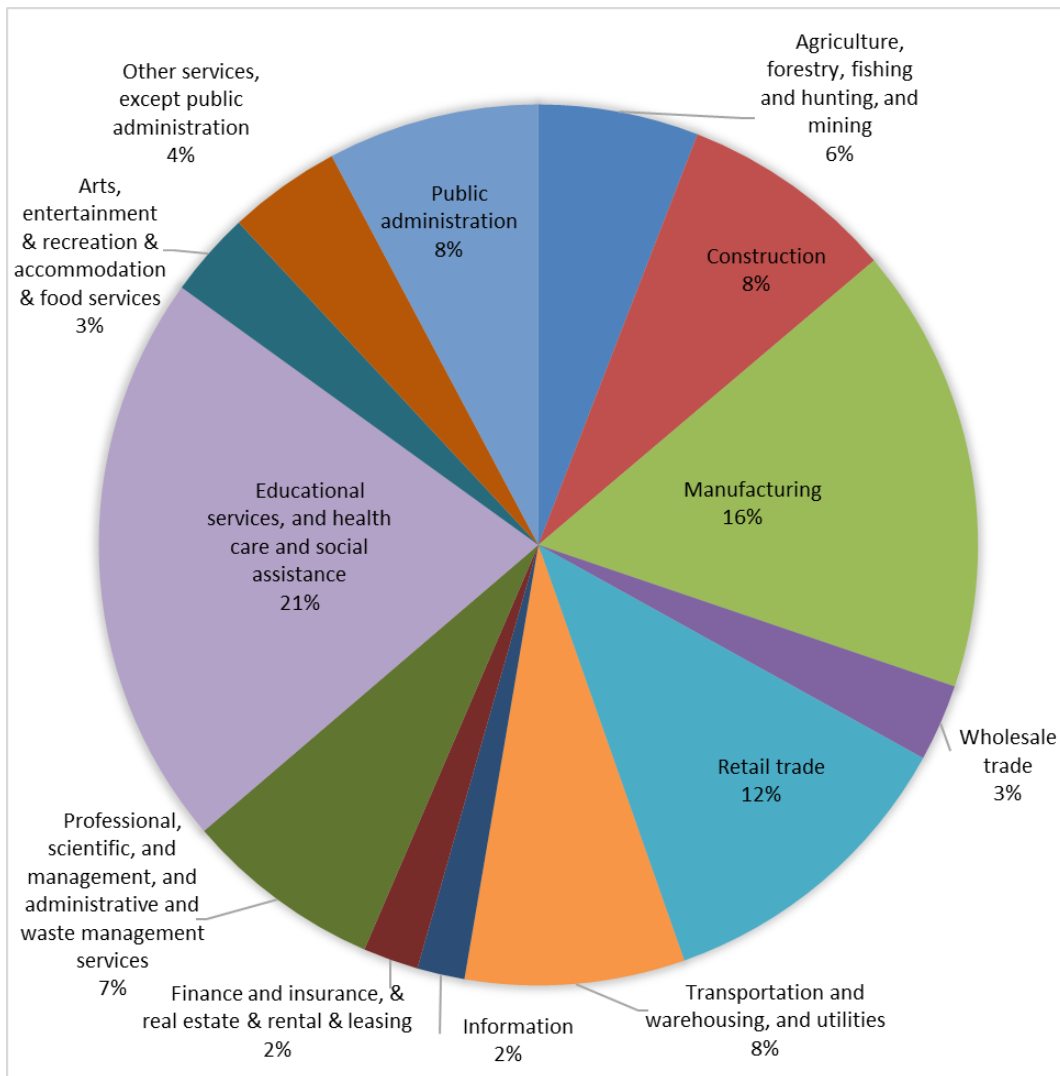
	% with a High School Diploma or Higher		% with a Bachelor's Degree or Higher	
	2000	2017	2000	2017
<b>Enosburgh</b>	75.3	87.9%	10.5	18.3%
<b>Franklin County</b>	82.0	90.7%	15.3	24.7%

<b>Table 2.6. Level of Educational Attainment</b>				
	% with a High School Diploma or Higher		% with a Bachelor's Degree or Higher	
	2000	2017	2000	2017
<b>Vermont</b>	86.0	92.3%	27.0	36.8%

Source: US Census 2000; American Community Survey 2013-2017

**Income and Economy.**

According to the 2013-2017 U.S. American Community Survey, most of the employees in Enosburgh worked in manufacturing and in the educational, health and social services. Prior to 2000 agriculture and forestry had previously been one of the top employment sectors in Enosburgh. As of 2017, only 6% of Enosburgh residents are employed in this industry. The percentage of persons employed by industry can also be seen in Figure 2.5.

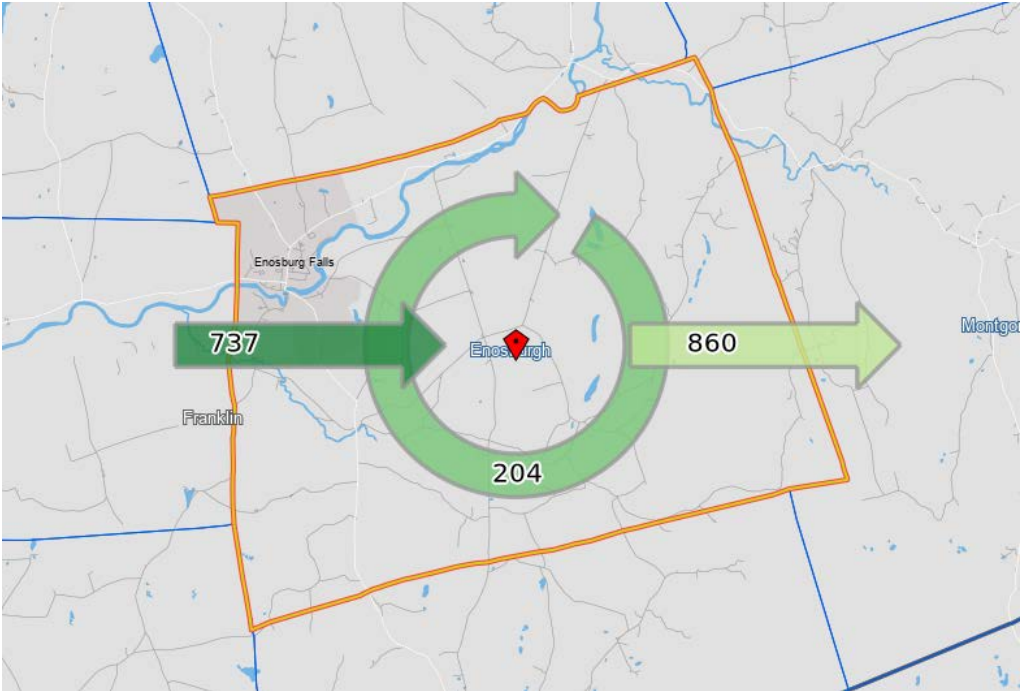


**Figure 2.5. Enosburgh Residents' Employment by Industry**

In 2017, 19.2% of employed Enosburgh residents worked in Enosburgh while another 43% worked elsewhere in Franklin County. The most common destinations for work outside of

Enosburgh were St. Albans town, St. Albans City, Richford, Berkshire, Swanton and Highgate. Of all those employed in Enosburgh, 21.7% were Enosburgh residents while 53.3% were residents of other Franklin County municipalities.

**Figure 2.6. Enosburgh Worker Inflow/Outflow**



Source: U.S. Census OnTheMap 2017

The median household income in 2017 for Enosburgh of \$54,900 is below the median incomes for both Franklin County (\$62,214) and the State of Vermont (\$57,808) (Table 2.7). While median household income for Enosburgh did increase steadily between 1979 and 2017, both the county and the state saw greater increases. Enosburgh had a decline in the percent of the population living below the poverty line in 1999; however, in 2011 this number elevated to near the 1989 level. Since 2011, the percent of the population living below the poverty line has declined by 3.3%. Enosburgh continues to have a greater percentage of those living below the poverty line than either Franklin County or the State of Vermont.

<b>Table 2.7. Median Household Income and Percent of All Families with Income Below the Poverty Level</b>									
	Median Household Income (\$)					% of all persons living below the poverty level			
	1979	1989	1999	2011	2017	1989			
<b>Enosburgh</b>	12,174	22,872	33,683	48,835	54,900	17.1	11.4	16.3	13.1
<b>Franklin County</b>	14,025	28,401	41,659	55,181	62,214	10.2	9.0	10.2	8.0
<b>Vermont</b>	14,790	29,792	40,856	53,422	57,808	9.9	9.4	11.3	11.4

<b>Table 2.7. Median Household Income and Percent of All Families with Income Below the Poverty Level</b>						
	Median Household Income (\$)					% of all persons living below the poverty level
	1979	1989	1999	2011	2017	1989
Source: US Census of Population 1980-1990, American Community Survey 2007-2011 and 2013-2017						

## Chapter 3: Historic, Archaeological, and Scenic Resources

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### *Early Years.*

The first Vermonters were most likely residents of the Lower Missisquoi watershed. Around 12,000 years ago, when prehistoric people first settled the area, much of the land in the region was submerged under the Lake Champlain Sea. The earliest known human settlements in the state are along the margins of what used to be the Champlain Sea. This margin is along the western side of the watershed, reaching as far east as St. Albans and the Highgate area.

Between 10,000 years ago, when the Champlain Sea receded, and 350 years ago, when European colonists displaced native populations, the residents of the region based their choice of home turf upon environmental factors. Archeological research indicates that likely sites were within 200 feet of surface water of any kind, having a gentle slope and moderate or well-drained soils. These are the areas that are most likely to contain archaeological remains of Enosburgh's early inhabitants.

### *Early Settlement and Government.*

The Town of Enosburgh was granted May 12, 1780 and chartered May 15 of the same year by Governor Thomas Chittenden to Major General Roger Enos. General Enos was the father of Ira Allen's wife Jerusha and he served as one of Benedict Arnold's officers in the invasion of Canada.

The first proprietors' meeting was held on September 8, 1795 at Joseph Baker's house in neighboring Bakersfield. Stephen House and Amos Fassett were granted permission to "pitch" 400 acres of land (survey, cut lumber, and build saw and grist mills) as compensation for building the Town's first mills. Construction began in 1797 and by 1800 a sawmill, gristmill, and tannery were in operation on the Tyler Branch in West Enosburgh.

Of equal importance was the arrival of the Township's first permanent residents. They are believed to have been the Balch family which spent the winter of 1796-1797 on the site of the present Fernand St. Pierre farm. Otherwise, most of the proprietors came periodically to work their land but returned to their homes south of Enosburgh for the winters. Soon, other settlers arrived and the population of the Town began to grow. Among the first permanent settlers were Amos Fassett, Stephen House, and Samuel Little. Amos Fassett is probably the only one of the first settlers to have direct descendants still living in Enosburgh. As the population grew, so did the need for government.

Until June of 1799, proprietors' meetings continued to be held in either Bakersfield or Cambridge. The first proprietors' meeting held in Enosburgh was at the home of Amos Balch. It was not until March 19, 1798 that the first town meeting occurred. That year residents met at the home of Samuel Little at the Center and several officials were chosen. The most notable local official was Dr. Eliphaz Eaton, who for years served the community as a physician and town clerk and later went on to be elected as Governor of Vermont (the highest public office attained to date by a resident of Enosburgh).



***The Vanishing Frontier.***

In the early days, the forested hill regions rather than the river lowlands were thought to be the best farmland. Consequently, the Center area, Cold Hollow foothills, and the uplands of the Township’s southeastern corner were the first to be settled.

As the first settlement, Enosburgh Center would remain for many years the most important of the Town’s numerous villages. It had been a logical location for a first settlement because of its location on the so-called Boston Post Road. Not only was it the only road in town, it was also the direct route between Boston and Montreal. It was here that the Town’s founders voted to lay out lands for a parade ground donated for public use. Local industry included a potash and pearlsh works, a comb factory, a harness shop, a tailor shop, and a blacksmith shop. The two ever-present institutions of frontier towns, the tavern and school, were run by the Little family. Samuel Little kept the first tavern while Betsey Little kept the first school. The first post office in the Town was established in 1803. By 1870, the Center contained twenty or so buildings, including two churches, a district school, the Academy (or Town House that was used for Town functions), a hotel known as the Central House (run by John Spooner), and a general store.

Although the upland areas were preferred by Enosburgh’s earlier settlers, the Township soon had several thriving smaller villages and hamlets. They included West Enosburgh (then called Jacksonville), North Enosburgh, Samsonville, East Enosburgh (then called Stoneville), West Hill, and Bordoville. Each had its own small businesses, stores, mills, post offices, and schools. West Enosburgh was the site of the first mill in Town; North Enosburgh became known as the “Gateway to Canada” because of its location; Samsonville was noted for a wooden dam built across the river that gave the area the name “the Upper Falls” because it provided hydro power for several mills and even an electric plant; East Enosburgh had a creamery to which many local farmers brought their milk; West Hill, on the eastern side of Enosburgh Mountain, evolved from dense forest in 1800 to open farmland in 1900. It is now almost completely back to forest. Bordoville, located in the southwest corner of Town, was a small hamlet with a grocery store, a school, and a post office. It was named for the Bordeau families who built the Seventh Day Adventist Church there in 1864. By century’s end, all of the smaller villages and hamlets would be eclipsed by the Village of Enosburg Falls.

***Schools, Post Offices, and Churches in the 1800’s.***

During the 1800’s, Enosburgh was divided into seventeen school districts with various lots or farms assigned to each. Each of the hamlets had a school as did the areas known as Sand Hill, Trout River, the Woodward Neighborhood, the Wright District, the Perley Neighborhood, the Austin district, and Enosburgh Mountain. As Enosburg Falls became more and more the center of activity, these schools gradually closed and in 1955 all students came to the consolidated school at Enosburg Falls. A brick high school building was built in 1907 and, in 1954, a separate elementary school was built. There have been additions to each since then, plus the building of the Vocational Center building in 1980-1981.

There were six post offices scattered among the hamlets of Enosburgh during the 1800’s. The first was at Enosburgh Center, and later, others were established at West Enosburgh, North Enosburgh, East Enosburgh, Bordoville, and Enosburg Falls. These were often in homes or stores and all except for Enosburg Falls gradually closed.

The first church was the Enosburgh Center Congregational Church built between 1820 and 1821. The Town of Enosburgh has had eleven churches at one time or another since then which were scattered among the hamlets.



**Above: West Enosburgh Methodist Church built in 1883. Right: Enosburgh Falls Methodist Church built in 1870.**



***The Township’s Changing Economy.***

The small farms of the early frontier had supplemented their incomes by producing potash from wood ashes (used in fertilizers and soap production) until the market for it dwindled after 1815. In spite of that, the number of farms continued to grow with the 1850 census counting 190 farms in the Township. Although most were small, isolated, and subsistence based, they produced a variety of products including butter, cheese, and maple sugar. Sheep were also quite plentiful at that time and wool was the major cash product. The more perishable products were sold locally while some of the wool was sold at more distant markets. Things were to remain as such until the construction of the Region’s first railroad in 1870.

The Region’s first railroad was constructed between St. Albans and Richford. The effect on Enosburgh was considerable. With the railroad, distances between Enosburgh and faraway markets shrank. It also brought new goods and services to Enosburgh and saw the expansion of agricultural production increase. By the mid 1900’s, the area became known as the “Dairy Center of the World.” Dairy farming blossomed into the important industry it is today. New efficient transportation to markets now made it possible for sales of fluid milk as well as large amounts of butter and cheese to expand. As a result, the Town prospered and what had earlier been the little Village of Enosburgh Falls grew quickly and had become the dominant center of commerce in the Township. The railroad line has since become the Missisquoi Valley Rail Trail; a 26.4-mile year-round recreation trail for use by residents and visitors alike.

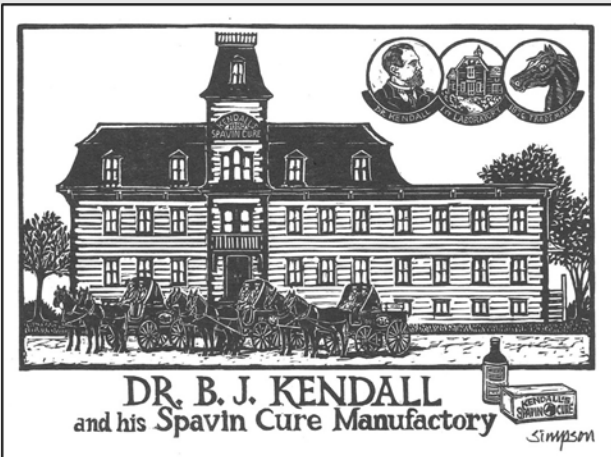
Located at the southwestern corner of the Township along the banks of the Missisquoi River, Enosburgh Village quickly secured its place as the commercial hub to a thriving agricultural community. By being located along the river which provided a suitable site for hydropower, and on the main rail line between St. Albans and Richford, the Village could easily serve its growing population.

In 1883, Charles Ovitt (who owned a mercantile and milling business in West Enosburgh) built the first telephone line in Enosburgh in order to keep track of the railroad schedule. He eventually established a telephone company and in 1906 built the Northern Telephone Building on Main Street. During that same period Dr. B.J. Kendall (a doctor in Enosburgh) developed his famous Spavin Cure for horses. His business's success would have a profound effect on Enosburgh's development.

The Village of Enosburg Falls was incorporated in 1888 as one of the smallest village populations in the state. Shortly after this, a high school was built behind the site of the present high school. The Enosburg Grade School was established in 1890, and by 1900 ranked among the best in the state.

### An Influential Development

The growth of Enosburgh is traceable from the establishment of one particular company and the completion of the Missisquoi Valley Railroad in the early 1870's. The B.J. Kendall Company, established in 1870, produced hogsheads of patent medicine for the cure of horse spavin. The Kendall Company was located in the northwestern corner of the Town near the railroad, which helped influence the area to become the center for business and residential development. The Kendall Company served as an engine for rapid growth in the Village, and contributed significantly to the community's social as well as its physical growth.



**Today.** Enosburgh today reflects its history in its predominately agricultural character, lifestyle, and economy. The small subsistence farms have been replaced by larger dairies with modern

equipment. More haying can be done in a day by one person with modern machinery than many workers could do in a week years ago. The love of the land and the ability to earn a living from it are still central values in the community. Descendants of the early settlers and farmers, and a steady stream of newcomers intermingle to make up the structure of the Town today.

**Historic Resources.**

Historical cultural and archaeological resources are irreplaceable resources which provide a sense of continuity between the past and the present and help us identify who we are. It is important to preserve and promote these resources whenever possible.

The state historic survey lists 3 districts of historic significance in Enosburg Falls: the Downtown Historic District, the Historic Railroad District and the Orchard Street-North Main Street Historic District. The Enosburgh Historical Society is active in promoting the preservation of historic resources in the Town and Village and has pursued state and national designation for local properties and presented programs to educate and inform the public about local history. Table 3.1 below lists sites on the State Register of Historic Sites. See Appendix B for maps of Village historic districts and sites listed below.

**Table 3.1. State Register of Historic Sites in Enosburg Falls**

Name of Site	Map Reference	Site Number
Aseltine & Greenwood Block	Map 1, #7	0603-13
B.J. Kendall House	Map 3, #16	0603-6
Carmi Marsh House	Map 3, #45	0603-4
Catholic Church	Map 2, #76	0603-18
Dr. William Hutchinson House	Map 3, #15	0603-8
Dr. A.J. Darrah House	Map 1, #4	0603-10
Enosburg Falls High School	Map 1, # 10	0603-20
Enosburg Falls National Bank	Map 1, #3	0603-11
Kendall’s Spavin Cure Building	Map 3, #43	0603-1
Masonic Hall	Map 1, #8	0603-15
Merrill Block	Map 1, #44	0603-14
Methodist Church	Map 1, #84	0603-19
Moses Perley House	Map 3, #17	0603-5
Northern Telephone Company Building	Map 1, #42	0603-3
Old Post Office	Map 1, #13	0603-16
Olin Merrill House	Map 3, #3	0603-9
Opera House	Map 2, #7	0603-2
Original Spavin Cure Building	Map 3, #16A	0603-7
Perley Block	Map 1, #6	0603-12
Silver Auction House	Map 1, #38	0603-17

Source: Vermont Historic Sites and Structures Survey for Enosburg, 2008.

There are six places that include buildings and bridges listed on the National Register of Historic Places:

- Billado Block (371 Main Street)

- Bridge 12 (Boston Post Road)
- Enosburg Congregational Memorial Church (Town Highway 2)
- Enosburg Opera House (31 Depot Street)
- Hopkins Covered Bridge (Town Road over Trout River)
- Kendall, Dr. B. J., Company (228 North Main Street)

Not included in the Register is the Region’s historic settlement pattern of small villages and hamlets, located along well-traveled routes, surrounded by an open, working landscape. This pattern strongly evokes the Region’s 19<sup>th</sup> century agrarian heritage, and contributes much to its particular sense of place and community. The Enosburg Telephone Company formed in 1895 when a line was built from Enosburg Falls to West Enosburg, Enosburg Center, and East Enosburg. The central office and exchange were maintained in Enosburg Falls. This building is now the home of County Currier.



Above: The Opera House (Photo Credit: Janice Geraw).

There are two historical markers in Enosburgh and Enosburg Falls. In Enosburgh there is a marker on the Town Green recognizing the birthplace of Larry Gardner, a baseball player. In 2019 a historic marker was added to 123 Depot St. in Enosburg Falls to provide information about the Enosburg Opera House.

The Opera House, built in 1892, still functions as the center of numerous community activities. It is one of the most commodious and handsome public halls in the state. The Opera House is now owned by the Village and Town and is on the National Register of Historic Places. The Town Selectboard appointed a special

committee to seek grants and other funding, while also overseeing the restoration of the facility. To date, remarkable progress has been accomplished with the restoration program.

Smaller landscape features such as stone walls, old barns, outbuildings, corner stones, markers, trees, and old apple orchards and lilac bushes planted around former homesteads, all have historic value and importance. Recognizing the need for more public education on the preservation of these historic features, the Vermont Department of Forests, Parks, and Recreation published in 1994 *Stonewalls and Cellar Holes: A Guide for Landowners on Historic Features and Landscapes in Vermont’s Forests*.

**Scenic Resources.**

Enosburgh’s contribution to the northwest region of Vermont is an extremely rich visual assortment of diverse landscapes, from the sweeping agricultural views west as far as the Lake Champlain islands, to the heavily wooded slopes of the Green Mountains in the east. It is the visual language of the area which plays an important part in how a community is perceived.

Scenic highways and corridors link natural, cultural, and scenic resources to the historic landscape of the area. The visual character of Enosburgh makes it an excellent place to live. The most panoramic views are of the Cold Hollow Mountains, Jay Peak, Mount Mansfield, and other smaller mountains. Enosburgh, like all other towns, should take steps to preserve the scenic vistas that exist virtually everywhere in the State.

One of Enosburgh's most scenic treasures, the waterfalls, are hidden to many tourists, friends, and Rail Trail users traveling through the Town and Village who are not familiar to the area. One of the falls is located at the current site of the Bridge of Flowers and Light. Originally, a wooden covered bridge spanned the Missisquoi River on this spot but was removed in July of 1915, and replaced with a cement arch bridge. In 1969, a 245-foot-long bridge was constructed just north of this location and the cement bridge was closed due to deterioration of the structure. In the 1990's the Village decided to preserve the bridge given its unique design as a sand-filled arch bridge and it was rehabilitated and converted into a pedestrian bridge. This bridge is known as the Bridge of Flower and Lights. Community members and visitors are invited to stroll along the bricks and view the falls; the bridge provides a spectacular view any time of year.



**Above: The Falls and Bridge of Flowers and Light (Photo Credit: Janice Geraw).**

The Planning Commission supports efforts to promote the bridge and falls as a scenic destination for visitors. Recent projects have been completed to this end. In 2018, the Diesel #1 Generator Building adjacent to the bridge's entrance was rehabilitated and converted to a history exhibit. This building is now open and staffed with volunteers during village events. In 2019, the Conservation Commission worked with Cold Hollow Career Center students to construct and install an informational kiosk at the site. Additionally, in 2019 the Village received grant funds from the Vermont Quick Build for Health program (Vermont Department of Health) to install a kiosk at the Missisquoi Valley Rail Trail intersection, which provides wayfinding to the Bridge of Flowers and Light.

***Goals, Policies and Recommendations.***

**GOALS**

- Protect and preserve the archaeological, historic and scenic features in Enosburgh for future generations.
- Ensure that new development is sensitive to the historic architecture and development patterns.

**POLICIES**

- Encourage participation and documentation of structures which qualify for the National Historic Registry.
- Promote community growth that maintains the land use pattern developed throughout the Town’s history – densely settled villages separated by open agricultural land.
- Encourage the adaptive reuse of historic buildings.
- Encourage innovation in design and layout of development so that the impact of development on scenic vistas can be minimized.
- Support the efforts of the Enosburgh Historical Society in protecting the historic character and buildings of the community and in informing the public about local history.
- Ensure that the historic integrity of the Enosburgh Opera House is protected in perpetuity.

## Chapter 4: Natural Features

The natural areas of Enosburgh are important for environmental, ecological, scenic, educational, and recreational uses. The critical or important natural areas include wetlands, flood hazard areas, important wildlife and/or endangered species habitats, and other biological, hydrological, or geological areas.

### *Topography.*

Upland areas (areas of 1,000 feet or more in elevation) include a good majority of the Northwest Region of Vermont. These areas include most of the Region's more prominent mountains, hilltops, and ridge lines. Many of these are highly visible from public vantage points and contribute significantly to the Region's scenic beauty. These areas also include drainage divides, steep slopes, shallow soils, and exposed, fractured bedrock. These areas are important for upland drainage and groundwater recharge. They also support wildlife habitat, forestry, and outdoor recreation but they generally prevent all but low-density development. For decades, Vermont has established an upper limit for development at 2,500 feet. Areas above this elevation are typically slower to recover from disturbance and are at greater risk to erosion. All development activities, including forestry operations, require an Act 250 permit above 2,500 feet. While the highest elevation in Enosburgh is around 2,100 feet, elevation is an important component to consider in relation to the use of the land.

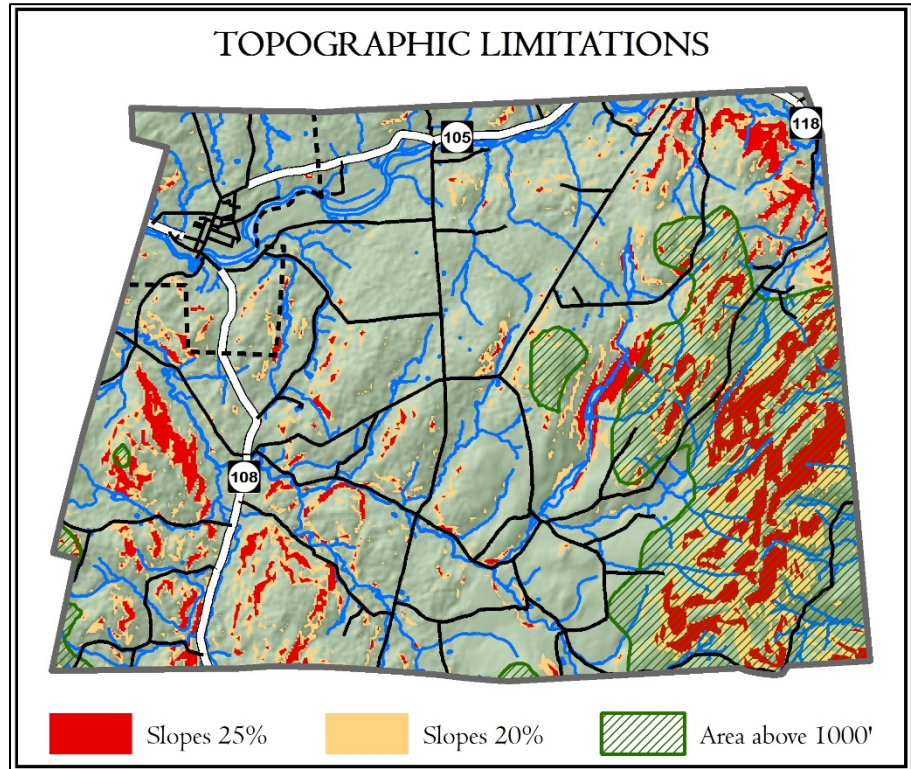
Enosburgh lies primarily in the Central Highlands physiographic region where the terrain is characterized by broad valleys and rolling hills. The Village lies in the Missisquoi River Valley at 426 feet above sea level as the settlement pattern of the village initially conformed to the meandering curves of the Missisquoi. For the most part, settlement in the Town has occurred at lower elevations, along roads and less than 1,000 feet (see Map 4.2). There are a few areas in Enosburgh where development above 1,000 ft has occurred, mainly along Longley Bridge Road and Woodward Neighborhood Road, and Enosburgh Mountain Road.

Slope conditions (the steepness of the land measured in number of feet of vertical rise over 100 feet of horizontal distance) are a major factor in determining the land's capacity for use and development. The Natural Resources Conservation Service (NRCS) provides general guidelines for assessing slope limitations and are provided in Table 4.1. However, the capacity of any particular site must be evaluated considering the interaction of slope with other features such as soils, vegetation, and the proposed land use.

0-3%	Suitable for most development but may require drainage improvements
3-8%	Most desirable for development, least restrictions
8-15%	Suitable for low-density development with particular attention given to erosion control, runoff, and septic design
15-20%	Construction costly, erosion and runoff problems likely, unsuitable for on-site septic systems
>20%	All types of construction should be avoided, careful land management for other uses is needed



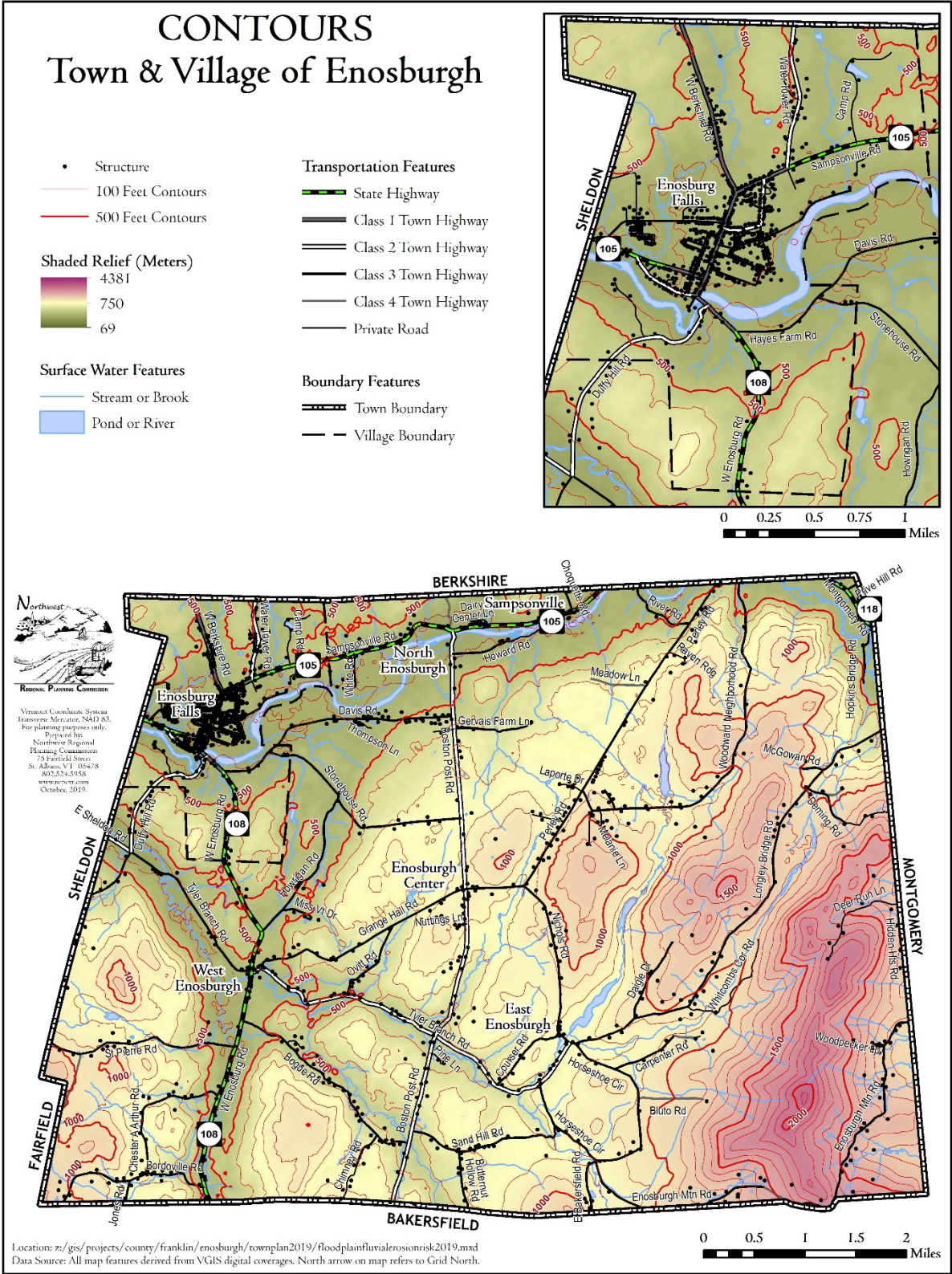
Map 4.1 identifies areas with topographic limitations; this includes those parts of town with slopes greater than 20 percent. These areas impose limitations on residential development, due to conventional septic rules established by the Department of Environmental Conservation (DEC). Unlike lands above 2,500 feet, there is no state regulation of steep slopes, other than DEC septic and wastewater system permitting rules.



Map 4.1. Topographic Limitations.



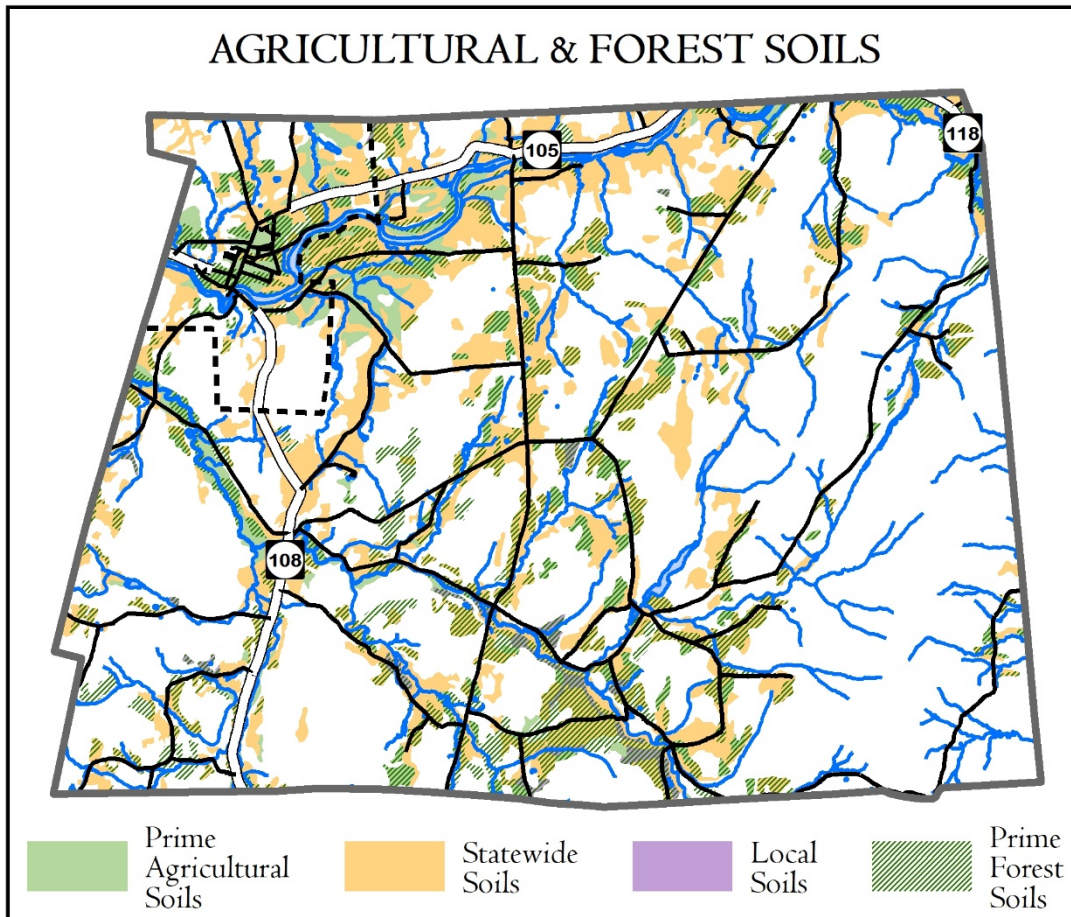
Photo: The Cold Hollow Mountains as seen from Enosburgh.



Map 4.2. Community Settlement Patterns and Land Contours.

**Soils.**

Soils are the most important environmental factor that governs the use of land in rural areas. Soils are classified on the basis of structure, form, composition, and suitability for various types of development. Four characteristics are of primary concern when doing land use planning: bearing capacity, erodibility, drainage, and resource value. The community’s agriculture depends upon the availability of high-quality soils in large, adjoining parcels to allow for economical hay and field production. The latest soil survey in Franklin County was completed by the Natural Resource Conservation Service in 1998.



**Map 4.3. Prime Agricultural and Forest Soils**

Enosburgh is home to soils that formed in water-deposited material on terraces and old lake plains and also to soils that formed in glacial till in the Green Mountains and on uplands. They are generally deep, moderately well drained to poorly drained, silty and clay soils. Where slope and drainage are favorable, these are classified as Prime Agricultural Soils (Map 4.3). Agricultural soils are considered a non-renewable resource and it is important to consider measures to conserve them. The most common soil associations that are found in Enosburgh are the Woodstock-Tunbridge outcrop association, Peru-Stowe association, Cabot-Westbury association, Munson-Buxton-Belgrade association, and the Windsor-Missisquoi association.

Woodstock rock outcrop is the most common soil type throughout the Town of Enosburgh while the Munson-Buxton-Belgrade soil group is more common in Enosburg Falls.

***Earth Resources.***

Earth resources, including sand and gravel deposits, are critical regional resources, especially because of their use in road maintenance and construction. Sand and gravel are non-renewable resources that are becoming increasingly scarce. The 1972 State Land Capacity Plan Map identified six sand and three gravel deposits in Enosburgh. The gravel deposits are located on Town Road 38, one mile from Route 108 near the intersection of Roads 5 and 20, and on Town Road 7 near the Montgomery town line. Five of the sand deposits are located near each other on Town Roads 1, 42, and 43, and at the intersection of Town Roads 42 and 50. The other sand deposit is on Town Road 7 about one mile from Town Road 10. The Vermont Geological Survey (1974) identified a large sand and gravel deposit of medium to good quality running along the Missisquoi through the Town and Village. It is common for sand and gravel deposits to be located in the floodplain, such as along the Missisquoi; however, environmental costs of extraction likely outweigh the benefits.

It is important to locate these reserves and to consider future use and access when making land use decisions. As Enosburgh develops, more of the earth resources will be needed to meet the needs of growing infrastructure. In considering the potential for any extraction operation, ground water contamination, the alteration of surface drainage patterns, soil erosion, stream sedimentation, and other environmental impacts should be avoided. At a minimum, any extraction operation must include appropriate site planning and development, erosion control, the phasing of operations, and proper site reclamation.

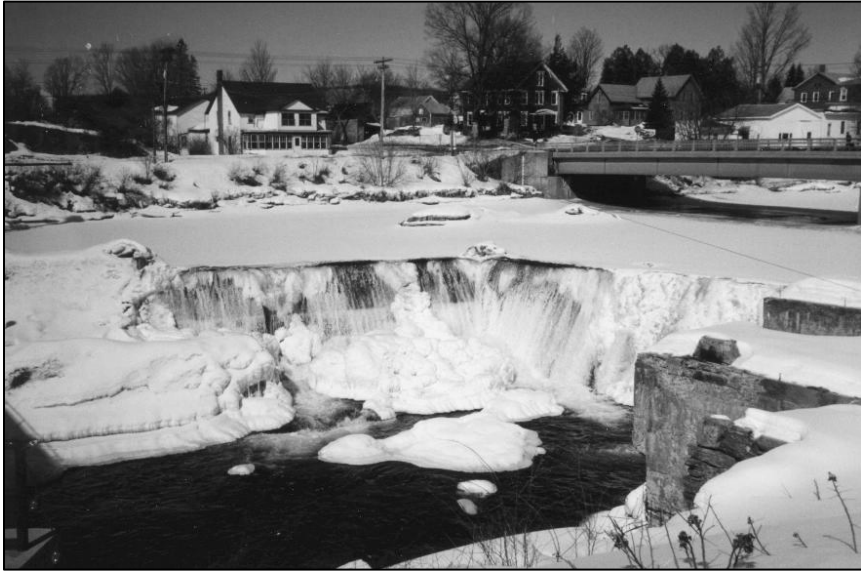
**Photo: Small Tributary of Missisquoi (Photo Credit: Janice Geraw).**



***Surface Waters.***

The Northwest Region of Vermont is home to many types of surface waters shown on Map 4.4. They offer sustenance, scenic beauty, recreational opportunities, and livelihood to the residents and visitors of Franklin County and Grand Isle County. Water is one of the basic necessities of life; and because of that, it must be appropriately respected, managed, enhanced, and preserved to ensure the future vitality of the Region and its inhabitants.

The Missisquoi, along with its associated brooks and streams is an important element of the local landscape. The Missisquoi River traverses through most of Franklin County (Map 4.4). In Enosburgh, it runs through the northwest section of town and south of the village. The Tyler Branch, which also runs through the Town, is one of its many tributaries. These rivers are a valuable natural and cultural resource. The Missisquoi River and the Tyler Branch provide many beneficial uses such as supplying people with drinking water and providing a place for recreation activities. Maintaining the quality of the rivers is of extreme importance. Not only does it affect the Town, but also it has the potential to directly affect the Missisquoi River Delta and consequently, Lake Champlain. Giddings Brook and Trout Brook are located north of the village and flow into the Missisquoi at points along Route 105.

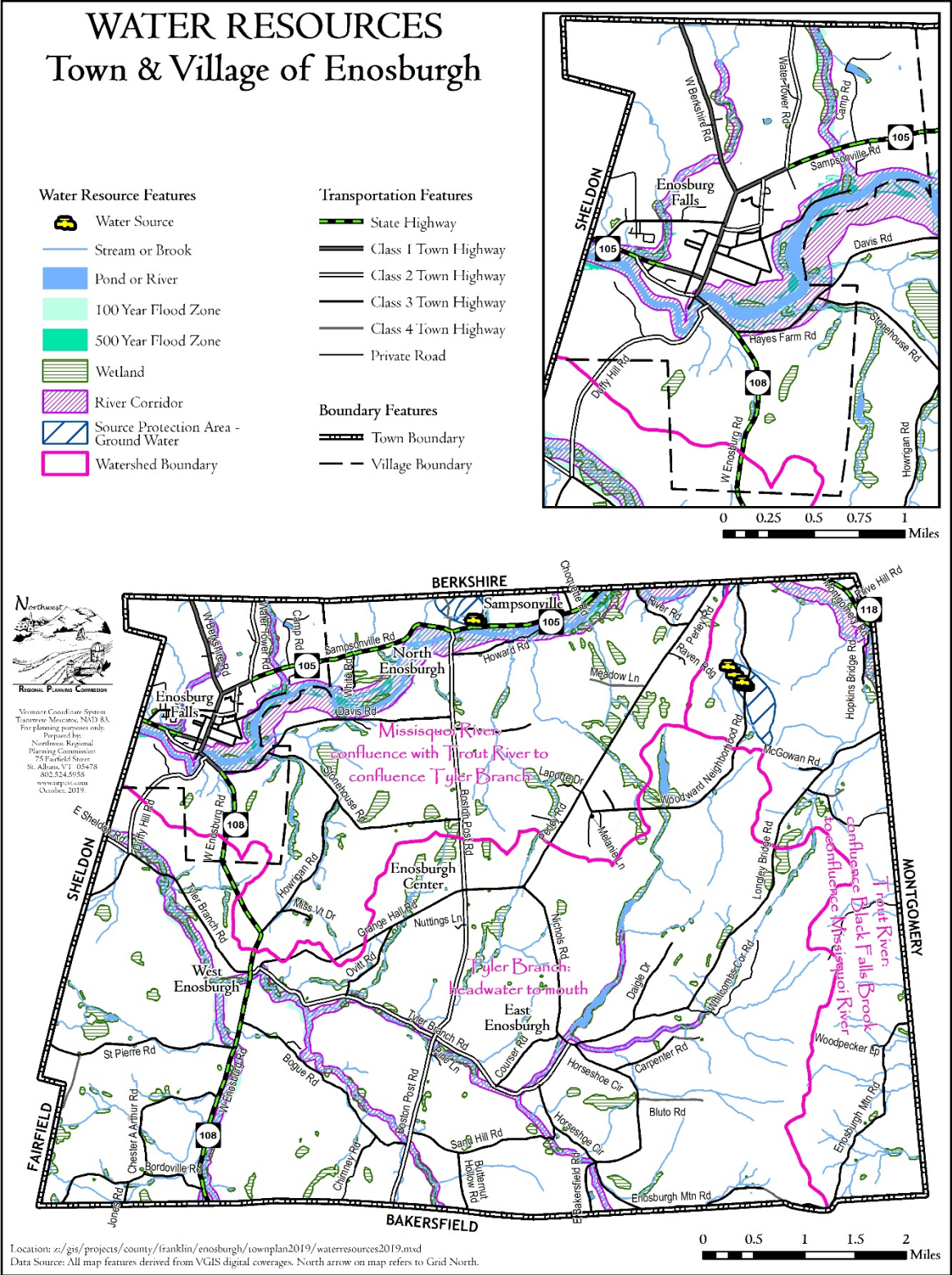


**Photo: A View of the Falls in the Village of Enosburgh Falls.**

Mapping the Stream Channel. Using the state’s protocols for geomorphic assessment, portions of the Tyler Branch, Trout River and the main stem of the Missisquoi have been analyzed to determine the causes of flooding, erosion and other water quality issues and to identify potential solutions. Information from these assessments has been used to develop Fluvial Erosion Hazard (FEH) maps for Tyler Branch, which can

depict the area where flooding and erosion hazards are most likely to occur. These maps provide valuable information for town planning and hazard mitigation in Enosburgh and should be considered during town planning efforts.

Water Quality. Water quality, fish and wildlife habitat, scenic values, and recreational experiences can be adversely affected by land uses in the river corridor or along shorelines, especially when the natural vegetation is disturbed. Additional assessments and inventories of local rivers, streams, and ponds will further efforts to improve water quality in Enosburgh and downstream to Lake Champlain. Where there is evidence of poor water quality, the community should determine the source of the contamination and what steps should be taken to prevent harmful pollutants from reaching the water source. Any development proposed along the streambank or ponds should be required to have a naturally vegetated buffer strip; the Town of Enosburgh has specified buffer distances between development and waterways.



Map 4.4. Water Resources in Enosburgh

As of June 2012, there are two streams that flow into the Missisquoi River in Enosburgh that have been identified as being an “impaired” waterway; these streams are Trout Brook and Samsonville Brook. Impaired water refers to a stream where identified pollutants are above the allowable water quality standards, these waters are reviewed every two years as required by the Clean Water Act and a Total Maximum Daily Load (TMDL) plan is developed to identify how the water quality concerns will be addressed.

*Recognizing Special Resources.* The Missisquoi River Basin Association initiated a study to explore the Wild and Scenic designation eligibility in 2009 for 50 miles of the upper Missisquoi River in Franklin and Orleans Counties and 20 miles of the Trout River. This designation excludes the section of the Missisquoi River with the Enosburg Falls dam. The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. This designation encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection. In addition, it enables access to federal funding for projects to preserve the recreational, scenic, historic, cultural, natural, and geologic resources of these rivers. It should be noted that designation neither prohibits development nor gives the federal government control over private property; recreation, agricultural practices, development and other uses are permissible in this designated area. The Town and Village voted to support this designation at the March 5, 2013 Town Meeting and the designation was approved by Congress on December 19, 2014.

***Groundwater.***

Water that is contained within the soil and rocks below the ground surface is considered ground water. Groundwater storage and travel is determined by topography and by the composition of the soils and rocks in which it is confined. Groundwater is the source of over 90% of the drinking water for rural areas in Vermont. It is replenished through rain and surface water that percolates down through the soil.

Vermont's groundwater policy declares that the State " shall protect its groundwater resources to maintain high quality drinking water...[and] shall manage its groundwater resources to minimize the risks of groundwater quality deterioration by limiting human activities that present unreasonable risks to the use classifications of groundwater in the vicinities of such activities (Vermont ANR Groundwater Protection Rule and Strategy). Risks to groundwater, as stated in the statute, are associated with human activity in the vicinity of the aquifer. There are State programs which are designed to protect groundwater. These include those aimed at hazardous materials management, agricultural plant industries, public water supply, well drilling, wastewater management, road de-icing management, and land use regulation.

Groundwater is a critical resource that must be managed effectively. Groundwater quality in Enosburgh and in the Northwestern Region of Vermont is considered generally good but there is always the potential threat of it being contaminated. The Vermont DEC has identified threats to groundwater resources to include such things as animal feedlots, fertilizer applications, irrigation practices, land application, landfills, material stockpiles, pesticide applications, pipelines and sewer lines, septic tanks, surface impoundments, and waste piles. Any activities that introduce

contaminants directly into the ground, such as underground storage tanks, leach fields, or agricultural activities, can affect ground water quality. Any of these land uses should be given serious consideration for their potential impact on ground water.

The Federal Well Head Protection Program was established to protect groundwater that supplies public drinking water systems. Vermont's Well Head Protection Program was adopted in 1990. It emphasized proper management of lands within Well Head Protections Area's to reduce or restrict potentially contaminating activities. The State also has the Groundwater Protection Rule and Strategy that was most recently revised in 2005. It provides restrictions, prohibitions, standards, and criteria for groundwater protection.

The Town of Enosburgh and Enosburgh Falls, as well as Berkshire, all rely upon ground water for their local water supply. The wellhead for Enosburgh Falls is located in Berkshire, and Berkshire's well head is in Enosburgh. Enosburgh has two wellhead protection sites (Map 4.4). In order to protect the source of water for the East Berkshire Water Coop, a 97-acre area around a spring off of the Woodward Neighborhood Road in the northeast corner of Enosburgh has been designated a wellhead protection site. The second site is located along Route 105 and is a groundwater recharge area for the Village. Land uses have potential to affect the quantity and quality of these water supplies across town boundaries and should be monitored.

**Wetlands.**

Wetland areas are defined by the State of Vermont as “those areas that are inundated by surface or ground water with a frequency sufficient to support vegetation or aquatic life that depends on saturated or seasonally saturated soil conditions for growth and reproduction.” This definition includes but is not limited to marshes, swamps, sloughs, potholes, fens, rivers, lake overflows, mud flats, bogs, and ponds. Generally, wetlands share three basic characteristics: the presence of water at or near the ground surface, the presence of water-dependent plants occurring on site, and common types of soil. Vermont's wetlands have been well documented as serving critical ecological and socio-economic functions.

Enosburgh's most important wetland is Adams Pond (also known as Woodward Swamp or Beaver Meadow Swamp) and its associated pond systems along Beaver Meadow Brook. The system includes 3 ponds along a 3-mile length from East Enosburgh to the north end of the pond located north of Woodward Neighborhood Road. It is classified as a wooded swamp with floating vegetation and bear activity. There are numerous other small marshy areas with open water, intermittent plant growth, forest cover, or shrubs.

Wetlands have been mapped by the U.S. Department of the Interior, producing a set of National Wetland Inventory maps for each municipality. This information is useful for assessing the general character of a particular area, but is not accurate enough to determine the nature of a particular property without a site visit. This inventory identifies numerous marshlands located throughout the community.

Wetlands serve many different functions that contribute to the quality of the surface and ground water as well as socio-economic factors including the following:



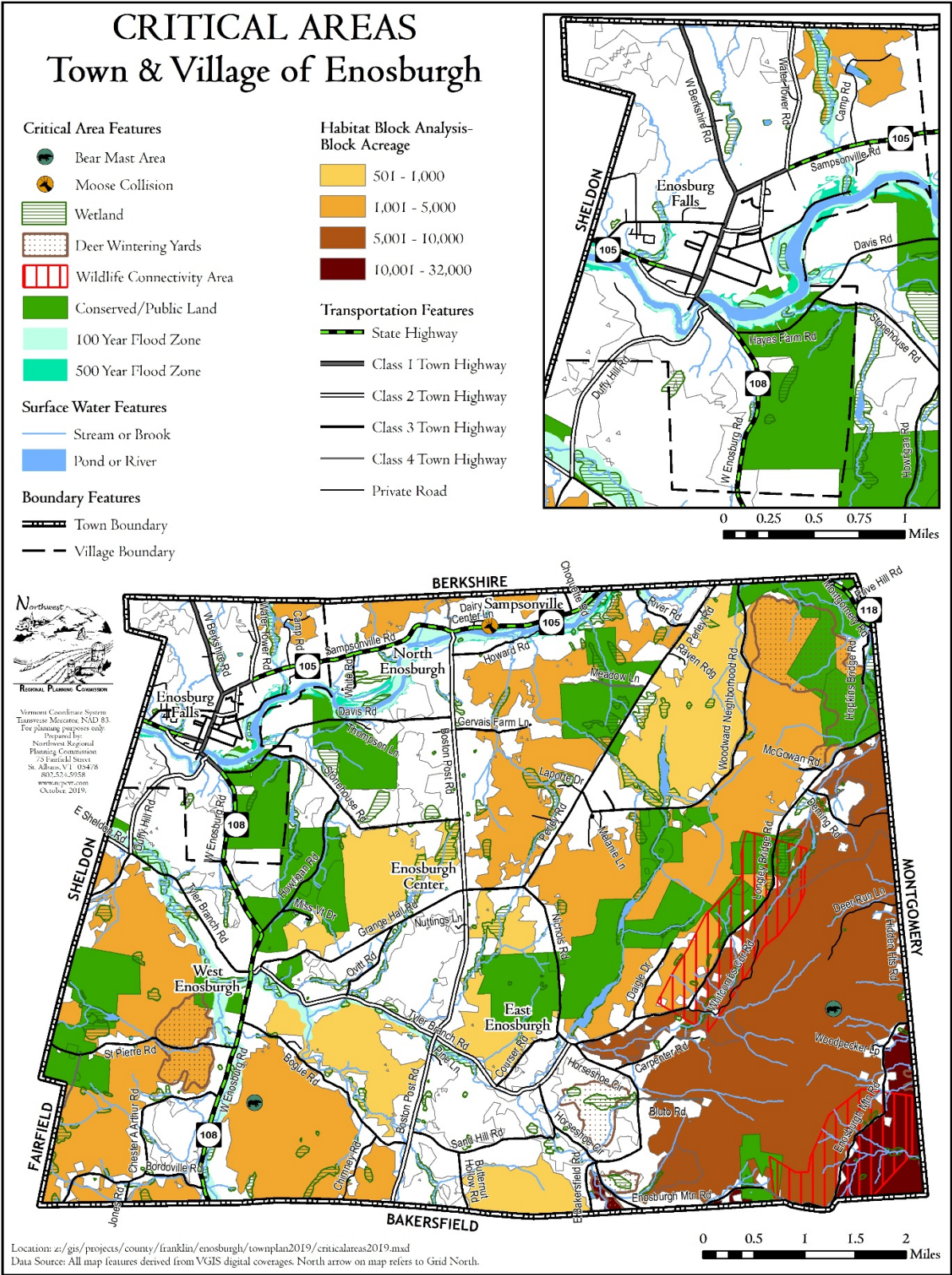
- Flood Control and Stormwater Runoff: wetlands associated with streams slow flood waters, provide flood storage, and reduce peak flood levels
- Shoreline Anchoring: wetlands provide erosion control
- Water Quality: wetlands act as a filter to process heavy metals, pesticides, and other toxic substances and they remove nutrients from run-off water (i.e. agricultural run-off)
- Habitat: wetlands provide habitat for a wide variety of plants and animals including a high number of threatened or endangered species
- Socio-economic Value: wetlands are utilized by humans for their recreational, scenic, historic, educational, and cultural values

Vermont’s wetland regulations were last amended effective August 15, 2018 and the current system established a three-tier wetland classification system. Designated Class I wetlands are considered the most environmentally significant and therefore receive the highest level of protection under state law, requiring a 100-foot vegetated buffer between any adjacent land development. There are currently no Class I wetlands located in Enosburgh. Rather, most local wetlands are designated as Class II—protected from development by a 50-foot buffer (see Map 4.4 for the locations of wetlands on the Vermont Significant Wetland Inventory). In addition, the Vermont Wetland Rules require that most development that impacts a Class II wetland obtain a conditional use permit from the Agency of Natural Resources, which may only be granted if it is proven that the proposed development will not have an undue adverse impact on the functions and values of any significant wetlands or their adjacent buffers. Lastly, Class III wetlands are those wetlands with no delineated buffer.

***Wildlife Habitat.***

Supporting a healthy wildlife population through the protection of habitat is an important component to maintaining a healthy ecosystem, and provides significant recreational and economic benefits to the community. An abundant and healthy wildlife population provides enjoyment for both hunters and non-hunters alike. Development in and around wildlife habitat can cause a significant decrease in the diversity and quantity of wildlife. This is especially important with wide-ranging species such as deer, bear, bobcat, fisher otter and moose populations as well as a number of species of concern that have been identified in the Vermont State Wildlife Action Plan. Species of concern include some amphibians and reptiles found in our upland forests and along the rivers and streams in Enosburgh. Wildlife species such as these and other non-game bird species are highly dependent on the river and upland areas for their habitat needs. Refer to the *2004 Open Space and Natural Resources Assessment* by Arrowwood Environmental for Wildlife Units and recommendations.

Deer wintering areas provide critical habitat for white tail deer and other forms of vertebrates. These areas of hemlock, spruce, fir, cedar, and pine species provide shelter from deep snows, and they also permit easier winter travel for deer and other species. The combination of elevation, vegetation, and solar aspect, significantly increase the survival rates of deer populations and also impact the landscape ecology and recreation. The U.S. Fish and Wildlife Service has targeted these areas for protection. Deer wintering areas have been identified in the heavily forested areas of Eastern Franklin County - this includes the eastern section of Enosburgh (see Map 4.5).



Map 4.5. Critical Habitat Areas in Enosburgh

Large, contiguous wintering areas exist along the Trout and Tyler Branch of the Missisquoi River. There are 3 designated deer yards in Enosburgh; a 124-acre yard on the St. Pierre Road, a fractured series of small yards along the Cold Hollow Brook, and a large yard (over 300 acres) in the northeast corner between Longley Bridge Road and the Woodward Neighborhood Road. Deer yards, aside from providing winter range, are essential for year-round species migration. Careful management of these areas is of extreme importance in order for the species to thrive.

Black bear prefer mountainous and forested landscapes just like those found on the slopes of the Green Mountains. The location of most bear habitat is in Eastern Franklin County in the towns of Enosburgh, Bakersfield, Montgomery, and Richford. Black bear have a significantly large home range and because of this, their survival rate decreases when larger areas are divided up into smaller units and into isolated forestlands. When land is developed in scattered locations throughout the Town, the black bear habitat areas are decreased. Prime black bear habitat is limited to 60% of the state, primarily along the Green Mountain spine and in the Northeast Kingdom. Prime black bear habitat in Enosburgh is found in the eastern section of the town, where the Green Mountains begin and large unbroken tracts of forest remain; Map 4.5 shows identified bear masting areas.

Additionally, Enosburgh shares a 3281-acre wildlife habitat with the Towns of Bakersfield and Montgomery. It is located in the Cold Hollow Mountain and Trout Brook areas. There are also several wildlife connectivity areas that connect distinct timber tracts as shown on Map 4.5. These areas are considered “connectivity areas” as they are the remaining links between large forest blocks necessary for wildlife travel between habitat areas. One critical connectivity area is between two core habitat blocks in the northeast corner of Enosburgh that connects a large block in Enosburgh to a large block in the Town of Richford; much of this area is currently conserved land. These connectivity areas are very important to maintain in order to prevent forest fragmentation of our forests and wildlife habitat. Another noteworthy wildlife habitat area is the Jarvis Brook Heron Rookery. This is a partially wooded, deep marsh area which supports a great blue heron nesting colony on a half-mile stretch of an unnamed tributary of the Jarvis Brook.

***Fisheries.***

The Missisquoi and its tributaries have natural populations of largemouth and small-mouth bass, brown trout, and rainbow trout. The fishery has aesthetic, recreational, and economic value.

***Forest Resources.***

According to 2002 Landsat data, approximately 62% of the land cover in Enosburgh is forest. Statewide, approximately 78% of the land cover is forest according to the Vermont Department of Forestry. Enosburgh forests provide quality forest products while supporting tourism, recreation, wildlife habitat, a clean and reliable water supply, and the scenic and rural nature of our town. Forest areas also provide additional benefits including a source of forestry-related jobs, storm water mitigation, air purification and temperature moderation.

The Enosburgh town forest is located on the east and west side of the Longley Bridge Road and contains 120 acres (Map 7.1). The rest of the forestland in Enosburgh is privately owned and managed. As of December 2012, approximately 15,689 acres enrolled in the State’s Current Use Program, of which approximately 5,820 acres were agriculture and 9,878 acres were enrolled

productive forestland. This is an increase of just under 3,000 acres since 2003 and the majority of the change in acreage has been in forestland. Enrollment requires that the owner follow a state approved forest management plan. There is one tree warden, and a forest resource committee that serves the town of Enosburgh.

**Rare or Endangered Species.**

According to currently available information, the Enosburgh does not contain or encompass either rare or endangered species of plants or animals.

**Air Quality.**

Clean air is an essential component of Enosburgh’s environment and should be protected from local site-specific (e.g. industrial, backyard burning, dust from construction and excavation sites) or cumulative (e.g. automobile emissions) pollutants that could degrade air quality. Protecting the Town from the effects of long-distance airborne pollutants such as acid rain; however, is far more complex and will require cooperative action at all levels of government.

**Goals, Policies and Recommendations.**

**GOALS**

- Protect the quality of air, water, and land resources through development regulations.
- Protect key natural features, groundwater recharge areas, wetlands, floodplains, streambanks, and local waterways from adverse impacts of development.
- Provide access to the natural assets of the area for residents and visitors.

**POLICIES**

- Protect ground water to ensure quality and quantity of public and private water supplies by regulating uses that could introduce contaminants into the ground.
- Protect quality of surface water to maintain scenic beauty and recreational benefits.
- Protect the water quality of the Missisquoi River and its tributary streams by promoting riparian zone management to aid in the prevention of bank erosion.
- Support and encourage landowner efforts to maintain open land with productive soils for use of local farming operations.
- Guide development away from productive agricultural or forest soils.
- Allow development based upon the capacity of the land considering factors such as soils, topography, and the presence of water and wetlands.
- Limit development in areas where soils have limited capacity to support structures or filter wastes and in areas where slope is greater than 20%.
- Limit use in floodplains to agriculture, open space, and recreation, unless otherwise approved through regulatory measures.
- Protect public access to the Missisquoi River.
- Ensure that development does not result in undue air pollution.
- Limit the loss of location wildlife habitat ad infringement upon wetlands.
- Limit or mitigate the loss of wildlife habitat by protecting wildlife connectivity areas.
- Minimize the fragmentation of forests by other land uses as a way to maintain the working forested landscape and core wildlife habitat.

## Chapter 5: Housing

Safe, affordable, adequate housing is one of our most basic needs and is an important concern to residents of Enosburgh. Availability of a variety of housing types (in equally various price ranges) fosters a diverse community, which is more attractive for residents and helps to facilitate economic development. A range of housing opportunities also strengthens the ability of local businesses to attract and retain new workers so they can compete and expand in the changing economy.

In recent years, access to affordable housing has become a greater issue as housing prices have increased at a greater rate than income. As a whole, Franklin County has a great difference in the supply of, and need for, affordable housing. Towns that are located in the southern tier of the County have a relatively small percentage of families below the County median income. Therefore, there is little housing that would be affordable to households earning the County median income. Town's that are more rural in nature, often provide a large portion of the Region's affordable housing.

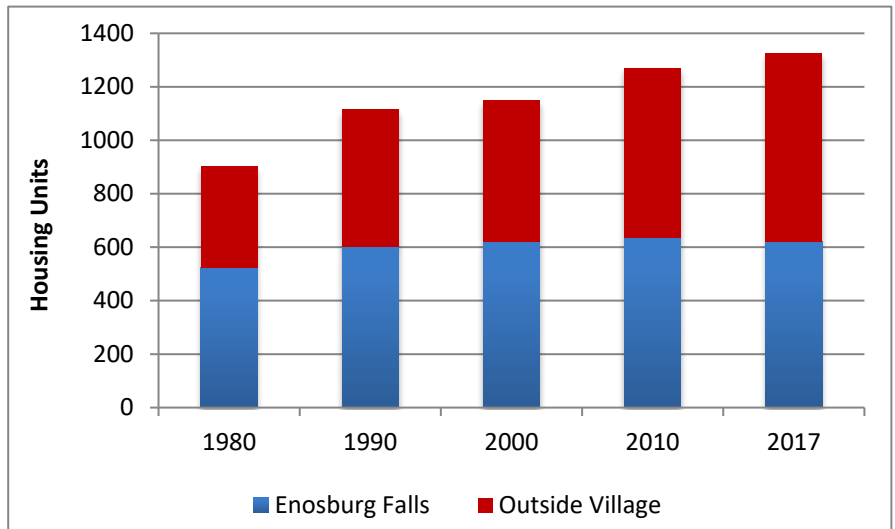
### **Current Housing Trends.**

Enosburgh experienced a boom in housing growth during the 1980s; the number of housing units increased by 23.6%. This rate of housing development slowed in the 1990s to 3% and from 2000 to 2010 rose up to 10.6% before slowing to 4.2% from 2010 to 2017. Much of the increase in housing during the 1980s resulted from the construction of three income-restricted housing developments within the village that added 90 affordable rental units to the housing stock (see section *Affordable Housing Development* for more detail).

A housing unit is defined as a house, an apartment, a mobile home or trailer, a group of rooms or a single room occupied as separate living quarters, or if vacant, intended for occupancy as separate living quarters.

Although fifty percent of the total housing units are located in the village, the majority of housing development in recent decades has been outside the village, see Figure 5.1. The 2017 American Community Survey reported a total of 1,324 housing units in Enosburgh, of these units 620 were in Enosburg Falls.

**Figure 5.1. Total Housing Units in Enosburgh**



Source: U.S. Decennial Census; 2013-2017 American Community Survey

Table 5.1 shows the change in population, the number of housing units, and the number of households for Enosburgh, Franklin County, and for the State of Vermont from 1980 to 2017. rate of population growth from 2010-2017 in Enosburgh was minimal while the rate of housing development decreased. This is in contrast to the scenario from the 2000-2010 trend where Enosburgh’s population grew minimally but the number of housing units by 10%, thus creating a softer housing market.

	1980-1990 (% Change)			1990-2000 (% Change)			2000-2010 (% Change)			2010-2017 (% Change)		
	Popn	HH	HU	Popn	HH	HU	Popn	HH	HU	Popn	HH	HU
<b>Enosburgh</b>	22.46	25.03	23.61	9.98	8.07	3.05	-0.25	4.73	10.62	-.83	21.39	4.17
<b>Franklin County</b>	14.92	23.65	19.29	13.6	17.02	11.25	5.13	10.43	12.49	2.24	16.02	3.33
<b>Vermont</b>	10.03	18.12	21.51	8.19	14.23	16.80	2.78	6.57	9.56	-.18	11.51	2.66

Source: 1980, 1990, 2000, 2010 U.S. Census, 2013-2017 American Community Survey

**Housing Stock.**

The vast majority of housing in Enosburgh consists of older, single family homes; 41% of all housing units were built prior to 1960. As of the 2017 American Community Survey, of the town’s 1,324 housing units, 1,128 (85%) were year-round units. These included 395 rental units, 64% of which are located in the village. Table 5.2 shows the occupancy status of housing units in Enosburgh for 2017. Eighty-five percent of Enosburgh’s housing is occupied and the majority of units are owner occupied (65%). With a 4.5% vacancy rate in 2017 for rental and sale units, the market is considered healthy for buyers and sellers and keeping up with demand.

	# of Units	% of Total
<b>TOTAL UNITS</b>	1,324	100%
<b>Total Occupied</b>	1,128	85%
<b>Owner Occupied</b>	733	65%
<b>Renter Occupied</b>	395	35%
<b>Total Vacant</b>	196	15%
<b>Seasonal, recreational, occasional use</b>	85	6%
<b>Rental</b>	29	2%
<b>For sale only</b>	31	2%

Source: 2013-2017 American Community Survey

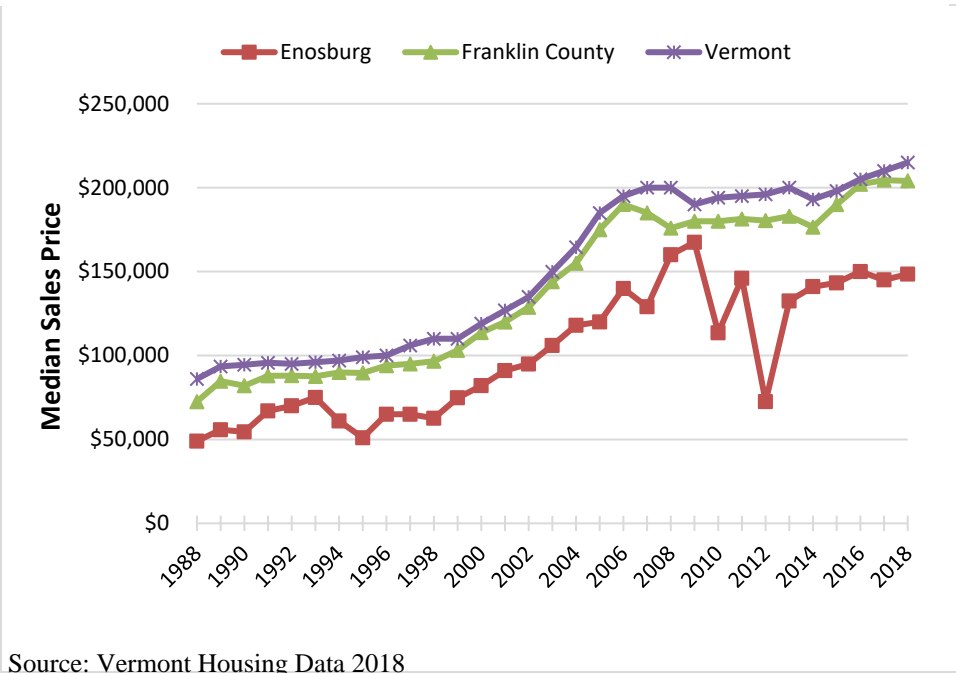
**Affordable Housing Needs.**

The demand for affordable housing is something that needs to be addressed in all communities. Housing is considered affordable when a household pays no more than thirty percent of their income on housing. Lower income households have to get by on tighter budgets and because housing is a basic need that people cannot do without; high housing costs place a greater strain on lower income households than on households with more disposable income. Therefore, affordable housing initiatives generally emphasize the importance of providing affordable housing to households that are at or below the median income of the area.

The price of housing in Enosburgh has generally been lower than the regional and statewide trends (Figure 5.2). According to the Vermont Housing Data in 2018, the median sale price of a

primary residence in Enosburgh (\$148,500) was \$55,500-\$66,500 lower than that of Franklin County (\$204,000) and the state as a whole (\$215,000). However when compared with other local housing markets, including St. Albans Town (\$265,000), Swanton (\$191,000), Fairfield (175,000), and Richford (\$104,500), Enosburgh appears to be in the middle of the range of homeownership affordability.

Figure 5.2. Median Sale Price of Primary Residence



To define affordable housing, the state has determined that 80% of the median household income (or median metropolitan statistical area (MSA) income, if it applies) should be able to afford to pay no more than 30% of their income on housing. This definition is used as an indicator for the availability of affordable housing in a community. Homeownership housing costs include not only the mortgage, but taxes and insurance. In the case of rental units, the cost is defined as rent plus utilities.

All municipalities in Franklin County are deemed part of the Burlington-South Burlington Metropolitan Statistical Area. The figures for median income, however, do not paint an accurate picture for many of the municipalities within Franklin County. The 2017 median household income for the Burlington-South Burlington MSA was \$65,476, while it was \$62,214 in Franklin County (2013-2017 US Census). For this reason, the Northwest Regional Planning Commission uses the county median household income to compute affordability statistics.

Income	% of Households
Less than \$24,999	23%
\$25,000 to \$34,999	10%
\$35,000 to \$49,999	13%
\$50,000 to \$99,999	38%
\$100,000+	17%

Source: 2013-2017 U.S. American Community Survey

The U.S. Census estimated the 2017 median household income in the Enosburgh to be \$54,900 versus \$62,214 in Franklin County as a whole. While the data do not allow for calculating the number of households that are considered “low-income” or earning less than 80% of the median (\$43,920); approximately 23% of the population are considered “very low income” or households earning less than 50% of the median. It is estimated that 13.1% of individuals were under the poverty level.

The following two tables (Table 5.4. and 5.5) compare maximum affordable mortgages and rents in Enosburgh with the median sale price for a primary residence and median rent based on spending no more than 30% of household income on housing. The affordability gap is the difference between the available income and the maximum affordable mortgage or rent. The median income represents moderate-income households or families and 80 percent represents low-income households or families. A family consists of two or more related members while a household refers to all people who occupy a housing unit regardless of relationship. All families or households earning the median income are able to afford homeownership however for the lower income populations the ability to bridge the gap to affordability can be large. At both the community and county level the median family income is greater than median household income; these groups are better able to afford homeownership. Rental housing in Enosburg Falls appears to be more affordable for median and low incomes, while very low incomes have a gap of 17 dollars.

Income		30% of Income Per Month	Taxes & Insurance	Income Available for Housing Per Month	Maximum Affordable Mortgage	Median Sale Price Primary Residence	Owner Affordability Gap
County Median Family Income	\$76,898	\$1,922	\$414	\$1,508	\$252,855	\$204,500	\$48,355
Low Family (80%)	\$61,518	\$1,538	\$414	\$1,124	\$188,404	\$204,500	\$(16,096)
Median Family Income	\$65,625	\$1,641	\$414	\$1,227	\$205,614	\$145,000	\$60,614
Low Family (80%)	\$52,500	\$1,313	\$414	\$899	\$150,612	\$145,000	\$5,612
County Median HH Income	\$62,214	\$1,555	\$414	\$1,141	\$191,319	\$204,500	\$(13,181)
Low HH (80%)	\$49,771	\$1,244	\$414	\$830	\$139,176	\$204,500	\$(65,324)
Median HH Income	\$54,900	\$1,373	\$414	\$959	\$160,669	\$145,000	\$15,669
Low HH (80%)	\$43,920	\$1,098	\$414	\$684	\$114,656	\$145,000	\$(30,344)

Source: Median Household Income, Median Family Income (American Community Survey 2013-2017); 2017 Median Home Sale Price (Vermont Housing Data); taxes and insurance estimated; all other figures computed by NRPC.



**Table 5.5. Affordability Gap for Renting in Enosburgh**

Income	Income Available for Rent/ Month	Median Gross Rent	Rental Affordability Gap
Median Family	\$1,641	\$703	\$938
Low (50 - 80%) Family	\$820 to \$1,313	\$703	\$117 to \$610
Very Low ( $\geq$ 50%) Family	< \$820	\$703	\$117
Median HH	\$1,373	\$703	\$670
Low (50 - 80%) HH	\$686 to \$1,098	\$703	(\$17) to \$395
Very Low ( $\geq$ 50%) HH	< \$686	\$703	(\$17)

Data Source: 2013-2017 U.S. Census

**Affordable Housing Developments.**

Vermont Statute defines “affordable housing development” as a housing development of which at least 20% of units, or a minimum of 5 units, whichever is greater, are affordable housing units. It also states that affordable units shall be subject to covenants or restrictions that preserve their affordability for a minimum of 15 years or longer as provide in municipal bylaws.

There are currently two developments of subsidized affordable housing in Enosburg Falls. Pleasant Street Apartments provides 24 apartments (8 one bedroom and 16 two bedroom), all of which are available to families making less than 60 percent of the median income. The second development of affordable housing, Falls Housing Inc., was open for occupancy in 2007 after rehabilitation of the Depatie Block on Main Street in the center of the Village, which was destroyed by fire in 2005.



**Photo: Falls Housing Inc. (Photo Credit: Janice Geraw)**

The redevelopment includes six units in the upper levels of the Merchants Bank Buildings, with a total of 28 units. Three units are market rate, while the remaining 25 are available to households earning 60% of the median income. Given the disparity between median income and the median sale price, the need for more affordable housing is apparent.

Adequate provision of housing options for the elderly is important as the baby boomers age, increasing the proportion of the elderly in the community. There is one level 3 assisted living facility (Brownway) and one apartment complex (Riverbend Apartments) available to the elderly

and disabled through Section 8 funding. Brownway is a 36-unit care facility with some subsidized rooms. Riverbend Apartments offers 30 units of housing for elderly and disabled with rents pegged to income.

***Affordable Housing Opportunities.***

When possible, affordable and senior housing should be located conveniently near community services and the Village area to make it easier for residents to access needed services without a vehicle. The accessibility of public infrastructure contributes to the availability of low-cost housing. In particular, sewer and water connections allow for higher densities and lower land costs by minimizing the amount of land that is necessary to accommodate new development. Affordable housing developers often depend on these public facilities to reduce building costs and pass on savings to the buyer or renter. Utilizing small, in-town lots for infill development and rehabilitating existing structures can also help create housing, which is naturally more affordable.

Mobile homes are also an important source of affordable housing. Vermont land use law does not allow municipalities to discriminate against or segregate mobile homes. Mobile homes in a town can provide an opportunity for those who cannot afford conventional housing.

***Goals, Policies and Recommendations.***

**GOALS:**

- Ensure adequate housing options for people of all income levels, ages, household types, and preferences.
- Promote safe, healthy and affordable housing for all segments of the population.

**POLICIES:**

- To conserve and protect the vitality and quality of existing residential neighborhoods or areas.
- To encourage compatible infill residential development in existing neighborhoods.
- To support the historic rehabilitation of the existing housing stock.
- To maintain existing rental units and support the creation of new ones with consideration for the character of the surrounding neighborhood.
- To encourage the development of senior housing opportunities located near necessary amenities.
- To promote and support zoning that allows and encourages increased densities for the purpose of providing affordable housing, such as planned unit developments, while preserving the character of older neighborhoods and the village areas.
- To promote low-density residential housing in areas without municipal services and higher densities in parts of town with existing services or close to existing service boundaries
- To promote housing developments that provides opportunities for a mixture of incomes and includes or provides access to commercial, civic, and recreational uses.
- To support housing connected to schools, safe areas for physical activity and healthy food access via safe walking and biking routes.
- Encourage the development of housing that is energy efficient to reduce heating and electricity costs.

# Chapter 6: Education

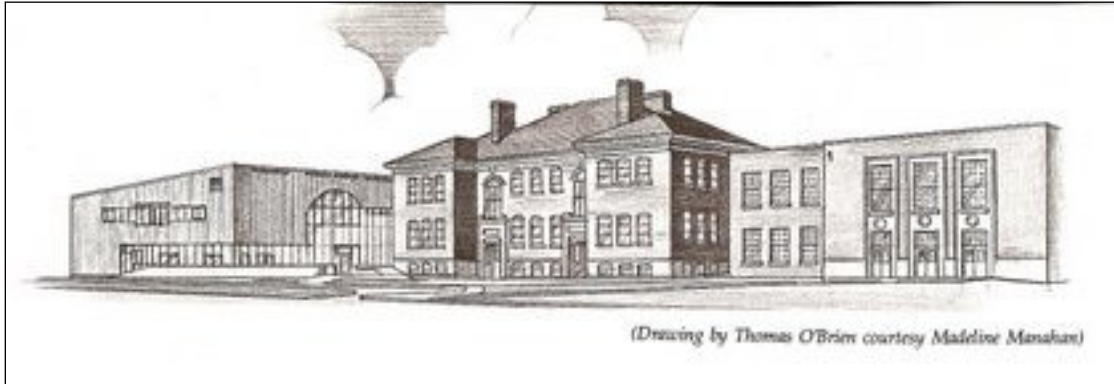
**History.**

Beginning in 1806, Enosburgh Town leaders arranged for the orderly education of local youth by dividing the Town into districts, which were made up of farms or lots. Enosburg Falls began its educational history as District Number 7, composed of 18 lots. The first school in the Village was built of logs in the 1820's, according to Janice Geraw's history of Enosburgh, and was replaced after being "set fire to by one of the pupils." The present Enosburg Falls Middle & High School was originally built in 1907, over 100 years ago, as a Kindergarten through grade 12 facility. In 1954, Town and Village school administrators closed the scattered school districts throughout Town and approved plans for a new elementary school to be built in the Village, which was built in 1956 and was last expanded in 1988. Voters have approved three additions to the Middle and High School, in 1945, 1981, and the most recent in 2001 (completed in 2004).



**Right: Historic photo of the Enosburg Falls High School.**

**Bottom: Enosburg Falls Middle and High School (2001 renovations).**



**Educational Facilities and Enrollment.**

Enosburgh has three educational facilities which are all located in the Village of Enosburg Falls. Together the schools offer regular and special educational programs which range from preschool to adult education. All three buildings provide access to technology to assist with student learning such as Internet and cable TV. The high school has a satellite dish which enables it to downlink programming. The school system's aim is to provide a quality education for the community's children and its adults.

As of July 1, 2019, the Enosburg Falls School District and the Richford School District merged due to Act 46. The district became the Enosburgh Richford Unified Union District. The ERUUSD is run by an elected six-member board.

The Enosburg Elementary School includes kindergarten through grade five and includes two pre-kindergarten programs for 3 and 4-year-olds; these programs have been in existence since the 2010-2011 school year. In 2005, grade 6 was moved to the Middle School to relieve the Elementary School from space limitations. Since that time, enrollment numbers have fluctuated with a peak in 2008 at 231 students at the Elementary School; overall the enrollment has been relatively stable at around 200 students. With the inclusion of the pre-kindergarten programs the current enrollment for 2018-2019 is 278. Even though grade 6 was moved to the Middle School in 2005, space limitations remain an issue for the Elementary School. The current capacity of the school is around 350 students. Several things contribute to the space crunch including, an increase in the number of special needs students and the facilities and staff to serve them and increasing enrollment. Currently, the school uses the gymnasium as the cafeteria, which adds an additional space constraint. The Village has had discussions on how to address the space limitations in the Elementary School, but there are no official plans yet.

<b>Table 6.1. Enosburg Falls School Enrollment Information</b>											
<b>Grade</b>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	<b>% Change 2009-2018</b>
<b>K</b>	43	27	31	31	39	29	37	32	41	40	-7.0%
<b>1</b>	39	42	29	34	29	39	26	35	34	39	0.0%
<b>2</b>	40	41	40	28	31	32	39	26	34	36	-10.0%
<b>3</b>	25	39	41	38	28	24	35	42	23	34	36.0%
<b>4</b>	38	30	36	45	44	26	29	33	48	23	-39.5%
<b>5</b>	27	39	27	36	42	43	25	25	37	41	51.9%
<b>6</b>	38	26	42	29	42	43	42	26	28	32	-15.8%
<b>7</b>	38	36	25	39	26	48	42	44	29	26	-31.6%
<b>8</b>	28	42	34	26	36	26	48	41	44	30	7.1%
<b>9</b>	100	93	80	80	72	93	78	88	84	101	1.0%
<b>10</b>	82	101	85	83	79	76	96	73	94	82	0.0%
<b>11</b>	78	81	87	86	78	82	76	99	71	90	15.4%
<b>12</b>	88	77	79	72	84	76	76	67	91	65	-26.1%
<b>Total</b>	<b>664</b>	<b>674</b>	<b>636</b>	<b>627</b>	<b>630</b>	<b>637</b>	<b>649</b>	<b>631</b>	<b>658</b>	<b>639</b>	<b>-3.8%</b>
Source: Franklin Northeast Supervisory Union; Enrollment as of October of Year Provided											

The Enosburg Falls Middle and High School is a NEASC accredited school, which houses grades six through twelve. It is one of only five high schools in Franklin County. Enrollment at the Middle and High School from 2003 to 2008 fluctuated around 500 however since 2009 attendance has been around 420 to 450 students. The fluctuation can be due to the presence of

tuition students who may choose to attend high school at Enosburg, Richford, Saint Albans, Swanton or Lamoille Union. Enosburg High School also receives tuition students from the towns of Bakersfield, Berkshire, Fairfield, Sheldon, and Montgomery. As of 2013, the State is allowing universal high school choice allowing students to go to any high school in Vermont provided there is capacity to accommodate them. Many towns served by the school system are growing more rapidly than the Enosburgh area therefore forecasting the number of tuition students, a most important factor in planning and budgeting, has become difficult.

The 2004 renovation to the Middle and High School was planned for a maximum capacity of up to 650 students. Capacity is sufficient for the current number of students (see Table 6.1) and for many years to come at the current rate of growth.

The Cold Hollow Career Center (CHCC), built in 1981, offers college and career opportunities to students from Enosburgh and Richford High Schools as well as adult students served by the area School District. The programs include automotive, forestry and natural resources, building trades, business leadership, cosmetology, digital media production and medical careers. Evening adult programs are offered during both spring and fall semesters. The Center has a capacity of approximately 105 students based on the capacity of service, 15 students per program and offers seven core programs. Through CHCC, many students interact with the community within their chosen field.

All Enosburg Falls educational facilities are located in or near the center of the Village. This provides convenience for transportation and for community use of the buildings and adjacent athletic fields. The cost of maintaining a school is shared between the Town and Village, the State, and the Federal Government.

***Other Educational Facilities.***

The majority of colleges are located either in or around Burlington or in St. Albans. The Community College of Vermont (CCV) offers courses and degree programs in both Burlington and St. Albans. The CCV is part of the Vermont State College System and has links to other higher education facilities around the State. The University of Vermont, St. Michael's College, Burlington College, and Champlain College are all located in the Burlington area while Johnson State College is located in Johnson.

***Goals, Policies and Recommendations.***

**GOALS:**

- Coordinate enhancement and expansion, as needed, of educational services and facilities to meet the current and future needs and requirements of the community and areas served.
- To provide high quality, broad-based educational services for the people of the community.

**POLICIES:**

- Work to maintain and expand cooperation and coordination between the municipal and school entities (Enosburgh School District, Town of Enosburgh, Village of Enosburg Falls, Franklin Northeast Supervisory Union, and School Boards) to ensure that the District's long-term plans are consistent with those of the Town and Village.

- Assure that the quality of school facilities and capacity is sufficient to meet planned community growth.
- Assure access to educational and vocational opportunities are broadened and maintained, though such programs as Adult Education, GED and free library services.
- Encourage community involvement in the school system.

## Chapter 7: Public Utilities, Facilities and Services

### *Water Supply and Systems.*

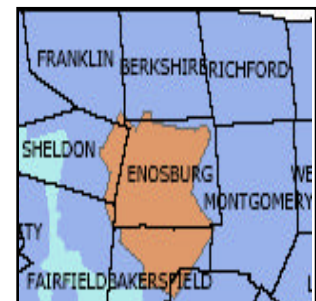
The majority of households outside of the village are served by a private water source such as a drilled or dug well or a private company. A little less than half of all households in the Northwest Region obtain their water from public water systems. The State of Vermont defines public systems as systems that have at least ten service connections or serve at least twenty-five individuals. Groundwater is a vulnerable resource and the source of most drinking water.

Enosburg Falls is served by a municipal water system supplied by two drilled wells located in the Town of Berkshire; Well #1 has been in service since 1960 and Well #2 since 1979. Demand for municipal water was 15% of combined well capacity in 2007 and therefore no additional capacity needs are anticipated in the near future. A new reservoir with a capacity of 750,000 gallons was built in 1990. A 16-inch line carries water from the reservoir to the intersection of Water Tower Road and Route 105. A 10-inch line extends from there to the corner of Pleasant and Elm Streets. From this point, water is carried down Elm and Main Street through an 8-inch and 6-inch line respectively.

There are no major water system expenditures expected in the next 5 years. There have been several line improvements over the last five to ten years; the Village has incorporated upgrades with street improvements. In 2012, a new 12inch water main was installed on Pleasant Street from Elm Street to the 10-inch line on Depot Street; this line has made a noticeable improvement to water for most of the fire hydrants in the Village.

### *Village Electric Department.*

The Village of Enosburg Falls is serviced by its own Electric Light Department (EFELD), which was built in 1896 at a cost of \$16,827.34. The local utility includes two hydro plants with a combined generating capacity of 900 kilowatts (kW). On average, the hydro plants generate 15% of total electric demand. Additional sources of electricity include Hydro Quebec and purchases from the New England Power Pool. The system has expanded over the years and continues to serve the community and the surrounding area.



**Figure 7.1. EFELD Service Area.**  
**Source: VT Dept. of Public Service.**

A 5-member board consisting of Village Trustees and the Village Manager govern the EFELD. The department serves the entire Village of Enosburg Falls, most of the Town of Enosburgh, parts of Bakersfield, Sheldon, Fairfield, Berkshire, and Franklin. Currently the department has 1,765 customers. Connections to the EFELD increased by close to 31 percent from 1994 to 2018 (Table 7.1). The majority of total connections are largely residential uses located inside the Village; however, in the last two to three years there has been an increase in the number of hookups for sugar bush operations.

Category	1994	2001	2006	2012	2018	Increase	% Increase
<b>Residential</b>							
Village	559	568	550	577	964	+ 405	+ 72.45%
Outside	681	773	847	890	580	- 101	- 14.83%
<b>Small Commercial &amp; Industrial</b>	106	171	175	198	221	+ 115	+ 108.49%
<b>Total Electric</b>	<b>1,346</b>	<b>1,512</b>	<b>1,572</b>	<b>1,665</b>	<b>1765</b>	<b>+ 419</b>	<b>+ 31.13%</b>

Source: Enosburg Falls Electric Light Department. 2012 Annual Report; Enosburgh Falls Town Clerk 2019.

The hydro plants underwent substantial upgrade in 1992, which included new automated controls, crest and head gates, intake structure and fish passage. Since then, the EFELD received federal grant money and bond approval to upgrade the Village substation and distribution lines, which was completed in 2003 and 2004. As a recommendation for system efficiency from the Comprehensive Electrical Distribution Report, the department has replaced most of the 2.4 kV Delta system in the Village with higher voltage of 12.47 kV. This upgrade creates better system reliability and lower line losses and makes critical improvements with regards to employee safety. In 2017 and 2018, the Village’s Electric Department completed a \$2,000,000.00 renovation project to Village Plant #1 hydro generator. The work completed has created greater efficiencies, capacity for generation, and ensured that Plant #1 and the Kendall Plant will continue to operate into the coming decades.

Electric utilities file annual reports with the Department of Public Service and Public Service Board that outline the number and type of outages that occurred during the past year. As part of that report, EFELD is required to indicate the worst performing area and what corrective measures are planned to rectify the problems.

Vermont law requires all electric distribution utilities to prepare and implement integrated resource plans ("IRP"). According to 30 V.S.A. § 218c, an integrated resource plan is a comprehensive, long-term plan for meeting the public's need for energy services, after safety concerns are addressed, at the lowest present value life-cycle cost, including environmental and economic costs, through a strategy combining investments and expenditures on energy supply, transmission and distribution capacity, transmission and distribution efficiency, and comprehensive energy efficiency programs. An Integrated Resource Plan was last filed with the Public Service

**Below: The Falls (Photo Credit: Janice Geraw).**





Board in March 2017.

The Energy Chapter discusses electricity service, costs, and efficiency and conservation programs related to electricity.

***Wastewater Disposal and Sewer System.***

The Village of Enosburg Falls operates an extended aeration wastewater treatment facility constructed in 1977. All but a few Village residences are connected to this system, while there are no connections outside the Village. Those that are not connected have onsite sewage disposal. There are no current plans to connect these residents due to physical and financial limitations. The system is permitted for 450,000 gallons per day and in 2018 was at 56.9% of the permitted levels, allowing sufficient reserve to meet planned growth demand; in 2018, there were 194,162 gallons per day in reserve. The Village contracts the disposal of its sludge to an approved facility, which had a cost of \$74,994.00 in 2018. The facility was refurbished in 2012 to handle increased flows during intense rainfall and to provide increased disinfection contact time.

Because the Missisquoi River and its tributaries traverse through Enosburgh, it is important that the community take steps to ensure the protection of its stream bank area. Development in these areas presents a difficult and potentially serious set of wastewater disposal problems. Existing homes or camps may have inadequate or failed septic systems and these have the potential to discharge directly into the river. This can cause harm not only to the river but also indirectly to Lake Champlain.

***Stormwater Systems.***

The term “stormwater” applies to rain and snowmelt that runs off impervious surfaces like roofs, driveways and paved streets, rather than infiltrating into the ground and natural water cycle. As it flows into streams and lakes, stormwater runoff often picks up pollutants such as oils, fertilizers and sediment. Excess stormwater also contributes to erosion and increases stream volumes during peak storm events. Larger municipalities may attempt to mitigate the negative impact of excess stormwater runoff through the creation of storm sewers, and even stormwater treatment plants. Enosburgh’s stormwater drainage system consists of series of drainage inlets within the village, as well as a network of culverts and ditches along the town highway network.

The Planning Commission encourages new residential and commercial development to implement stormwater mitigation strategies, otherwise known as Low Impact Development (LID). Common LID techniques that mitigate the adverse impacts of stormwater runoff include on-site rain gardens and grass swales; the utilization of cisterns and rain barrels; and the installation of pervious pavement and sidewalks.

***Solid Waste Disposal.***

Enosburgh is a member of the Northwest Vermont Solid Waste Management District. A small number of private contractors serve residents with curbside pick-up of trash and recyclables; recycling is mandatory within the District. All solid waste disposal and planning are managed by the Northwest Vermont Solid Waste management District, as outlined in the district’s most recent Solid Waste Implementation Plan.

***Telecommunications.***

Accesses to telecommunication services are increasingly important to the security, quality of life and economic needs of residents and businesses. Cable, DSL, and cellular service are available in the Village and in select areas of the Town. Many town residents have access to high speed internet.

Telecommunication towers and related infrastructure require careful consideration. These structures tend to be located in highly visible locations such as on mountaintops and ridgelines. The need for additional facilities is projected to increase dramatically in the coming years. The Federal Telecommunications Act of 1996 placed certain limitations over municipal control of these structures; however, within those confines, Enosburgh must act to protect the community’s historic character, rural nature, and aesthetic beauty.

***Public Buildings & Public Land.***

Enosburgh residents have a long history of contributing land, infrastructure, and facilities to enhance the community's quality of life. For example, the B. J. Kendall Company constructed the Opera House and water system and, in 1899, Olin Merrill, the Kendall Company business manager, donated Lincoln Park and furnished quarters for the first public library on the Merrill Block.

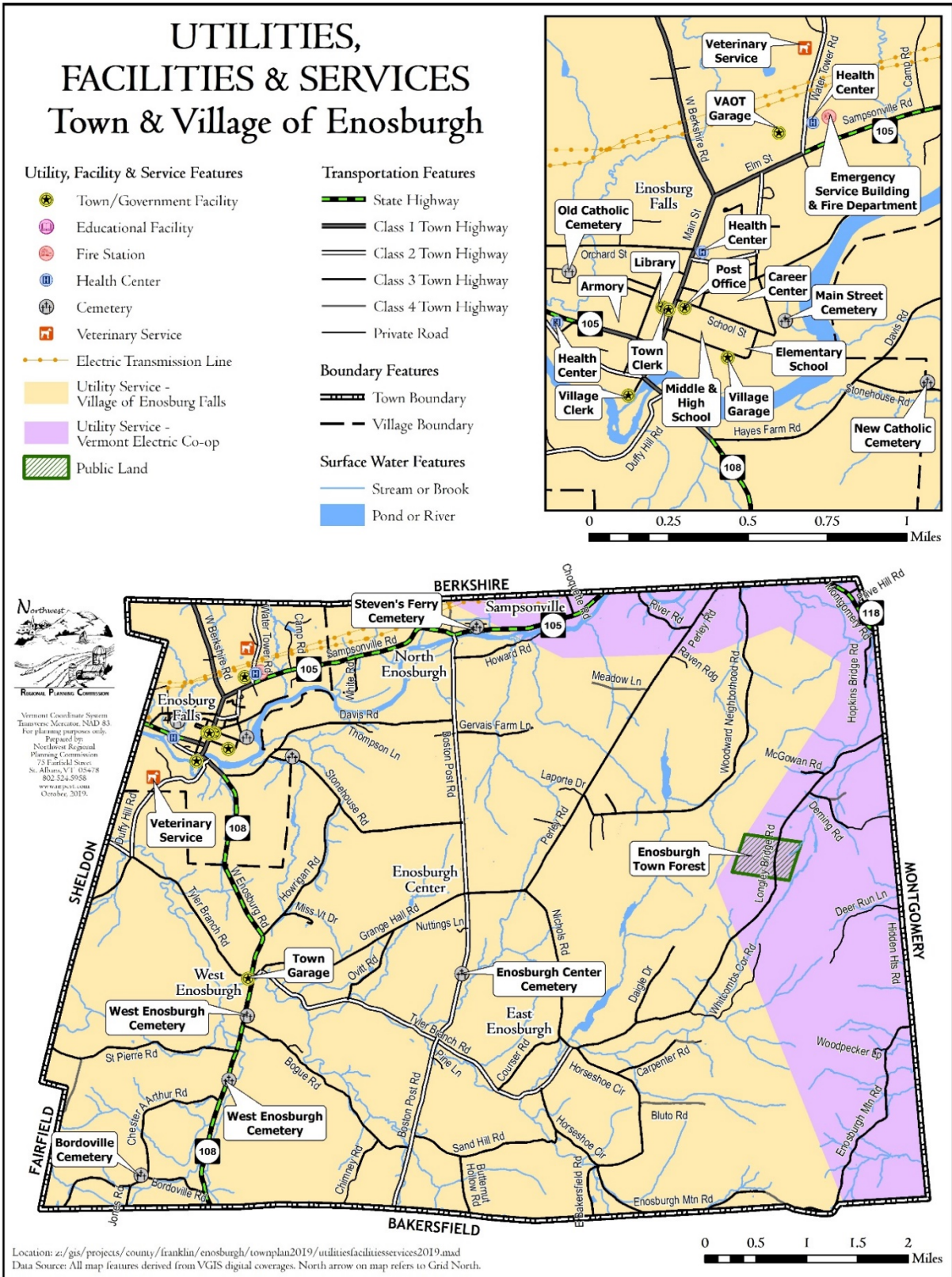
Enosburgh has a variety of public land and facilities within its boundaries; however, many of these properties are not in active use. Since land in public ownership is not taxed, it is important to consider present and future needs and potential use of these properties so that they can be properly managed, used, or disposed of to generate funds for management of other properties that better serve the needs of the community. A listing of properties in public ownership in Enosburgh is provided in Appendix C.

***Library.***

Enosburgh maintains a free library that is located on Main Street behind the Town Clerk’s office. Built in 1984, this modern facility houses over 20,000 titles in books, audio books, and videos. The hours for the Town library have been expanded and it now has both full-time and part-time librarians to better serve the public. The library does meet the State standards for library facilities and services.

The Enosburgh Public Library promotes reading and literacy for everyone in the community, provides a safe and welcoming environment, and offers current and significant material as well as information resources.

The Library’s focus of its services is on the development of interest and proficiency in reading, particularly reading for pleasure. The library provides access to learning of all kinds through its collection and programs, through Inter-Library Loan and internet access, and through collaboration with groups, the schools and individuals. It also serves as a gathering place for discussion and a center of the community.



Map 7.1. Utilities, Facilities and Services in Enosburgh

***Municipal Clerk’s Office.***

The Town of Enosburgh and the Village of Enosburgh Falls maintain separate offices. In 2014, Enosburgh Falls relocated its administrative offices and completed substantial renovations to the new site. These offices are of adequate size for Village administrative functions for at least 5 years. There is a need for more space at the Town of Enosburgh’s administrative offices. However, there are no current plans to move or expand the Town’s offices.

***Cemeteries.***

Enosburgh has several cemeteries in town and in the village area which are maintained by private citizens and associations. Occasionally, the cemetery in East Enosburgh receives help from the Town in the form of equipment or town employees for maintenance. Table 7.2 provides a list of cemeteries in the Town and Village; these facilities are also listed on Map 7.1:

<b>Table 7.2. Cemeteries</b>		
<b>CEMETERY</b>	<b>LOCATION</b>	<b>OPEN CAPACITY</b>
Missisquoi	Enosburgh Falls	Over 100 single lots
St. John the Baptist	Enosburgh Falls	Over 100 single lots
Main Street	Enosburgh Falls	Full
Bordoville	Bordoville	-
Enosburgh Center	Enosburgh Center	-
Bessay	Stoneville/East Enosburgh	-
Steven’s Ferry	North Enosburgh	-
West Enosburgh	West Enosburgh	-

Enosburgh should plan to ensure that adequate space is available for future needs. One option is to determine if there is land available that could be reserved for future expansion of the existing cemeteries. The municipalities should also ensure that funding arrangements are made for long-term maintenance of cemeteries.

***Rescue Services and Fire Protection.***

Rescue services and firefighting services are two services that are absolutely essential for communities to function. Enosburgh has volunteer organizations that provide both of the community’s emergency services. The organizations are made up of dedicated members who are on call twenty-four hours a day. Members of both organizations are qualified and trained through State and local training programs.

Both services participate in the mutual aid compact in Franklin County and bordering

**Photo: Emergency Services Building  
(Photo Credit: Janice Geraw).**



Canadian communities. When needed, they assist with trucks, heavy equipment, and personnel at emergencies including fires, accidents, and disasters.

Fire protection services are housed in the new Emergency Services Building on Route 105 north of the Village. Currently, there are twenty-six volunteer members who serve on the department. The annual budget for 2012-2013 is level funded at \$123,300 for the fire department. The department responded to 99 calls in 2012, all calls outside of Enosburgh (29) were for fires (mutual aid) or for vehicle accidents (heavy rescue). They have also developed fire protection plans and mapped accessible water sources throughout the Town in order to provide all residents with maximum protection. The Fire Department has stated that fire hydrant pressure remains a concern, especially in the Central Business District. While the Village has made substantial progress on this issue by installing new water lines in the northern section of the Village, further improvements are needed to ensure the safety of residents.

Existing equipment for the department is provided in Table 7.3; funding for equipment comes from property taxes and grant funds. There is a yearly \$5,000 vehicle replacement fund which is funded from the department's budget. It is not anticipated that any of the current equipment will need replacing within the next five years however funding is needed to continue repairs for the older equipment.

<b>Table 7.3. Equipment Inventory</b>		
<b>Vehicle</b>	<b>Manufacture Date</b>	<b>Anticipated Replacement</b>
Fire Pumper/Tanker	1992	As funds and grants allow
Fire Pumper/Tanker	1995	As funds and grants allow
Fire Pumper/Tanker	2017	As funds and grants allow
Fire Pumper/Tanker	2006	As funds and grants allow
Ambulance	2013	As funds and grants allow
Ambulance	2017	As funds and grants allow
Source: 2020 Vehicle and Mobile Equipment Schedule		

Enosburgh's Ambulance Service is also located in the new Emergency Services Building. The service is equipped with three ambulances that currently meet the needs of the service. The ambulance service pays sixty percent of the building's operating and maintenance costs. Currently, families are encouraged to subscribe to the ambulance service by paying a household fee. For the year ending in 2012, ambulance service expenses were \$447,375 while their revenue was \$371,389. Enosburgh provides ambulance services to the Towns of Berkshire, Bakersfield, and Franklin. The Enosburgh Ambulance Service also provides advanced Emergency Medical Training personnel for these communities when needed. The ambulance service responded to 760 calls in 2012.

The Town of Enosburgh, together with the Village, has adopted a Rapid Response Plan for responding to emergencies. This plan will be updated yearly. The 911 emergency system has also been implemented.

***Law Enforcement.***

The Vermont State Police and the Franklin County Sheriff's Department are responsible for public safety and law enforcement in Enosburgh. The State Police have a barracks in St. Albans

with dispatching services based out of the Williston barracks. The Franklin County’s Sheriff’s Department covers Franklin County and contracts with individual municipalities requesting additional police services. A contract with the County Sheriff’s Office provides a School Resource Officer available to schools in the School District. Crime statistics for the region can be obtained from the Department of Public Safety – Criminal Justice Services.

**Recreational Facilities and Programs.**

The Enosburgh area offers a variety of public and private recreation opportunities, ranging from parks, athletic fields, public access to the river, and trail networks. There are two Village parks, which provide quiet, open spaces. These include Lincoln Park and Maple Park.

The Missisquoi River offers many opportunities for recreation, tourism and enhancement of the Village Commercial District and surrounding areas. The 740-mile Northern Forest Canoe Trail is located on the Missisquoi River and hosts a primitive campground. A new public access to the Missisquoi River is provided by Island View Park, a 7-acre parcel on Duffy Hill Road that was obtained with the assistance of the VT River Conservancy. The Village also hosts the Brownway River Trail, an easy 0.9-miles trail that runs alongside the Missisquoi River taking you through fields, forests and floodplains, perfect for hiking, walking and snowshoeing. The Elementary School maintains a storywalk along the trail during the summer.

There are athletic fields located adjacent to the high school on School Street and additional athletic fields are located by the Town Emergency Service Complex which was secured by the Enosburgh Recreation Committee. The facilities at the Enosburgh recreation fields also includes one little league ball fields, a basketball court, a soccer field, and a walking trail. The Recreation Committee received a 2019 Municipal Planning Grant to complete a master plan to renovate the Enosburgh Recreation Fields and improve the offerings for all segments of the community. The Village is in the process of securing the right-of-way necessary to construct sidewalks on the north side of Route 105 to provide safe pedestrian access the recreation fields, funded by a Vermont Bicycle and Pedestrian Grant.



**Above: Lincoln Park. Below: Missisquoi Valley Rail Trail (Photo Credit: Janice Geraw).**



Throughout Enosburgh there are trail networks used by snowmobiles, skiers, and all-terrain vehicles. The town also manages a Town Forest accessed off of Longley Bridge Road and available for hiking/walking. It is referenced further in Chapter 4: Natural Features.

The most significant year-round multi-purpose recreational trail in the Village is the Missisquoi Valley Rail Trail, which connects Enosburgh with Richford to the north and St. Albans to the south. The trails' overall length is 26.4 miles. Mile marker 16 to 17 runs through the Village. Marker 17 to 19 through rural Enosburgh and 19 to 21 through North Enosburgh. As quoted from the Guide to the Missisquoi Valley Rail Trail "The landscape offers postcard-perfect views of the Missisquoi River rapids, Jay Peak, and adjacent farms". Working with the Village Trustees and Selectboard, the Planning Commission is committed to supporting this community treasure. Promoting the MVRT as an economic development tool was one of the main goals of the Vital Village master planning process.

The Enosburgh Recreation Committee opened the Enosburgh Community Center, located at 140 Missisquoi Street. This space is used year-round to increase indoor recreational opportunities in Enosburgh and surrounding areas, by offering indoor games, community events, enrichment classes, free community meals, meeting space for community groups, and more.

Commercial recreation in the area includes a bowling alley and an 18-hole golf course.

While there are various recreation opportunities available to young and old in Enosburgh, the Planning Commission is unsure whether all recreation needs are sufficiently met. A community wide discussion on needs and gaps in current recreation opportunities is needed before any specific recommendations for additional recreational facilities can be made.

***Health Services.***

Residents of Enosburgh, as well as those of the surrounding communities, are currently served by a number of private and public health care providers located mainly in the Village. A variety of individual and group practices offer a range of health services in the area including general medicine, pediatrics, physical therapy, gynecology, mental health services and home health. Emergency health care services are offered at hospitals in St. Albans, Morrisville, and Burlington. There are two veterinary services located in Enosburgh.

***Community Health.***

The town and village of Enosburgh values the health and well-being of all residents. The major threats to population health are categorized into three priority areas: Substance Misuse, Chronic Disease, and Mental Health. Substance misuse rates are continuously increasing among youth and adults, over 50% of deaths in the region are contributed to preventable chronic diseases, and there is an increase in the amount of poor mental health days and mental health crisis arising in the Northwest region. These community health threats carry a great economic burden both statewide and locally. However, data shows that when a population has good health, economic growth rates also increase. Prevention works, saving money and lives long term. Unhealthy communities see the effects in all sectors of society. Employment, health, public safety, and education are all negatively impacted when populations are facing addiction, mental health crisis and chronic disease. The town and village of Enosburgh will engage in non-regulatory and

regulatory prevention efforts with the help of key community partners, coalitions, and government entities to decrease youth substance use, chronic disease prevalence, and poor mental health.

**Childcare Services.**

Childcare is a strong concern for existing and prospective families with young children, whether it means finding quality services or securing the costs of services. High quality, affordable childcare is a critical component to supporting a stable workforce.

According to the Vermont Department for Children and Families/Child Development Division (as of August 2019), Enosburgh has four registered childcare homes and two licensed centers. The total capacity of these facilities is roughly 117 children; infant capacity is generally limited. According to the 2017 American Community Survey, in Enosburgh 134 children were under 5 years of age and 143 children were between the ages of 5 and 9. While the data do not allow for a direct look at what portion of the population needs are being served, these figures can provide an estimate of potential need.

**Enosburgh Households**  
*87% of family households with children under 6 years have both parents in the workforce.*

*70% of family households with children aged 6-17 have both parents in the workforce.*

*39% of family households are single parent with children under 18 years.*

*Source: 2013-2017 American Community Survey*

It is difficult to assess the availability and quality of childcare in the community. For instance, childcare openings in Enosburgh may also be filled with children from adjacent municipalities and likewise Enosburgh children fill spots in adjacent communities and St. Albans. Further data on other childcare options, such as grandparents, siblings, stay at home parents, un-registered childcare homes or other opportunities, and the quality and affordability of existing services is not available.

It is important to note that the childcare industry can contribute to the local economy by creating jobs and supporting a stable workforce. The accessibility, affordability, and quality of child care may affect a parent’s ability to enter and remain in the workforce and to be a productive employee.

**Goals, Policies and Recommendations.**

**GOALS**

- Provide public utilities and services in a manner that supports existing development and facilitates future growth at the appropriate time, scale, and location.
- Ensure community services and facilities meet the needs of local residents of all ages without undue or sudden impacts upon local property taxes.
- Protect public health and water supplies in areas without municipal services.
- Ensure that the regulation of land development in Enosburgh does not negatively impact the availability of safe and affordable childcare.
- Ensure a safe community that is committed to fostering the health and well-being of all residents.



## POLICIES

- Coordinate the extension and upgrade of water, sewer, and power lines with planned growth of the community.
- Maintain communication and cooperation with the Town of Berkshire to ensure proper land management within the Well Head Protection Area.
- Ensure that individual on-site septic systems and water supplies are sited and installed in a manner that protects public health and the quantity and quality of ground water.
- Where co-location of telecommunications facilities with other towers or structures is not feasible, new structures must be sited in appropriate areas, respecting the integrity of residential areas, aesthetic concerns, and natural resource issues.
- Investigate alternative technologies for wastewater treatment.
- Promote and encourage the development of recreational opportunities for all ages and ensure safe, convenient access to all recreation facilities is provided.
- Ensure regulation of land development does not negatively impact the availability of safe and affordable childcare.
- Provide sufficient space and facilities to carry out essential municipal functions.
- Provide emergency services and law enforcement to protect the health, safety, and property of residents and visitors.
- Encourage participation in the Emergency Subscription Program.
- Encourage patterns of land use, transportation strategies, and street design to promote walking, biking, and access to healthy foods for all.
- When considering future development within the community, identify vacant lots or unutilized spaces where parks, trails, or safe open spaces could be built and used for community gardens, community centers, Farmer’s markets, or other shared community spaces.
- Enosburgh will support regional youth substance prevention groups and coalitions that discourage underage substance use.
- The town will support strategies that reduce the stigma associated with addictions and mental health problems.

## Chapter 8: Transportation Planning

Transportation planning at the State, Regional, and Local level should have two primary functions. The *first purpose* is to ensure that people and goods are able to move freely, safely, and efficiently using all modes of transportation. This includes, where applicable, highways, local roads, railroads, airports, bicycle paths, pedestrian routes, ferry systems, and public transit. Transportation efficiency includes consideration of energy use, economic and social costs, and time. People and goods move with the assistance of more than one mode; therefore, transportation planning should consider how the different modes of transportation could complement each other.

The *second purpose* of transportation planning is to help guide growth in appropriate locations identified through land-use planning. Growth management can be assisted by directing construction or transportation improvements in coordination with local and regional plans into areas favorable for growth and away from environmentally sensitive areas.

Town of Enosburgh and the Enosburg Falls are active participants in the Regional Transportation Advisory Committee (TAC). The TAC serves to advise the Northwest Regional Planning Commission's transportation planning program, acts as a liaison between local communities and the Vermont Agency of Transportation (VTrans), and provides local and regional input regarding transportation issues important to the region

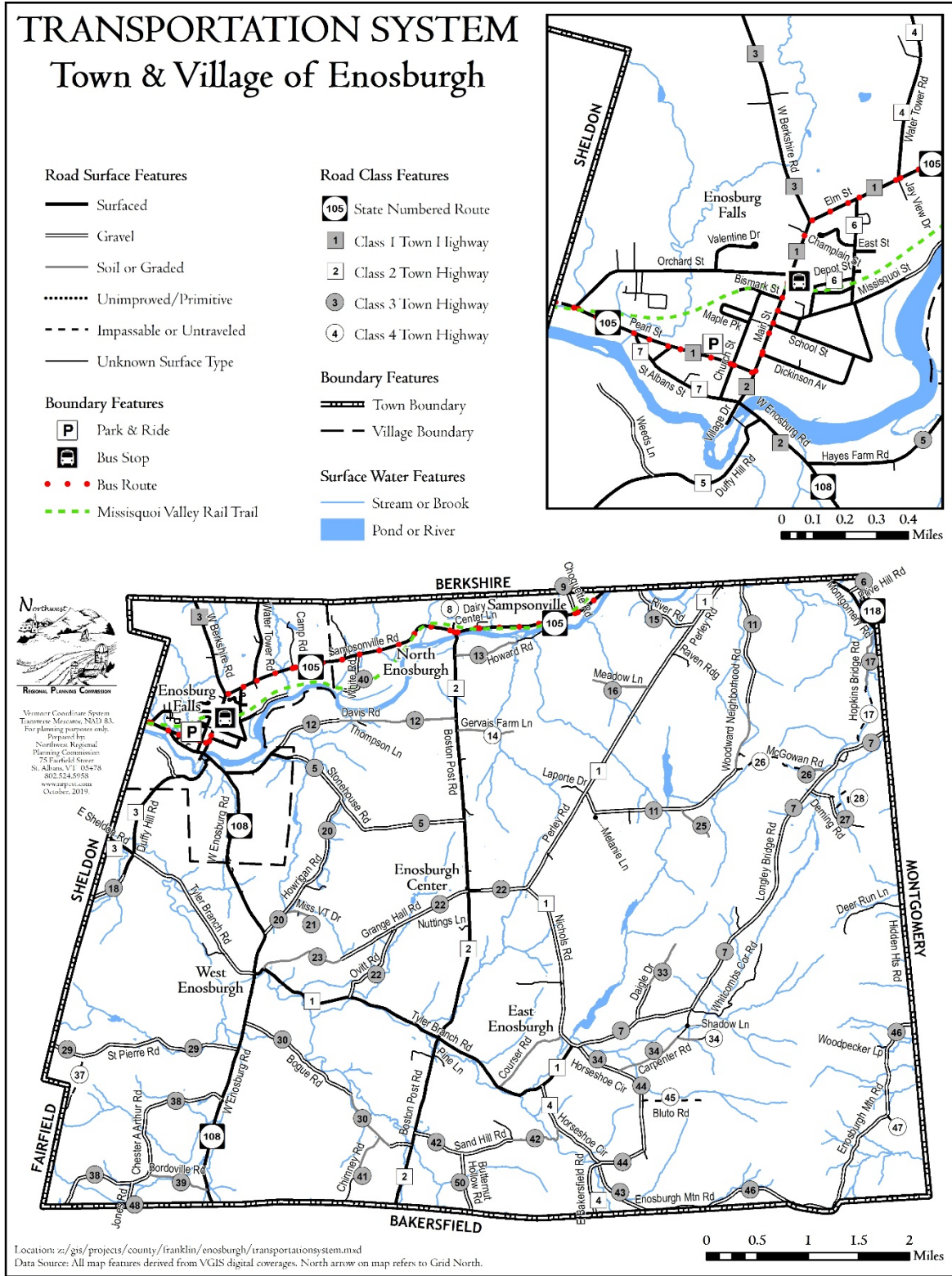
### History.

The completion of the Missisquoi Valley Railroad in 1871 brought new businesses, homes, and the need for an expanded road system to Enosburg Falls. Depot, Pleasant, Orchard, Church, and Pearl Streets were all added to accommodate the new growth. Historical records clearly demonstrate the way that the quality and location of the transportation systems affects the location, density, and intensity of local land use; however, land use decisions can have and do have dramatic impacts upon the function of the transportation network.

### Local Roads.

The Enosburgh Transportation System Map 8.1 shows the state and local highways, combined the Town and Village have approximately 77.6 miles of local roads and 9.4 miles of State Highway along Route 105, 108 and 118. Vermont classifies roads into four categories based on the role that a road plays in serving the flow of travel through the road network; Table 8.1 presents the amount of mileage of each category per municipality. Factors such as average speed, convenience, access and the adjacent land use, and the types of travel a road carries all affect how the roads function and serve the needs of its diverse users.

<b>Table 8.1. Mileage of Highway by Classification in Town and Village</b>				
<b>Miles of Road:</b>	Class 1	Class 2	Class 3	Class 4
<b>Village</b>	2.4	3.3	4.5	-
<b>Town</b>	-	17.5	45.8	4.1



**Map 8.1. Enosburgh Transportation System**

# Classifying Roads

### Class 1 Town Highways

Those town highways which form an extension of a state highway route (usually in a downtown area) and which carry a state highway route number. These routes have shared maintenance responsibilities between VTrans (responsible for scheduled surface maintenance or resurfacing and center line pavement markings) and the municipality (responsible for pothole patching, crack filling, crosswalks, and parking).

### Class 2 Town Highways

Those town highways selected as the most important highways (after State roads) in each town. They are generally selected with the purpose of securing trunk lines from town to town and to places that by their nature have more than the normal amount of traffic. Municipalities maintain however VTrans is responsible for line pavement markings.

### Class 3 Town Highways

These make up the majority of local roads. The minimum standard for Class 3 highways states that they must be maintained to a standard where a pleasure car could negotiate them under normal considerations, all seasons of the year. This would include, but not be limited to, sufficient surface and base, adequate drainage, sufficient width, and suitable for maintenance.

### Class 4 Town Highways

Includes all other town highways. Selectboards determine which roads will be Class 4 town highways. These are not required to be maintained by the municipality.

Roadways are also categorized by a functional classification system to describe each type of road. Functional classification organizes the highway network according to the function or role that each highway has to fulfill. These roles include providing for through movements and for access to adjacent properties. These include principal arterial – Interstate, principal arterial – other, minor arterial, major collector, minor collector, and local. Vermont Route 105 is considered a minor arterial and Vermont Route 118 is considered a major collector.

Roadway improvements in the form of paving and widening may be needed in the years to come. The decisions to perform this work should be made by the voters after local officials make recommendations.

***Maintenance of the Local Transportation Network.***

In addition to the 76 miles of local highways, the Town and Village are responsible for maintaining a network of bridges and culverts that assist in the conveyance of stormwater runoff and ensure the safe passage of motorists, pedestrians, and other travelers. General maintenance of the local transportation network is the responsibility of the Enosburg Falls Public Works Department and the Town of Enosburgh Highway Department.

The Enosburg Falls Public Works Department has three employees and owns the following equipment:

2000 Elgin Pelican Street Sweeper	2015 International Plow/Dump Truck
2017 ¾ ton Chevy Truck with Dump	2014 John Deere Loader Backhoe
2019 F550 Ford Pick Up Truck	2013 3320 John Deere Tractor (Snow blower/Mower)

There is a replacement fund, which receives yearly allocations for Public Works Department equipment. The Pelican Sweeper may need to be replaced in the next 5 years. The Public Works Department Garage is adequate in terms of space and condition for the near future. The Department is currently developing plans for a new storage facility to replace the Duffy Hill Barn that has been removed as well as a capital budget for equipment replacement.

The Town of Enosburgh Highway Department has four employees and owns the following equipment:

2017 International Dump Truck	2014 International Dump Truck (14 Yd)
2014 Ford F550 4 X 4	2006 John Deere Backhoe 772D Motor Grader with 13ft blade
2011 International Dump Truck (14 Yd)	2008 5445 John Deere Bucket Loader (3 cy)
2011 Chipper Bandit (12 in capacity)	2010 John Deere 120 D Excavator
2004 Trailboss (20-ton trailer)	1988 Eager Beaver (Trailer)

The Town Garage was recently expanded in 2010 to meet current needs and it is anticipated to do so in the future.

To guide highway construction and maintenance, VTrans recommends the adoption of “*Town Road and Bridge Standards*”. These standards have provisions to ensure investments in town highways are protected with proper drainage, ditching and construction techniques while also improving safety, reducing long-term costs and addressing environmental concerns.

Planning to address future needs and improvements can be facilitated by the development of a municipal capital plan to guide decisions typically over a five-year period. These plans can cover various topics such as detailing community-wide needs and assigning a priority to address them to the scheduling of maintenance and improvements as well as equipment replacement.

**Traffic.**

Traffic flow will vary depending on various factors such as the time of day, the day of the week, the season, the location of the road, and the weather conditions. The major influences on the traffic flow in Enosburgh are local businesses, local civic and social functions, recreational activities, and seasonal activities such as hunting, fishing, skiing, hiking, and foliage viewing. Table 8.2 shows the average annual daily traffic (AADT) count for Enosburgh’s major routes. Increases in daily traffic along routes are thought to be attributed to more commuters traveling through area as well as more seasonal traffic traveling to Jay Peak Resort. The Planning Commission also noted that Stonehouse Road and Davis Road are also seeing increases in traffic volume in recent years.

Route	Observation Point	1992 AADT	2002 AADT	2012 AADT	2018 AADT	% Change 1992-2012	% Change 2002-2012	% Change 2012-2018
105	Pearl St, just W of Church St	-	4200*	3800	3800	-	-9.5%↓	0.0%
105	Main St, between Depot St and W Main St	-	7600*	7900**	7300	-	4.0%↑	-8.8%↓
105	Elm St, between Pleasant St and Water Tower Rd	4900	7300	8400**	7600	71.4%↑	15.1%↑	-9.5%↓
105	Sampsonville Rd, between Boston Post Rd and Berkshire TL	3600	-	4300	4700	19.4%↑	-	9.3%↑
108	W Enosburg Rd, between Bakersfield TL and Tyler Branch Rd	1100	1400	1300	1400	18.2%↑	-7.1%↓	7.7%↑
108	W Enosburg Rd, between Tyler Branch Rd and Hayes Rd	1800	2000	1900	2000	5.6%↑	-5.0%↓	5.3%↑
108	Between Hayes Rd and Duffy Hill Rd	2300	2700	2400	2500	4.4%↑	-11.1%↓	4.2%↑

Source: VTrans, AADT 1975-2012 for VT State Highways; VTrans, 2018 (Route Log) AADTs State Highways

\*Count data from 2004, \*\* Count data from 2010.

**Table 8.2. A Comparison of Observed Average Annual Daily Traffic (AADT) Counts on Major Highways in Enosburgh (1992-2018)**

Route	Observation Point	1992 AADT	2002 AADT	2012 AADT	2018 AADT	% Change 1992-2012	% Change 2002-2012	% Change 2012-2018
105	Pearl St, just W of Church St	-	4,200*	3,800	3,800	-	-9.5%↓	0.0%
105	Main St, between Depot St and W Main St	-	7,600*	7,900**	7,300	-	4.0%↑	-8.8%↓
105	Elm St, between Pleasant St and Water Tower Rd	4,900	7,300	8,400**	7,600	71.4%↑	15.1%↑	-9.5%↓

<b>105</b>	Sampsonville Rd, between Boston Post Rd and Berkshire TL	3,600	-	4,300	4,700	19.4%↑	-	9.3%↑
<b>108</b>	W Enosburg Rd, between Bakersfield TL and Tyler Branch Rd	1,100	1,400	1,300	1,400	18.2%↑	-7.1%↓	7.7%↑
<b>108</b>	W Enosburg Rd, between Tyler Branch Rd and Hayes Rd	1,800	2,000	1,900	2,000	5.6%↑	-5.0%↓	5.3%↑
<b>108</b>	Between Hayes Rd and Duffy Hill Rd	2,300	2,700	2,400	2,500	4.4%↑	-11.1%↓	4.2%↑
Source: VTrans, AADT 1975-2012 for VT State Highways; VTrans, 2018 (Route Log) AADTs State Highways *Count data from 2004, ** Count data from 2010.								

**Condition of Roads.**

Sufficiency ratings are used by the VTrans to evaluate the State’s roadways. The rating is based on three different factors: structural condition, safety, and efficiency of movement. According to the VTrans 2008 Sufficiency Ratings, in Enosburgh sections of Route 105 has sufficiency ratings of poor to bad and Route 108 has sections of roadway with fair to poor ratings. Highways with sufficiency ratings in this range are candidates for repair. State highways are important segments of the transportation system; the municipalities should monitor this information and coordinate with VTrans on condition concerns.

As was noted in the 1993 Village Plan and again in the 2002 Plan, the Enosburg Falls Public Works Department is having difficulty keeping up with maintenance of the Village roads due to increases in traffic flow and lack of adequate funding. The 2007 Village Survey asked respondents to rate the quality of Public Works Department services with 1 being excellent and 5 being poor. While 42% gave the department a rating of 2 out of 5 and 15% a rating of 3 out of 5, 21% rated the Public Works Department at 4 and another 15% at 5. Residents in the 2002 Enosburg Falls Village Survey were asked to grade the quality of Village roads. 88% of those responding to the 2002 survey question said that streets were fair or poor. The results of these surveys clearly indicate that the improvement and maintenance of Village roads should remain a high priority for Village management.

Since this survey, Enosburg Falls was able to complete three paving and improvement projects from 2009-2012 with funding received from a 2005 Federal Transportation Earmark. Improvements were made on Dickinson Avenue, School Street, and Pleasant Street. In 2015, Enosburg Falls received a grant to upgrade and pave Duffy Hill from Island View Park to the Village/Town line. In 2019, the Village paved four roads: Hayes Farm Road, St. Albans Street,

Railroad Street, and Village Drive. In addition to paving projects, the Village repaired and added sidewalk along Pleasant Street in 2016.

**State and Town Bridges.**

In the town road system, the maintenance of the bridges is a tremendous asset to Enosburgh, drawing considerable tourist attention and adding scenic beauty to the area. Enosburgh has four (4) State bridges and eleven (11) Town bridges. The Village completed repairs to the Bridge of Flowers & Light in 2016.

VTrans also uses a sufficiency rating method to evaluate the conditions of the bridges. Bridges are ranked with a numerical score from one to one hundred, with one hundred being the best. A structurally deficient bridge with a rating less than 50.0 is eligible for federal replacement funding; a bridge with a rating of 50.0 to 80.0 is eligible for federal rehabilitation funding. Covered bridges and steel truss bridges often have lower sufficiency ratings even though they may be structurally sound. The lower rating may be due to a bridge’s width, low clearance or inability to carry heavy loads. Because covered bridges are a historic asset, they are not held to the same standards as other bridges. A lower sufficiency rating does not necessarily indicate replacement is needed. It should be noted that the town structure B48, is a temporary bridge and is currently in the VTrans Capital Budget and planned for replacement. Table 8.3 is a listing of State and Town bridges and their sufficiency ratings.

<b>Table 8.3. Bridge Sufficiency Ratings for State and Town Structures</b>						
<b>Bridge Owner</b>	<b>Bridge #</b>	<b>Route Carried or Road Name</b>	<b>Location</b>	<b>Feature Crossed</b>	<b>Year Built</b>	<b>Sufficiency Rating</b>
State	B46	VT 108	4.2 Miles South JCT. VT 105 W	Brook and Cattle Pass	1952	83.2
State	B47	VT 108	3.3 Miles South JCT. VT 105 W	The Branch	1952	77.4
State	B50	VT 108	0.2 Miles South JCT. VT 105 W	Missisquoi River	1970	78.6
State	B48	VT 108	2.6 Miles S JCT. VT 105 W	Tyler Branch	1998	94.4
Town	B52*	Hopkins Bridge Rd	JCT. W VT 118	Trout River	1998	34.8
Town	B45	Sand Hill Rd	0.2 Miles To JCT. C3 TH 43	Tyler Branch	1911	19.7
Town	B12	Boston Post Rd	JCT. VT 105	Missisquoi River	1929	59.2
Town	B09	Longley Bridge Rd	0.1 Miles To JCT. C2 TH 1	Beaver Meadow Brook	1919	97.9
Town	B48	Boston Post Rd	JCT. C2 TH 1	Tyler Branch	2014	--
Town	B11	Tyler Branch Rd	0.1 Miles To JCT. C2 TH 1	Beaver Meadow Brook	1919	76.2
Town	B49	Nichols Rd	1.1 Miles To	Beaver Meadow	1948	31.2



**Table 8.3. Bridge Sufficiency Ratings for State and Town Structures**

Bridge Owner	Bridge #	Route Carried or Road Name	Location	Feature Crossed	Year Built	Sufficiency Rating
			JCT. C2 TH 2	Brook		
Town	B50	E Bakersfield Rd	JCT. W CL 3 TH 43	Tyler Branch	1918	49.6
Town	B51	Tyler Branch Rd	0.5 Miles E JCT. TH 3	Tyler Branch	1980	85.9
Town	B10	Duffy Hill Rd	1.3 Miles S JCT. VT 108	Tyler Branch	1981	95.6
Town	B47	Boston Post Rd	0.1 Miles to JCT. C3 Th 42	Bogue Branch	1983	99.8

Source: VTTrans Bridge Sufficiency Ratings, \*Covered Bridge, originally built in 1875 and rebuilt in 1998.

***Pedestrian and Bicycle Facilities.***

Enosburg Falls has a network of sidewalks throughout the Central Business District and the High-Density Residential neighborhoods, which provide safe and accessible routes for foot traffic throughout the community. Most streets have sidewalks on both sides of the street for particular sections; see the Map 8.2 for a map of sidewalk facilities in Enosburg Falls. There is an annual appropriation voted for sidewalk construction and maintenance, which receives yearly allocations at the Enosburg Falls annual meeting. Recent sidewalk projects include the repair and addition of new sidewalk along Pleasant Street in 2016 and implementing a community supported effort to extend the sidewalk network to the Enosburgh Recreation Fields across from Hannaford’s, which is ongoing as of 2019. While the Village continues to work on sidewalk maintenance and construction annually, the Vital Village Master Plan (2019) noted that the condition of many sidewalks is poor.

Bicycle traffic in and around Enosburgh has increased in recent years. It has become a popular seasonal activity locally and in the surrounding areas. Enosburgh has become a favorite destination for both bicycle tours and road riders from Quebec, Canada and other parts of Vermont. On many of the local roads, the mixing of bicycles and auto traffic is potentially very hazardous. Local efforts to develop bicycle and pedestrian paths are currently underway in many communities in Franklin County including Enosburgh.

The Missisquoi Valley Rail Trail crosses Main Street in the center of the Village. This recreation trail spans from St. Albans City to Richford and is open to walkers, runners, cyclists, snowmobilers, cross country skiers and horseback riders. The Trail is part of a larger bicycle network known as the Lake Champlain Bikeways and is linked to a 350-mile route around Lake Champlain. *See the Recreational Facilities and Programs section in Chapter 7 for further discussion of the Rail Trail.*

The Enosburg Vital Village Project and a walk audit in June of 2019 with the national walkability expert Mark Fenton provided several recommendations to improve pedestrian and

bicycle facilities in the municipality, many of which are included in the recommendations for implementation.

**Complete Streets.**

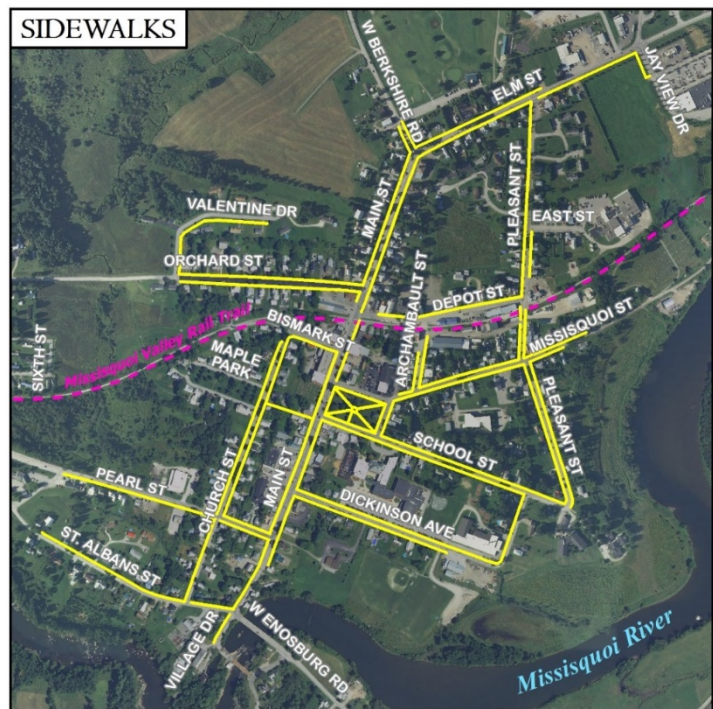
In 2011, Vermont enacted “**Complete Streets**” legislation, mandating that new and renovated paved roads be designed to safely accommodate motorists, bicyclists and pedestrians of all ages and abilities. Roadways that are planned and designed using a Complete Streets approach may include: sidewalks, bike lanes (or wide paved shoulders), comfortable and accessible public transportation stops, frequent and safe crossing opportunities, accessible pedestrian signals, curb extensions, and narrower travel lanes. It is important that all new road projects take a complete street approach to design and implementation.

**Public Transportation.**

Local public transportation via buses and vans is provided by Green Mountain Transit (GMT). Residents in the northeastern section of Enosburgh may connect with the fixed route service at locations along VT 105 in Enosburg Falls. GMT also coordinates Medicaid and elderly transportation service. GMT’s services are discussed further in Chapter 10 – Energy section of the Plan. Passenger bus service to destinations beyond Franklin County is available on Greyhound Lines from St. Albans.

Presently the nearest rail service for freight is in Richford (Montreal, Maine, and Atlantic Railway) and St. Albans (New England Central Railroad). Amtrak passenger service is available in St. Albans via a route that travels south to New York City and eventually Washington D.C.

**Map 8.2. Existing Sidewalk Facilities in Enosburgh**



The nearest airport is the Franklin County Airport in Highgate, which supplies local air service. Larger interstate and international flights are available at the Burlington International Airport, Plattsburgh International Airport, and at Mirabel and Trudeau airports in Quebec.

**Specific Transportation Issues.**

**Excessive Speed on Orchard Street and Other Streets.** Orchard Street acts as a de facto bypass to Main Street. It is used by cars as an alternate route to avoid congestion in the Central Business District. Excessive speed on Orchard Street as well as other streets is an issue and must be addressed. Excessive speed causes both a safety hazard and undue noise for a residential area. The Planning Commission will work with the Village Trustees in developing programs to slow traffic on Orchard and all other streets, to the posted speed limit.

**Vital Village Master Plan Implementation.** The Vital Village Master Plan (2019) was an extensive community strategic planning project, which resulted in recommendations relating to improving the vibrancy of Main Street and the safety and experience of pedestrians and cyclists. The first steps towards implementing 3 of the top-5 priorities of this plan is a scoping study for streetscape and wayfinding improvements to Main Street, the Missisquoi Valley Rail Trail intersection and Depot Street. The Village secured funds for this study through the Vermont Bicycle and Pedestrian Program and the study should be complete by the end of 2020.



*Rendering of a conceptual curb bump-out and other improvements to Main Street from the Vital Village Master Plan.*

**Intersection with Route 105 and Hannaford Shopping Center.** The intersection with Route 105, Watertower Road, and the Hannaford Shopping Center is unsignaled. The State of Vermont owns the Route 105 right-of-way and therefore is responsible for improvements. In 2007, the Village petitioned VTrans to evaluate the intersection to determine if it warranted a traffic light; however, VTrans maintains that the intersection does not yet warrant signalization. VTrans did make alternate improvements to the intersection including lowering the speed limit from 40 MPH to 30 MPH, and repainting the road marks on Route 105 and the intersection with Watertower Road. In addition, VTrans has posed the question to Enosburg Falls whether Watertower Road could be straightened to make a "T" at the intersection rather than a "Y" coming onto Route 105; Watertower Road is owned by Enosburg Falls and the village would be required to pay for such an improvement. No decision on this matter has been made.

***Goals, Policies and Recommendations.***

**GOALS**

- Provide for a safe, convenient, economic, and energy efficient transportation system that respects the natural environment and utilizes a variety of transportation modes.
- Maintain the physical state of municipal roads and associated infrastructure in good condition.
- Provide appropriate provisions for bicycle and pedestrian use on designated routes, including sidewalks, paths, proper signage and pavement improvements.

**POLICIES**

- Recognize the link between land use and transportation and coordinate transportation improvements to facilitate and complement the desired type, location, density, and timing of local development.
- Maintain good quality, safe local roads and streets, sidewalks, bridges, and equipment needed for their maintenance.
- Promote a safe, convenient, economic, and energy efficient transportation system for all users including public transit options and paths for pedestrians and bicycles.
- Pursue the implementation of “Complete Streets” designs whenever possible.
- Promote modes of transportation and activities that respect the natural environment.
- Maintain the scenic character of Enosburgh’s rural byways.
- Support public transit efforts of Green Mountain Transit Agency to increase mobility and access for Enosburgh residents.

## Chapter 9: Planning for Hazard Resiliency

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Hazard Mitigation is any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. Communities can engage in opportunities to identify mitigation strategies and measures during all phases of Emergency Planning including Mitigation, Preparedness, Response and Recovery. Hazards may not be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe and identify local actions that can be taken to reduce the severity of the hazard.

Hazard Mitigations Strategies and Measures **alter** the hazard by eliminating or reducing the frequency of occurrence, **avert** the hazard by redirecting the impact by means of a structure or land treatment, **adapt** to the hazard by modifying structures or standards or **avoid** the hazard by stopping or limiting development and could include projects such as:

- Flood-proofing structures
- Tying down propane/fuel tanks in flood-prone areas
- Identifying & modifying high traffic incident locations and routes
- Ensuring adequate water supply
- Elevating structures or utilities above flood levels
- Identifying & upgrading undersized culverts
- Proactive land use planning for floodplains and other flood-prone areas
- Proper road maintenance and construction
- Ensuring critical facilities are safely located
- Buyout & relocation of structures in harm's way
- Establish & enforce appropriate building codes
- Public information

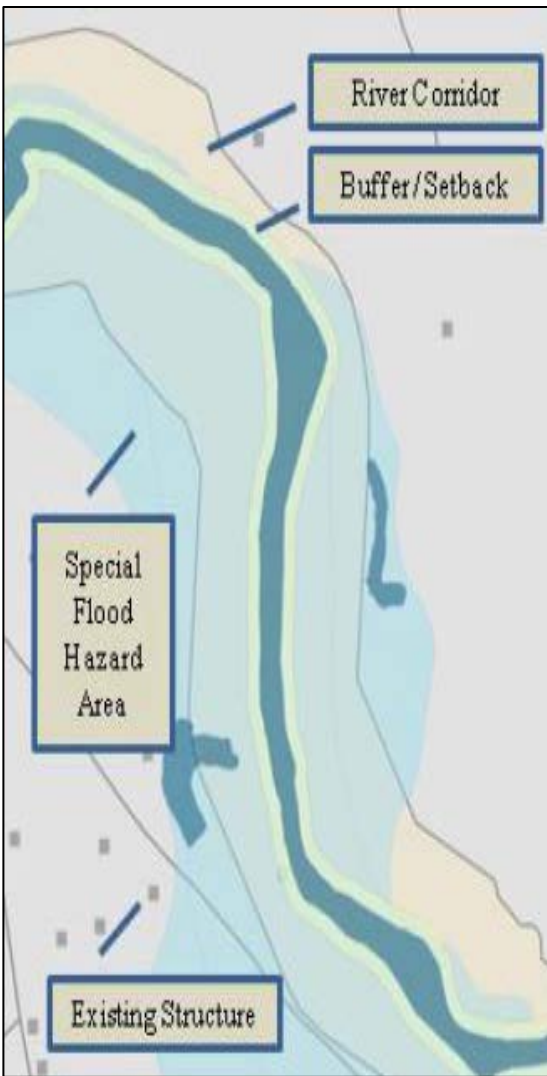
Both the Town of Enosburgh and the Village of Enosburg Falls are actively engaged in hazard mitigation planning; both communities are represented on Local Emergency Planning Committee District 4 serving Franklin County and are members of the Franklin County International Firefighters Association Mutual Aid. Additionally, the Town of Enosburgh adopted a Local Hazard Mitigation Plan (LHMP) on March 17, 2008 that evaluates potential risk to the community and strategies that address those risks. The LHMP evaluated just those natural and human made hazards that are likely to affect the community. The following are a list of hazards that have high to moderate risk for the community, including:

- Flooding
- Fluvial erosion/landslide
- High Winds
- Structure Fire
- Winter Storm

**Rising Waters.**

Enosburgh lies within the Missisquoi River watershed and has the Missisquoi River running through the northwest section of the Town and Village (see Map 9.1). The Tyler Branch, one of Missisquoi’s tributaries, flows through the southwestern part of the community and flows into Missisquoi in the neighboring Town of Sheldon.

Flooding has been identified as the worst natural hazard within the community. The Missisquoi River and many of its tributaries flood in the spring of each year when snow melts and the spring rains cause them to overflow their banks. Ice jams also cause flooding on the Missisquoi, contributing to field and bank erosion. Enosburgh’s LHMP lists the history of flood events in the community. Based on the USGS data on the Missisquoi River, several flood events greater than the 25-year flood have occurred over the last 20 years; a 25-year flood has a 4% chance of being exceeded in any one year.



**Figure 9.1. Depiction of the Special Flood Hazard Area, River Corridor and Riparian Buffers**

The Federal Emergency Management Agency (FEMA) defines a floodplain as an area of land adjacent to rivers and streams that is subject to recurring inundation.

Development within floodplains can have many potentially damaging consequences, as construction may obstruct the natural flow of water or displace soil and raise base flood elevations.

A strategy to mitigate potential encroachment and flood loss is to use river buffers or a delineated river corridor as a planning tool to reduce future development in these areas.

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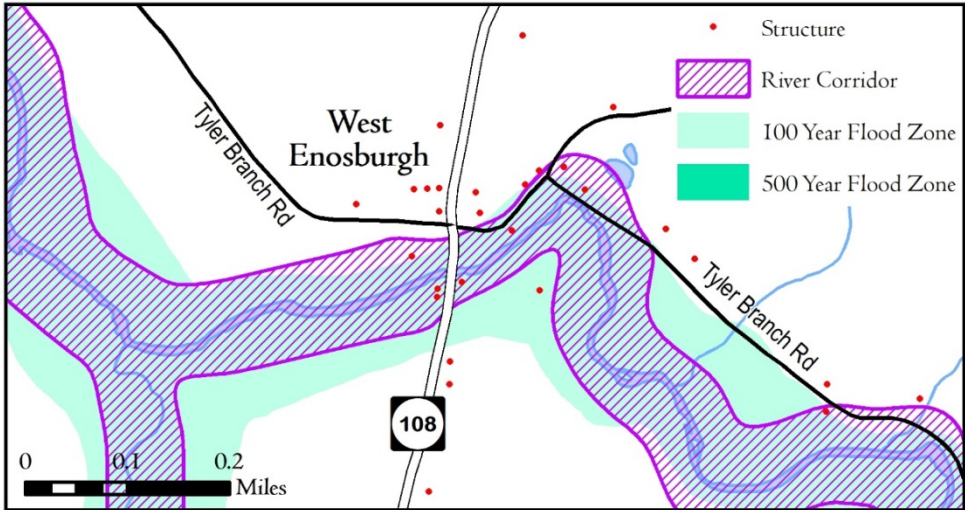
Flooding is a natural occurrence and happens when water rises and inundates the adjacent low-lying land. Residents of every town should be aware of the power inherent in a flood. Proper

management should be used to ensure that critical floodplain areas are being used appropriately. Development within floodplains poses significant risks and should generally be avoided. River channels and floodplains function as a single hydrologic unit, periodically transferring floodwaters and sediment from one to the other. Appropriate uses of floodplains are those that can accommodate this cycle and allow for areas where the rivers can access the floodplain during high flows. Examples of uses that are appropriate to floodplains include agriculture, open space, and recreation.

**Structures in Floodplain.**

The Federal Emergency Management Agency (FEMA) provides flood insurance under the National Flood Insurance Program (NFIP). In order for property owners to participate in the NFIP, FEMA requires that communities adopt flood hazard regulations. Owners of buildings within the designated special flood hazard areas (SFHA) are required to carry flood insurance in order to get a federally backed mortgage. Both the Town of Enosburgh and the Village of Enosburg Falls have adopted land use regulations for flood hazard areas in order to protect the health, safety, and welfare of its residents and to allow the community to participate in the National Flood Hazard Insurance Program. As of September 2013, property owners in the Town of Enosburgh have 4 flood insurance policies through the NFIP covering \$879,200 and 3 flood insurance policies covering \$557,000 in value are within the Village of Enosburg Falls. Currently there are four policies in force for structures in the Special Flood Hazard Area. Since the community participates in the NFIP, flood insurance is available to any structure in town regardless of previous losses. Insurance information is available at [www.floodsmart.gov](http://www.floodsmart.gov).

It is important to note that the existing Flood Insurance Rate Maps (FIRMs) are dated January 2, 1981 and Flood Insurance Study was published in December 1979. While this information is the best available, the hydrology that these maps are based on has not been updated since the study in 1979 and therefore does not account for shifts in the river location or effects of development since 1979 in these areas. The FIRMs were digitized by the Northwest Regional Planning commission in 1999 to assist in planning efforts and are used to determine approximate locations. The digital version is not used for regulatory rulings.



**Figure 9.2. Enosburgh e911 Structures in Flood Hazards and River Corridor Area**

There are currently twenty-three structures that reside within the Special Flood Hazard Area (Zone A or 100-year floodplain) based on a GIS overlay analysis using e-911 structure locations (December 2012) and the digitized 1981 Flood Insurance Rate Maps. These structures have a 1% change of flooding. The structures include one multi-family dwelling, four mobile homes, one commercial property and seventeen single-family dwellings. Any mortgages, grants, or loans (including disaster aid) for a structure in the Special Flood Hazard Area must secure flood insurance.

Additionally, seven structures are identified to be within the extent of the 0.2% annual chance flood hazard (Zone B or 500-year floodplain). These include one camp, two industrial sites, and four single-family dwellings. One of the industrial sites is a village owned building on Village Drive. Federal capital funds may not be invested in facilities located within the 0.2% and 1% annual chance flood hazard areas.

Structures located within Zones A and B represents 2% of all structures in the community. The utility of these facilities before, during, or after flooding may be impaired therefore Enosburgh should identify the impact to community services should these structures be at risk from flooding.

**What is a River Corridor?**  
*Rivers are very dynamic and have the ability to change course and create new channels or widen the existing channel. A river corridor includes lands adjacent to and including the channel of a river. A corridor defines the land area where the river will move into overtime as it naturally changes its course.*

***Fluvial Erosion in the River Corridor.***

Fluvial erosion, erosion caused by the lateral and vertical movement of streams and rivers, and landslides are becoming more common within the Northwestern region of Vermont. The VT Department of Environmental Conservation recommends that the community identify *River Corridors*, or the area along the larger tributaries and rivers, that are susceptible to stream channel adjustment in order to reduce the risk of erosion damage. Historic land uses along the river and its streams including floodplain encroachments and vegetative debris removal have increased the risk of erosion and landslides.

In 2005, a Phase 2 Stream Geomorphic Assessment in the Tyler Branch watershed was performed to map the river corridor and infrastructure (bridges and culverts) were assessed to identify those that are at risk from river adjustment. The assessment noted that nearly all of the reaches have a sensitivity of high to very high with the potential for further widening of the stream channel and bank erosion; because of this many areas of the river have layered the bank with large rock to limit the potential areas of bank erosion. This method, called rip-rap, can increase the speed of the water which also adds to the strength of the flow and increasing erosion potential in unprotected areas.

The geomorphic assessment recommends that areas with limited riparian buffer, those most sensitive to further widening, should be targeted for buffer reestablishment and/or active bank



stabilization to limit potential property loss from erosion. Also, bridges that are slightly undersized act as local channel and floodplain constrictions and should be upgraded. Since 2005, the Town and the Missisquoi River Basin Association have been considering restoration and corridor protection projects identified within the assessment.

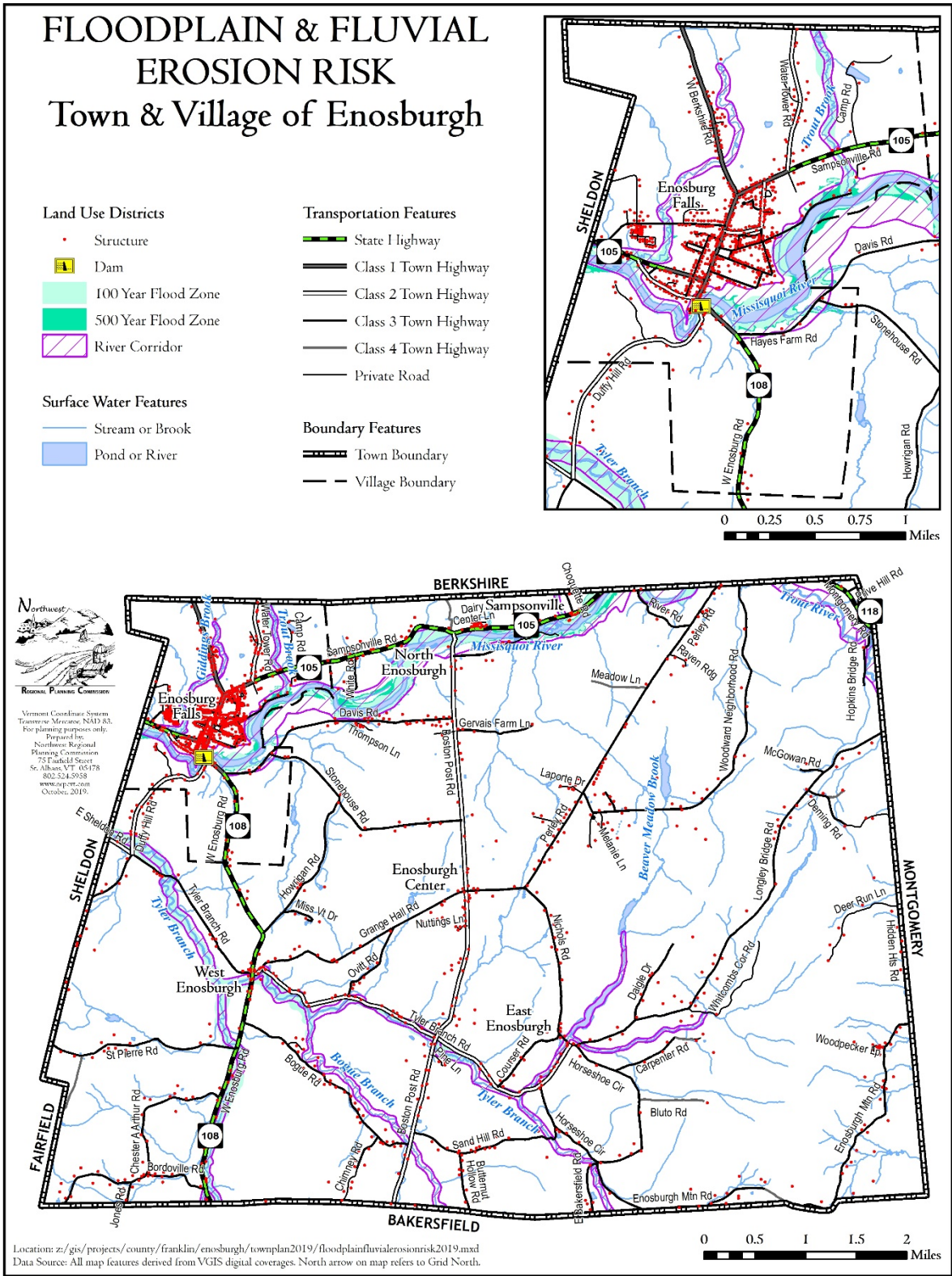
Infrastructure placed too close to streams and rivers is particularly exposed to damage from flash flooding, bank failure, and stream channel dynamics. Fifteen structures fall within the River Corridor along the Tyler Branch including one camp, one government facility, three mobile homes, and ten single-family dwellings. The Town Highway system within the watershed has experienced many erosion events during periods of high precipitation and rapid run-off along roads within proximity of Tyler Branch and its tributaries including: TH-30 along Bogue Brook; TH-1 along Tyler Branch; TH-1 and TH-7 along Beaver Meadow Brook; VT 108 along The Branch. Erosion concerns are also present along the Missisquoi River, one problem areas is near the Dairy Center along 105 which has riprap along one bank.

**Past Flood Damage**

On July 14–16, 1997, flooding in northern Vermont caused severe local damage and resulted in a Presidential disaster declaration (FEMA-1184-DR-VT). The erosion and deposition were significant at numerous locations. Local officials and residents were concerned that the accumulation of sand, gravel, and cobbles in stream channels magnified the severe flooding. Currently, Vermont and Federal stream management policies restrict the removal of these materials. The flood of 1997 exacerbated an already serious river erosion problem. Historic land use changes, channel management practices, and floods had resulted in an extremely unstable river system.

Northern Vermont experienced record rainfalls during the spring of 2011 (DR1995 and DR4043). High precipitation combined with snowmelt resulted in prolonged saturated conditions and significantly elevated and/or perched water tables. The saturated ground and high water table conditions contributed to slope instability and landslides at several locations throughout northern Vermont.

There are many areas throughout Town where stream bank erosion is causing in – stream sedimentation. It is noted in the 2007 Geomorphic Assessment of Rock River and tributaries that stormwater runoff and sedimentation would be decreased following road maintenance practices such as stabilization of road surfaces (different gravel materials), improvement of roadside ditches (excavation, stone lining and/or seeding and mulching), alternative grading practices (turnouts, check-basins); re-orientation of culvert crossings; and protection of culvert headers. In agricultural settings, increased flows from drainage tiles, ditches and erosional gullies can be addressed through design and retrofitting of tile networks to provide for energy dissipation at tile outlets; gully stabilization; and consideration of crop rotation or alternative farming practices that reduce the need for drainage tiles.



**Map 9.1. Floodplain and Fluvial Erosion Risk in Enosburgh**

The Town of Enosburgh and Enosburgh Falls Village have mapped fluvial erosion hazards (see Map 9.1). Fluvial erosion and landslide hazard maps could be used as a tool for communities to guide development away from areas that pose a high risk of erosion and landslides. Additionally, to mitigate the rates of erosion, riparian buffers of woody vegetation could be cultivated along stream banks. Selective armoring of the lower portions of stream banks would very likely be needed until a dense root system of vegetation develops along banks. Currently, several working farms within Town utilize buffer strips to mitigate erosion along streams. The town has incorporated defined buffers into their development regulations that protect a distance around rivers and ponds from development.

**High Winds.**

High winds can occur anytime and in any area of Enosburgh during the year as pressure gradients move through the area. The area has experienced a variety of high winds from storm systems that track from eastern New York and Ontario and across Lake Champlain. Enosburgh is far inland and is unlikely to receive a direct hit from a hurricane, however high winds and hail storms are typically an accompanying hazard. Localized high wind events have caused damage to sugarbushes in the area.

Power outages may occur resulting in significant loss of business as well as threatening public safety. Cleaning up debris following high wind events can be costly depending on the severity of the event. While there have been several tropical storms in the last decade, high winds have not led to significant reported damages in the community.

**Structure Fires.**

Structure fires can occur anywhere and be a threat whether it is in the village center or the rural countryside. Agriculture emergencies, such as barn fires, pose a unique risk for first responders. Animal behavior and barn fire logistics must be considered during response and many agricultural buildings store a variety of hazardous materials. Structures that are relatively close raise the risk for multiple structure fire.

- Since 2000 there have been three notable fires that have impacted public facilities:
- November 5, 2007 – A fire at the Historic Dairy Center complex on Route 105 destroyed the main office, two motel units, and damaged other facilities. The cause of the fire was not determined and damages were estimated to be \$165,000.
- In 2005, a fire occurred in the Depatie and Abbott blocks of the Village Center. The fire completely destroyed two blocks of retail, business and housing; this area has since been rebuilt.
- In 2000, a fire destroyed the Dairy Center’s banquet and dance hall. A wood stove caused the blaze. There was an estimated \$70,000 in damages.

The impact of this type of incident would primarily be on the commercial sector with a smaller impact on housing. Newer public facilities, such as the Enosburgh Public Safety building, are subject to fire safety building codes and are designed with heat/smoke detection systems.

Estimated loss due to fire damage on 5 structures annually using median home values is \$412,500. This loss estimate does not include building contents nor losses to commercial or lodging sites. Older historic buildings, commercial sites and residences that lack fire alarms and sprinkler systems are at greater risk for damages. The Fire Department has noted the concern of adequate water capacity in the Village; this concern should be taken into consideration for planning and response purposes.

**Winter Storm.**

Winter storms bring snow, ice and freezing temperatures to the area and occur on annual basis. Winter storms affect all of Enosburgh and generally cause disruptions to public and private services. The primary impacts of a storm typically include the disruption to transportation networks, school closings and occasionally telecommunications and power outages. Vulnerable populations such as the elderly, those dependent on medical equipment and specialized health or physical care are at risk to winter storms. Also at risk are farms and associated structures and livestock.

Since 2000 there have been four major events:

- March 5<sup>th</sup> & 6<sup>th</sup>, 2001 - Enosburgh received 16” of snow. The storm began early Monday morning with a brief burst of snow then transitioned during the midday hours to intermittent light snow, sleet, freezing rain and rain. The storm developed into a nor’easter during the afternoon and continued through the evening. Damage estimates for cleanup are unknown.
- October 25, 2005 - A rare autumn Nor’easter struck Franklin County fed by the remnants of Hurricane Wilma. There were reported snowfall amounts in the County varied from 6 to 14 inches. Trees still laden with fall foliage were downed due to the weight of heavy, wet snow. There were many reports of snapped power lines from downed trees and branches. Many homes serviced by Vermont Electric Cooperative were without power for several days.
- December 1-5, 2010 - Severe winter storms during this period received a Presidential disaster declaration (DR 1951) to supplement state and local recovery efforts. FEMA’s public assistance funds were made available to Franklin and other affected counties.
- December 20-26, 2013 - (DR-4163) A wide-spread low-pressure system that brought snow and freezing rain through Ontario, Quebec, and Northern New England. These areas experienced an ice storm that brought wide-spread power outages. Many Towns throughout Franklin County were affected by the ice storm. Vermont Electric Cooperative responded to over 60,000 customer outages during the week and estimated costs of restoring power at \$7,400,000. Residents were without power for several days.

Severe winter storms are accompanied by strong winds creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chill. Strong winds with these intense storms and cold fronts can knock down trees, utility poles, and power lines. Extreme

cold often accompanies a severe winter storm or is left in its wake. Prolonged exposure to the cold can cause frostbite or hypothermia and become life-threatening. Infants and elderly people are most susceptible. Severe winter storms can bring heavy accumulations of ice which can down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days while utility companies work to repair the extensive damage. Even small accumulations of ice may cause extreme hazards along roadways.

***Risk from Community Infrastructure - Dams.***

The Village of Enosburg Falls Electric Department owns and operates two hydroelectric dams on the Missisquoi River. The Village of Enosburg Falls Electric Department has conducted a safety analysis on the dam which considers downstream impacts to a dam breach or failure. Projected impacts are minimal according to the analysis. Any future dam safety analysis should be reviewed to ensure that the municipality implements any recommendations for local mitigation actions.

Major in-stream infrastructure like dams, even small dams on small streams, have significant impacts on fish and other aquatic life and can lead to stream instability by disrupting the natural downstream transport of sediment.

***Past and Future Mitigation Actions.***

The following sites were identified in the LHMP as problematic areas and have since been addressed:

- Culvert on Town Highway (TH)-1 (Perley Road), 0.5 mile North of the intersection with TH-11
- Bridge 48 on TH-2 (Boston Post Road)
- Bridge 9 on TH-7 (Longley Bridge Road)
- Bridge 49 on TH-1 (Nichols Road)
- Concrete bridge on TH-30 (Bogue Road)

The following sites have been identified as repetitive problems or maybe at risk in future events. These areas have been included in the LHMP update:

- Box culvert on unnamed tributary of Tyler Branch on TH-1 (Tyler Branch Road), 0.5 mi from VT 108
- Road reconstruction on TH19 (Tyler Branch Road) and TH18 (Duffy Hill Road)
- Bridge 45 on TH-42 (Sand Hill Road)
- Bridge 50 on TH-2 (VT 108) over the Missisquoi River
- Box culvert on TH22 (Nichols Road)

***Goals, Policies and Recommendations.***

**GOALS:**

- Encourage and foster an all hazards disaster resilient community.
- Reduce the loss of life and injuries that result from disasters.
- Reduce damages to public infrastructure resulting from all hazards events through hazard mitigation planning and project implementation.

**POLICIES:**

- Encourage flood emergency preparedness and response planning.
- Encourage the protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion.
- Continue to implement the Local Hazard Mitigation Plan and Emergency Operations Plans in conjunction with the NRPC and others.
- Participate in the Franklin County Mutual Aid Agreement.
- Resiliency measures will be compatible with natural features, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forests, historic resources; character of neighborhoods; and the capacity of the community to implement them.

# Chapter 10: Energy

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## ***Enhanced Energy Plan.***

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further regional and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (90 x 50 goal), and the following:

- A. *Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);*
- B. *Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;*
- C. *Vermont's building efficiency goals under 10 V.S.A. § 581;*
- D. *State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and*
- E. *The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005; and*

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Enosburgh to achieve “substantial deference” instead of “due consideration” in Section 248 applications for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that Enosburgh will have a greater “say” in Certificate of Public Good proceedings before the Vermont Public Service Board about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and must contain the following information:

- A. An analysis of current energy resources, needs, scarcities, costs, and problems.
- B. Targets for future energy use and generation.
- C. “Pathways,” or implementation actions, to help the municipality achieve the established targets.
- D. Mapping to help guide the conversation about the siting of renewables.

This chapter will include the required analysis, targets, and mapping. The “pathways,” or actions, have been included in the implementation section of the municipal plan.

## ***Energy Resources, Needs, Scarcities, Costs and Problems.***

The following subsection reviews each energy sector of energy use (thermal, transportation, electricity) and generation in Enosburgh.

### Thermal Energy

An estimate of current residential thermal energy demand in Enosburgh, based on data from the American Community Survey (ACS 2011-2015), is shown in Table 7.1. This data represents the

homes primary fuel source for home heating and does not account for backup or secondary home heating fuel sources. The data shows that 47.6% of households in Enosburgh depend on fuel oil for home heating as their primary fuel source. Fuel oil and wood sources are estimated to heat almost 75% of homes in Enosburgh. There is access to natural gas in Enosburgh Falls, but only 127 households use this as their primary heating source.

**Table 10.1. Current Enosburgh Residential Thermal Energy Use**

Fuel Source	Enosburgh Households (ACS 2011-2015)	Enosburgh % of Households	Enosburgh - Households Square Footage Heated	BTU (in Billions)
Natural Gas	127	10.8%	191,120	11
Propane	128	10.9%	202,176	12
Electricity	16	1.4%	28,352	2
Fuel Oil	557	47.6%	881,008	53
Coal	7	0.6%	8,400	1
Wood	316	27.0%	572,800	34
Solar	0	0.0%	0	0
Other	20	1.7%	31,744	2
No Fuel	0	0.0%	0	0
<b>Total</b>	<b>1171</b>	<b>100.0%</b>	<b>1,915,600</b>	<b>115</b>

Estimates for commercial and industrial thermal energy use are more difficult to calculate. An estimate of total commercial energy use (thermal and electricity) is provided in Table 7.2. Based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 65 billion BTU per year, is likely to be for thermal energy needs.

**Table 10.2. Current Enosburgh Commercial Energy Use**

	Commercial Establishments in Enosburgh (VT DOL)	Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)	Estimated Thermal Energy BTUs by Commercial Establishments in Enosburgh/year (in Billions)
<b>Municipal Commercial Energy Use</b>	89	0.725	65

Electricity Use

An estimate of current electricity use in Enosburgh is shown in Table 7.3. Enosburgh electricity use has increased from 26 million kWh in 2014 to about 26.7 million kWh in 2016. However, during this time average annual residential usage per household dropped from 8,704 kWh to



8,644 kWh between 2014 and 2016. Much of the increased growth in total kWh in Enosburgh between 2014 and 2016 has come from increased commercial and industrial users.

The Village of Enosburgh Falls Electric Department is the electric utility that serves the vast majority of the village and town. Vermont Electric Coop is the electricity utility serves very limited portions of Enosburgh near East Berkshire and Montgomery.

**Table 10.3. Current Enosburgh Electricity Use**

Use Sector	Current Electricity Use in Enosburgh - 2016 (Efficiency Vermont)
Residential (kWh)	13,195,444
Commercial and Industrial (kWh)	13,597,360
Total (kWh)	26,792,804

**Table 10.4. Current Enosburgh Transportation Energy Use**

Transportation Data	Enosburgh Data
Total # of Passenger Vehicles (ACS 2011-2015)	2,090
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	23,734,040
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
Total Gallons Use per Year	1,276,024
Transportation BTUs (Billion)	154
Average Cost per Gallon of Gasoline in 2016 (NRPC)	2.31
Gasoline Cost per Year	2,947,615

Transportation

Table 7.4 contains an estimate of transportation energy use in Enosburgh. It’s estimated that Enosburgh residents drive approximately 23.7 million miles per year and spend about \$2.9 million on transportation fuel expenses a year. This calculation does not include expense for commercially owned and operated vehicles.

As of January 2016, data from the Vermont Department of Motor Vehicles notes that there are between 1 and 4 electric vehicles within the Enosburgh zip code (which includes parts of Berkshire, Sheldon, and Bakersfield).

Generation

There is currently 2.29 MW of electricity generation capacity from renewable generation facilities in Enosburgh. This capacity results in approximately 7,372 MWh of electricity generation per year. This is roughly equal to the annual electricity use of about 1,100 households in

Vermont based on information available from the U.S. Energy Information Administration (558 kWh per VT household per month).

Table 7.5 organizes information about existing generation in Enosburgh by type of facility. The Existing Generation map at the end of the chapter shows the location of all electricity generators in Enosburgh with a capacity greater than 15 kW.

Enosburg Falls, along with the western and northern parts of Enosburgh along VT Route 105 and VT Route 118, generally have good access to electricity transmission lines and three-phase

distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. Access to this type of infrastructure may make development of renewable energy facilities easier and more cost-effective in than in other surrounding communities with less existing grid infrastructure. The Transmission Infrastructure Map at the end of the chapter shows the electricity transmission and three-phase distribution infrastructure in Enosburgh. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

**Table 10.5. Existing Renewable Generation in Enosburgh**

<b>Generation Type</b>	<b>MW</b>	<b>MWh</b>
<b>Solar</b>	0.29	355.66
<b>Wind</b>	0.00	8.58
<b>Hydro</b>	2.00	7,008.00
<b>Biomass</b>	0.00	0.00
<b>Other</b>	0.00	0.00
<b>Total Existing Generation</b>	2.29	7,372.24

**Targets for Energy Use.**

Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and generation to meet the State of Vermont’s 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan ([www.nrpcvt.com](http://www.nrpcvt.com)).

Tables 7.6, 7.7 and 7.8 show the targets for future energy use for Enosburgh by sector (totals are cumulative). These municipal targets are based on regional targets that have been disaggregated.

The thermal target for Enosburgh in 2050 is to have 85% of structures be heated by renewable sources. Much of this transition is likely to come in the form of electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. The target also relies on wood heating being a continued source of residential heating. There are also high targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

**Table 10.6. Thermal Targets**

<b>Thermal Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
<b>Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)</b>	44.3%	57.3%	85.0%
<b>New Efficient Wood Heat Systems (in units)</b>	6	16	59
<b>New Heat Pumps (in units)</b>	122	293	578
<b>Percentage of municipal households to be weatherized</b>	5%	16%	78%
<b>Percentage of commercial establishments to be weatherized</b>	25%	49%	73%

The transportation energy targets for Enosburgh are similarly ambitious. By 2050, almost 91.7% of transportation energy will need to come from renewable sources. This will primarily be done through conversion to electric vehicles from fossil fuel vehicles for light-duty, passenger

vehicles. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. The biodiesel technology and infrastructure will certainly need to advance and evolve in order to meet this target.

**Table 10.7. Transportation Targets**

<b>Transportation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
<b>Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)</b>	12.4%	35.7%	91.7%
<b>Electric Vehicles</b>	183	1369	3258
<b>Biodiesel Vehicles</b>	493	984	1906

Targets for electricity use are more complex to interpret. Electricity use is targeted to double by 2050 (Table 7.8). This will likely be driven by conversions to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels. So while the doubling of electricity use is the target, then intent is to continue to work towards electricity conservation while becoming more reliant on electricity for transportation and heating. To truly assess whether or not Enosburgh has achieved this target, it will need to assess both parts of the targets, conservation and conversion, in the future.

**Table 10.8. Electricity Targets**

<b>Electricity Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
<b>Increased Efficiency and Conservation (BTUs)</b>	25.2%	48.3%	100.7%

***Targets for Energy Generation.***

Table 7.9 shows the electricity generation targets for Enosburgh in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (21,783.1 MWh) is about 3 times the current generation capacity (7,372.24 MWh) within the Town of Enosburgh.

**Table 10.9. Generation Targets**

<b>Renewable Generation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
<b>Total Renewable Generation Target (in MWh)</b>	7,188.4	14,376.8	21,783.1

Enosburgh has sufficient land to meet the above generation targets based on mapping completed by NRPC. Based on mapping and calculations completed by NRPC, Enosburgh has access to the generation capacity outlined in Table 7.10. This generation capacity was calculated using the “base” layers for solar and wind. For an explanation of what constitutes a “base” layer, please see the mapping subsection below.

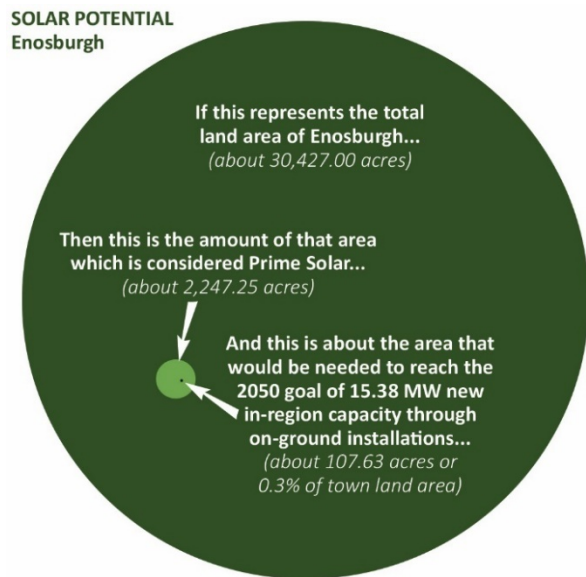
**Table 10.10. Renewable Generation Potential**

Resource	MW	MWh
<b>Rooftop Solar</b>	2	1,982
<b>Ground-mounted Solar</b>	461	565,299
<b>Wind</b>	176	539,831
<b>Hydro</b>	0.004	14
<b>Biomass and Methane</b>	0	0
<b>Other</b>	0	0
<b>Total Renewable Generation Potential</b>	<b>639</b>	<b>1,107,125</b>

Enosburgh supports NRPC’s position regarding “commercial” and “industrial” wind facilities. The NRPC Regional Plan finds that the construction of new “industrial” or “commercial” wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an “industrial” or “commercial” wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Enosburgh encourages the use of these sources for electricity and thermal generation, especially on farms.

**Figure 10.2. Ground Mounted Solar Potential**



**Figure 10.1. Rooftop Solar Potential**

Rooftop solar was estimated by using methods suggested by the Vermont Department of Public Service. The methodology estimates that 25% of residential and commercial structures in Enosburgh could be suitable for rooftop solar generation. This results in 293 residential structures and 22 commercial structures in Enosburgh. It is then estimated that the average residential rooftop system is 4 kW in size and the average commercial rooftop system is 20 kW in size. The resulting estimated generation capacity is 1.62 MW of solar generation.

**Mapping Energy Resources and Constraints.**

Enosburgh has incorporated maps provided to them by NRPC in Appendix D. These maps show data as required by the Department of Public Service Determination Standards, including access

to energy resources and constraints to renewable development, and are a required element of enhanced energy planning. All maps may be found at the end of this section.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When a generation facility is proposed, it is the applicant’s responsibility to verify the presence of all constraints on site as a part of the application.

**Mapping Methodology.**

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass “potential.”

“Known” and “possible” constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table 7.11. The known constraints and possible constraints used to create the maps include constraints that are required per the State Determination Standards from the Department of Public Service and regional constraints that were selected by NRPC. The Conservation Districts for both Enosburgh and Enosburg Falls were included as regional known constraints.

**Solar and Wind.**

The solar and wind maps show both “base” and “prime” areas. Base areas are areas with generation potential, yet may contain possible constraints. Prime areas are areas that have generation potential that do not contain known or possible constraints. Areas that do not contain generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general concentration of base and prime solar areas around the northern portion of VT Route 105, and in the vicinity of Enosburgh Center. Enosburgh has identified the following preferred locations for solar generation facilities: rooftops, parking lots, and landfills. Brownfield sites located outside of the village are also considered preferred locations.

There generally isn’t much land available in Enosburgh that has base and prime wind resources. These areas are generally concentrated west of Enosburgh Center and on the lower western slope of Enosburgh Mountain.

**Hydro and Biomass.**

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays “base” and “prime” areas. However, these categories are not necessarily indicative of

generation. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites.

Enosburgh has one existing dam site. The dam, owned by the Village of Enosburgh Falls, is located on the Missisquoi River and currently generates electricity for the Village Electric Department.

**Conclusion.**

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Enosburgh is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, less costly, and more secure energy future.

**Goals, Policies and Recommendations.**

**GOALS:**

- Plan for increased electric demand with the support of Efficiency Vermont.
- Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
- Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips, increasing the amount of pedestrian and bicycle commute trips, and increasing public transit ridership.
- Focus growth within and adjacent to the village.

**POLICIES:**

- Enosburgh supports energy conservation efforts and the efficient use of energy across all sectors.
- Enosburgh supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
- Enosburgh supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from Enosburgh to other parts of the region and considering access to public transit when reviewing Act 250 applications.
- Enosburgh supports the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan.

Development of generation in identified preferred locations shall be favored over the development of other sites.

- Enosburgh supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
- Support local farms and the local food system.

# Chapter 11: Economy

### Introduction.

Enosburgh’s geography as a central location in Franklin County and its distance from larger towns and cities has led to its historic and current role as a regional center. The village is characterized by a traditional Main Street with a rich historic legacy consisting of a variety of brick, block-style buildings intermixed with historic New England architectural styles. Retail is the dominant sector of the local economy, but agriculture remains important.



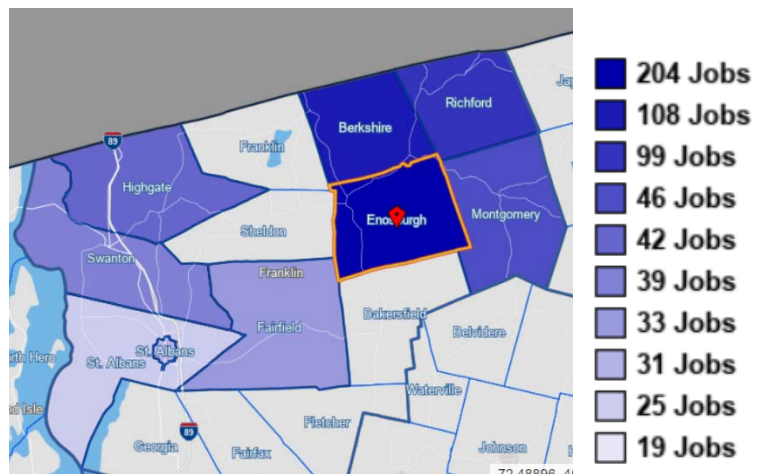
Main Street Retail Establishments in Enosburgh Falls.

### Employment, Business and Industry.

Workers coming to Enosburgh for employment largely pull from Franklin County. Figure 11.1 depicts the communities where the majority (66%) of the workers employed in Enosburgh live. The distribution of workplaces for Enosburgh residents is far more diffuse geographically. Notably, 19 percent of Enosburgh’s workforce commutes to the Burlington area, while 17 percent commutes to St. Albans.

Enosburgh has a variety of businesses that serve both local needs and the needs of its surrounding areas. A complete listing of the sectors and the number of persons employed by each can be found in the Figure 2.6. According to a 2019 market assessment completed Doug Kennedy Advisors, there are approximately 98 businesses in the village. Retail accounts for 27 percent of all business establishments and 23 percent of total employment.

Figure 11.1. Enosburgh Commuter Shed



Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2011.

One of the bigger employers in Enosburgh is Franklin Foods, the cheese processing plant which employs over one hundred persons. Two of the service-orientated businesses that contribute significantly to the local economy are in the health care field and transportation. In the health care services sector are the



Riverbend and Brownway nursing and boarding care facilities. There is also the Northern Tier Center for Health (NOTCH) health center, which houses several health care professionals and practitioners, as well as Northwestern Pediatrics, Cold Hollow Practice and Franklin County Home Health Agency.

The transportation sector has a considerable impact on the local economy. There are four companies in Enosburgh which together provide nearly two-hundred full-time and part-time positions. Most of these companies are involved in the hauling of bulk milk. Some provide miscellaneous trucking services and one provides school busing for the districts in eastern and central Franklin County. While not all the jobs are based in Enosburgh, the fact that they are part of operations headquartered in Enosburgh is significant. Of special note is the close relationship between the transportation sector and the local dairy sector. The most prominent businesses in this sector are McDermott’s Milk Transport, Richard I. Green Trucking, Vaillancourt’s, and Wrightholm.



Above: The Gervais Farm (Photo Credit: Janice Geraw).

Other large employers in Enosburgh include the Enosburgh School District, Hannaford’s Supermarket, the Enosburgh Municipal Electric Co, and dairy farming.

**Agriculture.**

The economy of the Northwest Region, particularly with regard to land use, remains predominantly rural and resource-based. According to the 2017 Agricultural Census,

the number of farms in Franklin County declined, but only by 7 farms or less than 1%. The amount of land in farms increased by a small percent with an increase in average farm size as well.

Agriculture is extremely important to the regional and local economy. The agricultural industry exports goods from the Region and imports new dollars into the local and regional economy. Local farm operators tend to rely on other local businesses for their needs. By keeping things local, every new dollar brought into the area increases in value as it circulates. Agricultural related companies have located in the Village to capitalize on proximity to the region's farms; these companies include McDermott Trucking, Vaillancourt Trucking, and Franklin Foods Inc.

The Town of Enosburgh is known as the “Dairy Center of the World.” Its importance as one of the most agricultural communities in the State of Vermont has only slightly diminished. Although several of the smaller farms are no longer being operated, much of the land is still in agricultural use, generally by the larger farms. There are still many working dairy farms in the Town. In addition, there are also beef, goat, horse and vegetable farms as well as several logging and maple sugar operations of varying size. During the summer months, there is a farmer’s market in Lincoln Park where local farmers can sell their products.



**Above: Old fashioned power with a little modern machinery.**

The strong agricultural base that is present in Enosburgh easily lends itself to the current trends in agritourism combining agriculture and tourism; this not only results in additional support for that farm’s business but also greater appreciation of the land and knowledge of local agriculture. Agritourism along with value-added products could provide local businesses with a source to diversify their farming venture and maintain a sustainable business.

***Forestry.***

Enosburgh is in close proximity to several commercial mills. Within a sixty-mile radius, within the United States, there are 5 hardwood mills, 4 softwood mills, 1 concentration yard and several portable saw mills. On average, 70% of the Vermont forest harvest comes from the northern part of the state, due to better access to markets. Maple syrup production is high in the region and has increased significantly over the past decade in Enosburgh and neighboring communities. The economic benefits that the forest industry provides to the state, particularly in the rural areas, are greater than any single industry or segment of the economy. The managed use of our forests will continue to provide jobs in logging and primary wood processing, and wood products manufacturing. The goal should be to capture as much value from locally grown timber as possible in the local economy.

***Tourism.***

Tourism is an important component of Vermont’s economy and generates revenue from retail sales, accommodations, restaurants, and supports jobs in tourism-related businesses. In rural areas, the traditional landscape pattern of open fields surrounded by wooded hedgerows with a backdrop of wooded hillsides has the potential to attract visitors to Enosburgh.

The Village Center contains well preserved historic structures and features, as well as local businesses selling services and “Vermont” products. Investment in pedestrian infrastructure has made it possible for tourists to leave their cars and enjoy the Village safely on foot. In order to encourage this activity, marketing materials describing self-guided “walking tours” of the Village could be developed in collaboration with local businesses, the Historical Society, and economic development interests.

The promotion of the natural environment and outdoor recreation opportunities serves as both a draw to the resource and brings awareness to their importance. Fishing and paddling opportunities can be found along the Missisquoi River and Tyler Branch. Paddlers also access the Northern Forest Canoe Trail, which passes through the Village along the Missisquoi River linking 740 miles of waterway across New York and northern New England. Walkers, bikers, cross country skiers and snowmobilers can take advantage of the Missisquoi Valley Rail Trail; a 26.4mile recreation trail that crosses the countryside and funnels travelers into the village. Trails such as this provide significant environmental, transportation, health and economic benefits.

The Vital Village Project (Figure 11.2) provides specific recommendations for attracting more tourists, particularly Canadian tourism opportunities. Increasing the wayfinding and marketing around the MVRT was also a primary focus of the Vital Village project.

***Economic Development.***

In response to a struggling local economy and Main Street, the Village Trustees and the Enosburg Falls Economic Development Commission hired Mad River Research to complete a Downtown Business Plan in 2003. The purpose of this plan was to provide the information and analysis necessary to strengthen and expand the economy of downtown Enosburg Falls. The same year, the Vermont Council on Rural Development completed a Community Visit and Action Plan touching on many of the same issues. While some progress has been made in implementing the recommendations of these plans since 2003, the community has struggled to make progress until recently with a resurgence of activity with the Enosburg Business Association, Enosburgh Economic Development Corporation and the volunteer coordinated revitalization effort the Enosburgh Initiative. The Village and Town joined forces in 2018-2019 to complete the Vital Village Master Plan, which targets Main Street revitalization, outdoor recreation and improved pedestrian and bicycling connections (Figure 11.2).

Despite its challenges, the Village of Enosburg Falls has seen many business improvements in recent years; it is experiencing a strong business base, improvements to storefronts, and a connected sidewalk system which aid in encouraging new business and growth to the area. The Enosburgh Business Association, made up of local business owners, assists with keeping the business community vibrant with community events and promotions. The Cold Hollow Career Center is also vital resource as it aids in training the future workforce to bring those trained workers into the economy.

Figure 11.2. Vital Village Project

**Vital Village Project.**

In 2018, the Village and Town joined forces to complete a village master plan, funded by a State of Vermont Better Connections Grant. Known as the Vital Village Project, the master plan was completed in 2019 with an overarching focus on physical improvements and programmatic/policy initiatives to improve economic development in the Village Center. The plan can be accessed digitally from this website: [www.enosburgvitalvillage.org](http://www.enosburgvitalvillage.org). The plan outlines five (5) top priorities for implementation, which include:

- Streetscape and wayfinding improvements on Main Street and Depot Street,
- Improvements to the Missisquoi Valley Rail Trail intersection,
- Developing a community wide brand and
- Promoting Canadian Tourism.

Many recommendations to further these priorities have been incorporated into this plan. Provided here are the policies and projects recommended by the plan to promote tourism.

**Policy and Strategic Projects**  
**Tourism Policies and Projects**



**Proposed Initiatives**

**Regional coordination**

- For Enosburg Falls to realize its tourism potential, the eastern Franklin County region needs to be more of a tourist destination
- The village should cooperate with other towns to enhance the tourist appeal of the region
- Given its existing opportunities, Enosburg Falls will be the principal stopping point in the region and the focal point of tourism
- Create a regional tourism commission with representatives from each town

**Encouraging Canadian tourism**

- Canadians living just north of the border come to Enosburg Falls frequently to shop and buy gas

- Enosburg Falls should encourage Canadian visitors to extend their trip and come more frequently for the recreation, dining, and shopping
- Enosburg Falls should expand their offering and promote through Canadian social media, list serves, and local publications

**Visitor survey**

- Collect information about visitors - where are they coming from? How did they hear about Enosburg Falls? What activities or attractions did they visit?
- These questions could be asked at the point of sale at local businesses
- This information should guide future tourism planning efforts and help address gaps in the tourism offering

**Open tourist-friendly businesses**

- Encourage tourist-friendly businesses to open on Main Street such as restaurants and gift shops
- Additional shopping options on Main Street would also be enticing to tourists
- These restaurants and shops would make the village a better place to live for residents as well

**Feasibility**

COST	Ⓢ	Ⓢ	•	•	•
LOGISTICS	👉	👉	👉	•	•
TIMING	⌚	•	•	•	•

Competition for industry is high, and Enosburgh has not experienced any improvement in its manufacturing economy in recent years. Recently, the Enosburg Economic Industrial Corporation (EFEDC) was reconvened to work towards attracting development to the Industrial Park after faltering for several years. These lots have access to water and sewer lines and are

zoned for industrial development; the Town is seeking to permit mixed used on these lots by amending the applicable permits.

***Goals, Policies and Recommendations.***

**GOALS**

- Promote a balanced, diverse economic base, with a focus on locally owned enterprises.
- Support economic growth that complements existing firms and the vitality of the downtown business district.

**POLICIES**

- Enhance and protect the economic vitality of the Village and population centers as important community assets by promoting the reuse of existing buildings and recognizing the impact of the built aesthetic.
- Encourage commercial and industrial development within the Central Business District and Industrial Park.
- When planning for commercial and industrial development, encourage such development to serve the public good in terms of employment, revenue, environmental quality, health and safety, and services.
- Promote a diversified and stable economy by encouraging compatible industrial and commercial development, supporting the expansion of existing industry and small business, and encouraging businesses that utilize the skills of the local labor force.
- Support agriculture and forestry related businesses, and protect productive agricultural and forestry lands from conversion to incompatible land uses.
- Recognize and encourage the positive economic impact from recreational activities and local events such as art exhibits, musical events, craft fairs and farmer’s markets.
- Increase availability and access to groceries, farmers’ markets, and community gardens to expand healthy and local options.
- Support home-based occupations.

## Chapter 12: Land Use

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The use of land, both historically and currently, defines the physical make-up of the municipality, providing not only a sense of place, but an insight to how the community functions economically, physically and socially. As Vermont’s economy expands beyond natural resource-based businesses towards technology-based businesses, the factors that determine the lands economic value have changed. Previously it was determined by the productivity of a piece of land for farming or timber, while today features such as access to major transportation networks; infrastructure such as telecommunications, water and sewage systems; and proximity to qualified labor markets all help in determining the value of land for economic development.

Technological advances also have an impact on land use. Current technology allows projects to be completed much more rapidly today than in the early years. The construction of roads and the use of transportation technology allow people and materials to move rapidly and reliably over the landscape. Telecommunication and technological advances further erase geographical limitations. Changes in State sewage regulations and the design of innovative sewage management systems also help in reducing the number of constraints on land development. Previously, land that was thought to have too many constraints can now be more easily developed.

Land use planning involves the consideration of the many possible types of land uses and the goals of the land users. The impacts of growth, development, and environmental change on the land should be taken into consideration before any changes are made to the land. These changes will have a lasting effect on the community.

***Current Land Use.***

Enosburgh covers a total of 30,925.29 acres or approximately forty-eight square miles. The majority of land in town is comprised of forestland and agriculture. Deciduous, coniferous, and mixed forest account for 64 percent of the total land area with agriculture comprising 30 percent (Landsat 2002, Map 12.1).

Much of Franklin County’s eastern section, including the Town of Enosburgh, is wooded, hilly, and well suited for forestry. Forested areas are beneficial for both the economic livelihood of the rural communities and for the natural habitat they provide. “Non-productive” uses of land, such as protection of wildlife, provide substantial benefits to society, ranging from the economic returns arising from tourism to the benefits of water purification and flood control.

Enosburgh can best be described as a diversely agricultural community. Similar to the trend across the state, Enosburgh has seen a decrease in the number of farms over the last ten years. In most cases these farms are still managed as agricultural resources but are owned and managed by a fewer number of owners. The Vermont Land Trust has worked with several landowners to conserve existing farmland by the purchase of development rights to ensure that this land will remain perpetually open; currently there are 3,339 acres conserved in Enosburgh. The purchase of conservation easements has provided farmers with one tool to keep their farms permanently

managed for forestry and agriculture. Other agricultural uses include maple sugaring operations and commercial greenhouses.

Enosburgh has maintained the character of the traditional village center, with a Main Street consisting of multi-story brick blocks at its heart and surrounded by residential and additional commercial areas. Most neighborhoods are characterized by an amiable mixture of land uses and there is still a sizable portion of land within the Village which is open and in use for agriculture or woodland. The Central Business District has experienced a period of renewal with the 2007 redevelopment of the Depatie/Abbott Block which provided residential apartments and additional retail space in the village center.

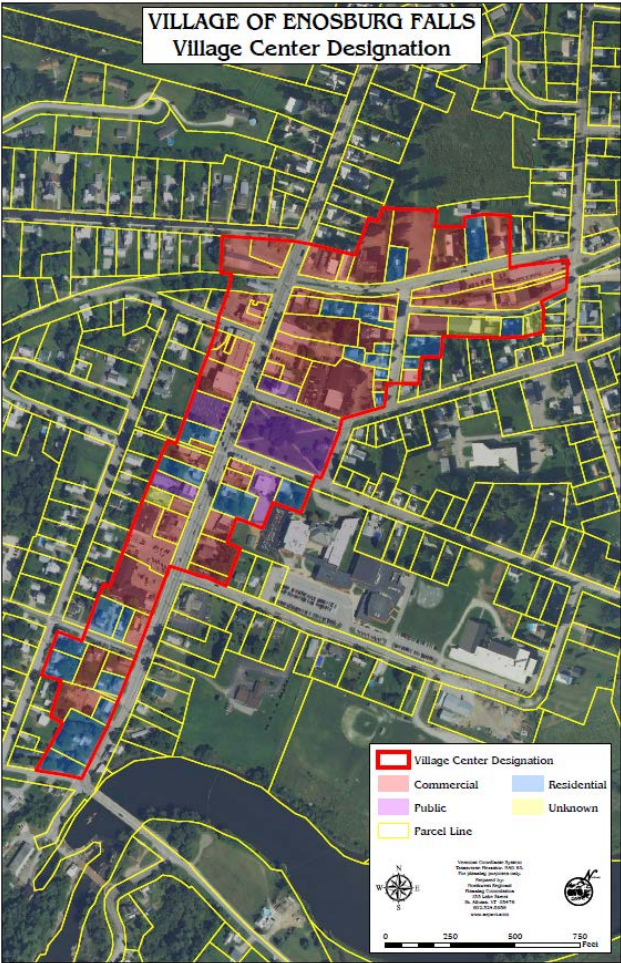
In recent years, commercial development has increased in the commercial districts in the north and west Village on Route 105. It is important to implement strict design standards to maintain pedestrian accessibility within the Commercial Districts and from the commercial districts to the Central Business District.

The high school, elementary school, and the vocational center are all located within the High Density Residential District. The Planning Commission should work with the School Board to ensure that sufficient land is secured for educational facilities and future growth, either in the neighborhood of existing facilities, or at a new location. Particular attention should be given to maintaining the schools' role as central to the community and to recreational spaces that can be accessed by residents of all ages.

***Village Designation.***

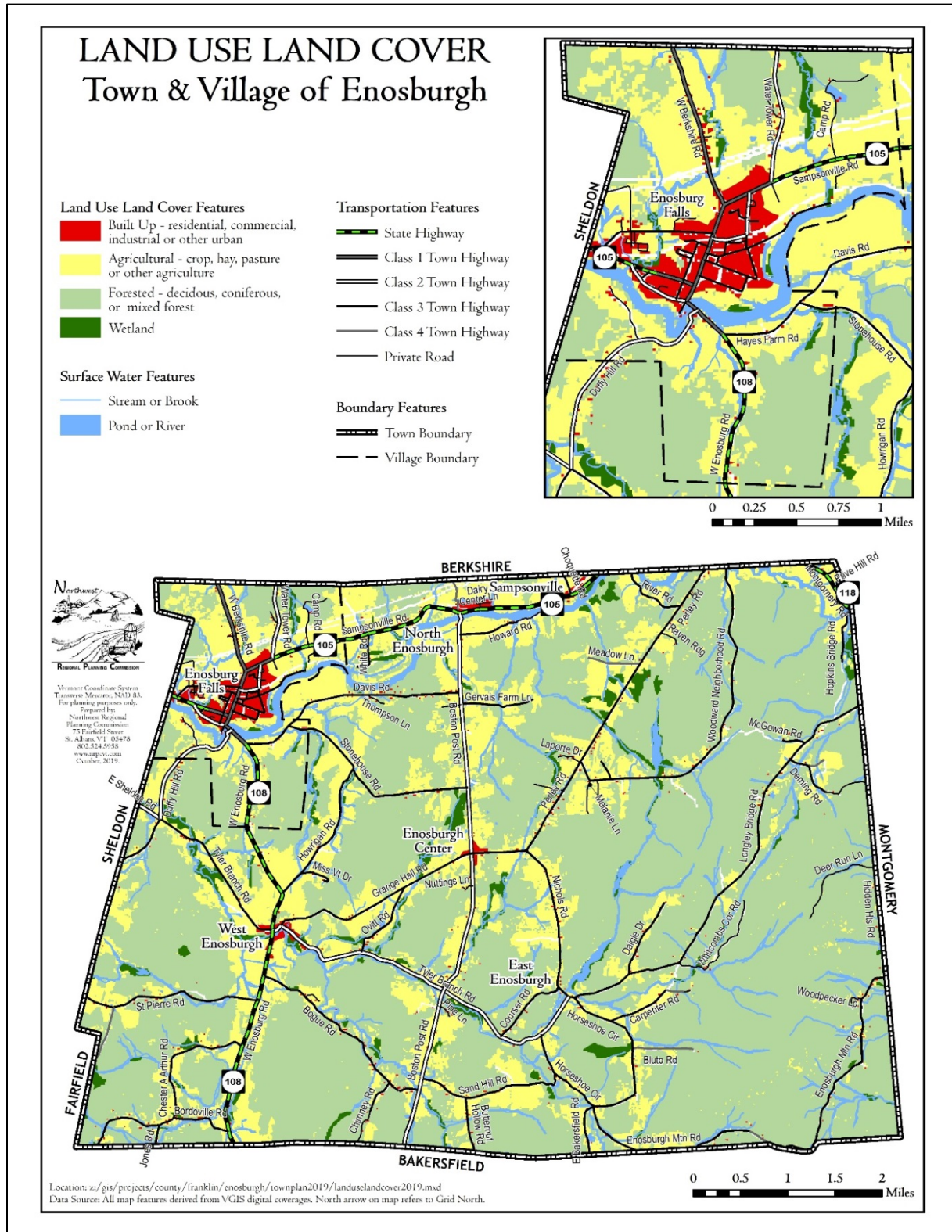
The Village of Enosburg Falls Village Center was designated on February 2006 as a way to support the revitalization of the existing traditional village center. The Village Center is composed of an interconnected core of residential, civic, religious, and commercial buildings arranged along Main Street and the adjacent areas.

This designation supports the goals of the community by gaining access to several benefits such as receiving priority consideration for state grants, access to tax credits, priority consideration for state building and general services when leasing or constructing buildings, and allows for the creation of a special assessment district within the Village Center to use funds for operating costs. The Village Center also aligns with the statewide planning goals



**Figure 12.1. The Area Designated as the Village Center**

of compact development and maintaining the historic settlement pattern as stated in 24 V.S.A. § 4302.



Map 12.1. Land Use and Land Cover Present in Enosburgh



***Constraints to Development.***

Areas with steep slopes (20% or greater), shallow soils, high water table, or within the flood plain are poorly suited for development. These site conditions may entail high maintenance costs, and pose a burden to municipal taxpayers as well as hazards to public health and safety. Development in these areas may also compromise the quality and quantity of ground and surface waters and other natural resources, and therefore should be restricted.

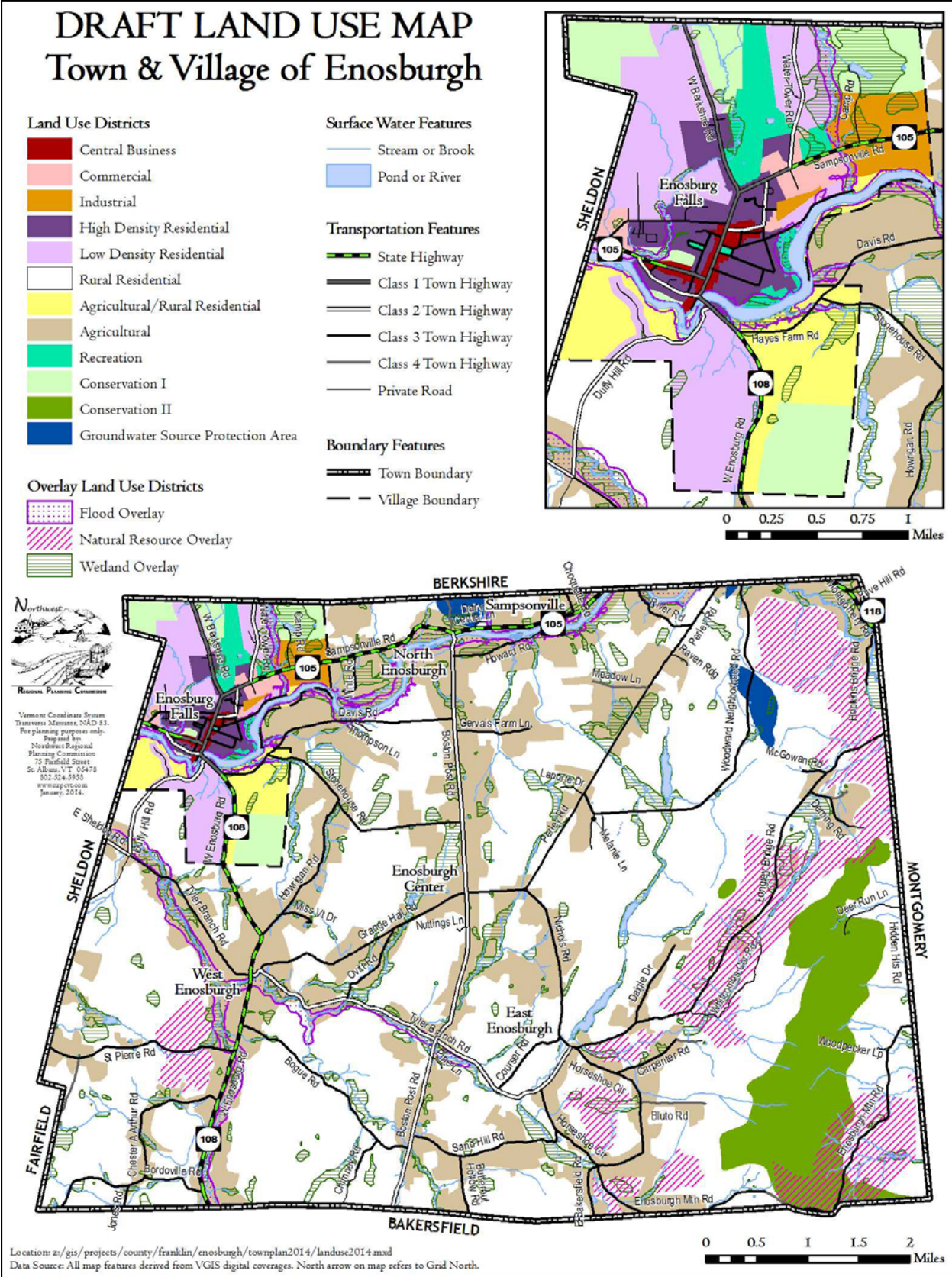
***Proposed Land Use Districts.***

A trip through Enosburgh offers a picturesque display of landscape features – small hamlets, the village of Enosburg Falls, rolling forested hills, farms fields with scattered homes, wetlands, and rivers. Together these landscape elements make Enosburgh what it is today. Some of these features were created by limitations of the environment to support development while others are historical remnants from the days of water powered mills.

The development of the Proposed Land Use Districts are based on existing land use patterns, traffic patterns, the intensity of proposed uses, physical constraints of the land, the resident's vision for the community, and several long-range planning goals and objectives. The Village of Enosburg Falls is expected to continue to be the primary residential, commercial, and industrial center for the surrounding town. The village is expected to provide the services needed by the businesses and residents in order to maintain the village densities.

The vision for the future of Enosburgh is to preserve the rural and agricultural character and protect the natural assets. Future development should aim to conserve agricultural soils, water quality, forests, and wildlife while allowing for additional residential and commercial growth. The aim of this plan is not to stop growth but rather to guide development in the future away from some areas and towards others.

To further the goals, policies, and recommendations set forth in this Plan, the following twelve (12) land use districts and three (3) overlay districts describe the current zoning districts in Enosburgh, shown on Map 12.2.



Map 12.2. Draft Land Use Districts in Enosburgh

**CENTRAL BUSINESS DISTRICT.**

The purpose of the Central Business District is to provide a concentrated area to serve the business, service, and social needs for the community as well as the region. The historical character of the district focuses upon pedestrian access to a mixture of retail sales, personal services, professional services, business offices, and high density residences tightly spaced with minimal setback from the street. Residential uses add interest and vitality to the area and accommodate those who desire high-density housing.

Pedestrian travel will be encouraged by well-maintained and landscaped walkways that connect the District to other commercial and residential areas of the Village. Public open space is provided for rest and recreation, and to increase the district’s scenic quality. Public events such as art exhibits, musical events, craft fairs, and farmers markets are encouraged.

**COMMERCIAL.**

The purpose of the Commercial Districts is to provide areas with public water and sewer for larger-scale, land-intensive retail, commercial, and high density residential development that may not be suited to location in the Central Business District. These areas are intended to complement the Central Business District, and efforts will be made to connect them by attractive pedestrian paths, internal roadways, and landscaping.

The Commercial Districts are located at entrances to the Village, and they must be designed to create a positive first impression for visitors. Master planning will be encouraged in order to promote efficient and economic connection with existing services and facilities. Development within the District will be reviewed to ensure attractiveness of sight design and signs. Strip development will be controlled by limiting the number of curb cuts and requiring consolidated access points onto RTE 105.

**INDUSTRIAL.**

The purpose of this District is to provide an area with good highway access and municipal water and sewerage for manufacturing, warehousing, research and development, and their accessory uses. Since these are intensive uses with potential impacts and hazards to public health and welfare, all uses within the District shall receive conditional use review by the Development Review Board. Master planning will be encouraged in order to promote efficient and economic connection with existing services and facilities.

**HIGH-DENSITY RESIDENTIAL DISTRICT.**

The purpose of this District is to maintain the privacy, and property values in established traditional residential neighborhoods. Industrial and most commercial uses should not be allowed in this district to maintain a safe, residential character. This area is served by public services and facilities. Efforts to retain and improve the quality and vitality of older neighborhoods through restoration of deteriorating buildings should be encouraged. Residential development in this District should provide for a variety of dwelling types and for the needs of people of all income levels and ages.

**LOW DENSITY RESIDENTIAL.**

The purpose of this District is to provide opportunities for residential development at densities appropriate to the physical capability of the land outside of the more densely settled village area. These areas have public water supplies and may or may not have municipal sewerage. A density bonus will be offered to encourage clustering of dwellings in this district in order to conserve open land for recreation, aesthetics, agriculture, and forestry.

**RURAL RESIDENTIAL.**

The purpose of this District is to protect those areas which are used for agriculture but to allow for uses other than agriculture and forestry, including residential and compatible uses, at a density these areas can support in accordance with the municipal plan. Of top concern is the protection of prime agricultural soils. Historically, rural development was considered “scattered” but today the goal is for “clustered” growth. In this way, large contiguous open space is protected for farming and pockets of housing will occur in less productive areas.

**AGRICULTURAL/RURAL RESIDENTIAL DISTRICT.**

The purpose of this District is to maintain the predominantly agricultural character of the area with its scattered residences. Since much of this district is prime farmland, new residential and other nonfarm development will be reviewed to ensure minimal interference with continuing agricultural use. Planned unit developments, the clustering of houses and developments that do not remove land from production will be encouraged by a density bonus.

**AGRICULTURAL DISTRICT.**

The purpose of this District is to protect the long term viability of productive farmland in the Town for agriculture use by 1) protecting prime agriculture soils as mapped by the U.S. Natural Resources Conservation Service (NRCS), 2) minimizing the fragmentation of productive farmland, and 3) mitigate the adverse effects of development on farmland operations. Other uses may be conditionally allowed, including residential use at a low density.

**What is a Land Fragmentation?**  
*Fragmentation is the separation of parcels of land into ever-smaller pieces, with like uses interspersed with unlike uses.*  
*A forest cut into two by a power line or two farms separated by a townhouse development are examples.*

**RECREATION DISTRICT.**

The purpose of this District is to reserve areas for current and future outdoor recreational facilities. The District includes areas within the Village that are presently being used for private and/or public recreation as well as additional areas to be reserved for the development of outdoor recreation facilities. It is intended that no development other than outdoor recreational use occur in this District.

**CONSERVATION DISTRICT I.**

The purpose of this District is to protect the scenic and natural resource value of lands which lack direct access to public roads, are important for wildlife and wildlife habitat, and which are poorly suited for development. Location, topography, and soil limitations make lands in this district unsuitable for intensive development. Included are areas of steep slope and wetlands.

No public water or sewer facilities are planned for these areas. Only low-density residential development, limited outdoor uses, conservation uses, agriculture, and forestry compatible with the district purposes will be allowed.

**CONSERVATION DISTRICT II.**

This district is defined as areas that, by reason of its soil and topography, have limited development potential or are more susceptible to environmental degradation. Steep slopes (over 15%), wetlands, deer yards, and high elevations (over 1,500 feet elevation) are all areas in the conservation district. The purpose of this district is to protect the pristine and sensitive areas of the Town, that are primarily used for forestry and outdoor recreation, from the adverse effects of development and growth but to allow for uses other than forestry, including camps and other compatible recreation uses, at a density these areas can support.

**GROUNDWATER SOURCE PROTECTION AREA.**

This district serves to protect the source of water for the East Berkshire Water COOP, an area around a spring off the Woodward Neighborhood Road in the northeast corner of Enosburgh, which has been designated as a “Groundwater Source Protection Area” by the State of Vermont. This district also includes an area in Northwest Enosburgh which is a water recharge area for the Village of Enosburg Falls.

**FLOOD HAZARD OVERLAY DISTRICT.**

The purpose of this District is to prevent increases in flooding caused by development in flood hazard areas, to minimize future public and private losses due to flood, and to promote the public health, safety, and general welfare. Designation of this District is also required for continued eligibility in the National Flood Insurance Program (NFIP). Included are all areas in the 100-year floodplain as identified on the Flood Insurance Study map(s). The Flood Hazard District overlays other districts and places additional restriction upon development in the areas to which it applies.

**NATURAL RESOURCE OVERLAY.**

Designation of this district is intended to protect the scenic and natural resource values of lands which are important for wildlife and wildlife habitat, and which are poorly suited for development because of their environmental constraints. This area maintains large tracts of forest, protects significant wildlife habitat, and ensures connectivity between habitats. Land uses and development in this district should be planned and designed to be compatible with the surrounding characteristics of the landscape, to be harmonious with wildlife habitat and the species that depend on this habitat and should recognize and protect the full range of vegetative and animal habitats and species in the Town. The district includes areas which have significant geologic features, unusual or important plant and animal qualities of scientific, ecological or educational interest, steep slopes, waterways and significant wildlife habitat.

**WETLAND OVERLAY DISTRICT.**

The purpose of the Wetland Overlay District is to protect the natural system functions (e.g. water and air purification, flood attenuation, speciation, and nutrient cycling) that are critical to support the human, animal, and plant populations in Enosburgh.

**Goals, Policies and Recommendations.**

**GOALS:**

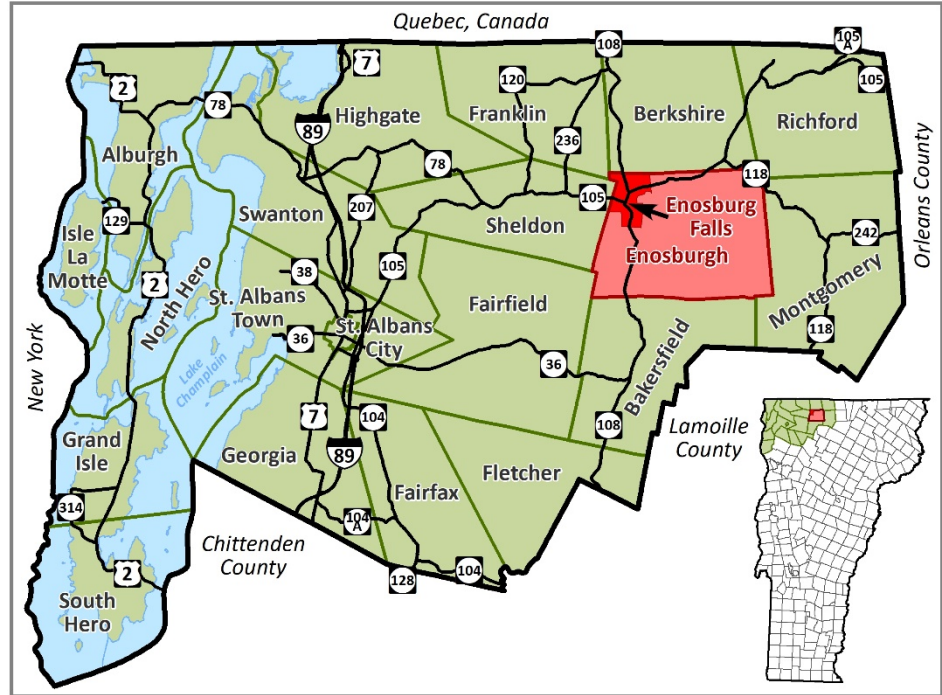
- Maintain the traditional village center surrounded by a landscape of farms, forestry, and rural countryside.
- Encourage development in the rural areas of town to be clustered to preserve the open rural landscape that defines Enosburgh for the future.
- Preserve the working landscape of farms and managed forests to support economic opportunities.
- Promote and enhance the historic features and character of the Village.

**POLICIES:**

- Encourage and preserve the dense development in traditional village centers; maintain the character of existing neighborhoods and discourage strip development.
- Encourage clustering of residential development to conserve open areas for recreation, aesthetics, agriculture, and forestry.
- Support the vitality of the Central Business District while accommodating larger scale, more land intensive commercial development.
- Promote a pattern of land uses which connect the Central Business District to outlying commercial areas via pedestrian paths, sidewalks, public green spaces, and landscaping.
- Promote industrial expansion and the development of new industries.
- Utilize the scenic natural features of the Village to enhance the business climate and supply the recreational needs of the community.
- Conserve productive lands and maintain forest health by accommodating development in areas apart from most farming and forestry activity.
- Prohibit development on slopes greater than 20% and minimize clearing of natural vegetation on steep slopes.
- Discourage development in areas with steep slopes, shallow soils, high water table, or productive agricultural soils.
- Protect scenic ridges by prohibiting development above 1,500 ft in elevation.
- Protect water quality by limiting development in Groundwater Source Protection Areas, wetlands, and along stream banks.
- Recognizing the community’s susceptibility to flooding, new development shall conform to adopted floodplain regulations to protect public health, welfare and safety.
- Continue to support the efforts of the conservation commission and local land trust.

## Chapter 13: Compatibility with Neighboring Towns and the Region

Enosburgh is located in central Franklin County and bordered by the communities of Franklin, Berkshire, Richford, Montgomery, Bakersfield, Fairfield, and Sheldon (See Figure 13.1). Land use patterns in all of these towns can affect one another in many different ways. It is important that all of their development patterns are compatible with each other. It is also important that each town's future development plans do not adversely affect their bordering neighbor's plans. The Enosburgh Municipal Plan does not propose any major changes to its land use districts, and because of this, no substantial conflicts with adjoining Town Plans should arise.



**Figure 13.1. The Location of Enosburgh in Relation to the Surrounding Communities and the Northwest Region of Vermont (Franklin and Grand Isle Counties)**

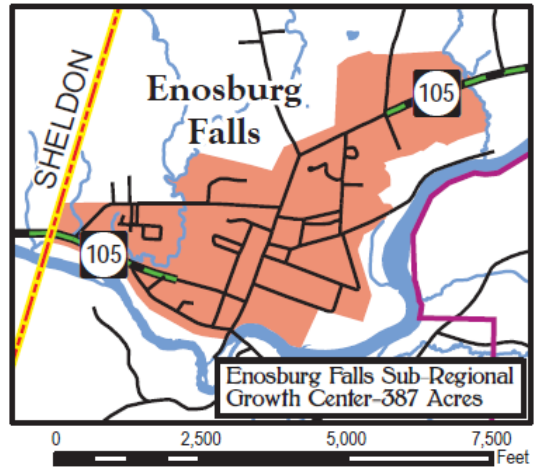
### ***Planning with Adjacent Communities.***

The community shares a variety of common resources, infrastructure, and issues with adjacent communities. It is important that all parties work together in planning for and managing these shared interests. In addition to managing growth, the quality and supply of public drinking water is an important multi-town interest. The Village of Enosburgh Fall's municipal water supply is located in the Town of Berkshire and Berkshire's is in the Town of Enosburgh. It is vital that these communities manage the land use in those areas so that the quality of the community water supplies is protected.

### ***Compatibility with Adjacent Land Use Plans.***

Enosburgh's Land Use plan is compatible with the land use plans for the region and adjacent municipalities. There are however, a few areas that require cooperation between adjacent municipalities to control growth around the Village of Enosburgh Fall's sub-regional growth center (Map 13.1) and industrial areas. Within the Village of Enosburgh Falls, the growth center is mainly composed of high density residential development, the Central Business District, and commercial and industrial development. However, on the Village's edge, the growth center borders Sheldon along Route 105 and corresponds to Sheldon's Rural Lands District I that

allows for commercial development as a Conditional Use or based on Site Plan review and to the east the Village’s Industrial District borders the Town of Enosburgh’s Agricultural District. There is a risk that the growth center and Industrial District will increase the development pressure in adjacent areas and create sprawl along Route 105. While it is important for Enosburgh to keep implementing planned growth and master planning with careful consideration of access management, landscaping, and Franklin County’s rural character, it is also important for adjacent communities to consider land use planning from a multi-town perspective and to consider the consequences of growth. In order to prevent sprawl outside of designated areas, strict land use controls may be necessary, such as limited allowed uses, planned unit developments, and access management.



**Map 13.1. Enosburgh’s Sub-Regional Growth Center Area**

Compatibility of this plan with those of adjacent municipalities and the Region was undertaken by reviewing those plans and zoning districts along the borders of Enosburgh. The majority of the areas at the border of Enosburgh are in the current Agricultural or Rural zoning districts, which allow density of 1-acre lot for residential or professional services and 5 acres for allowed commercial and industrial uses. The borders along the Village of Enosburgh Falls to Sheldon, Franklin, and Berkshire abut the current Low Density Residential, Agricultural/Rural Residential, and Conservation districts. The Low Density Residential establishes less than 1-acre minimum lot sizes and the Agricultural/Rural Residential establish a minimum size of 2 to 2.5-acres depending on use.

Similar zoning districts exists in the adjoining municipalities:

Franklin Rural Residential/Agricultural District.

Berkshire Rural Lands District (5-acre zoning). Berkshire’s Wellhead Protection Overlay (10-acre zoning) and Flood Hazard Overlay along this border correspond with Enosburgh’s designated districts.

A consideration to note, in Berkshire’s most current Land Use and Development Regulations (adopted February 18, 2019), a wellhead/source water protection area is identified to provide protection to the water supply. However, residential uses are allowed as a conditional use in the protection area and the regulation of onsite septic systems is out of the town’s authority. Berkshire should carefully review new development to assure that there will be no negative impact to water quality or supply and in the future, assess whether new development should be prohibited.



Richford Agriculture District (2-acre zoning).

Montgomery Agricultural/Residential District (4-acre zoning) and the Conservation I and II Districts (10-and 20-acre zoning respectively).

Bakersfield Primarily Rural District (10-acre minimum) with the higher elevation areas to the east in Conservation District (25-acre minimum).

Fairfield Agricultural/Rural Residential District (1-acre, expect 35-acres for camps), Chester A. Arthur Scenic District is a 1,000ft buffered area around the Chester A Arthur Road and has special conditions outlined in their zoning.

Sheldon Districts Rural Lands I and II (1 acre and 10-acre zoning respectively); the Rural Lands I district consists of a buffered area around all town and state roads.

Compatibility with the Regional Plan

The Regional Plan was most recently adopted in August 2007 and is currently in the process of being updated. Many of the Regional Plan’s goals and policies were based on ideas expressed in local plans. Though the goals and policies listed in the Regional Plan are consistent with the goals and policies that each town has listed in their own plans, they may be tailored somewhat to each town.

## Chapter 14: Implementation

IMPLEMENTATION RECOMMENDATIONS	WHO'S INVOLVED?	STATUS
<b>HISTORIC, ARCHEOLOGICAL &amp; SCENIC RESOURCES</b>		
1. Provide improved wayfinding and promotion of public sites with historic and scenic significance, such as the Bridge of Flowers and Light, Town Forest, Opera House and the Missisquoi Valley Rail Trail. Work with the Trustees to ensure tis perspective is addressed in scoping study for streetscape and wayfinding.	Historical Society; Planning Commission; Conservation Commission	Scoping Study to be completed by 2021. Design and construction should be completed by 2028.
2. Review the allowable land uses, dimensional requirements, street design and parking requirements in the zoning bylaws to ensure that they promote the historic character of Village neighborhoods and Village center.	Planning Commission	Complete during next zoning revision by 2025.
3. Monitor Village Zoning Bylaw provisions that provide incentives for the adaptive reuse of historic structures. As a first step, inventory projects that have been approved under this criterion. Consider adding and adaptive reuse provision to the Town's regulations.	Planning Commission, Zoning Administrator	Complete prior to next zoning revision, before 2025.
4. Continue to pursue historic markers for important historic landmarks in the Village and Town.	Historical Society, High School	Two markers done, complete at least 4 more markers by 2028.
5. Promote a historic walking tour of the village with the major landmarks. Evaluate whether changes should be made and develop marketing materials and messaging.	Historical Society, other interested partners	By 2025
6. Collaborate on community events that highlight Enosburgh's historical heritage.	Historical Society, Enosburg Business Association	Ongoing
<b>NATURAL RESOURCES</b>		
7. Maintain and update a multiple use forest management plan for the town forest.	Conservation Commission	Once every 5 years (next 2025).
8. Provide educational materials and assistance in planning to prevent or minimize destruction of core habitat and wildlife connectivity areas. Discuss how	Conservation Commission	Ongoing

IMPLEMENTATION RECOMMENDATIONS	WHO'S INVOLVED?	STATUS
best to achieve this.		
<b>HOUSING</b>		
9. Consider adoption of a basic building code to ensure health and safety of residents and community.	Manager / Planning Commission	Make determination by 2025
10. Complete a housing needs analysis to ensure Enosburgh continues to meet the communities' housing needs.	Planning Commission	By 2028
11. Review the zoning bylaws to ensure that regulations to not inhibit and rather enable and incentivize affordable housing development.	Planning Commission	Next bylaw revision by 2025
<b>EDUCATION</b>		
12. Hold annual meetings with representatives from the Village Trustees, Town Select Board, Enosburgh School District, and Franklin Northeast Supervisory Union to ensure better communication and coordination of all planning needs and issues.	Planning Commission	By 2028
13. Coordinate capital budgeting and programming between the Village, Town, and School District.	Village Manager, Planning Commission	Ongoing
<b>PUBLIC UTILITIES, FACILITIES &amp; SERVICES</b>		
14. Consider developing a Capital Budget & Program that includes planned expenditures for municipal utilities and facilities.	Trustees/ Planning Commission	By 2028
15. Bring together Village & Town officials to discuss a comprehensive plan for public land holdings and their best use and management.	Planning Commission	By 2028
16. Redesign and construct an expansion of the Enosburgh Recreation Fields to address multi-generational recreation needs and increase recreation offerings for the community.	Recreation Committee	By 2025

IMPLEMENTATION RECOMMENDATIONS	WHO'S INVOLVED?	STATUS
17. Hold a community-wide forum on child care to gain a fuller understanding of families' child care needs and the Enosburgh's child care industry.	Planning Commission, Enosburg Initiative Partners, Enosburgh School	By 2025
18. Identify a safe and accessible connection to the recreation fields by the Emergency Services Building from the existing Village facilities that will serve bicycle and pedestrian users.	Village Trustees, VTrans, Regional Planning	Funding secured; to be completed 2020
19. Provide better wayfinding for the Brownway River Trail, especially for Missisquoi Valley Trail users, as recommended in the Vital Village Master Plan.	Conservation Committee	By 2025
20. Complete a needs assessment for the Town of Enosburgh Offices, consider potential properties or options for expansion and build a reserve fund for the project.	Selectboard, Town Clerk	By 2028
<b>TRANSPORTATION</b>		
21. Develop a prioritized list of streets and roads where traffic studies are needed to provide information for local road/street management.	Planning Commission, Trustees, Selectboard	By 2025
22. Develop a traffic calming program for Orchard Street.	Planning Commission/ Trustees	By 2025
23. Install wayfinding and signage for public parking options in the Village.	Village Trustees, Vital Village Steering Committee	Scoping Study to be completed by 2021. Design and construction should be completed by 2028.
24. Continue to contract with State Police and Sheriff to enforce local traffic ordinances.	Trustees	Ongoing
25. Participate in regional transportation planning efforts, including the Transportation Advisory Committee, Green Mountain Transit Authority, and the Missisquoi Valley Rail Trail Council.	Planning Commission/ TAC Representative	Ongoing
26. Consider developing a Capital Budget & Program that includes a plan for local street and sidewalk improvements, future growth of roads, bridge repair and replacement, and equipment replacement.	Planning Commission/ Village Manager	By 2028

IMPLEMENTATION RECOMMENDATIONS	WHO'S INVOLVED?	STATUS
27. Implement the streetscape and wayfinding enhancements to Main Street and Depot Street as proposed in the Vital Village Master Plan.	Village Trustees, Vital Village Steering Committee	Scoping Study to be completed by 2021. Design and construction should be completed by 2028
28. Prioritize and implement community wide pedestrian/bicycle/mobility enhancements as recommended in the Vital Village Master Plan.	Trustees, Vital Village Steering Committee	By 2028
29. Work with the Vermont Agency of Transportation to install the trailhead parklets on the west and east side of Main Street where the Missisquoi Valley Rail Trail crosses.	Trustees, Vital Village Steering Committee	By 2021
<b>HAZARD RESILIENCY</b>		
30. Work with first responders, Emergency Management, and the road crew to plan improved emergency response capacity (operations, training, equipment) during natural disasters.	Emergency Management Director/Public Works	Ongoing
31. Adopt the Vermont River Corridor standards to regulate development in high risk areas for flooding or erosion hazards and gain access to additional Emergency Relief and Assistance Funds for disaster recovery.	Planning Commission	Next bylaw update by 2025
32. Explore participation in the FEMA Community Rating System (CRS) so as to secure a discount on flood insurance.	Planning Commission/ Selectboard/ Trustees	Next bylaw update by 2025
<b>ENERGY</b>		
33. Complete any remaining energy audits on municipal buildings and develop a schedule for needed improvements.	Manager/ Trustees	By 2025
34. Modify development regulations to require or incentivize the use of energy efficient building and site design techniques.	Planning Commission/ Zoning Administrator	Next bylaw update by 2025
35. Work with Selectboard and Trustees, along with municipal staff to establish energy standards for all public facilities and equipment.	Planning Commission	By 2028
36. Provide education and outreach to residents on energy efficiency and conservation measures.	Zoning Administrator	Ongoing

IMPLEMENTATION RECOMMENDATIONS	WHO'S INVOLVED?	STATUS
<b>ECONOMY</b>		
37. Establish and maintain communications with the Enosburg Falls Economic Development Corporation, Enosburgh Business Association, Village and Town officials, school district, and local business people to best serve the community and surrounding areas.	Planning Commission	Ongoing
38. Support efforts of the Enosburgh Initiative, Enosburg Business Association and other community groups on expanding economic opportunities in the Village and Town.	Trustees, Selectboard, Planning Commission	Ongoing
39. Work with the Franklin County Industrial Development Corporation and the Enosburg Falls Economic Development Committee to encourage occupancy of the Enosburg Falls Industrial Park.	Trustees, Selectboard, Planning Commission	Ongoing
40. Promote and provide wayfinding for the Missisquoi River and Missisquoi Rail Trail as recreational resources and attractions to the Village.	All Municipal Boards	Scoping Study to be completed by 2021. Design and construction should be completed by 2028
41. Develop a community wide brand that will bolster community pride and cohesion and help to define the visitor experience.	Trustees, Selectboard, Vital Village Steering Committee	By 2022
42. Design and install a gateway and wayfinding signage scheme for the entire village that both introduces and orients visitors to the village and its places of interest.	Trustees, Vital Village Streeting Committee	Scoping Study to be completed by 2021. Design and construction should be completed by 2028
43. Foster and support the Vital Village Steering Committee in implementing the Vital Village Master Plan.	Trustees, Selectboard	Ongoing
44. Review sign regulations to ensure they are compatible with the pedestrian oriented traditional village center and the Vital Village Master Plan.	Planning Commission	Next bylaw update by 2025

IMPLEMENTATION RECOMMENDATIONS	WHO'S INVOLVED?	STATUS
45. Research what the community can do to support and foster agro-tourism opportunities in the community.	Planning Commission, Vital Village Steering Committee	By 2025
<b>LAND USE</b>		
46. Work with landowners, the Vermont Agency of Transportation and Regional Planning Commission to develop a comprehensive long-range plan for access onto Route 105, which provides safe access while limiting curb cuts.	Planning Commission	By 2028
47. Maintain and implement development regulations that effectively preserve prime agricultural lands and maintain the productivity of agricultural land.	Planning Commission, DRB	Next bylaw update by 2025
48. Review Development Regulations to ensure that development maintains the character of the traditional village setting (for example development is oriented towards the public right of way, includes sidewalks and other pedestrian amenities, and is appropriately landscaped, including street trees).	Planning Commission and DRB	Next bylaw update by 2025
49. Identify critical habitat areas in order to prevent or mitigate harm during planned development.	Conservation Commission/ Planning Commission	By 2028



# **FAIRFIELD, VERMONT MUNICIPAL PLAN 2021-2029**

Adopted by the Fairfield Selectboard February 8, 2021

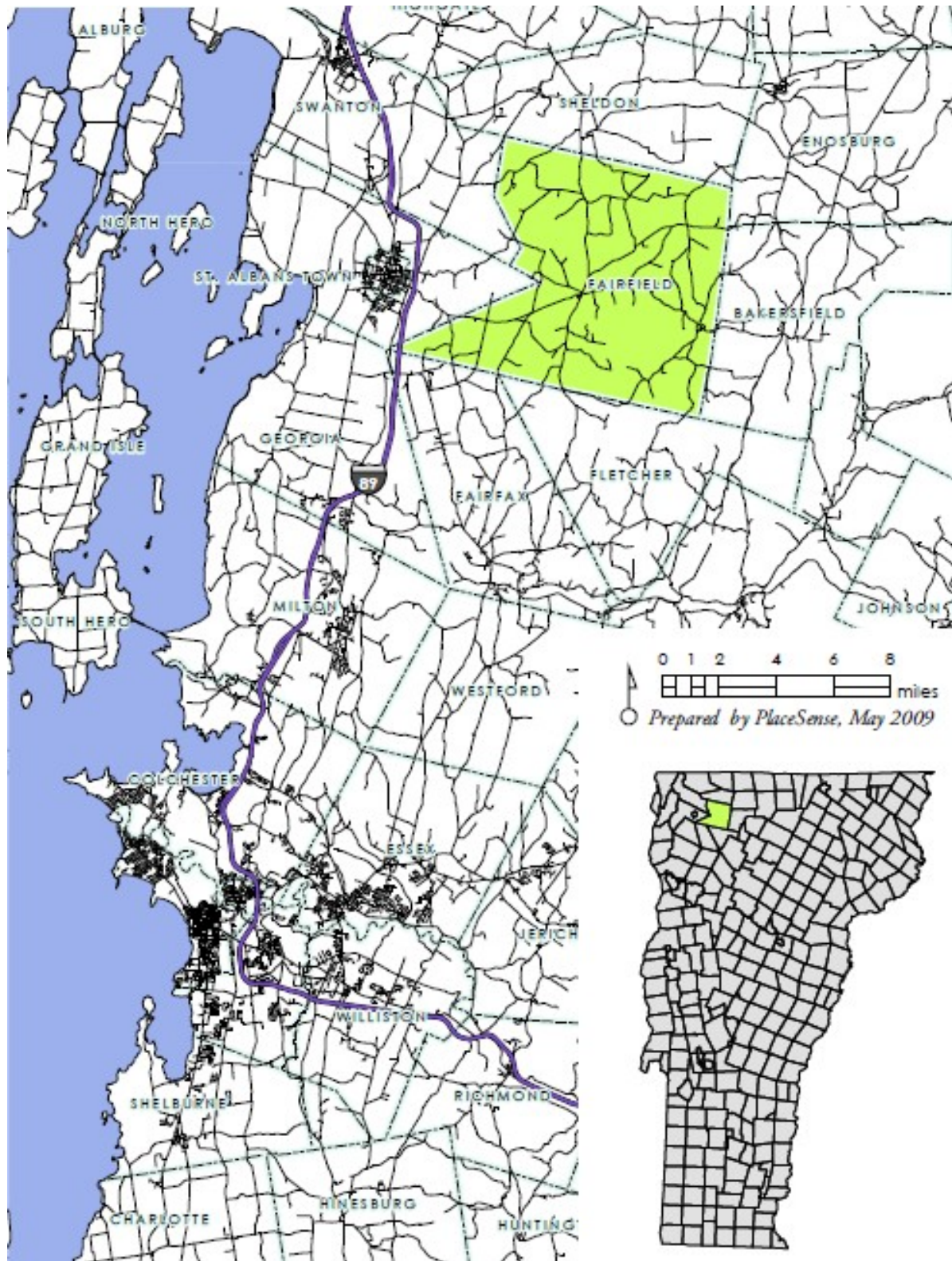


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Figure 1.1 Location Map



# 1. INTRODUCTION

## Community Profile

Fairfield, having about 47,000 acres, is the largest town in Franklin County. It is situated about 30 miles northeast of Burlington and is bounded north by Sheldon, east by Bakersfield, south by Fletcher and Fairfax, and west by St. Albans and Swanton.

The Town of Fairfield lies in the rolling hills of northwestern Vermont. Black Creek, a tributary of the Missisquoi River, flows through town in a major valley formation.

Fairfield Pond, reserve water supply for the Village of Swanton, and the location of several water-based recreational activities, occupies the northwest part of the Town. Running southerly from Fairfield Pond, an extensive swamp cuts across the town. A large portion of this swamp is encompassed in the state-owned Fairfield Swamp Wildlife Management Area.

Most of Fairfield, nearly seven-eighths of its total area, is very evenly divided between agricultural land and woodland. Residents are quite evenly dispersed throughout the entire town with many homes associated with active farms. Except for a concentration of seasonal housing around Fairfield Pond, the only population centers are the villages of Fairfield and East Fairfield.

Fairfield possesses a long and proud tradition of productiveness. The town has avoided many of the blights of over development and the accompanying loss of agricultural and open land to date, reflecting

the stability its generations of residents have given the town. The beauty of Fairfield and the productiveness of its lands stand as a monument to the achievements of earlier generations who have lived here.

## Planning

### Purpose

Under Vermont’s Planning and Development Act, the Fairfield Selectboard has established a Planning Commission to prepare a town plan and land use regulations. Fairfield’s first town plan was adopted in 1972. State law now requires that the town plan be updated every eight years, to reflect any changing conditions that may be affecting the community. Fairfield’s plan was updated in 1977, 1986, 1996, 2002, 2010, 2015 and now in 2020. Fairfield adopted zoning regulations in 1968 and revised them in 1973, 1986, 1996, 2004, 2012 and 2021. This amended town plan is consistent with the goals established in 24 V.S.A. § 4302.

A comprehensive town plan and land use regulations allow Fairfield to control both the location of development and the types of land uses permitted. Not only is a current town plan necessary should any amendments to the zoning regulations be desired, but major projects that come under Vermont’s Land Use and Development Act (Act 250) must conform to a current town plan.

Changes are coming at an increasing rate. The problems posed by these pressures must be addressed by comprehensive forethought to ensure that future decisions will provide long-term solutions rather than

stopgap measures. The intent of this plan is not to eliminate any existing land uses or to stop all future development, but rather to channel growth to appropriate locations within the town.

**Citizen Participation**

Over the years, citizen participation has been encouraged throughout the process of developing of the plan and bylaws. Previous citizen participation has included a survey in 2001, and a public workshop in 2010.

For the most recent 2020 plan revision, citizen participation focused on developing a new community vision and identifying priorities for the next eight years. This process included two presentations, one at Town Meeting Day and one in August of 2020. Additionally, the Town conducted a survey which received 122 responses from Fairfield residents. Students at the Fairfield Center School were sent a worksheet asking them what places they want to see in Town.

**Vision Statement**

**1. It is the primary and fundamental intention of Fairfield to remain a rural, agricultural town.**

Every effort should be given to the maintenance and furtherance of agricultural enterprises in Fairfield. No activities in Fairfield should be allowed that are detrimental to this primary objective.

**2. Fairfield supports its agricultural economy and looks forward to a future where working lands continue to be in production for diverse forms of agriculture.**

Dairies, maple sugar farms, beef production, vegetable farms and other diverse forms of agriculture are integral to the landscape and

economy of Fairfield.

A wise land ethic implies that the placement of new houses on prime croplands ought to be prohibited, as there is enough agriculturally marginal land in Fairfield that can provide suitable locations for new dwellings.

**3. Fairfield encourages the development of small-scale enterprises in the village centers of Fairfield and East Fairfield that will offer basic goods and services for town residents, that will provide employment locally and that will enhance the town’s rural way of life.**

Our two villages continue to be important focal points of the social and commercial life of the town, and serve as rural service centers. Light industry and manufacturing and other businesses appropriate in scale and character, can be further ways to enhance the rural character of Fairfield. Economic growth should be encouraged in and adjacent to these existing villages as growth centers.

**4. Fairfield values preserving our natural landscape and historic features.**

Our historic settlement and land use create a scenic rural landscape enjoyed by both residents and visitors. Every effort should be made to preserve our natural lands and historic structures.

**5. Fairfield is a vibrant and welcoming community.**

Fairfield values all residents, from families to senior citizens. We envision a future where both new and long-term residents feel part of the Fairfield community and there are diverse opportunities for neighbors to connect with each other.

## 2. IMPLEMENTATION

Plan Action	Involved Parties	Timeline
<b><i>Remaining a Rural &amp; Agricultural Town: Future Land Use</i></b>		
Maintain a current Local Emergency Management Plan (LEMP) and Hazard Mitigation Plan.	Selectboard	Ongoing
<b><i>Supporting the Future of Agriculture in Fairfield</i></b>		
Develop and annually maintain an inventory of farms, maple sugaring operations, farm parcels, total acreage in farm production, value-added farm business, community-supported agriculture programs, and other agricultural enterprises.	Planning Commission	Develop inventory: 2020-2023, Maintain inventory: Ongoing
Investigate grant opportunities to support new farmers.	Selectboard, Grant Writing Committee	2020-2028
<b><i>Promoting Small-Scale Business in Fairfield's Village Centers</i></b>		
Develop and maintain a current inventory of home occupations and businesses to determine trends as they develop in the town and encourage the support of such businesses.	Planning Commission	Develop inventory: 2020-2023, Maintain inventory: Ongoing
Maintain membership in and support the efforts of the Northwest Vermont Communications Union District (NWCUD) to expand broadband access in Fairfield.	Selectboard, Planning Commission	Ongoing
<b><i>Preserving Fairfield's Natural Landscape and Historic Features</i></b>		
Support any applications for grants to compile a town history.	Historical Society	Ongoing
Support efforts of the Historical Society to rewrite the Yesterday section of the Fairfield Town Plan	Historical Society, Planning Commission	2028
Support community efforts to restore and utilize the Fairfield Common School.	Selectboard, Planning Commission, Historical Society	2020-2025
Support efforts of the Recreation Committee to pursue public recreational opportunities on Fairfield Pond and the efforts of the Fairfield Pond Recreation Association to maintain the pond's water quality.	Planning Commission, Recreation Committee, Fairfield Pond Recreation Association	Ongoing

Plan Action	Involved Parties	Timeline
<b><i>Sustaining a Vibrant Community</i></b>		
Encourage the development of a capital program which includes an inventory of capital facilities, establishes minimum levels of service (as appropriate), and serves as the basis for a five-year capital budget to be revised and adopted on an annual basis.	Selectboard, Planning Commission	2020-2022
Maintain dedicated equipment reserve funds and avoid using those funds for purposes other than the acquisition of capital equipment. A separate short-term cash flow, or contingency, reserve fund can be established should the town deem it necessary.	Selectboard	Ongoing
Continue to participate in the regional Transportation Advisory Committee (TAC) to facilitate transportation plans and policies that are in the best interest of the region and Town of Fairfield.	Selectboard, Road Commissioner	Ongoing
Maintain a Road Erosion Inventory and update it every 5 years in compliance with the Municipal Roads General Permit (MRGP) requirements.	Selectboard, Road Commissioner	Ongoing
Develop a town newsletter and identify volunteers to update the newsletter on a monthly basis.	Planning Commission	2020-2028

## 2. YESTERDAY

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### **Formation & Settlement**

Fairfield was chartered August 18, 1763 and granted to Samuel Hungerford and his associates. The town was not settled until the spring of 1787, when Joseph Wheeler erected a cabin in a clearing in the forested wilderness near the Fairfax line. Others quickly followed, many of who made their way northward from Fairfield, Connecticut.

The town was organized in March 1790 and the first town meeting was held on March 30, 1791, at the home of Joseph Wheeler who was chosen moderator and town treasurer. Edmund Town was elected town clerk, Levi Wakeman, constable; Edmund Town, Thomas Northrup and Ralph Gregory, selectmen; Salmon Wheeler, Abram Northrup and David Hoit, listers; and Nathan Lobdell, collector of taxes. The Federal Census of 1791 recorded 176 residents in Fairfield and neighboring Smithfield. These two towns were merged together in 1792 to create present-day Fairfield – one of the state’s largest towns at 60 square miles.

### **First Settlers**

Fairfield’s first settler, Joseph Wheeler, brought his family to live in the cabin he had built the previous year in March 1788. In 1789, Hubbard Barlow and Andrew Bradley, with several others, settled here. Polly Hoit was the first child born in Fairfield on July 14, 1788. Smithfield Beaden was the first male child born here, in the part called Smithfield. The proprietors made him a present of 100 acres of land.

In about 1789, Jabez Burr came to Fairfield,

bringing his family to the house of one of the Hoits where they remained one night. The next morning the two men started to find the lot upon which Burr was to locate. This was three or four miles from Hoit’s. The lot was found with but little difficulty, and the two sturdy fellows immediately went to work to build a house; when night came the building was ready for occupancy; the men returned to Hoit’s, and Burr and his family took possession the next morning.

This wooden dwelling contained parlors, dining room, kitchen, dormitory, pantry and scullery all in one. The house was twelve feet square, built of split basswood logs, notched at the ends to ensure stability and tightness of the walls, and about seven feet to the roof, which was constructed by using poles for the support of the outer roofing made of bark peeled from the logs which constituted the sides. The doorway was closed, when necessary, by hanging a blanket over it. The “windows” were small holes covered with greased paper as soon as it could be afforded. This was not fancy; there were many similar houses.

**Early Family Histories**

The Vermont Gazetteer of 1882 records the following family histories:

John B. Mitchell served seven years in the revolutionary war, returned home to Hartford, Conn., and was married to a young lady sixteen years of age, and when the settlers first commenced to come into this town started on foot with his wife to make for himself a new home here. This they accomplished by locating upon the farm now owned by Samuel H. Soule. Their first house was built on the low bottomland along the creek, but the first overflow of the stream caused them to seek higher land as a site for their residence. Here they remained until their death, at an advanced age, Mrs. Mitchell attaining the great age of 106 years. They reared a family of eight children, none of whom are living, though several grandchildren represent the family here.

Thomas Northrup, from Sherman, Conn., came to the forests of Fairfield in 1790, and settled upon a farm of 140 acres which he had purchased from one of his brothers, an original proprietor of the town, paying therefore \$100.00. Upon this he made a small clearing, planted some corn, and cut some hay from a beaver meadow, and also erected a small log cabin, then returned to Connecticut. In the following spring he started for his new home with a yoke of oxen and one horse hitched to a heavy sled, upon which was placed his household effects and provisions for his family, consisting of his wife and three children. After a long and tedious journey, he arrived here and commenced his useful life, remaining in this town until his death. He had a family of four sons and seven daughters, only one of whom, Harmon Northrop, is now living, at the age of eighty-seven years. Harmon has been a deacon of the Congregational church, to which he has been a pillar for the past fifty years. He has held nearly all the offices in the gift of the town, and has also held the office of county commissioner four years, and was president of the Franklin County Agricultural Society three years. The great regard felt for his opinion and advice is attested by the fact that he has assisted in the settlement of, or settled independently, sixty-one estates.

Thomas Ryan came to Vermont from Ireland, about the year of 1812, and worked at his trade of tailoring at Burlington for a time, then removed to this town and located upon the farm now owned by his son, John H. Soon after locating here he married Catharine Belfort, the union being blessed with six children, two of whom are now living. Mr. Ryan was a man of intelligence, and much respected for his integrity and gentlemanly character. He died in 1872, aged seventy-

two years.

Joseph Soule, who served in the revolution, had a family of six sons and two daughters, all of whom settled in this town and in Fairfax. The Soule family is of French Huguenot extraction, and came to America in the "Mayflower." Timothy, the oldest son, came to Fairfield from Dover, Connecticut, about the year 1792. He was twenty-two years of age when he settled in his wilderness home, and remained until his death, December 27, 1861, aged ninety-three years. His youngest child, James M., now resides on the old homestead. Salmon Soule, brother of Timothy, came to Fairfield a year or two after his father, and located upon the farm now occupied by his son, C. Rollin, where he carried on the business of blacksmithing, in addition to conducting his farm. As a blacksmith he made himself particularly useful to the early settlers, and was noted for the fine axes he forged. He died on the old farm, aged eighty-six years and six months.

Joseph Field, Jr. came here with his father, and settled at what is now the village of Fairfield Center. He was a carpenter and joiner, and subsequently engaged in mercantile pursuits, and carried on a distillery and starch manufactory. In business he was quite successful, and succeeded in gaining the regard and esteem of his townsmen, whom he honorably represented in many offices of trust. He died in 1863, aged eighty-four years. Of his family of eleven children, only three, A. G., Samuel H., and Mrs. A. A. Farrand, are now living.

John Leach, Sr., was born as New Fairfield, Connecticut, in 1735, and came to Fairfield, Vermont, in 1789, locating in the southern part of the town. He reared a family of fourteen children, all but two of whom settled in the town, and died in 1811. John Leach, Jr., born at New Fairfield, in 1761, came here in 1788, made some improvements on a farm, and returned to Fairfield, Connecticut. In the spring of 1789, he returned, bringing his wife and two children, and located permanently upon the farm now owned by Mr. Oliver, on road 21. His honorable life was brought to a close in 1844, in his eighty-fourth year.

Amos Northrop came to Fairfield, from Fairfield, Connecticut, in 1792, and located where Thomas Hale now resides. Here he resided until his death, in 1849, aged eighty-three years. During the war of 1812, he started to market, at Plattsburg, with a load of oats, and upon his arrival there was pressed into the service of the United States, and sent with his team to Sackett's Harbor, to transport soldiers and supplies, and was retained from home from January until March. During a portion of this time he was obliged to camp in the forest with no protection from the



weather, and thereby had his feet frozen so badly that a portion of the right foot had to be amputated. He reared a family of four sons and three daughters, only one of whom, Horation, residing at East Fairfield, is living.

### Fairfield's Development

The physical design of both the villages of East Fairfield and Fairfield Center with their greens, churches and schools reflect the origins of the town's founders. Land use plans guiding development and protection of rural life are also successful templates provided for us in the original European homelands of so many of Fairfield's earliest settlers.

In the late 18th century, several villages were established near important waterpower sites in Fairfield. Fairfield

Center was an important early settlement with the first mill set up in the summer of 1791 on the Fairfield River. The peak of the

pioneer period occurred in 1810 when 1,618 town residents were counted in the Census. Many of these original Yankees began to migrate westward, especially after the War of 1812, and the population began to decline. A new influx of settlers, especially from Ireland began arriving in the 1820s, and in 1850 Fairfield reached a peak population of 2,591 residents.

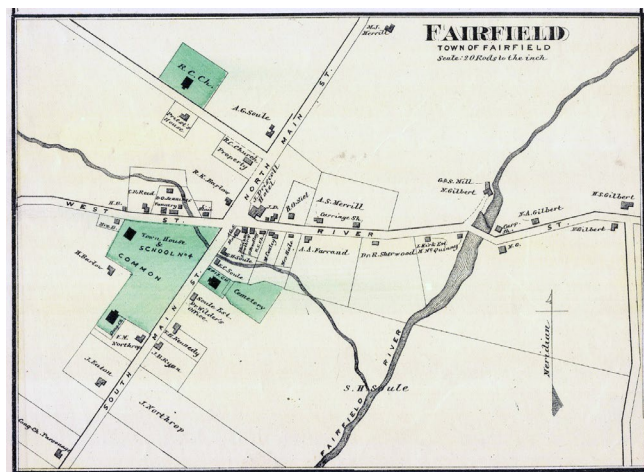
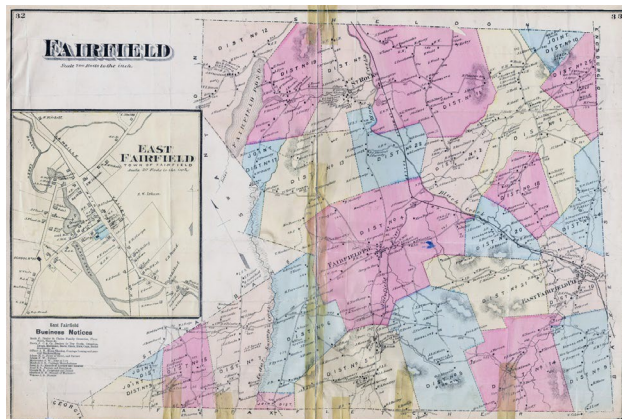


Figure 2.1, 2.2 & 2.3: 1871 F.W. Beers Atlas

The 1842 Gazetteer included the following description of Fairfield:

There are a Congregational, a Baptist, an Episcopal and a Methodist church in this town. The Rev. Benjamin Wooster was settled over the Congregational Church in 1805. He was the first settled minister, and died in this town February 13, 1840 aged seventy-seven years. The present minister is the Rev. T. Reynolds. The Episcopal Church, called Trinity Church, was the only one in Franklin County when the Rev. Stephen Beach, took charge of it in 1815. Several clergymen labored here more or less previous to 1840, when the Rev. Ezekial H. Sayles, the present minister, was settled. This church consists of about 60 members. An Academy was incorporated here in 1808, and a convenient building erected for its accommodation. Black Creek is a considerable stream, which issues from Metcalf pond in Fletcher, and runs through this township, affording an excellent stand for mills. Fairfield River is a small stream, which, also, takes its rise in Fletcher, and passes through the town near its center, affording several good mill privileges. These streams unite and fall into Missisquoi River in Sheldon. Smithfield pond lying in the westerly part of the town, is about three miles long and one and a half broad. At the outlet is an excellent stand for mills, and another on the same stream about two miles below. The township was originally covered principally with hard wood. The surface is uneven, but very little of it so broken as to be unfit for cultivation. The soil is generally good. The town is divided into fifteen school districts, with a comfortable schoolhouse in each. The public buildings are an Academy, townhouse, an Episcopal and a Congregational church. There are in town, three stores, four gristmills, eight sawmills, two fulling mills, one carding machine, and two tanneries.

The self-sufficient economy of the pioneering settlers shifted to grain and wool production in the early 19th century. Along with timber, these products could be transported and shipped across Lake Champlain and canals to points south and north.

Starting in the middle of the 19th century, rail lines in the Champlain Valley and eventually in East Fairfield allowed for rapid export of products to the rest of the country.

In the decades after the Civil War, a decrease in the importance of wool and an increase in butter and cheese in regional economies resulted in a shift away from sheep and into dairying.

In the early 1900s, logging was an important industry supporting a large part of the economy. Mostly virgin hemlocks, often as large as 4 feet in diameter, were cut and drawn to the railroad for shipment to the Swanton Lumber Mill. Other area industries which profited were the Carrol Page Tannery in Hyde Park which used the bark and the Swanton Lime Kiln which used the unsuitable logs for cordwood.

Today, Fairfield still shows the vestiges of these earlier days. The current villages of Fairfield Center and East Fairfield exist on



**Figure 2.4: Chester Allen Arthur Ole Balling, Oil on Canvas, 1881**

the historic settlements from 200 years ago. The economy of the region remains the same as it has been for a hundred years, an agricultural town based around the dairy industry. Many historic structures remain including homes, barns, public buildings, and covered bridges. The population is once again growing, but remains well short of the population peak of 1850.

**Birthplace of Chester Alan Arthur**

Fairfield is the birthplace of President Chester A. Arthur who took office in 1881. The Vermont Gazetteer of 1882 includes the following story:

Elder William Arthur, the father of our President, was born in Ireland, finished his education at Edinburgh, Scotland, and soon after its completion came to America, and located at Dunham. He first took up the study of law; but after his marriage with Miss Stone, daughter of Rev. Washington Stone, he entered the ministry of the Free Will Baptist church, and shortly after united with the Baptist Church. He taught school and preached in several localities throughout Chittenden and Franklin counties, and Canada. In 1829, he received a call from the Baptist church of North Fairfield, which he accepted, and removed to that village. He first occupied a portion of Jonathan Bailey's dwelling, where he remained until the church built a parsonage. The parsonage was located on a lonely by-road, some three-quarters of a mile from the church, a story and a half structure, about 18 by 24, and is still in existence, though it has been moved about one hundred rod down the hill and across the highway, where it is used as a hay-barn. In this unpretentious structure Elder passed a few years of an uneventful life, and here was born his son, Chester A., the present chief magistrate of our nation. Young Arthur was named in honor of Dr. Chester Abell, long a friend and physician of the family, and who now peacefully rests in the little cemetery near the church where Elder Arthur officiated.

The Vermont Historical Proceedings adds this to President Arthur's story:

The one hundredth anniversary of the birth of Chester A. Arthur, which occurred on October 5, 1930, was completely ignored in his native state. Not the slightest

observance was made of the day anywhere in Vermont, and if the fact of the occurrence of the anniversary was mentioned by a single Vermont newspaper we were unaware of it. Such is fame. Will the hundredth anniversary of the birth of Calvin Coolidge be similarly ignored and forgotten, we wonder?

The twenty-first president of the United States can hardly be called a typical Vermonter, to be sure, but he was a native son of Vermont and as such deserves something better than oblivion to his memory. He was not a great statesman, but he was fully up to the average of our presidents and his character was irreproachable. It was his misfortune to come into the presidency at a time of great scandal, and he was weighted with the further disadvantage of being known as a machine politician and spoilsman. Perhaps no man of the time could have done better than he did in the circumstances.

Curiously, the centennial of his birth seems not to have brought forward the old story that he was not born in Vermont, but in Canada. Just before the Republican national convention was held in 1884, a writer named Hinman published How a British Subject Became President of the United States. Hinman alleged that the Rev. William Arthur and his Vermont-born wife, who was Malivina Stone, lived in Canada when their oldest son was born. That son was Chester Alan Arthur. They moved to Fairfield, Franklin County, Vermont, where a second son was born. This son died in infancy. According to Hinman's story, it was the second child who was born at Fairfield, October 5, 1830. Up to the time that he became the nominee of his party for the vice-presidency or shortly before then Chester A.



**Figure 2.5 Chester A. Arthur Historic**

Arthur did not claim either the birthplace or the birthday now accepted, according to Hinman. When he saw the vice-presidency looming before him, with the presidency as a possibility Chester Alan Arthur quietly appropriated the birthday and birthplace of his deceased younger brother, and went to Canada, immediately after his nomination as vice president, to make sure that no records which might prove embarrassing were permitted to remain. The story was widely published, but apparently it had little to do with the outcome of the convention which denied him the Republican nomination for the presidency.

There ought to be a good portrait of President Arthur in the capitol at Montpelier or in the rooms of the Vermont Historical Society. Incidentally he looked the part as very few presidents have done. Possible he is entitled to be called "the handsomest of the presidents."



Figure 2.6: Chester A. Arthur Historic Marker

### Archeological Resources

Fairfield’s archeological sites contain a fragile, complex and irreplaceable record of past human activities. Archeological resources include both prehistoric hunting camps and historic ruins of early homes, mills, and settlements. Archeological resources differ from historic structures in that the information that exists is buried. Fairfield’s prehistoric archeological sites are not readily recognizable and have no apparent structural or architectural shape. Rather, evidence of prehistoric activities and occupations are contained within the soil deposits of a cornfield or a woodlot or are buried in a floodplain.

For 10,000 years Native Americans focused their activities within river valleys and lake basins. Although no Native American sites have been documented in Fairfield, the state has identified areas associated with Black Creek as archeologically sensitive. Unlike the large settlements found in Highgate and Swanton along Monument Road, any sites in Fairfield are likely to be much smaller in scale.

The ruins of 18th, 19th and early 20th century buildings, structures, and activity areas comprise historic archeological sites. Thus, the ruins of homes and farmsteads, mills and settlements constitute Fairfield’s historic archeological heritage. Visible remnants of these sites frequently consist of stone foundations or collapsed ruins although much of the archeological information is buried.

Our prehistoric and historic archeological sites constitute an essential link to our recent and distant past. These sites are often the only source of information for the longest part of human history in Vermont. Archeological sites are an important non-renewable resource.

### Historic Resources

The Fairfield Historical Society was organized in 1996 in order to record and preserve the history of Fairfield. The Historical Society has a safe place to store and display some of its collection since the President Chester A.

Arthur Conference Room was constructed. Additionally, the Historical Society has as one of their goals, to secure funding in order to compile a history of Fairfield. The town supports the efforts of this organization.

The state’s Division of Historic Preservation is responsible for preserving the state’s historic, architectural, and archeological resources. In 1981, the state conducted a survey of sites and structures in Fairfield. In all, 61 structures were reviewed, of which 60 were later placed onto the Vermont State Register of Historic Places. The entire report can be found in the Town Office. The Chester A. Arthur monument was the lone structure from the survey not to be included in the State Registry.

In similar fashion, the United States Department of the Interior National Park Service is the agency responsible for the National Register of Historic Places. Only the East Fairfield Covered Bridge, which underwent a \$1.2 million renovation in 2009, is found on the National Registry. Many other buildings in town qualify but are not registered. Being listed results in the following for historic properties:

- Consideration in planning for federal projects.
- Consideration for federal tax provisions.
- Qualification for federal grants for historic preservation.

Listing on the National Registry does not restrict the use of the property or place any legal restrictions on the property. It only regulates the use of federal funds that may affect the property. The town encourages owners of qualifying properties to register with the National and/or State Registry. Any questions concerning state or federal listing

as a historic site or structure should be forwarded to Vermont Division of Historic Preservation in Montpelier.

**Historic Districts and Scenic Roads**

The state recognizes the Fairfield Center Historic District as an outstanding example of an early 19th century town center. The features identified as important were the intact green, commercial buildings, tavern (since destroyed), residences, school, the Town house and fine Gothic Revival church. Only a few buildings do not contribute to the historic district. The Patton-Soule House, one of the finest Federal style houses in Vermont, sits at the north end of the district overlooking what was a very busy and thriving 19th and 20th century community center. Although not recognized on the state registry, the town has identified East Fairfield Village as being historically significant.

Chester A. Arthur Historic District and Scenic Road is an important part of the legacy of Fairfield. The state maintains a replica of the small house in which he was born in North Fairfield. Other features of this district include an old brick church and adjacent cemetery, now owned by the State Historic Society. Several homes in the area are architecturally appropriate to the era.

**Cemeteries**

Cemeteries offer a personal link to past residents of Fairfield. For some families in town today, these are the final resting places for parents, grandparents and great-grandparents back to the earliest settlers. There is perhaps no stronger connection to our common past than in the cemeteries that dot our countryside.

Figure 2.7 shows the location of Fairfield’s cemeteries. A survey by D. B. Morry in 1973 (and updated in 1990 by Arthur Hyde) cataloged some basic information about each site.

**References**

Anyone interested in more information regarding Fairfield’s colorful history has many places to turn. Unfortunately, a comprehensive work has yet to be compiled. The Fairfield Historic Society is hoping to get grants to have such a work assembled, but until then a trip to a library will have to suffice.

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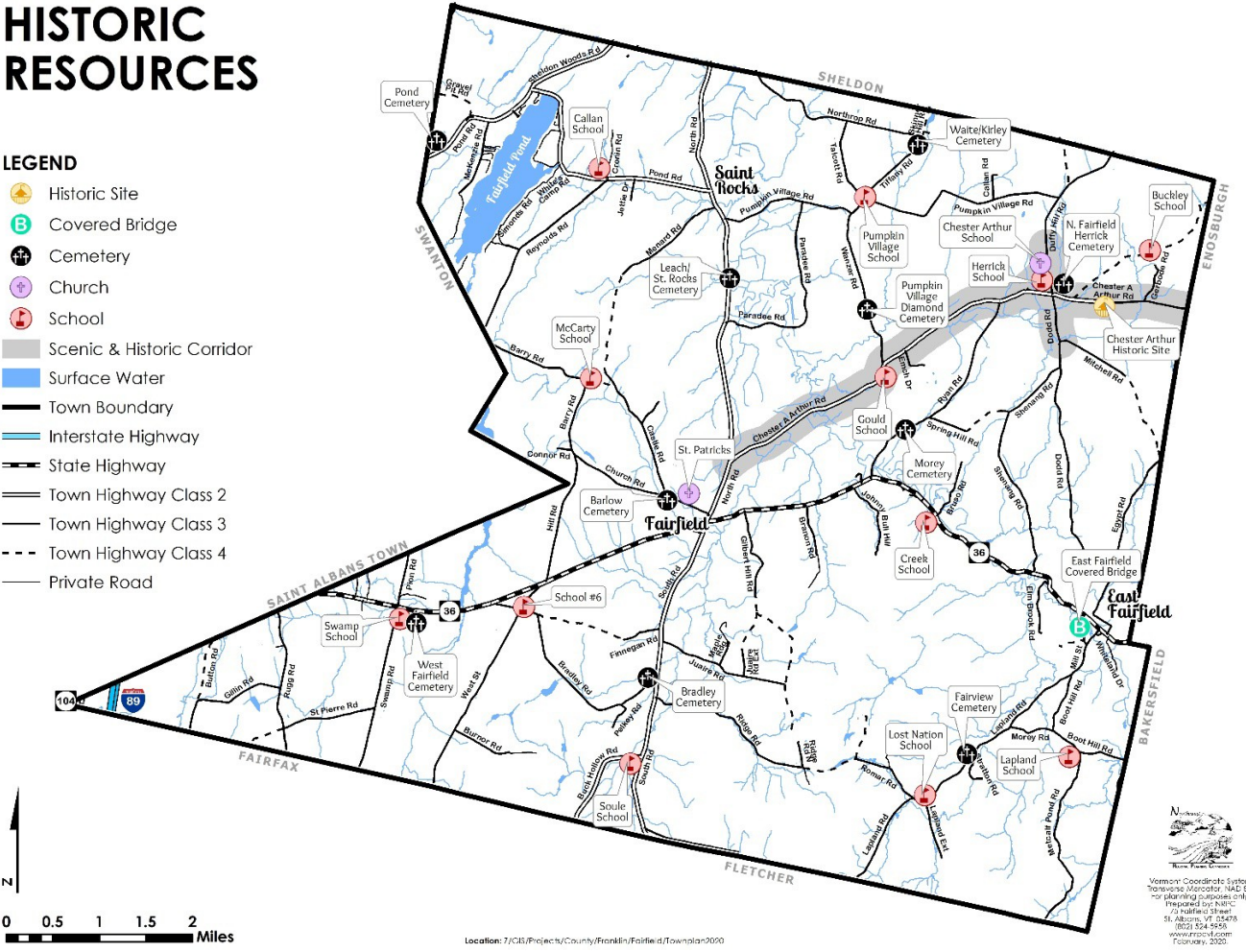
Walling, H.F. Map of Counties of Franklin and Grand Isle, Vermont (New York: Baker, Tilden & Company, 1857).

Figure 2.7

# HISTORIC RESOURCES

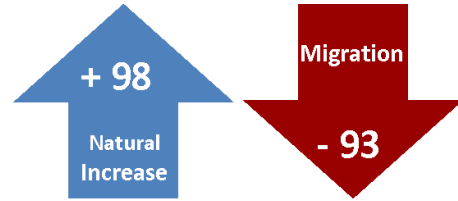
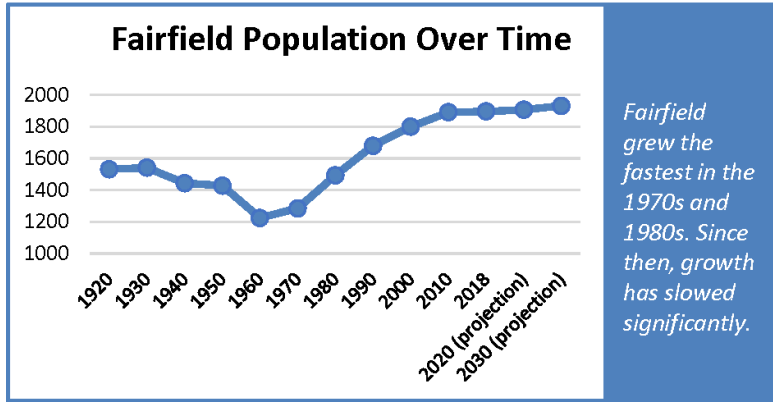
**LEGEND**

-  Historic Site
-  Covered Bridge
-  Cemetery
-  Church
-  School
-  Scenic & Historic Corridor
-  Surface Water
-  Town Boundary
-  Interstate Highway
-  State Highway
-  Town Highway Class 2
-  Town Highway Class 3
-  Town Highway Class 4
-  Private Road

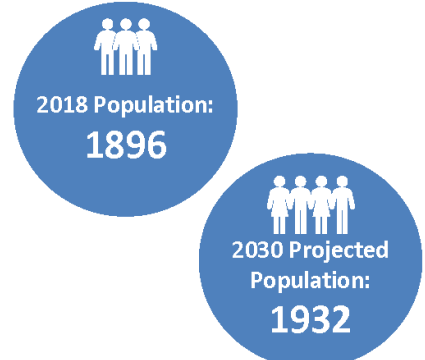


# Population & Age Profile

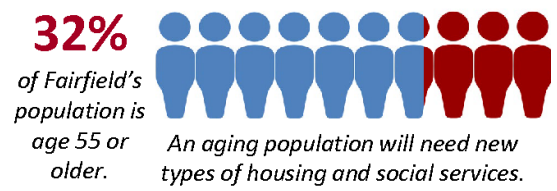
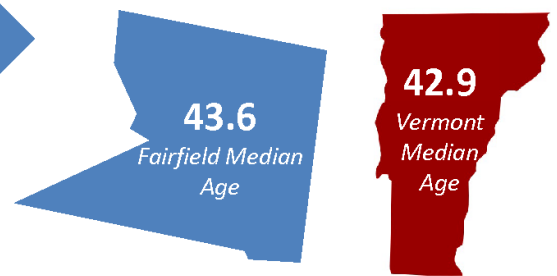
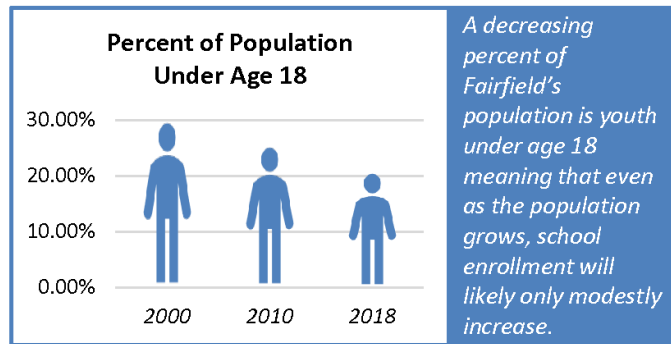
Population growth in Fairfield has slowed significantly over the last 20 years.



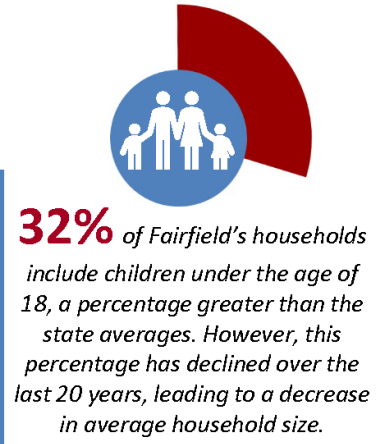
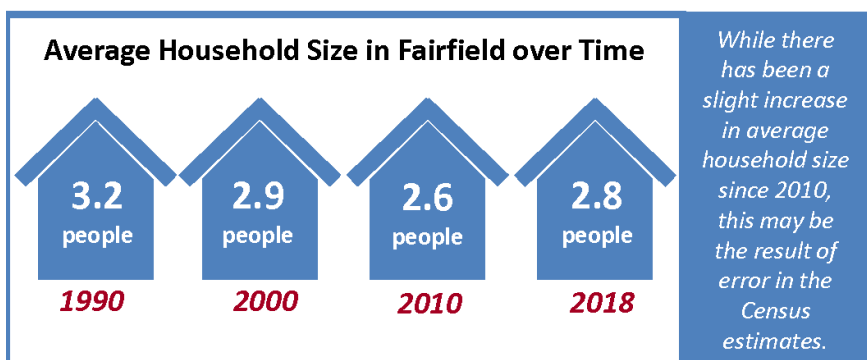
Population growth in Fairfield has been the result of natural increase.



Fairfield's population is aging.



Fairfield's average household size has declined over the last 30 years. This will lead to increased housing demand, even as population growth slows.



Sources: U.S. Census; U.S. Census American Community Survey 2014-2018



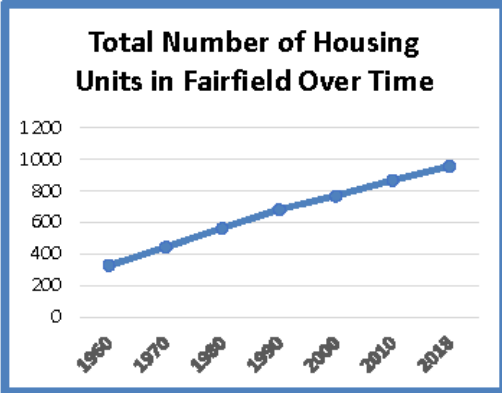
# Housing

The number of housing units in Fairfield has continued to grow.

**5.3**  
permits

Average number of permits for single family homes in Fairfield 2010-2019

**676**  
Occupied housing units



Most housing units in Fairfield are owner-occupied detached single-family homes.



**86.9%** of all housing units are detached single family homes.



**83.9%** of all year-round occupied housing units are owner-occupied.

Homeownership in Fairfield is somewhat unaffordable to households making the county median income.

In 2018, the median sale price of a primary residence in Fairfield was **\$215,000**

Affordability of Home Ownership				The State defines housing as affordable when housing costs are 30% or less of a household's total income. Under this standard home ownership is not affordable to households making the county median income (\$64,258) or less.
	Household Income (2018)	Maximum Affordable Mortgage	Median Sale Price of Primary Residence in Fairfield (2018)	
Median Income	\$64,258	\$214,398	\$215,000	
Low Income (80% Median)	\$51,406	\$152,916	\$215,000	
Very Low Income (50% Median)	\$32,129	\$60,693	\$215,000	
Sources: U.S. Census American Community Survey 2014-2018; Housingdata.org; Calculation of maximum affordable mortgage based on taxes & insurance calculated by NRPC and a 4% interest rate.				

Mobile homes are an important source of affordable housing. Owning a mobile home with land is affordable for households with county median and low incomes, but not for households with very low incomes (\$32,129).

**Average Value of Mobile Home with Land**  
**\$126,315**

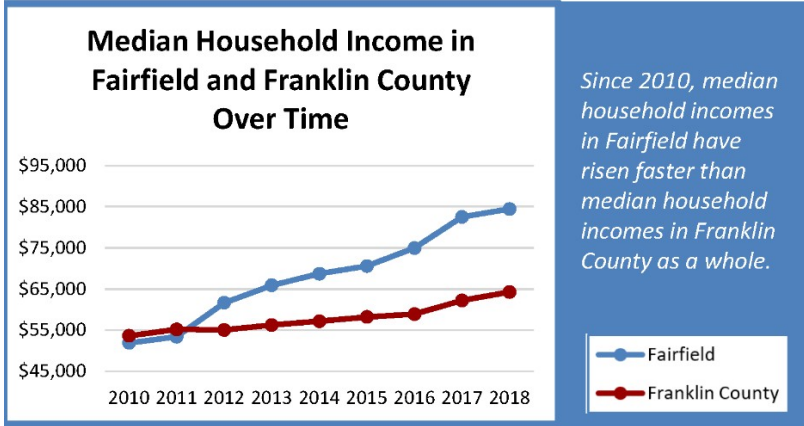
**Median Rent**  
**\$808**

Renting is affordable for those making the median county income and those making 80% of the median county income.

Sources: Fairfield Grand List, Housingdata.org; U.S. Census; U.S. Census American Community Survey 2014-2018; Fairfield Town Report

## Income & Economy

Incomes in Fairfield are well above County and State averages.



Fairfield's median adjusted income rose **18.0%** from 2010 to 2017

### Per Capita Income



**Fairfield**  
**\$39,332**

**Franklin Co.**  
**\$30,692**

Fairfield has a higher per capita income than the county and state averages.

Most Fairfield residents work outside the Town, primarily in St. Albans and Chittenden County.



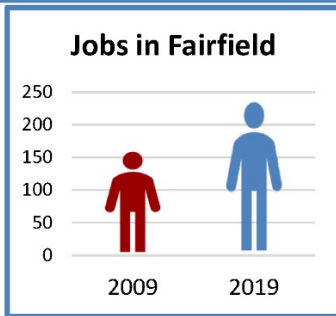
The average Fairfield resident commutes **28.1** minutes to travel to work.

In 2018, Fairfield's unemployment rate was **1.7%**

### Top Commuting Destinations for Fairfield Residents



Fairfield has seen modest increases in the number of local businesses and jobs in the last 10 years.



**2009**  
**37** businesses

**2019**  
**51** businesses

**7.4%** of employed residents work in Town.

Over the last 20 years, the number of farms has decreased significantly.

**2013**  
**104** parcels

**2018**  
**108** parcels

Sources: U.S. Census; U.S. Census American Community Survey 2014-2018

### 3. TODAY

#### Population

##### Population Trends

Population growth in Fairfield has slowed significantly over the last 20 years.

While the population of Fairfield has continued to grow, this rate of this growth has slowed significantly. From 2010-2018 the population of Fairfield increased by just 5 people, an annual growth rate of .03%. Annual growth rates were significantly higher in the 1970s and 1980s.

The Vermont Agency for Commerce and Community Development created two population projections for each municipality in Vermont based on Census data from 1990-2010: a high growth projection based on growth from 1990 to 2000 and a low growth projection based on growth from 2000 to 2010. Based on the 2018 estimated population, it is likely that the population of Fairfield will more closely reflect the low projection which predicts that Fairfield will have a population of 1,932 by 2030.

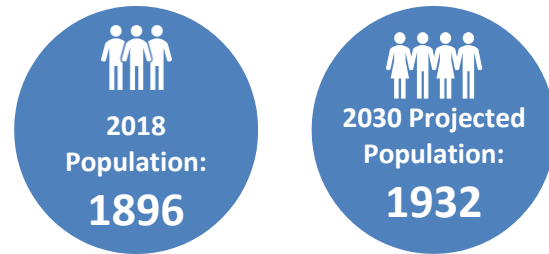


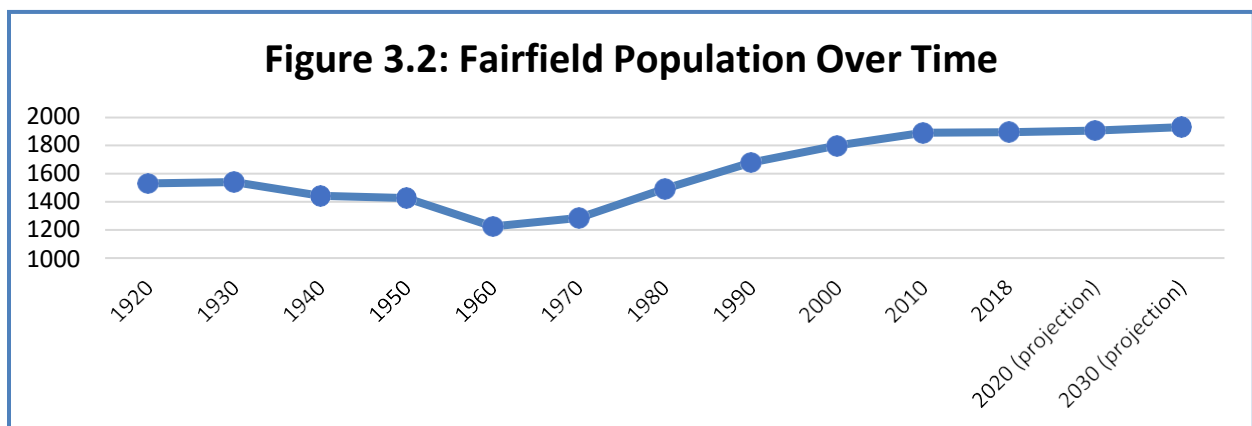
Figure 3.1 Population Estimates

Sources: U.S. Census American Community Survey 2014-2018; Agency of Commerce and Community Development Vermont Population Projections

For the past 40 years, Fairfield’s population has been around 4% of the total population of Franklin County. However, if the 2030 low population projection is correct, Fairfield’s population will shrink to just 3.5% of the total population of Franklin County by 2030.

	Fairfield	Franklin Co.
1960s	0.49%	0.61%
1970s	1.62%	1.12%
1980s	1.25%	1.49%
1990s	0.71%	1.36%
2000s	0.51%	0.51%
2010-2018	0.03%	0.33%

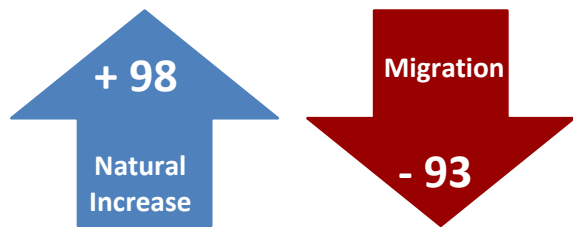
Sources: U.S. Census; U.S. Census American Community Survey 2014-2018



Population Projections 2010-2030.

Population growth has not been shared equally among all Franklin County towns. The rate of growth has been markedly higher in towns adjacent to historic population centers (e.g. St. Albans Town) and in towns located on the border with Chittenden County and within the Interstate 89 corridor (e.g. Fairfax).

Unlike those faster growing municipalities, Fairfield’s growth is being driven by natural increase, rather than by people moving into town. Natural increase is a measure of the number of births minus the number of deaths in any given year. In the past 8 years, Fairfield lost a net 93 residents due to people moving out of town but gained a net of 98 new residents due to natural increase.



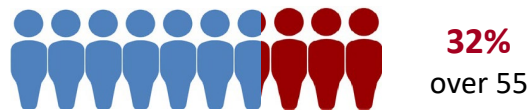
**Figure 3.3: Population Change**

Sources: U.S. Census American Community Survey 2014-2018; Vermont Department of Health Annual Vital Statistics

### Age Profile

**Fairfield’s population is aging.**

Thirty-two percent of Fairfield’s population is age 55 or older. The population of those 55 and older has increased by almost 20% in the last 30 years. This increase is reflective of a national trend as the baby-boom generation ages.

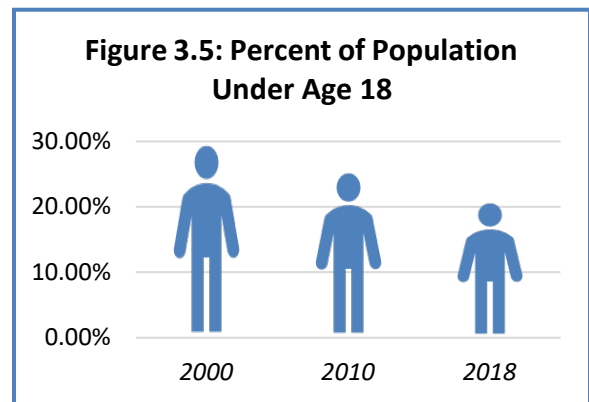


**Figure 3.4: Population Over 55**

Source: U.S. Census American Community Survey 2014-2018

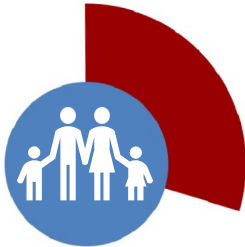
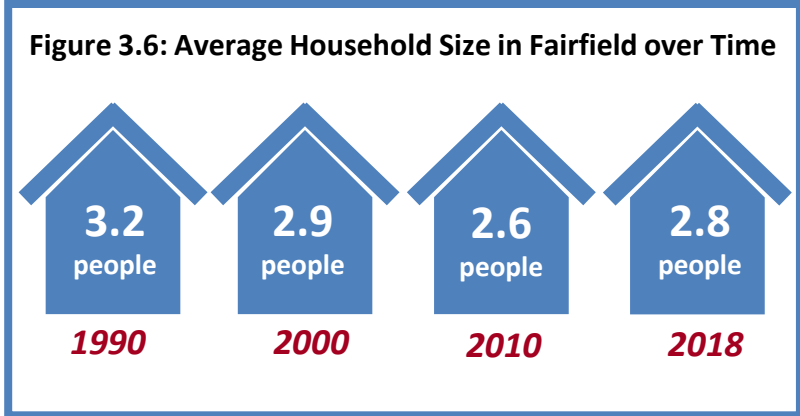
These demographic changes will affect the

housing needs of Fairfield residents, the local school system, and the provision of human services. Demand for smaller, accessible homes with reduced maintenance requirements located closer to basic services will likely grow. There is currently a limited amount of housing in Fairfield designed to meet the needs of older residents. The number of frail elderly, many living alone, is expected to increase, which points to a need for housing, healthcare, transportation and other support services that will allow residents to remain living in the community as they age.



Sources: U.S. Census; U.S. Census American Community Survey 2014-2018

As the population ages, the percent of youth under age 18 has decreased. Therefore, even with some population growth it is anticipated that only modest increases in the school’s enrollment will occur over the next several decades. The record high school enrollments of the 1990s will likely not be surpassed for the foreseeable future unless there are significant changes in the regional economy that would attract large number of younger families from outside the area to move into town.



**32%** of households have children under age 18.

**Figure 3.7: Households with Children**

Sources: U.S. Census; U.S. Census American Community Survey 2014-2018

### Households

**Fairfield’s average household size has declined over the last 30 years. This will lead to increased housing demand, even as population growth slows.**

For planning purposes, the number of households and their characteristics are perhaps more important than the total population. Households drive demand for housing, facilities and services. As households become smaller, the number of households – and therefore needed housing units – can increase without any growth in population.

As of 2018, there were approximately 676 households living in Fairfield (2014-2018 American Community Survey). Over the past two decades, the number of households has grown almost twice as fast as the total population due to a declining household size. In 2018, the average household size was 2.8 people, a slight increase from the 2010 household size. However, this increase may be the result of error in the Census estimates, and the overall trend is still towards declining household sizes.

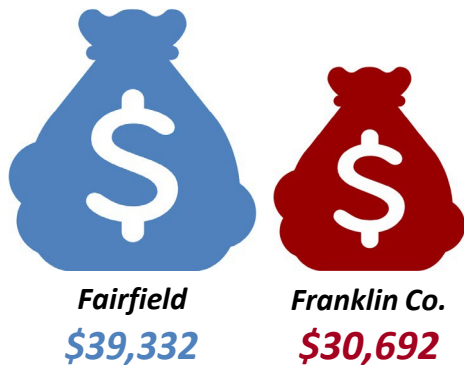
The average household size in Fairfield remains higher than county and state averages, likely because Fairfield has a greater percentage of households with children under age 18 than the State or County.

While the percentage of households with children remains above State averages, it has decreased by 20% over the last 20 years. Given the age distribution of Fairfield, this trend will likely continue and lead to decreased household size in the future.

### Income Profile

Incomes in Fairfield are well above State and County averages.

Figure 3.8: Per Capita Income



Source: U.S. Census American Community Survey 2014-2018

According to the 2014-2018 American Community Survey, in 2018, the median household income in Fairfield was \$84,423 while the per capita income was \$39,332. Both these figures are well above the State and County averages. According to the Vermont Department of Labor, the average wage paid by a Franklin County employer in 2018 was approximately \$48,000— indicating that many households are likely supported by more than one wage earner.

### Housing

#### Housing Trends

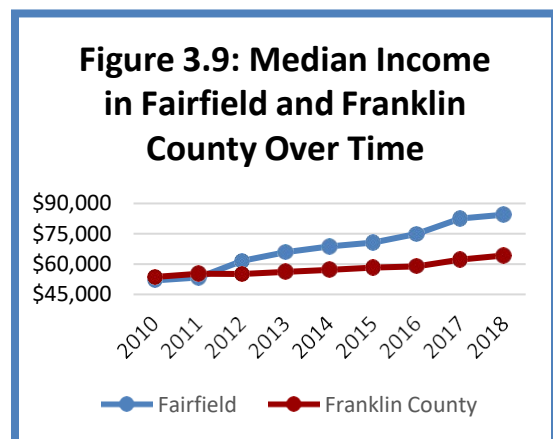
The number of housing units in Fairfield has continued to grow.

The 2014-2018 American Community Survey counted 955 housing units in Fairfield, of which 676 were classified as year-round, occupied dwellings. During the 1960s, '70s and '80s, Fairfield added around 10 homes per year to its housing stock. The amount of housing in Fairfield was increasing at rates above county and state averages during those decades.

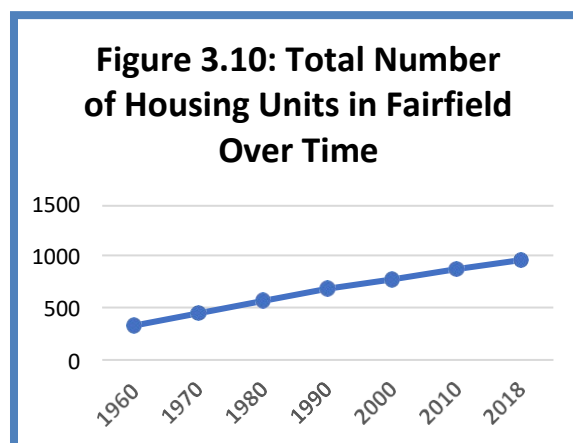
From 1988 to 2020, Fairfield had a permit allocation system that capped the number of residential building permits that can be issued each



year. From 2010-2019 the Town issued an average of 5.3 building permits a year. Even with the allocation in place, the rate of housing development in Fairfield was still higher than county or state averages for the period between 2010 and 2018.



Source: U.S. Census American Community Survey 2014-2018



Source: U.S. Census American Community Survey 2014-2018

The 2018 grand list included 695 residential properties including 104 listed as vacation homes (these figures do not include residences on farm properties) totaling 11,066 acres of land or 28% of listed property in town.

**Characteristics**

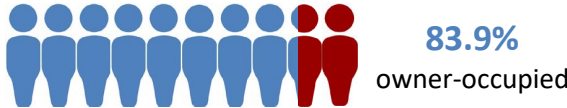
**Most housing units in Fairfield are owner-occupied detached single-family homes.**



**Figure 3.8: Housing Stock**

Source: U.S. Census American Community Survey 2014-2018

87% of Fairfield’s housing stock is made up of single-family detached homes. Of all housing units occupied year-round, 83.9% are owner-occupied.



**Figure 3.9: Home Ownership**

Source: U.S. Census American Community Survey 2014-2018

**Farm Housing**

An analysis of the town’s 2018 Grand List suggests that there were 55 primary dwellings on farm property.

**Senior Housing**

Fairfield has one senior housing development, Chester A. Arthur Apartments, which has eight units. The Town supports the development of additional senior housing.

**Seasonal Housing**

The town also has 104 seasonal properties

(2018 Grand List), most located around Fairfield Pond. This is down from 140 in 2013. There have been many conversions of camps to year-round homes in recent years. The town anticipates that more seasonal residences may be converted to year-round use as property owners retire to their “camps.”

**Mobile Homes**

There are between 35 (2018 Grand List) and 89 (2014-2018 ACS) mobile homes in Fairfield, depending on how structures are classified. There are no mobile home parks in town and virtually all mobile homes are on their own lots. Mobile homes have traditionally been an affordable housing option in rural communities like Fairfield. Given the cost of land in Fairfield, a mobile home on its own lot may not be affordable for some households as the average assessment for such a dwelling was around \$126,315 in 2018 according to the Fairfield Grand List.

Table 3.2: 2018 Fairfield Grand List Characteristics			
	# of Parcels	Acres	Average Value
<b>Residential</b>	556	10,656	\$222,364
<b>Mobile Home</b>	35	254	\$138,237
<b>Vacation</b>	104	1041	\$130,392
<b>Commercial</b>	16	15	\$317,401
<b>Utility</b>	1	-	\$659,400
<b>Farm</b>	108	21,959	\$454,099
<b>Woodland</b>	57	4,249	\$80,197
<b>Vacant Land</b>	119	3,456	\$93,277
<i>Source: 2018 Fairfield Grand List</i>			

**Table 3.3: Affordability of Home Ownership**

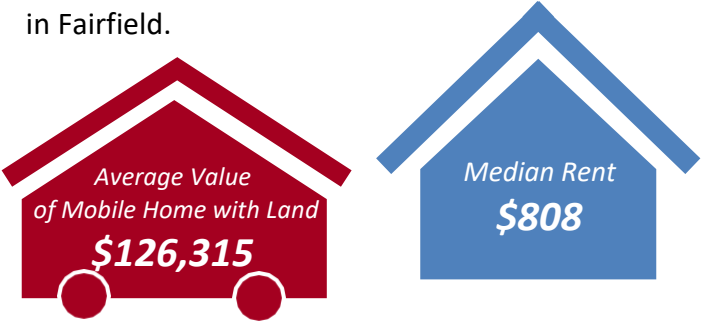
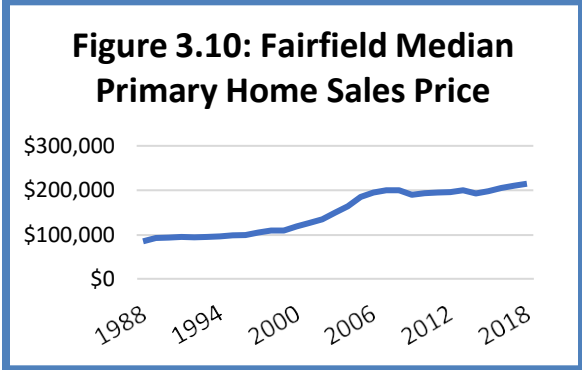
	Household Income (2018)	Maximum Affordable Mortgage	Median Sale Price of Primary Residence in Fairfield (2018)	Affordability Gap
<b>Median Income</b>	\$64,258	\$214,398	\$215,000	<b>-\$602</b>
<b>Low Income (80% Median)</b>	\$51,406	\$152,916	\$215,000	<b>-\$62,084</b>
<b>Very Low Income (50% Median)</b>	\$32,129	\$60,693	\$215,000	<b>-154,307</b>

Sources: U.S. Census American Community Survey 2014-2018; Housingdata.org; Calculation of maximum affordable mortgage based on taxes & insurance calculated by NRPC and a 4% interest rate.

**Values and Affordability**  
**Homeownership in Fairfield is somewhat unaffordable to households making the county median income.**

An analysis of housing affordability based on the state’s definition found that owning a home was somewhat unaffordable for households making the county median income of \$64,258, however the affordability gap is very small (\$602). In contrast, homeownership is very

the beginning of the recession in 2008 to 2014. From 2014-2018 housing prices have begun to increase. Sale prices, household income and assessed values should continue to be monitored to determine the affordability of homes in Fairfield.



**Figure 3.11: Housing Costs**

Sources: 2018 Fairfield Grand List, U.S. Census American Community Survey 2014-2018

While home ownership is not affordable to those with lower incomes, renting and mobile home ownership are affordable to both median and low-income households.

unaffordable for those with low incomes (80% or less of the county median income).

Housing sale prices shot up in Fairfield between 2002 and 2006 but leveled off from



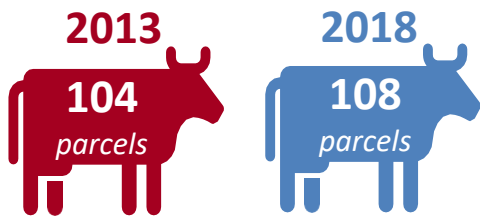
## Economy

### Agriculture

Over the last 20 years, the number of farms has decreased significantly.

Fairfield, despite continued decline in the total number of farms, remains one of the most agricultural communities in the state. The town’s farming community is ever changing and increasingly diverse. Fairfield acknowledges the importance of farmworkers to the farming community in Town.

Figure 3.12: Agricultural Parcels



Sources: 2018 Fairfield Grand List, 2013 Fairfield Grand List

Unfortunately, there are few agricultural statistics available at the town level. The Agricultural Censuses used to tabulate data by zip code but data is only available by county for the most recent 2017 census.

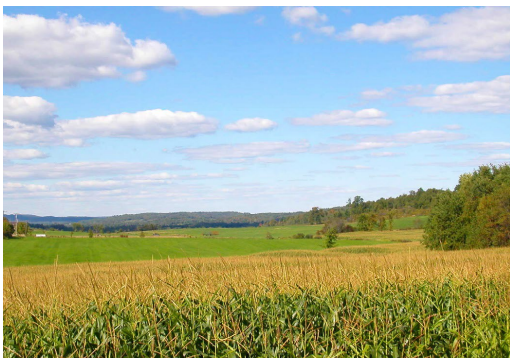


Figure 3.13: Farmland in Fairfield

Over the past two decades, Fairfield’s agricultural economy has experienced both consolidation and diversification. In order to remain profitable, the average Vermont dairy farm has become larger, which explains why the number of farms in Fairfield has declined while the amount of land being farmed has increased. From 1990 to 2020 the number of dairy farms decreased from 74 to 20. However, the number of agricultural parcels has stayed relatively consistent.

The available statistics also point to the increasing number of small farms that are diversifying the town’s agricultural economy, which for more than a century has been largely focused on milk production. Within Fairfield, farmers are raising beef cattle, horses, pigs and poultry in addition to milk cows. A range of crops is grown including corn, hay, soybeans and berries. Across the region, small direct-to-consumer farm operations have grown, with value added vegetable and maple sugar operations being successful in Fairfield. The Healthy Roots Collaborative maintains a directory of direct-to-consumer farm operations in the region.



Figure 3.14: Fairfield Farm

It is estimated that more than half of the town’s farms produce maple syrup; so, stands of sugar maples are important agricultural resources in Fairfield. In addition to the challenges posed by acid rain, air pollution and climate change on the sugar maples, woodlots also face pressure from development.

Organic dairies have also become more common, with 11 organic dairies currently operating in Fairfield (55% of all dairies).

**Current Use Program**

The Current Use Program allows landowners to be taxed based on the current productive value of land rather than based on the traditional “highest and best” use of the land. The program includes a tax penalty for removing enrolled lands as a disincentive to develop productive lands. Over the past 25 years, the amount of land enrolled in Fairfield has increased from 62% of the town to 73% of the town, a total of over 29,000 acres. However, it should not be assumed that all that acreage is actually in productive use.

**Purchase of Development Rights**

Farmers may want to consider selling their development rights – that is, selling the right to develop the land while maintaining all other existing rights – to land trusts or other parties buying such rights for agricultural lands preservation purposes. This provides extra income, and can ensure that the land is not developed even after the current farmer has passed on the land to the next generation, rented it out, or sold it.

The purchase of development rights has been perhaps the most effective form of protection of farmland to date. The Vermont

Land Trust, has targeted Fairfield farms as part of an agricultural “critical mass” area resulting in the purchase of development rights on roughly 8,177 acres of land, representing 38% of all land in Town.

**Local Businesses**

**Fairfield has seen modest increases in the number of local businesses and jobs in the last 10 years.**

In 2019, the Vermont Department of Labor counted 51 business establishments in Fairfield, employing 242 people. While the most rapid

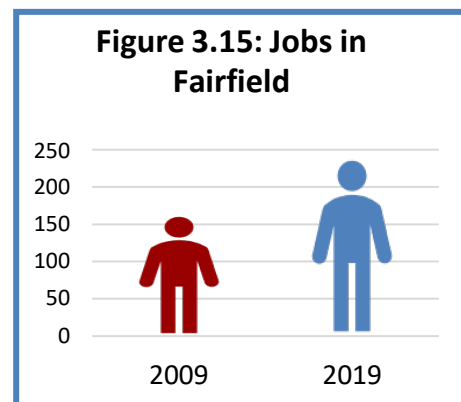


**51**

*businesses*

growth in number of businesses occurred in the 1980s, the number has continued to grow. From 2009 to 2019, the number of businesses increased 47.6%. The average annual wage of someone employed in Fairfield in 2019 was \$42,000.

The types of non-agricultural businesses in town are diverse and typical of rural communities including a number of construction contractors, automotive service and repair, specialty shops, professional services, and artists. The town’s

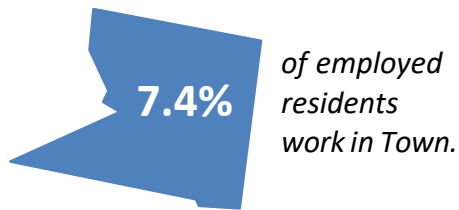


Source: Vermont Department of Labor

largest employer is the public school system, which employs around 60 people.

### Home Businesses

While there is little concrete data available on home businesses currently operating in town, there is evidence that they are an important component of the town’s economy. According to the 2014-2018 American Community Survey, 150 (22.2%) of the employed civilian population over 16 reported self-employment income and 99 (9.2%) people reported working at home.



Source: Longitudinal Employer-Household Dynamics Data

### Employment

**Most Fairfield residents work outside the Town, primarily in St. Albans and Chittenden County.**

According the 2014-2018 American Community Survey, Fairfield has a labor force of 1,162 people. In 2018, the unemployment rate was 1.7%, a figure lower than State and County averages. While the rate of unemployment has risen to 6.6% as a result of the Coronavirus pandemic, this rate is still lower than the state average.



Source: Longitudinal Employer-Household Dynamics Data

### Commuting Locations

The average Fairfield resident commutes 28.1 minutes to work. Top commuting destinations include St. Albans City, St. Albans Town, and Burlington.

### Education Facilities

The Maple Run Unified School District operates full educational services for children in grades K-8 in Fairfield. Grades 9-12 attend regional high schools, primarily Bellows Free Academy in St. Albans. The Fairfield School was last expanded in 1988, when six classrooms and a new library were added. The library has since been moved to a new, separate building from the school. Current school capacity is approximately 300 students.

The School District is currently constructing a new addition to the Fairfield Center school. This addition will add two classrooms for music and art classes which are currently be conducted in the historic Common School building. It will also add an office & storage space.

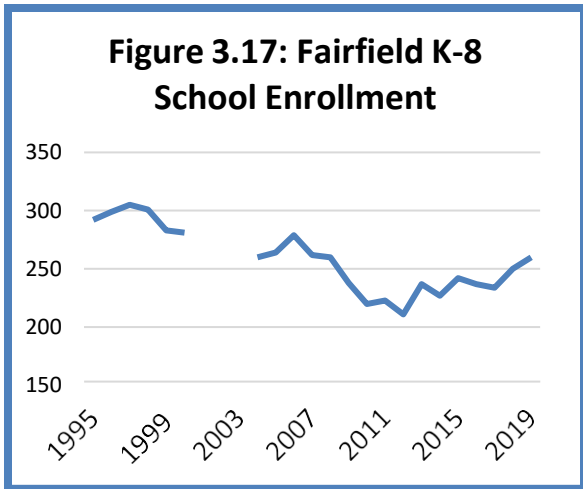
Fairfield contracts with an outside entity to provide bus services to students.

### Enrollment

**Enrollment has increased somewhat since 2010, but remains below the peak enrollments of the 1990s.**

Current enrollment (2018-2019 school year) at the Fairfield School is approximately 260 students. Enrollment peaked at around 300 students during the 1996-97 school year, reflecting the passing of the “echo baby boom” through the school system. Over the past 5 years, enrollment has increased somewhat. However, given the demographic

trends of smaller households and an aging population it is unlikely that school enrollment will surpass the peak of the 1990s unless there are significant changes to the regional economy that would attract young families with children to town.



Source: Vermont Agency of Education

### Costs

The cost of providing public education has risen sharply over the past decade. There have been changes to state funding for education that have complicated the relationship between education costs and property tax bills, but the simple fact remains that each new home has the potential to add students to the school system and the taxes levied on that home alone will not cover the annual cost of educating even one child. As of 2018-2019 school year, the Maple Run Unified School District, which includes Fairfield Central School, spent around \$15,442 per equalized pupil. This figure is roughly equal to the state average of \$15,521.

### Childcare

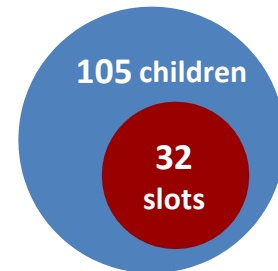
**There has been a decrease in the**

### availability of child care in Fairfield and surrounding communities.

According to the 2014-2018 U.S. Census American Community Survey, 77.2% of all children under age 6 in Fairfield live in households where all parents in the household are working. Many of these families are reliant on childcare providers, located both in Fairfield and nearby communities. This percentage was slightly higher for school-age children (84.9%), indicating a potential need for after-school and summer programs.

In 2019, there were two registered in-home childcare providers located in Fairfield. Additionally, a preschool program located at the Fairfield Center School is available during the school year. Combined these programs have 32 child care slots for children under the age of 6. There are 105 children under 6 with working parents in Fairfield, meaning that there are 3.3 children for every available child care slot.

In 2020, a new child care center opened at the Fairfield Community Center with 30 total slots for both children under 6 and school age children.



**Figure 3.18: Child Care Availability**

Source: Bright Futures Child Care System

Many parents likely use childcare providers in the community in which they are employed. However, there has been an 18% decline in the number of child care slots available in the county from 2015 to 2018, suggesting that the availability of child care may be an

issue for Fairfield families.

**Vocational and Continuing Education**

Fairfield school-age and adult residents have access to vocational and continuing education in nearby communities including the Northwest Technical Center in St. Albans, Cold Hollow Career Center in Enosburg Falls, Vermont Adult Learning in St. Albans, Vermont Community College in St. Albans, and numerous opportunities in the greater Burlington area.

**Utilities and Services**

**Water**

Two private water districts, one serving Fairfield Village and one serving East Fairfield, operate in town. Both are funded through user fees and have not traditionally sought assistance from the town. Both systems were last upgraded in the early 1990s. Fairfield Fire District #1 is facing upgrade needs.

Fairfield Fire District #1 owns and operates East Fairfield’s water supply system. The source of supply for this system is a gravel-packed well located at the Burton Gravel Pit land donated by Francis Howrigan in Fairfield. With a depth of 381 feet, the well is reported to have a safe yield of 275 gallons per minute. This chlorinated water supply is then distributed throughout the village area by four-inch and smaller plastic water mains. The system’s 60,000-gallon reservoir is currently covered by a wooden structure. To maintain compliance with state requirements, the Fire District plans to replace this cover with a concrete cap. The Fire District is currently investigating funding sources to assist with this upgrade.

Fairfield Village is serviced by a water supply completed in the fall of 1992. A 40,000 gallon covered storage reservoir is located adjacent to State Route 36. At an elevation of about 480 feet, this reservoir is connected to the system with a six-inch plastic main and helps to maintain the operating pressure at 40 to 45 pounds per square inch in the village.

Throughout the rest of the town, homes are served by individual water systems.

**Wastewater**

Wastewater is treated on-site by private systems. Changes to the state septic regulations in 2002 closed the 10-acre exemption requiring all new lots, no matter their size, to obtain a state wastewater permit. The changes also included approval of alternative systems for use in Vermont. As a result, the town no longer relies on state septic regulations to maintain a low density settlement pattern in rural areas or to keep development off marginal lands.

There is a potential problem in the villages for the proper disposal of sewage. In 2011, the Town completed a Wastewater Needs Assessment and Feasibility Study to look at solutions for improvements to wastewater management in East Fairfield, Fairfield Village and Fairfield Pond, including decentralized options. Estimated costs for various wastewater solutions ranged from \$500,000 to \$3 million. A survey of Fairfield residents found that most residents felt that this cost was too high, therefore there is no plan for implementation.

### **Solid Waste**

Fairfield is a member of the Northwest Regional Solid Waste District. Residents must make their own arrangements with private haulers for trash and recycling pickup.

### **Electric Infrastructure and Services**

Both Green Mountain Power (GMP) and Vermont Electric Co-Op (VEC) provide electricity in Fairfield. There is a transmission corridor that crosses into the southwestern corner of town, but no other regional infrastructure is located in Fairfield.

### **Communication Infrastructure and Services**

Land line phone service is provided in Fairfield by Consolidated Communications. There is one cell phone antenna array installed on a farm silo along Chester Arthur Road. There is also cell phone service from out-of-town towers. Some places in town still may have limited cell phone coverage.

The primary types of internet services available in Fairfield are DSL and wireless/satellite internet. Antennas for satellite internet are not mapped, but one is known to be placed on a silo near Duffy Hill Road. Some residents may have cable service. Just 10.5% of Fairfield homes & businesses have access to broadband internet as defined by the FCC. Improving broadband & cell phone service was rated by residents as a top priority for the Town to address in the next eight years.

### **Public Safety and Emergency Response**

#### **Fire Protection**

Two volunteer fire departments – Fairfield

and East Fairfield – provide fire protection service in the town. Both departments are funded through the town and private donations. No significant shortages of equipment or personnel have been identified at the present time. During the past few years, the numbers of fire calls responded to by the department have increased due to an increase in motor vehicle accidents. As a result, training and equipment costs have increased, resulting in higher Town expenditures.

#### **Police Protection**

Police protection, when needed, is provided by the Vermont State Police.

#### **Health and Human Services**

Doctors, dentists, and hospitals in nearby St. Albans provide medical treatment.

#### **Energy**

Fairfield has adopted an enhanced energy plan which can be found in the Appendix.

#### **Transportation**

As one of the most rural towns in Vermont, Fairfield deals with a smaller range of transportation issues than many other municipalities in the state. There is no public transportation system. The town’s roads are not as heavily traveled by tourists as those in many other parts of Vermont. All transportation related features are identified on Figure 3.20.

#### **Public Roads**

The only state highway in Fairfield is Route 36, which travels west from the St. Albans line east to the Bakersfield line and passes through Fairfield Center and East Fairfield.

Table 3.4: Fairfield Road Mileage			
	<i>Paved</i>	<i>Gravel</i>	<i>Total</i>
<b>Interstate Hwy</b>	0.676	0	0.7
<b>State Hwy</b>	10.1	0	10.1
<b>Town Class 2</b>	19.8	1.5	21.3
<b>Town Class 3</b>	1.7	68.8	70.5
<b>Town Class 4</b>	0	13.1	13.1
<b>Private Roads</b>	0	3.4	3.4
<b>Total</b>	<b>32.3</b>	<b>86.7</b>	<b>119.1</b>
<i>Source: VT Agency of Transportation</i>			

Route 36 is state maintained and carries around 1,600 vehicles per day at the Bakersfield line and 3,000 vehicles per day at the St. Albans line. These traffic figures have been increasing gradually and they suggest that the highway is a primary route for many of the town’s commuters and residents. A very short segment of Interstate 89 cuts across the westernmost corner of town, but the nearest interchange is approximately 2.5 miles west of the town line in neighboring St. Albans. Most of the remaining roads in Fairfield are town-maintained highways. Class 2 and 3 town roads receive state monies for their upkeep according to formulas based on class. Class 4 town roads receive no state funding for maintenance and are not maintained by the town during the winter months.

The majority of the transportation issues in Fairfield have to do with the maintenance of the many public roads, and associated bridges and culverts, which dissect the town. Most town roads are gravel. Respondents to the 2020 survey rated the maintenance of town highways as the second most important priority for the Town. Some residents encouraged better maintenance of existing gravel roads, while others indicated that they would prefer roads to be paved.

Fairfield has a higher number of road miles than most Vermont towns, but a relatively low population. This means that a high proportion of the town’s budget must be used for road maintenance. Downgrading some roads from class 3 to class 4 is one option for the town to reduce maintenance costs. However, this must be done with caution since evidence suggests that most roads are well traveled.

Fairfield has designated the Chester A. Arthur Road as State Scenic Road protecting the road’s scenic character.

**Private Roads**

Given the fiscal implications of increasing the total mileage of town-maintained roads, it is likely that any new roads constructed in Fairfield will be private. Private roads need to be constructed to basic standards in order to protect public safety and prevent damage to adjoining public infrastructure.

**Bicycle and Pedestrian Infrastructure**

In recent years there has been an expansion in the amount of bicycle and pedestrian infrastructure in Fairfield.

In 2020, Fairfield installed 2,700 feet of sidewalk and pedestrian improvements along Vermont Route 36, Soule Drive and South Road in Fairfield Center.

In terms of trails, the former Missisquoi Valley Rail Trail cuts across the northwest corner of town (for about 1/3 of a mile) from Swanton to Sheldon.

It is expected that by 2023, the State will finish construction of the Lamoille Valley Rail

Trail, which will run parallel to the Black Creek for several miles through the villages of Fairfield and East Fairfield from Sheldon to Bakersfield. Once constructed, the trail can be used for walking hiking, cycling, horseback riding, snow-shoeing, cross-country skiing, and snowmobiling. Local input from farmers and abutting land owners should be taken into consideration when developing the Rail Trail.

Other trails in Town are the Chester A. Arthur Walking path and a walking path around the school. Residents can utilize ancient roads as trails (see Appendix).

Residents have provided mixed feedback on future bicycle and pedestrian infrastructure priorities. Several residents have expressed that there should be sidewalks in East Fairfield, but bicycle & pedestrian infrastructure was rated as the lowest priority in the 2020 Town Plan survey.

**Public Transportation**

The Town of Fairfield is not serviced by fixed public transit. Green Mountain Transit (GMT) offers public transit for Franklin County. GMT offers a commuter route from St. Albans to Burlington called the St. Albans LINK Express, as well as several other regional commuter routes and a St. Albans City loop. The Town encourages the expansion of public transit, especially public transit options for senior citizens.

Presently, the nearest rail service for freight is in Richford (Canadian Pacific). The nearest passenger rail service is Amtrak’s Vermonter which stops in St. Albans and travels south to New York City and Washington D.C with connections to Boston and other locations on the east coast.

Historically, two railroad lines ran through Fairfield, but neither is currently used. Both of these lines have been officially rail banked meaning they will remain trails until rail becomes feasible again.

Burlington International Airport, approximately 45 miles to the southwest, is the closest airport with national and international connections. Trudeau Airport is located about two hours to the north in Montreal, Quebec.

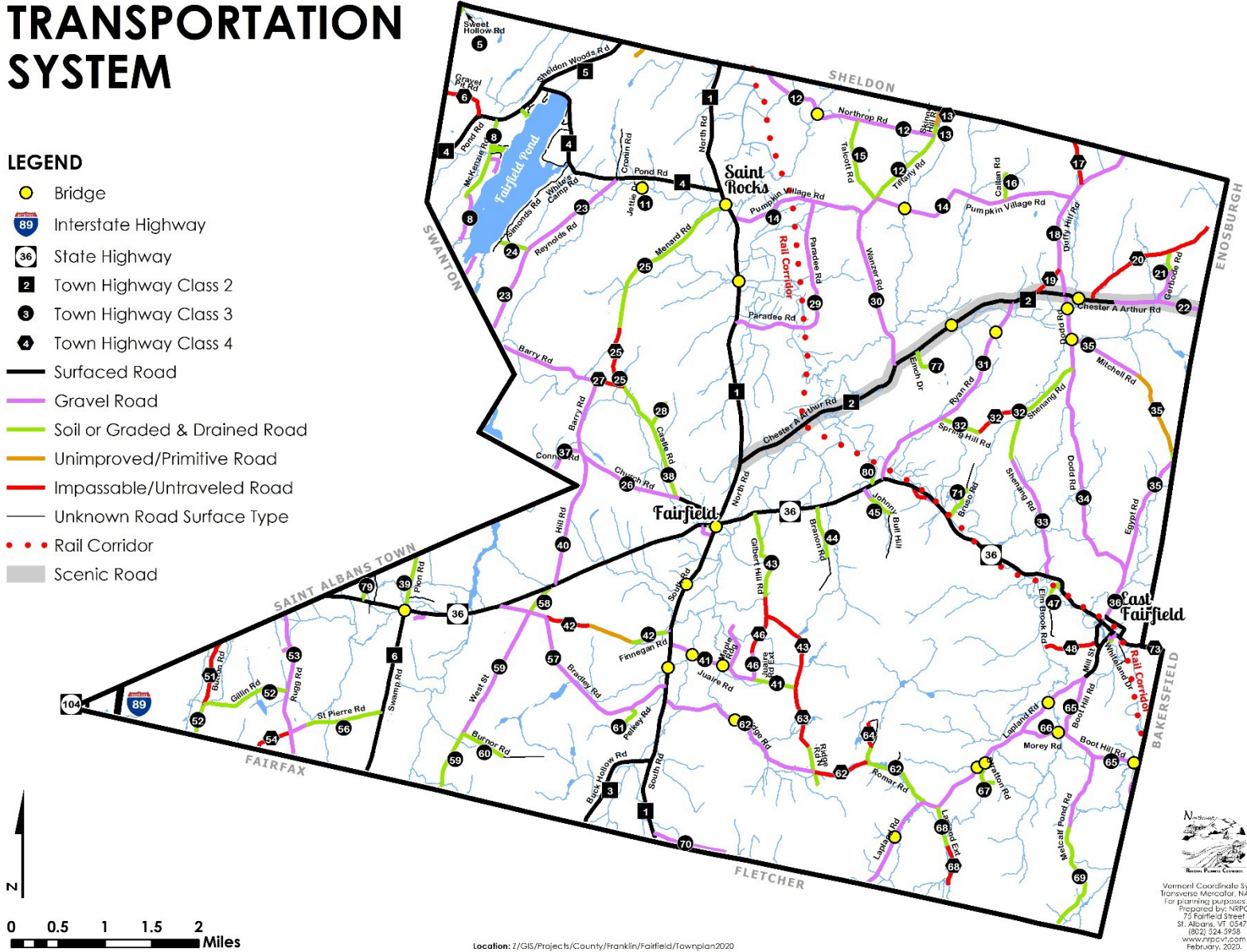


Figure 3.19

# TRANSPORTATION SYSTEM

## LEGEND

-  Bridge
-  Interstate Highway
-  State Highway
-  Town Highway Class 2
-  Town Highway Class 3
-  Town Highway Class 4
-  Surfaced Road
-  Gravel Road
-  Soil or Graded & Drained Road
-  Unimproved/Primitive Road
-  Impassable/Untraveled Road
-  Unknown Road Surface Type
-  Rail Corridor
-  Scenic Road



Location: Z:\GIS\Projects\County\Franklin\Fairfield\TownPlan2020


  
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## Recreation

Fairfield has an active Recreation Committee that oversees the mostly volunteer maintenance of the town’s recreation fields and that organizes year-round activities. In recent years the Recreation Committee has started an annual run and put in a high school certified softball field and a full-sized junior high school soccer field in Fairfield Center. The committee plans to add a tee-ball field to the facility. The town typically funds capital costs associated with maintenance, such as the replacement of the East Fairfield Community Center septic system in 1998.

Figure 3.20 Fairfield Pond



### Facilities

Fairfield’s public recreation facilities include the following:

**East Fairfield Town Common:** Located in East Fairfield, the town common includes a basketball court / ice rink, baseball field and picnic tables. There is a playground nearby next to the Fairfield Community Center.

**Fairfield Center Town Common:** Includes a baseball field, soccer field and basketball court.

**Fairfield Center Recreation Park:** Fairfield has a five-acre Recreation Park located on town property across from the Fairfield Center School. The park, which was developed in 1989, contains a gazebo, playground equipment and a recreation path. The Town Recreation Committee remains active in maintaining and improving the park.

**Fairfield Pond Beach:** Fairfield Pond Beach consists of a stretch of beach along Pond Road on the north end of the pond. Recently, the Town developed a parking area, eliminating the need to park on the beach itself. The Recreation Committee is in the process examining other potential improvements to the beach.

**Chester A. Arthur Walking Path:** The Chester A. Arthur Walking Path is located behind the re-creation of Chester Arthur’s birthplace. The Recreation Committee should develop a plan to ensure the trail is adequately maintained.

### Outdoor Recreation and Rural Character

Maintaining and developing Fairfield’s natural beauty and resources for recreational purposes is an important aspect of the overall town plan, because not only is such an endeavor compatible with the preservation of the rural character of the town, but also, recreational development in the form of vacation dwellings helps form a solid tax base for the town.

Keeping the area attractive for outdoor recreation entails more than merely maintenance of the present assets. Some assets are already deteriorating and

becoming overcrowded. Fairfield Pond, for example, has nearly reached its limits as far as accommodating housing on its shores. The area requires immediate attention in order to prevent further development where the water quality and surrounding soils are already suffering.

In addition to cleaning up the deteriorating areas, the town’s recreational plan must encourage the development of new recreational areas. Many good sites are located in the town and could be made suitable for recreation, wildlife areas and other uses. The Town forest could be one area further developed for such uses. The most important aspect of planning new recreation areas is to ensure that sound environmental and ecological principles are employed.

The density of housing, whether it is seasonal or full-time, must be carefully controlled in areas surrounding water bodies to control pollution and accompanying health hazards; similarly the proximity of housing to the water’s edge must be carefully guarded. In line with maintaining ecologically sound recreation areas with natural beauty as their outstanding quality, measures must be taken to ensure that commercial establishments and concession stands do not dominate ‘natural’ recreation areas. Such commercial development must be confined to specific areas where environmental beauty and quality will not be impaired.

**Environment**  
**Climate and Air Quality**

Vermont’s climate is best described as variable; temperatures range greatly

throughout the year and can change considerably in a given day. There can be great differences in the weather during the same seasons in different years, and considerable diversity from place-to-place. Moderately warm summers, cold winters and ample rainfall are characteristic of the regional climate.

Air quality is generally high throughout Vermont, especially in rural towns like Fairfield. Levels of air pollution throughout most of Vermont meet federal standards. Unlike more industrialized places, motor vehicles are the largest source of air pollution in Vermont; vehicles emit ozone, particulate matter and chemical compounds. Localized areas where traffic is congested or vehicles sit idling often have very low air quality. Weather patterns can also influence whether pollutants will disperse or remain concentrated close to the ground. Lower air quality has been linked to human health problems and can impact the natural environment as well.

Acid rain, which is caused by air pollution, is affecting environmental quality in Vermont. Acid rain causes acidification of lakes and streams and contributes to damage of trees, especially at high elevations. Acid rain is an additional stress, along with climate change, on the town’s sugar maple stands. In addition, acid rain accelerates the decay of building materials such as stone and metal. Power plants, industrial manufacturing and motor vehicles are all sources of pollutants that are ingredients of acid rain. These pollutants become part of the air masses circulating in the upper atmosphere. Prevailing winds transport the polluting compounds, sometimes hundreds of miles, across state and national borders.

## Geology, Terrain and Soils

### Geology

Greywacke schist is a rock commonly found in Fairfield. It is complex metamorphosed sandstone. Gniesses, phyllites, schists, and greenstones are also present in Fairfield. The main difference between these rocks is their degree of metamorphism - some are finer grained than others are. These metamorphic rocks of Fairfield have also been folded, faulted, and jointed.

On the surface, a large part of Fairfield is covered by more recently deposited glacial till, the debris deposited directly by the melting ice of a retreating glacier. Till is unsorted, which means it is composed of particles of all sizes from clay to small boulders. Till covers Fairfield as a thin veneer less than ten feet thick (greater in stream valleys).

### Slope

The locations of slope categories in Fairfield are listed and described below, and are shown on the development limitations map. More than half of Fairfield has a slope that is favorable for agriculture.

Steep slopes present challenges to development. Slopes greater than 25 percent are characteristically covered by

shallow soils often having fragipans that make development more difficult.

Development at such a slope requires cuts and slope stabilization for foundations, parking areas, road access and utilities that are expensive and often, unless well designed, are unattractive.

Development on slopes over 15 percent may also be at the expense of the municipality as the costs of road maintenance, runoff maintenance and sedimentation problems are much higher on steep slope areas. School bus and fire service may also be difficult, expensive or even impossible depending on weather conditions.

Considerable environmental problems may arise from development on steep slopes presenting hazards to those residing within the areas as well as those outside.

Development on steep slopes may upset the natural slope repose angle and by removal of vegetation and the injection of effluent by on-site sewage disposal will increase runoff, erosion and the possibility of mass movement or slumping. Slippage of foundations is not uncommon in steep slope areas.

Slope Categories in Fairfield and Best Possible Uses	
<b>0–15% Slope (Flat).</b>	Good for agriculture, housing construction and engineering. This is the best land and makes up 31,328 acres or 66% of the land in Fairfield.
<b>15–25% Slope (Gently Sloping).</b>	Good for agriculture with the use of machinery and more labor. 10,580 acres of Fairfield, or 22% of the land area, is in this category.
<b>25%+ Slope (Steep).</b>	Thin soils, susceptible to erosion. This land is not agriculturally productive, is not safe for construction, and is best kept under natural vegetation and grass cover. Approximately 5,382 acres, or 12% of Fairfield, is in this category.

Septic tank disposal fields located on slopes greater than 15 percent may result in partially treated effluent surfacing and seeping onto the downslope surface causing health hazards and possible nutrient enrichment of surface water, not to mention aesthetic problems. Of the effluent that does remain under the shallow soil characteristics of steep slopes, much of it may flow laterally and result in groundwater contamination or the surfacing of effluent at outcrop or fragipan areas.

Development on slopes greater than 15 percent should be avoided or at minimum carefully performed in order to avoid high environmental and social costs. Runoff and erosion should be carefully controlled during all phases of construction and wastes should be treated outside the steep slope area.

**Soils**

In addition to slope, soil characteristics greatly influence the suitability of land for a given use. Since all development in Fairfield relies on on-site, soil-based systems to treat wastewater, the suitability of soils for septic systems is a key element in determining future land use patterns. As shown in Figure 3.22, there are few areas in town with soils well suited for on-site septic systems. Most of the town’s soils are either moderately or marginally suited, and a significant amount are unsuited for wastewater treatment. While the soil survey provides information at the town level, a field assessment is necessary to accurately determine soil capacity on a particular piece of property. Figure 3.22 also identifies soils which are frequently flooded and therefore present a significant barrier to development.

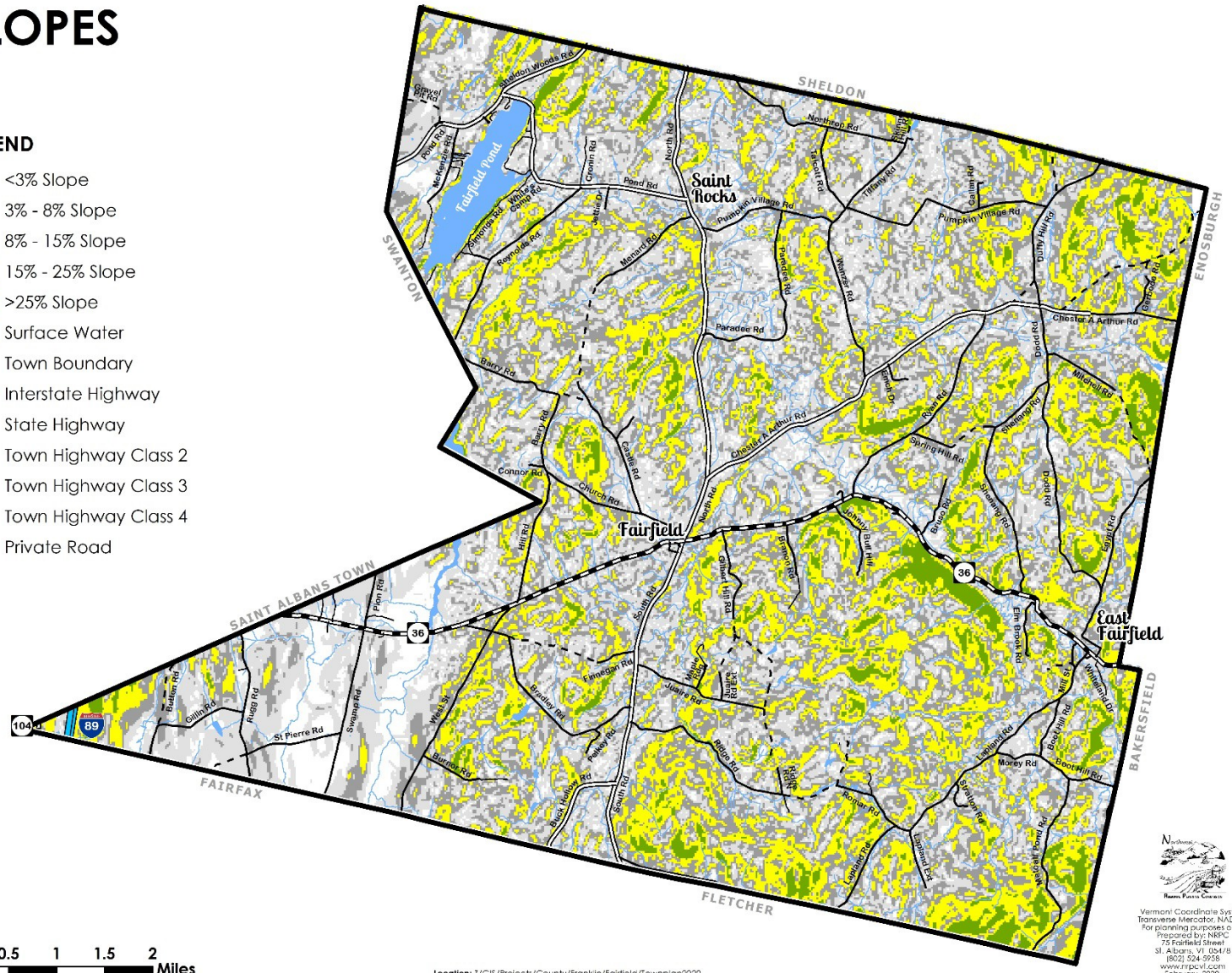
In addition to influencing development potential, soils are the foundation of the agricultural landscape. Both state and federal agencies have classified soils by their properties and have identified the most productive soils, as shown in Figure 3.23. Prime agricultural soils have natural fertility retention qualities, high organic matter content, favorable drainage, level to gently rolling slopes, sufficient depth and textural qualities as well as high available moisture content. These factors in combination make such soils intrinsically suitable for crop production.

Figure 3.21

# SLOPES

## LEGEND

- <3% Slope
- 3% - 8% Slope
- 8% - 15% Slope
- 15% - 25% Slope
- >25% Slope
- Surface Water
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road



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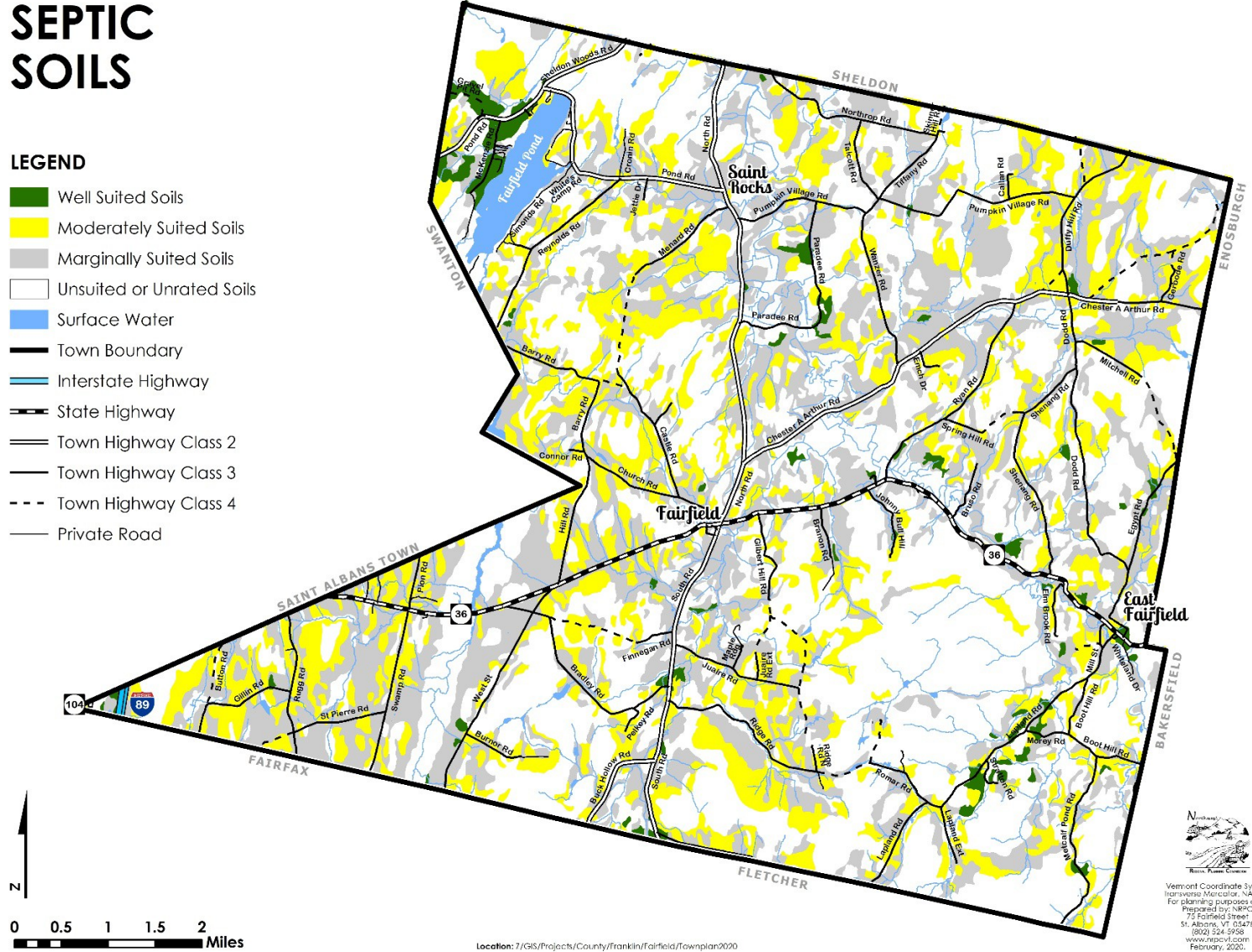

  
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Figure 3.22

# SEPTIC SOILS

## LEGEND

- Well Suited Soils
- Moderately Suited Soils
- Marginally Suited Soils
- Unsited or Unrated Soils
- Surface Water
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road



Location: 7/GIS/Projects/County/Franklin/Fairfield/Townplan2020

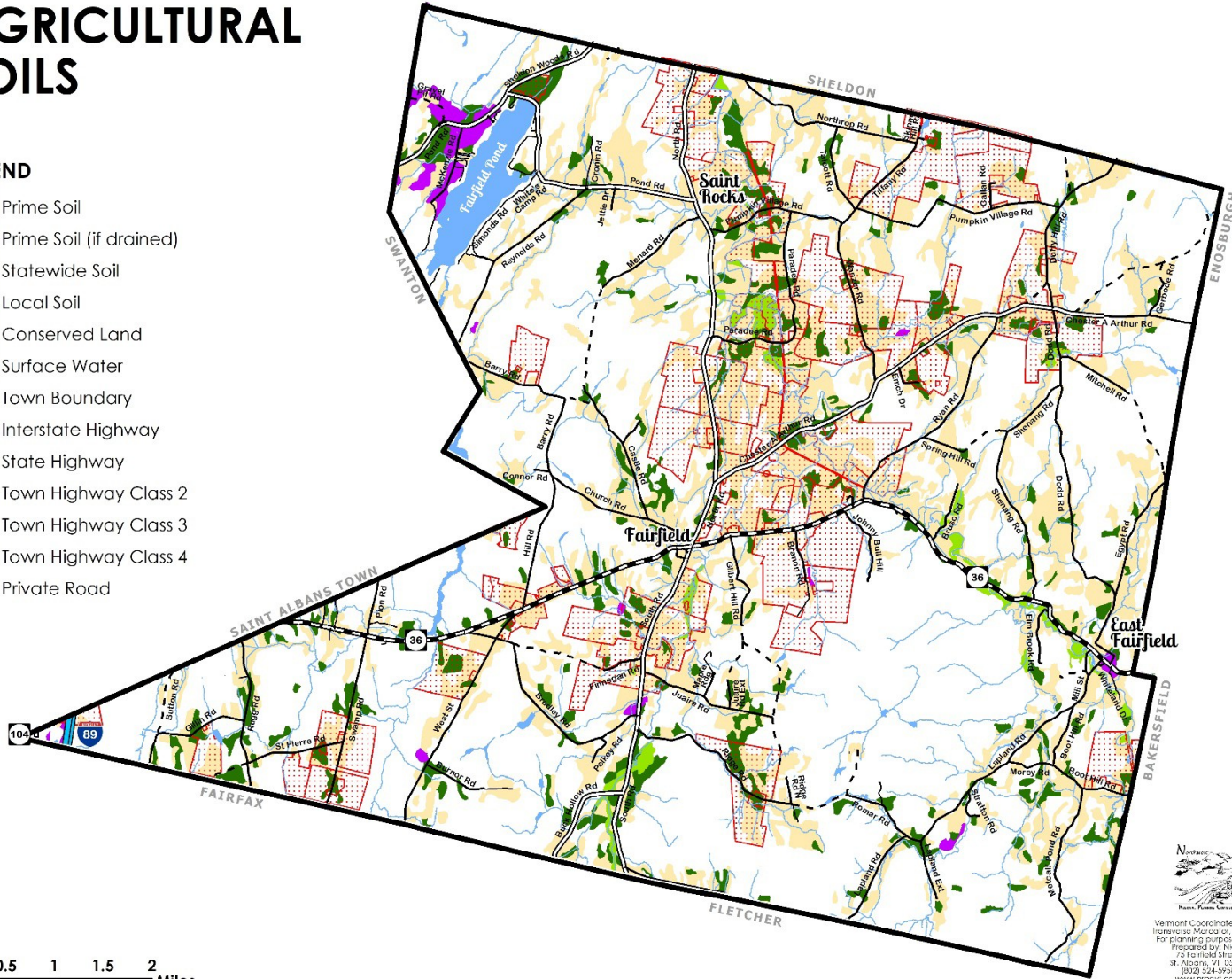

  
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Figure 3.23

# AGRICULTURAL SOILS

## LEGEND

- Prime Soil
- Prime Soil (if drained)
- Statewide Soil
- Local Soil
- Conserved Land
- Surface Water
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road



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**Earth Resources**

There are a few earth resources of importance in Fairfield – sand and gravel deposits and mineral deposits. Sand and gravel are important local resources for Fairfield and are needed for road repair and construction. Gravel deposits also are important areas for recharging groundwater supplies.

The state recognizes two mineral sites in Fairfield. Located just west of North Road between Sheldon and St. Rocks behind the Callan Farm is the Saint Rock Iron Mine. This small mine consists of six pits where good quality hematite has been extracted.

The second site is the Burnor #1 oil and gas exploration well (also known as the Columbia gas well). In the mid-1980s, Columbia Gas and Delta Drilling commenced work on an exploratory well on the north side of the Chester A. Arthur Road. In 1984, at a depth of nearly 7,000 feet, the consortium ceased drilling operations. The site is now registered as a dry hole. The possibility still exists for future exploratory wells in Fairfield. Wells drilled in St. Albans and near Mallets Bay in Colchester produced small amounts of natural gas mixed with a high percentage of methane. If gas prices remain high there may be incentives again to search for resources like natural gas.

Earth resource extraction and/or processing activities have a high potential for becoming a substantial public nuisance in the area where such activities are located. There is a potential for problems in any of the following areas:

- Noise, dust and air pollution, or radiation.
- Surface and groundwater pollution,

siltation or radiation.

- Storage and disposal of waste materials, both solid and liquid.
- Increased storm water runoff, erosion and sedimentation.
- Despoilation of the landscape and limited utility for subsequent uses of the site.
- Decreased highway safety and increased municipal costs due to increased traffic and accelerated deterioration of highways and bridges attributable to transportation activities generated by the earth resources operations.
- Reduced property values because of primary or secondary impacts of the proposed earth resource operations.

All of these factors, single and together, may act to substantially depreciate land values in the immediate vicinity of such activities and the town in general.

While earth resource extraction comes with risks, many of these resources are needed by residents for road and building material, or for sale as a marketable resource. Each of these resources is finite and once depleted cannot be replaced. Development near or over the resource may, in effect, make extraction impossible in the future. Therefore, any construction over an earth resource should account for the potential loss of that resource. The state has estimated that more than 30 percent of all sand and gravel deposits in Vermont are now inaccessible due to state regulations including water supply protection, critical wildlife habitat, conserved lands, and other factors. Current developments over deposits have further limited the availability of the resource.

The town, therefore, has two responsibilities. First, it needs to be vigilant in its regulation of earth resource extraction operations to prevent the creation of a nuisance. And second, the town needs to protect the resource to ensure its availability for future residents.

**Water Resources**

The Town of Fairfield is located in the Missisquoi River Basin, with the Black Creek Watershed covering most of the area in town. Major streams in town include the Black Creek, Dead Creek, Elm Brook, Fairfield River, and Wanzer Brook.

**Black Creek**

As the Black Creek meanders through the center of Fairfield, it is degraded by human and agricultural waste to the extent that large portions of it no longer support the most fundamental needs. The Vermont Agency of Natural Resources partnered with the Missisquoi River Basin Association and the Northwest Regional Planning Commission to conduct Phase 1 and Phase 2 Geomorphic Assessments of several stream reaches within the Black Creek watershed, which then resulted in the Corridor Management Plan, April 2009. The plan identifies areas where restoration projects can have the greatest impact on improving stream stability and water quality.

**Fairfield Pond**

Located in the northwest corner of the town, Fairfield Pond is a spot of incredible beauty and considerable activity. It is used by town residents for recreational activities such as fishing, boating, and sailing. Its shores are dotted with a number of seasonal camps

that are for the most part unobtrusive and bolster the particular New England feel of the area. The pond also serves as water supply for the Town of Swanton, so it is essential that this water be protected for diverse uses.

Beginning in 1988, the water quality of the lake experienced a significant downturn with large-scale algal blooms occurring during both the winter and summer months. A detailed study was compiled that outlined the current status of the pond and recommended a series of actions that were meant to reduce the negative effects of land-use in the surrounding area. The study was called the Fairfield Pond Diagnostic Study. The study recommended the creation of a survey that would catalog current land use practices and attempt to predict future patterns. This in turn could dictate a land management strategy to guide future decision-making, but no such survey has been developed.

In 2018, the Fairfield Pond Recreation Association received a grant to study aquatic plants with an emphasis on controlling milfoil in Fairfield Pond. The study, available on the Fairfield Town website, identifies rare native species and high-priority areas for milfoil removal. The Association has been active in hosting milfoil removal events and placing no-wake buoys around milfoil infested areas.

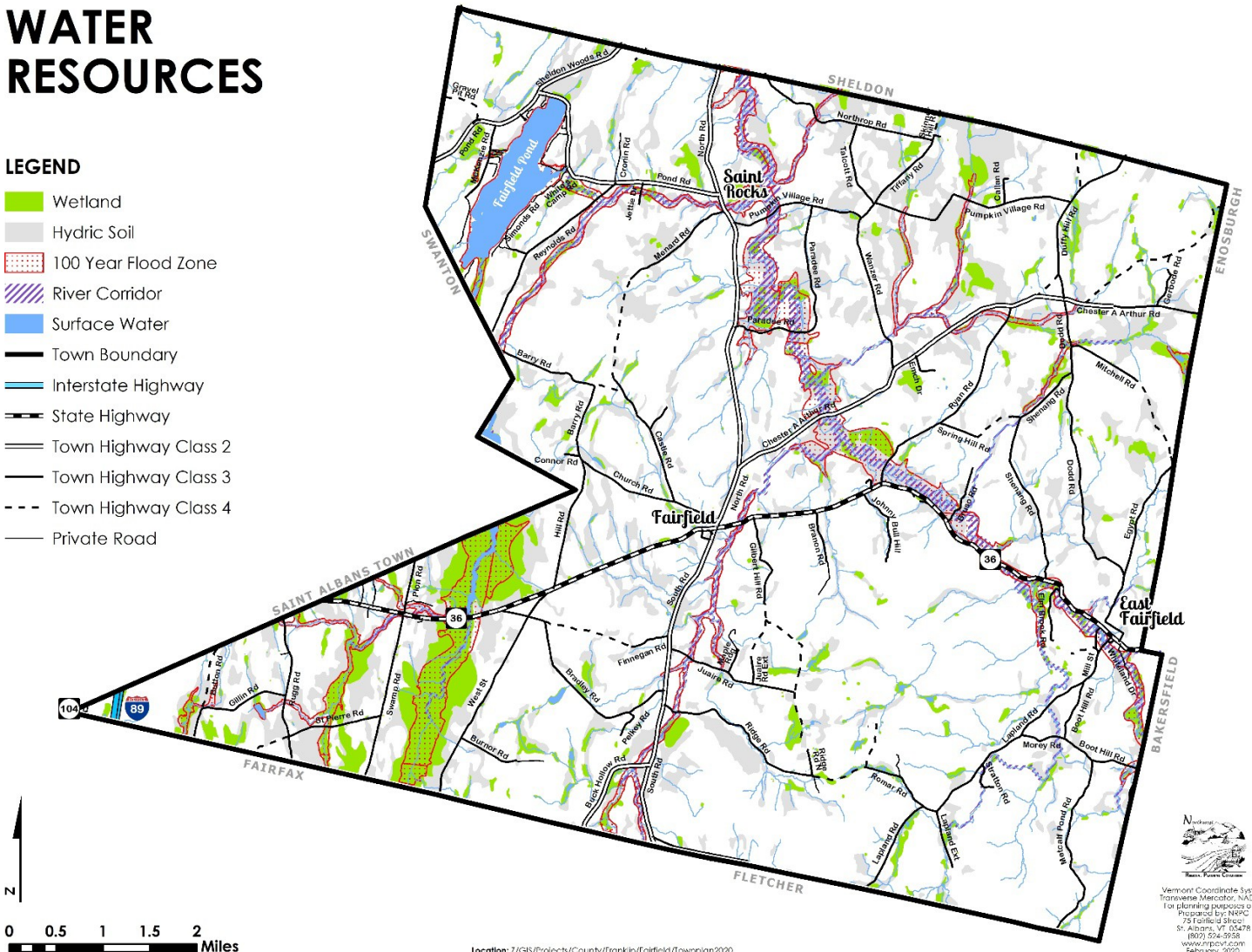
An important objective for Fairfield would be to work creatively toward preserving the

Figure 3.24

# WATER RESOURCES

**LEGEND**

- Wetland
- Hydric Soil
- 100 Year Flood Zone
- River Corridor
- Surface Water
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road



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character of the lake while simultaneously improving its quality. The Fairfield Pond Recreation Association is an excellent vehicle through which to promote actions necessary to improve the health of the lake.

**Groundwater**

Groundwater is defined as all water that exists beneath the surface of the earth. The geology of the region is the most important factor in determining the flow of subsurface water.

As a result of Fairfield’s geologic conditions there is limited availability of groundwater. Areas of moderate groundwater potential are available within sand and gravel deposits in the sand valleys of Black Creek. Good ground water potential is present in the area directly west of Fairfield Pond. Recharge areas should be protected from unrestricted dumping and other practices which might harm the potability of this important water supply.

The limited availability of ground water in Fairfield led to difficulties in locating a well site that would produce sufficient municipal water supply for Fairfield Center, however a good source was found and is expected to contain adequate supply for many years. Similar to the need for protecting recharge areas, it is important to protect the area surrounding a municipal supply well to ensure continued water quality. State regulations require that every municipal wellhead be managed under a Source Protection Plan. A Source Protection Area has been delineated around the new water supply wellhead to protect the Town’s water supply.

Groundwater can become polluted when it

comes in contact with surface water pollutants. There are many points at which groundwater and surface water meet, creating the opportunity for contamination. For this reason, good surface water quality should be maintained.

Human activity is a significant contributor to groundwater contamination. Therefore, it is essential that residents be informed of the types of practices that can cause contamination. This is particularly true in an area such as Fairfield, which does not have an abundance of ground water sources. Potential sources of ground water contamination include septage, sewage, agriculture, landfills, junkyards, salt from runoff, and inadequate-depth or poorly percolating soils. These sources should be identified and ameliorated to the greatest extent possible.

**Wetlands**

Wetlands are those areas inundated by surface or ground water with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction. Such areas include but are not limited to marshes, swamps, sloughs, potholes, ferns, river and lake overflows, mud flats, bogs and ponds, but exclude areas that grow food or crops in connection with farming activities.

Over 2,000 acres of wetlands are scattered across Fairfield, although Fairfield Swamp dominates in most people’s minds. A large portion of Fairfield Swamp is under state management, and as such, no development is permitted. It is estimated that only 50 percent of Vermont’s original wetlands still



**Figure 3.25: Fairfield Swamp**

exist, and roughly 200 acres per year are disappearing in the state. No exact figures are available for Fairfield.

Fairfield Swamp in the Dead Creek valley is one of the largest and most diverse natural areas in the county. Its 1,700 acres consist of 75 percent vegetative cover and 15 percent open water. There are a number of significant and rare plant species which have been identified in Fairfield Swamp including the only autumn-willow (*Salix serissima*) in Vermont. Other rare species that have been discovered in the swamp include the fringed white orchid (*Platanthera blephariglottis*) and one showy lady’s slipper (*Cypripedium reginae*).

Fairfield Swamp has important potential as a good example of a hardwood-northern white cedar swamp which comprises a large part of the swamp’s acreage. This type of ecosystem has often been degraded due to cedar harvest. Good management of this area as future “old growth” is likely as most of it is under state ownership. This area exhibits good examples of cattail marsh, shrub swamp and lowland bog, as well as a leatherleaf shrub bog and a black spruce bog.

All the typical components of hardwood-northern white cedar swamp forest are present in Fairfield Swamp except for a healthy population of white cedar. Red maple, yellow birch, black ash (*Fraxinus nigra*), winterberry (*Ilex verticilla*), red-osier dogwood (*Cornus stolonifera*), and withe-rod (*Viburnum nudum*) are the forest’s main components. White cedar, also common in these areas, has suffered due to extensive logging and has never grown very large in size.

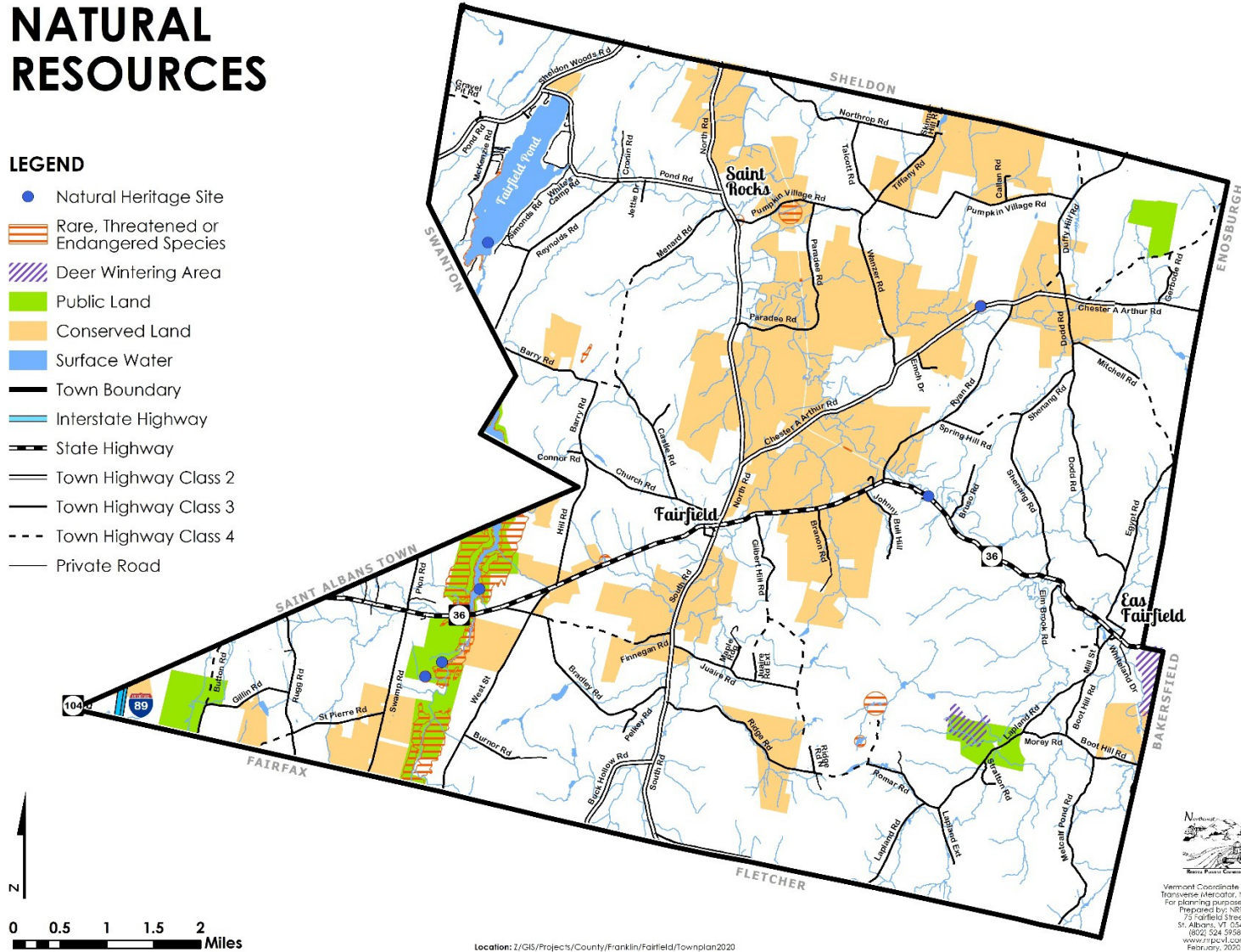
Species that are common to the habitat include the common cat-tail (*Typha latifolia*), bulrushes (*Scirpus spp.*), white water-lily (*Nymphaea odorata*), spatterdock (*Nuphar variegatum*), water-shield (*Brasenia schreberi*), speckled alder (*Alnus rugosa*), red maple, leatherleaf (*Chamaedaphne calyculata*), black spruce and bog laurel (*Kalmia polifolia*), and small cranberry (*Vaccinium oxycoccos*). Common herbs include pitcher plant (*Sarracenia purpurea*), cottongrass (*Eriophorum*), and uncommon rose-pink (*Calopogon tuberosus*).

Figure 3.26

# NATURAL RESOURCES

## LEGEND

- Natural Heritage Site
- Rare, Threatened or Endangered Species
- Deer Wintering Area
- Public Land
- Conserved Land
- Surface Water
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road



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**Flood Resiliency**

Flooding is a natural occurrence and the most common natural disaster in Vermont. Two types of flooding are associated with most flooding damage: inundation flooding and fluvial erosion.

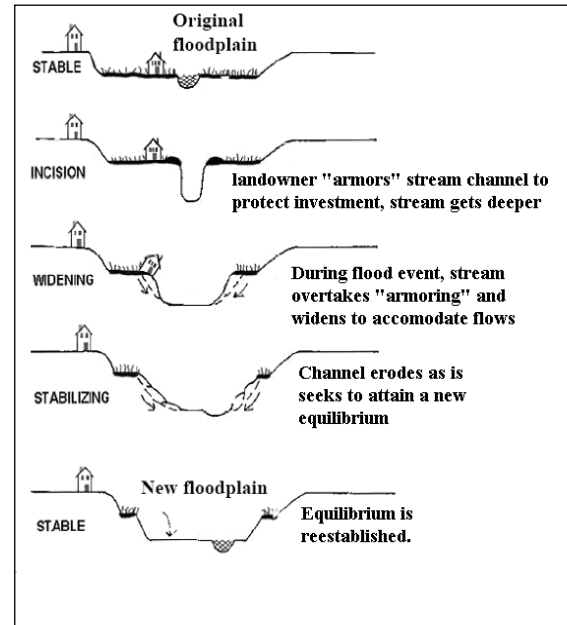
Inundation flooding occurs when the water level in rivers, lakes and streams rises and inundates the adjacent low-lying land. The Federal Emergency Management Agency (FEMA) defines a floodplain as an area of land adjacent to lakes and streams that is subject to recurring inundation or high water (see Figure 3.24).

Fluvial erosion occurs when lateral and vertical movement of streams and rivers cause erosion of the river or stream bank. Both inundation flooding and fluvial erosion are becoming more common within the North-western region of Vermont.

**Special Flood Hazard Area**

Development within floodplains can have many potentially damaging consequences, as construction may obstruct the natural flow of water or displace soil and raise base flood elevations.

Lake and stream buffers can be used as a planning tool to reduce future development in these areas. In 2014, the state adopted the Shoreland Protection Act. The Act applies to all Lakes greater than 10 acres, which includes Fairfield Pond. It essentially prohibits new clearing and development within 100 feet of the mean water level of the Lake and place limits on clearing and development from 100 to 250 feet from the mean water level.



**Figure 3.27: Fluvial Erosion**

Another strategy to mitigate potential encroachment and flood loss due to inundation flooding is to prohibit development below base flood elevation, or set the elevation from which development is prohibited at a level higher than the base flood elevation.

The Town of Fairfield has adopted development regulations for special flood hazard areas as defined by FEMA on Flood Insurance Rate Maps (FIRMS). These regulations protect the health, safety, and welfare of its residents and to allow the community to participate in the National Flood Hazard Insurance Program.

The existing FIRMS were developed in 1985 and the Flood Insurance Study was developed in 1975, so while this information is the best available, it may not reflect changes to streams and effects of development since 1976. FEMA is currently in the process of updating the FIRMS for the Missisquoi Basin.

The Town should participate in this process as needed to ensure new FIRM maps accurately reflect conditions in Town. The current FIRMs were digitized by the Northwest Regional Planning commission in 1999 to assist in planning efforts and are used to determine approximate locations. The digital version is not used for regulatory rulings.

**River Corridors**

Seventy-five percent of all flooding damages in the state of Vermont are the result of fluvial erosion. Historic land uses along the river and its streams including floodplain encroachments and vegetative debris removal have increased the risk of erosion and landslides. Such practices included armoring, dredging, gravel mining and channelization, for the purpose of containing high flows and to protect infrastructure built in the historic floodplains. These practices increase the power of the stream, disconnect the stream from its historic floodplain, and ultimately lead to channel instability and increased damages from flooding.

To limit the potential damages of fluvial erosion, the Vermont Agency of Natural Resources (ANR) recommends regulating development in the river and stream corridors. For rivers with a watershed of greater than 2 square miles, ANR has mapped the river corridor area where risk of fluvial erosion is greatest. For all other smaller streams, the stream corridor is defined as the area within 50 feet of the top bank of the stream.

In 2020, the Town of Fairfield adopted development regulations that limit development in these river/stream corridor areas. These regulations are designed to ensure the safety of town residents and limit damages from flooding events.

For more information on the Town’s disaster preparedness and resilience initiatives, please reference the Fairfield Local Hazard Mitigation Plan.

**Land Cover and Habitat**

**Natural Communities**

Fairfield is situated in the hemlock-white pine-northern hardwood sub-region. The dominant species of this forest type are eastern hemlock (*Tsuga canadensis*), sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), white ash (*Fraxinus americana*), and yellow birch (*Betula leutia*). Of the softwoods, Fairfield is comprised predominately of eastern hemlock, eastern white pine (*Pinus strobus*), black spruce (*Picea mariana*), northern white cedar (*Thuja occidentalis*), and tamarack (*Larix laricina*). The most common hardwoods include sugar maple, American beech, white ash, yellow birch and paper birch (*Betula papyrifera*).

**Our Changing Landscape**

Prior to European settlement, Vermont forests consisted primarily of sugar maples, beech, yellow birch, paper birch, red spruce (*Picea rubens*) and balsam fir (*Abies balsamea*).

Due to high demand for agricultural land, nearly 75 percent of Vermont’s forests had been cut by the late 1800s. Over the last century Vermont forests have regenerated, resulting in the current forest cover.

The maple sugar business has been a catalyst for the protection of hardwood forests. Use of sugar maples for making maple syrup, an important agricultural product in



Fairfield, has often motivated landowners to manage forest areas in a monoculture fashion.

Invasive species, including emerald ash borer, buckthorn, Japanese knotweed, multiflora rose and poison parsnip, can pose a threat to the native vegetation and natural landscape of Fairfield. Good management practices can limit the spread of these species.

**Wildlife and Fisheries**

Wildlife is an important resource for any community. The presence of wildlife is an indication of a healthy, sustainable environment. A diverse and large wildlife population is also necessary for hunting and trapping. Fairfield has an extraordinary range of habitats, characterized by many elevation differences, and thus hosting a diverse collection of wildlife and bird populations.

Wildlife is mobile and uses different areas for living, eating and sleeping; because of their mobility wildlife is difficult to inventory. Fairfield is gifted with abundant wildlife and fish resources. The following are some of the wildlife species or groups of species found in Fairfield.

*Deer:* There is a considerable variation in deer habitat across Vermont. Because of the generally mild winter climate of this area, deer do not concentrate in wintering yards to the extent they do in other zones. Conflicting land use practices also affect the range of the deer, especially intensive agriculture. The area has good potential for increased deer range as it becomes more wooded and through the creation of more buffers. The prime deer wintering area is

hemlock.

*Bear:* The greatest threats to the black bear in Vermont are buildings and roads; seclusion and forest areas are the requirements for successful bear habitat. A large population of bear is said to live in the southeastern corner of Fairfield, probably resulting from a spill over of individuals from Bakersfield. The beech stand in the northeast quadrant of Fairfield is a good bear habitat. Beech “mast” is one of the preferred foods for bear.

*Upland Game:* Fairfield is an extraordinary habitat for birds like the upland plover, hawks, kestrel, pheasant, Hungarian partridge, ruffled grouse and woodcock.

*Furbearers:* There are a variety of furbearers found in Fairfield: beaver, otter, martin, mink, raccoon, fisher, fox, skunk, and muskrat. In economic terms, the greatest income is from mink, fox, and muskrat.

*Waterfowl:* There is a diversity of waterfowl found in Fairfield such as duck, mallard, wood duck, blue winged teal, golden eyes, and ring necked ducks. These species prefer shallow marshes with a good interspersion of aquatic vegetation species for cover and food. The major problem facing waterfowl is loss of habitat hence there is a need to retain the wetlands as prime habitat and prevent pollution and filling of these areas.

*Warmwater Fish:* Among the native species are pickerel, northern pike, small mouth and large mouth bass, and yellow perch. There is need to preserve predator species of fish to control other populations, e.g. northern pike on perch. Water levels should be kept at a level which allows for adequate spawning.

Pollution of the streams from agriculture has affected the perch and brown trout populations.

*Coldwater Fish:* Local species are dominated by brook, brown and rainbow trout.

Problems related to wildlife:

- Lack of access for hunters from excessive posting,
- Lack of all stream side buffers, resulting in a fragmented habitat,
- Little money in the trapping business,
- Misfiring by hunters; firing of horses, dogs and the destruction of fences.

**Hunting & Habitat Blocks**

Fairfield has only a fall hunting season; during this season gun, bow and arrow, and trap (beaver) hunting are permitted.

Maintaining large unfragmented forest areas is critical to preserving large animal species and providing hunting opportunities to Fairfield residents. Over time, even low-density rural development and roads can fragment these areas, threatening their health, function and value of these forest areas.

The largest habitat block is located in the southeastern corner of Fairfield known as the Romar District (see Figure 3.29). This area should be preserved as a wildlife habitat especially seasonally for bear. Additionally, buffers should be left out along streams and other habitat connectors to provide for the free movement of wildlife.

**Wildlife Management Areas**

These are the areas owned and administered by the Vermont Department of Fish and Wildlife; they include:

*The Elm Brook Management Area:* This is situated on a knoll on the northeastern corner of Fairfield. This area provides a 53-acre deer wintering area (80% basal is hemlock). This is the home of woodcock, white tailed deer, ruffed grouse, sunshine hare, brook trout lark, flying squirrels, brown bat and the short tailed shrew. The game population in this area is small because of area size.

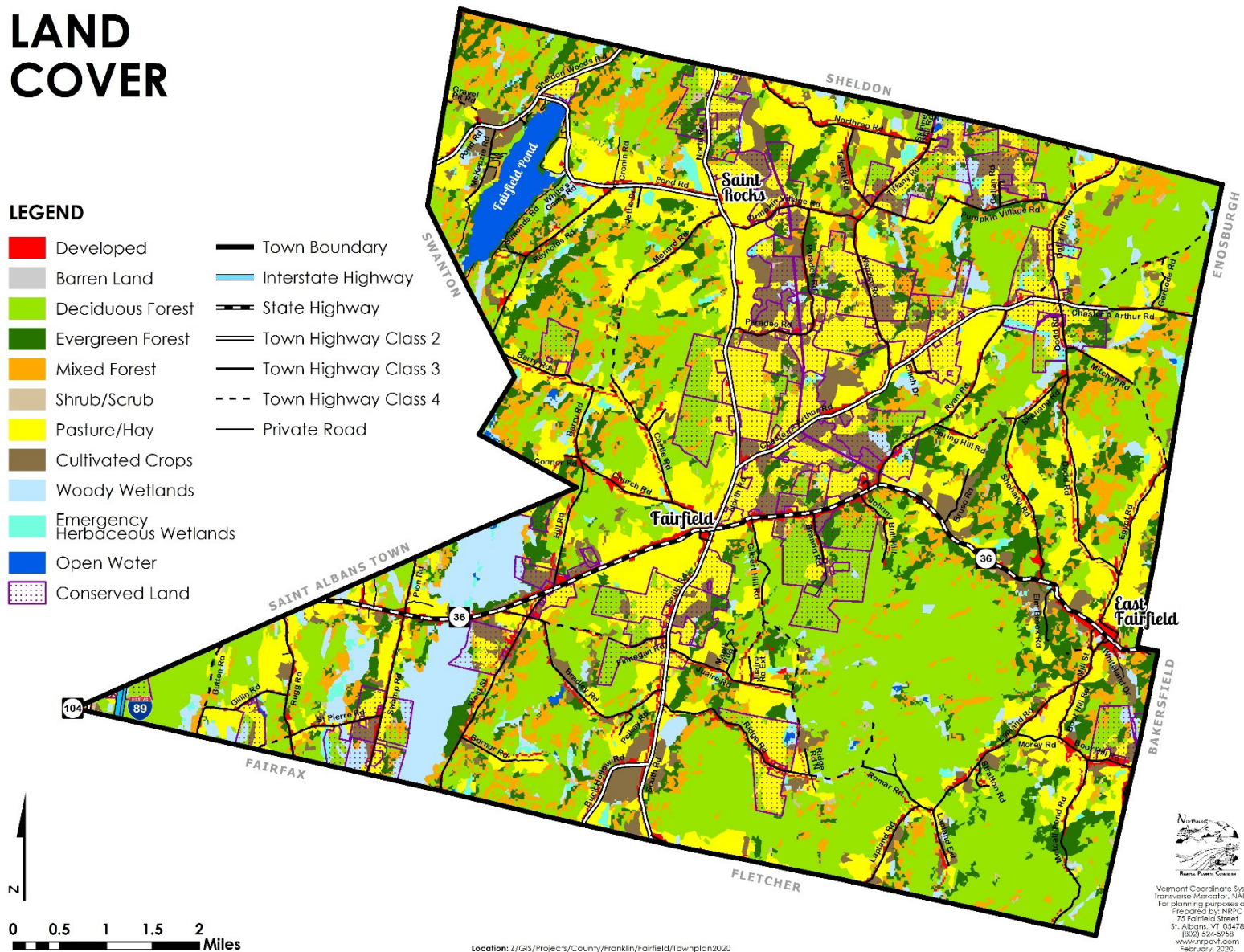
*Fairfield Swamp:* This comprises 1,292 acres, spanning Swanton, St. Albans and Fairfield; the largest portion being in Swanton. Waterfowl are seen in the area, because of the 60 woodduck boxes. Studies have shown that 90 percent are used annually by woodducks and hooded mergansers. There is an element of pressure from hunting.

Figure 3.28

# LAND COVER

## LEGEND

- Developed
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergency Herbaceous Wetlands
- Open Water
- Conserved Land
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road



Location: Z:\GIS\Projects\County\Franklin\Fairfield\Townplan2020

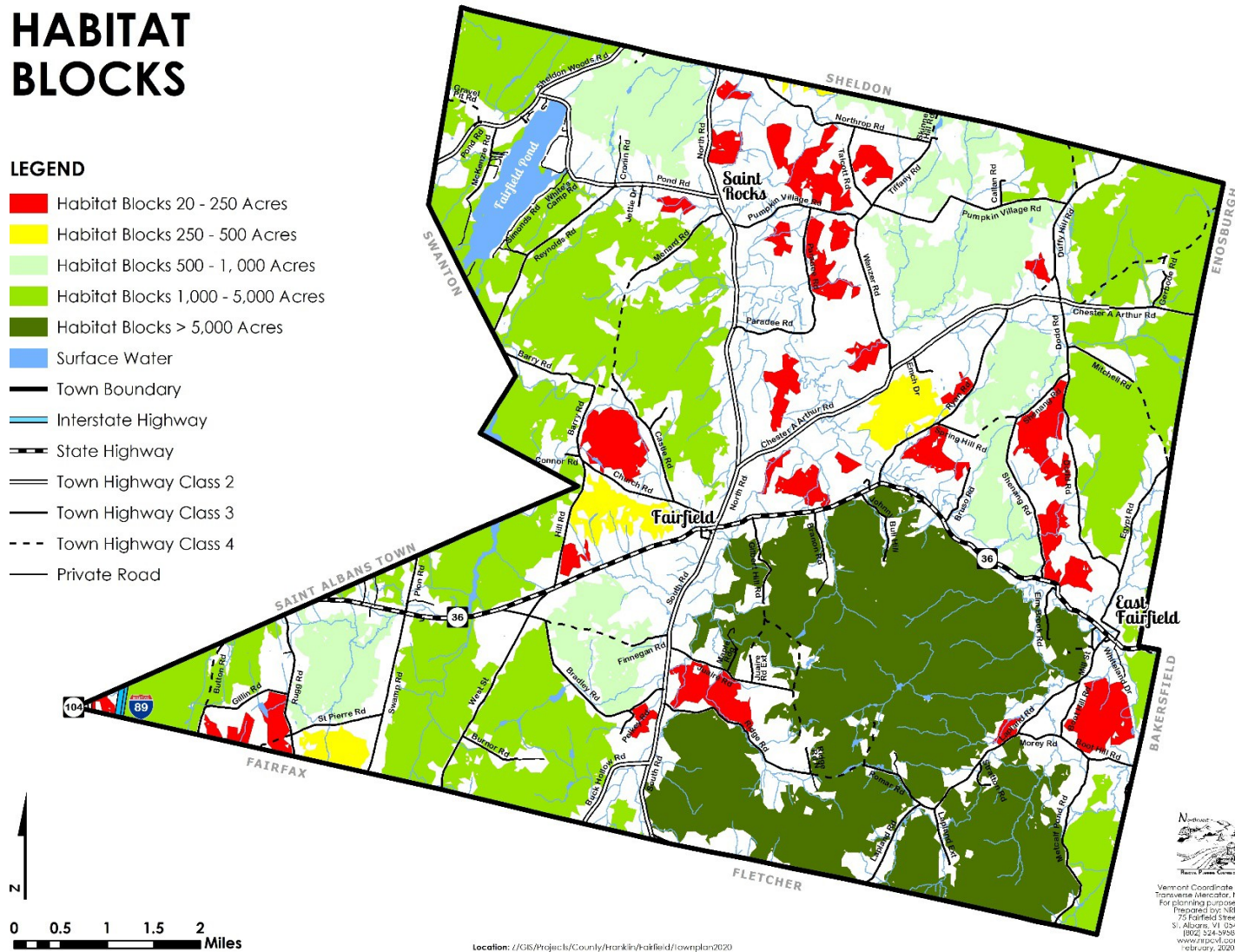
  
 Vermont Coordinate System  
 Transverse Mercator, NAD83  
 for planning purposes only.  
 Prepared by: NRPC  
 75 Fairfield Street  
 St. Albans, VT 05478  
 (802) 254-2928  
 www.nrpcvt.com  
 February, 2020.


Figure 3.29

# HABITAT BLOCKS

## LEGEND

- Habitat Blocks 20 - 250 Acres
- Habitat Blocks 250 - 500 Acres
- Habitat Blocks 500 - 1,000 Acres
- Habitat Blocks 1,000 - 5,000 Acres
- Habitat Blocks > 5,000 Acres
- Surface Water
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road




  
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 75 Fairfield Street  
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 (802) 244-2968  
[www.nercvt.com](http://www.nercvt.com)  
 February, 2020

**Significant Natural Areas**

Creekside Rails, a stretch of unused Lamoille Valley Railroad track between Black Creek and Route 36, has become home to one of Vermont’s rare and endangered species, the great St. John’s wort (*Hypericum ascyron* or *Hypericum pyramidatum*). Great St. John’s wort typically grows along rivers on gravel shores and bedrock ledges. The population that is found in Fairfield is one of Vermont’s largest consisting of over 100 stems. The man-made gravel railroad bed forms an excellent habitat for this endangered plant. A serious threat to the population would be a possible conversion of the tracks to recreational uses.

The Elmbook Wildlife Management Area is significant because it is state-owned and therefore protected from inappropriate development. Three forest stands have been identified in this area including a 53-acre high-quality hemlock stand, a 22-acre pole timber northern hardwood stand (composed of red (*Acer rubrum*) and sugar maple and yellow birch) and a 76-acre black ash-elm-red maple pole timber stand.

**Scenic Resources**

Fairfield is an incredibly beautiful rural town. Set against the backdrop of the Green Mountains, the town’s hamlets, open fields, wooded hillsides and historic farmsteads all delight the eye. The town’s geography and historic settlement patterns create a wonderful town resource, and the visual beauty is a valued asset of the town.

**Current Land Use**

**Current Development Patterns**

A review of Fairfield’s 2018 Grand List indicated that roughly one quarter of the

town’s land area is used primarily for residential and commercial uses. Just over sixty percent of the land in town is farm land, open land, or woodlands.

The greatest density of homes occurs in East Fairfield and Fairfield Village, around Fairfield Pond (primarily seasonal camps) and in the vicinity of Route 36 near the St. Albans line. However, most of the town’s year-round homes are dispersed at low densities along the town’s many miles of rural roads.

There is limited new land available for development in the Village Centers. As a result, much of new development is occurring at the outer edges of town, most notably near Fairfield’s border with St. Albans and Swanton.

Fairfield has a large proportion of residential properties on large lots. Of properties classified as year-round residential in the 2018 Grand List, 48% were 6 acres or more in size accounting for 23% of the total land in Town. The other 52% of properties were on lots less than 6 acres in town acres. In total this 52% of properties account for just 1.5% of the total land in town. While it is likely that many large-lot residential properties include working lands or open space, the trend towards greater fragmentation of the town’s land base is a concern. Encouraging residential development to occur on smaller lots would help maintain larger tracts of agricultural and forest land suitable for productive use.

**Land Ownership**

Fairfield enjoys a high rate of resident ownership with around 65 percent of the

town’s land area owned by town residents. The owners of most of the remaining land live in neighboring communities. Less than five percent of land is owned by out-of-state entities. Even the town’s seasonal camps are largely owned by Vermont residents, many of whom are residents of nearby towns.

**Conservation**

Approximately one-third of Fairfield’s land area has been conserved through the Vermont Land Trust, limiting its future development potential, or is owned by the State of Vermont for conservation purposes. Most of the nearly 12,000 acres of conserved lands are located in the central part of town, creating a large swath of land that will remain in productive use. The state-owned lands are part of the Fairfield Swamp Wildlife Management Area. (See Figure 3.28).

**Town Government**

**Facilities**

**Town Office**

In 1998, the town acquired property in Fairfield village which has allowed for the construction of a new town office with a larger vault, meeting space and office space for the clerk and other town officers.

**Fairfield Community Center**

East Fairfield Community Center on School Street is leased to the Fairfield Community Center Association. It houses a food shelf, a community center, child care, community meals, and a youth program.

**Bent Northrop Memorial Library**

With the generous endowment from the descendants of the Northrop family, a Town and School library was built in 1988 as an addition to the school. In 2011 a separate

town library was built on Park Street. It still serves both the school and the community. In addition to great books, the library offers WiFi, on-line databases, word processing, magazine subscriptions (both in print and electronically), and downloadable audio books! Library Policies are established by the Library Board of Trustees. In addition to holding regular story hours, the library hosts a variety of community programs and classes.

**Fairfield Common School**

The Fairfield Common School is a historic building located next to the Fairfield Center School. Until 2020, it was leased to the School from the Town. Currently, the Town is examining other options for its use.

**Old Town Office Building**

The Town has retained ownership of the previous town office building The Town leases the building to Quimby Hill, a private gift shop business.

**Chester’s Bakery**

The Town owns the building occupied by Chester’s Bakery and leases it to a private business owner.

**Officials and Staff**

The administration of the town is the responsibility of a town clerk, treasurer and town administrator working closely with the five member Selectboard. The clerk’s office oversees the financial management of the town, maintains land records and associated documents. The Town Administrator’s mission is to support the Selectboard in carrying out their duties and responsibilities to the ultimate benefit of the Town of Fairfield. The Town Administrator is

responsible for planning, organizing, directing, and coordinating the affairs of the Town, for assisting the Selectboard in developing policies for the general direction of Town affairs, for planning long-range programs for Town Departments, and responsible for the performance of administrative and technical duties as assigned by the Selectboard.



**Fairfield Town Office**

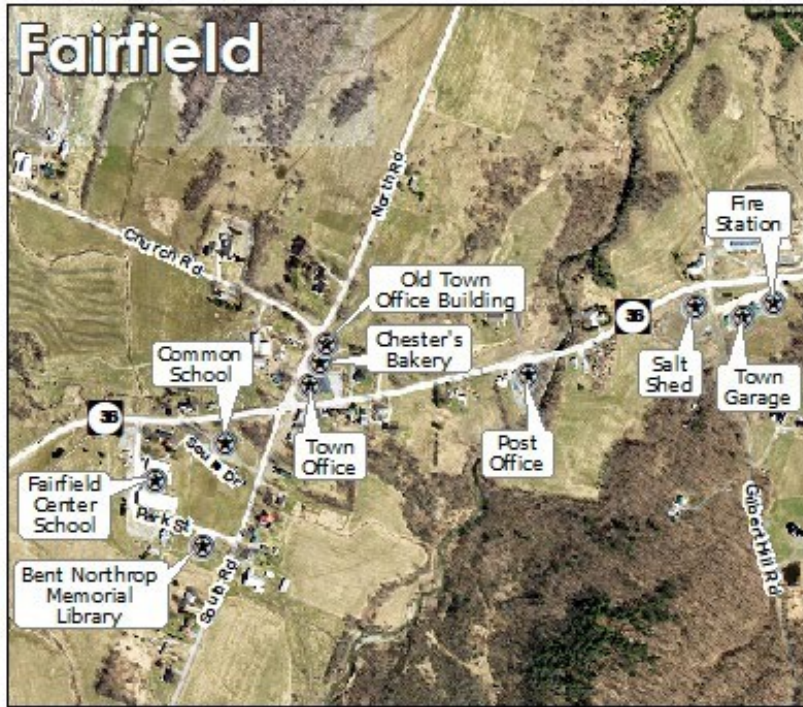
A three member Board of Listers maintain the town’s grand list with the assistance of the town clerk. With the passage of Act 60, the board was provided with computer equipment intended to help standardize property assessments in the state. The Town is currently undergoing a town-wide mreappraisal which may lead to changes in the Town’s systems for assessing property values. Property parcel maps are available through the State Parcel Mapping Program.

**Fairfield Grant Writers Committee**

The Fairfield Grant Writing Committee consists of various members of town organizations who work with a part-time grant writer to find grant opportunities for the Fairfield community. The grant-writer is funded by both the Town and participating organizations. In 2019, \$20,000 of funding was awarded through Committee-written grants.

Figure 3.30

# PUBLIC FACILITIES





## 4. TOMORROW

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### Remaining a Rural & Agricultural Town: Future Land Use

#### Housing Demand

According to a study commissioned by the Vermont Agency of Commerce and Community Development in 2013 Fairfield’s population is projected to grow to 1,932 by 2030. The ACCD projections do not provide any insight into the composition of Fairfield’s future population. At the county level, however, the ACCD projection does provide an age profile of the future population. That profile suggests that current trends will continue – reflecting the aging of the baby boom generation and declining birth rates. While the composition of Fairfield’s population is slightly younger than the county as a whole, it is likely that Fairfield’s population will continue to age over the next decade.

Using the projected demographic profile for Franklin County, by 2030, Fairfield should anticipate that approximately 23 percent of its population will be 65 years of age or older. The percentage of the population composed of school-age children is expected to decline to around 18 percent

Consistent with national trends, the number of people per household in Fairfield has been declining for more than 25 years. Given the current demographic profile of Fairfield residents, it is reasonable to assume that average household size will continue to decline.

Even with a low rate of population growth,

decreasing household sizes will lead to new housing development. Over the last 10 years, there has been an average of 5 new single-family homes constructed in Fairfield per year. It is critical that such development is carefully regulated to preserve the rural & agricultural character of Fairfield.

#### Telecommunications Facilities

Improving broadband and cellular service in Fairfield is an important priority for the Town. Improving these services may require additional telecommunications facilities. Each town must identify areas in which telecommunications towers and facilities will be allowed. Towns may also regulate the appearance and other considerations with regards to towers and facilities.

The Town encourages telecommunications facilities to be located on other structures existing in the area such as silos and steeples, wherever possible. Towers and facilities should be sited away from populated areas and sensitive habitats to minimize safety and health risks. Due to the risk of contaminating public water supplies in the event of a fire, facilities should not be located in wellhead protection areas.

#### The Rural Character of Fairfield

Fairfield’s rural character is created by complex development patterns, which have evolved over two centuries of agricultural- and forestry-based land uses. The Town’s landscapes include areas of relatively

clustered development separated by large areas of productive farmland, forests, wetlands, rivers and hills. Buildings of different sizes are located on lots of variable areas at various distances from the roads based on the character of the land and its intended use. Key to the rural character of the Town is large unfragmented sections of land suitable for agriculture and forestry uses.

To preserve Fairfield’s rural character while accommodating reasonable amounts of growth, Fairfield should promote development in the Village Districts and the use of planned unit development (PUDs) on the lands outside the Village Districts. PUDs require development to be clustered together on smaller lots with a significant amount of the original parcel set aside as open space or productive land. In those areas identified as environmentally sensitive, PUDs should be clustered so as to protect important natural resources such as prime agricultural soils, wetlands, steep slopes, wildlife habitat, scenic views or forestlands.

Within the two villages of Fairfield, new development should maintain the character of small, traditional New England village centers. Traditional New England village centers can be described as places with:

- A mix of commercial, residential, civic and recreational uses in close proximity to each other bringing people of all ages and income levels together for a variety of activities.
- A physical layout with higher densities in comparison to outlying areas and a distinct, defined geographical edge that establishes an identity or a sense of place.

- A pedestrian-friendly environment in which most uses are within a five- or ten-minute walk (1,500 to 3,000 feet) of each other and a transportation system that is designed first for pedestrians and secondarily for vehicles.
- A strong public presence, such as greens or parks, municipal buildings, post office, school or other public spaces or buildings.
- An atmosphere that is friendly and inviting.
- A presence of special features, such as historic buildings, landmarks, and views.

New development within the Village Districts should be compatible with the physical design of the traditional village centers. Lot sizes, building heights and massing, setbacks, frontages, etc. should match and continue historic patterns. The physical design of traditional New England villages is characterized by:

- Multi-story buildings that maximize the use of vertical space while maintaining a human scale at street level.
- New buildings are located at similar setbacks to existing buildings.
- Principal buildings closer to the street than associated accessory buildings (such as garages).
- Narrow, interconnected, tree-lined streets.
- Short and/or irregularly shaped blocks.
- Buildings whose main entrance is oriented to the street.
- Limited amounts of land devoted to parking, especially as visible from the street.

- On-street parking.
- Diversity in the size of buildings and lots.

### Land Use Policy

The overall policy concerning future land use shall be to maintain the rural character, aesthetic and scenic resources of the town and provide sufficient space in appropriate locations for forest and agriculture, residential, recreational, commercial, and industrial development and for public and semi-public facilities in light of their respective environmental needs and of their mutual interrelationships. Land use in the Town of Fairfield, for present and future purposes, has been defined in the following districts as shown in Figure 4.2.

### Village District

The Village District includes the historic limits of the town’s two villages, East Fairfield and Fairfield, as shown as Figure 4.2. These areas are largely developed and are characterized by high-density residential, civic, and business uses. For that reason, the geographic boundaries of this area incorporate a limited amount of adjacent undeveloped and underdeveloped lands, which have the possibility of being served by public infrastructure, to accommodate future growth and development.

The purpose of the Village District is to support the role of the villages of Fairfield and East Fairfield in social and economic activities in the community and to provide for residential, commercial and other compatible development that serves the needs of the Town. Such development

should occur with densities and uses which will maintain the traditional, social and physical character of the villages, including their historic and scenic resources, and which will not exceed the capability of the lands, waters, services, and the facilities to support such densities.



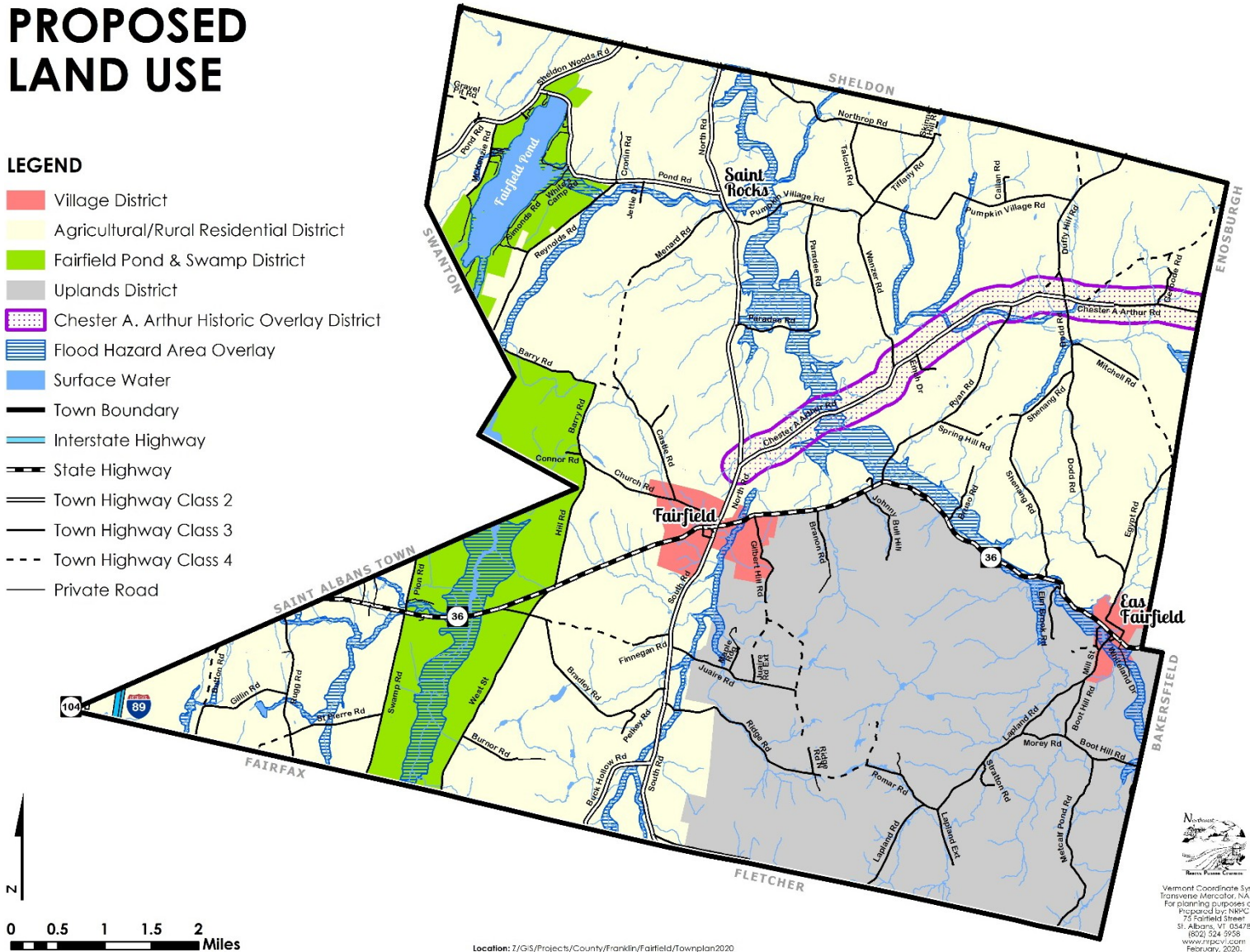
Figure 4.1: East Fairfield

Figure 4.2

# PROPOSED LAND USE

**LEGEND**

- Village District
- Agricultural/Rural Residential District
- Fairfield Pond & Swamp District
- Uplands District
- Chester A. Arthur Historic Overlay District
- Flood Hazard Area Overlay
- Surface Water
- Town Boundary
- Interstate Highway
- State Highway
- Town Highway Class 2
- Town Highway Class 3
- Town Highway Class 4
- Private Road



Location: T:\GIS\Projects\County\Franklin\Fairfield\Townplan2020

North  
 Vermont Coordinate System  
 Transverse Mercator, NAD 83.  
 For planning purposes only.  
 Prepared by: NKC  
 75 Fairfield Street  
 St. Albans, VT 05478  
 (802) 524-9958  
 www.nkpcvt.com  
 February, 2020.

**Agricultural District**

In agriculture lies the economic, social, historic, aesthetic and scenic character of the town and the fundamental strength and stability of the local and regional economy. Agricultural land represents a vulnerable and irreplaceable resource which must not be wasted; once it is developed it will likely be lost forever.

The purpose of the Agricultural District is to provide for and protect agricultural, forestry and compatible residential, commercial, and recreational uses. Lower development densities and clustered development are encouraged so as to preserve the rural character and protect the agricultural resources of these areas.

Though residential development is an appropriate use for these areas, and very likely will take place, measures should be taken to ensure that minimum lot sizes are large enough to accommodate a septic system.

While lots for residential development need to be large enough to accommodate water and septic systems, the parcels should be kept as small as necessary so as to minimize the loss of agricultural lands. The town supports the use of Planned Unit Developments (PUDs) and other clustering mechanisms to conserve agricultural lands.

**Fairfield Swamp, Pond and Uplands Districts**

This planning area includes the lands around Fairfield Pond, Fairfield Swamp, the town’s wildlife management areas and steep

uplands. Generally, the lands in this area are poorly suited for future community growth and development.

Such areas may present severe limitations because of environmental characteristics, location or potential social costs if misused. Once developed these areas may entail high maintenance costs, the burden of which may fall directly upon the municipality.

*Fairfield Swamp:* Development in the area around Fairfield Swamp must be carefully controlled to protect water quality, scenic beauty, and related natural resources. Due to the presence of natural resources and the cost of providing public services to this district, only limited, low-density land development will be permitted.

*Fairfield Pond:* Land development in proximity to Fairfield Pond must be carefully controlled to protect water quality and scenic beauty. Fairfield Pond is a resource used by people for fishing, swimming, and boating. Land adjacent to Fairfield Pond is used for agricultural and low-density residential land uses. No land development shall be allowed in this district which degrades the pond’s quality. Only limited commercial development shall be permitted to protect the natural environment.

Seasonal homes will be permitted in the area around the pond, as they contribute to the town’s tax base; however, the enlargement of these seasonal homes or the conversion of a part-time dwelling to a full-time dwelling must conform to stringent controls in order to preserve the fragile environment of these areas.

*Uplands District:* The southeast corner of Fairfield is characterized by a series of upland ridges and is presently the least settled part of town. The soils here tend to be most severely restrictive for all types of human developments, but do contain areas appropriate wildlife habitat, with its accompanying use by people for hiking, nature study, snow-shoeing, snowmobiling, cross country skiing, and hunting.

Appropriate means, such as landscaping and screening with trees and shrubs must be taken to maintain the pleasant appearance of this route which is traveled by many tourist visitors to our town. Efforts should be made to encourage appropriate building styles within or visible from the corridor. Fairfield has established an overlay zoning district to protect this important resource from incompatible development.

**Historic and Scenic Corridor**

The Chester A. Arthur Historic and Scenic Corridor is an important part of the legacy of Fairfield. The state maintains a replica of the small house in which President Arthur was born in North Fairfield. Other features of this district include an old brick church and adjacent cemetery, now owned by the State Historic Society. Several homes in the area are architecturally appropriate to the era.

**Flood Hazard Overlay District**

The flood hazard overlay district includes all land defined as a river/stream corridor by the Vermont Agency of Natural Resources and all land defined as a special flood hazard area by FEMA.

Chester A. Arthur Road is recognized along its entire length, from the intersection of North Road and Route 36 as a scenic road extending 1000 feet on either side.

The purpose of this district is to prevent flooding in flood hazard areas and River Corridors, to minimize future public and private losses due to floods, and to promote the public health, safety and general welfare. Designation of this district is also required for continued town eligibility in the National Flood Insurance Program.

**Goals**

1. Protect prime agricultural lands and support the continuation of agriculture.
2. Encourage residential & appropriate small-scale commercial development in the village growth centers.
3. Maintain Fairfield’s historical settlement pattern of compact villages surrounded by agricultural countryside.
4. Provide adequate infrastructure to support appropriately-scaled development in the village planning areas.
5. Protect and improve water quality and recreational values of the area for residents and visitors of Fairfield.
6. Protect the scenic and important natural resource value of open meadowland, lands for forestry, ground and surface water recharge, wildlife habitat, and outdoor recreation.
7. Preserve Fairfield’s heritage, scenic vistas and scenic landscapes within the Chester A. Arthur Historic and Scenic Corridor and other recognized scenic areas.
8. Mitigate loss of life and damages to public infrastructure resulting from flood events

through hazard mitigation planning.

9. Ensure that all development within the town is pursued with strict regard to the capability of the land to support it and to limit development in areas which are hazardous or otherwise unsuited for this purpose.

**Policies**

1. Protect the vitality and importance of the villages of Fairfield as community and regional assets.
2. Provide safe drinking water in the village areas.
3. Promote a diversified and stable economy by encouraging compatible industrial development and home occupations that utilize the skills of the local labor force.
4. Encourage appropriately scaled commercial development that serves the needs of Fairfield residents and provides additional employment opportunities.
5. Promote the clustering of related and compatible commercial uses and to discourage strip commercial development along highways.
6. New development in the Village Centers should respect traditional densities, setbacks, building scale and massing, and architectural integrity with attention paid to the need for new pedestrian and bicycle infrastructure in proportion to new development.
7. Encourage the development of agricultural business and cooperatives as a means to stimulate the agricultural economy.
8. Control the siting of non-agricultural development and structures to limit impacts on important resources and loss of agricultural lands.
9. Encourage innovative densities, clustering of houses, protection of development rights, purchase of development rights, tax incentives and other means to keep prime agricultural lands in productive use.
10. Require tree/shrub planting and location of berms or equivalent to preserve scenic roads and vistas.
11. Support designation and protection of historic buildings including barns.
12. Discourage new development in the Special Flood Hazard Area and river corridors as identified by the Agency of Natural Resources. If new development is to be built in such areas, it should not exacerbate flooding and fluvial erosion.
13. Encourage the protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion. Support efforts of the watershed organization, the state or others to protect and restore such areas.
14. Encourage flood emergency preparedness and response planning.
15. Limit land development on steep slopes and where there are shallow soils.
16. In accordance with state policy, discourage development that will risk contamination of an existing or potential source of public water supply.

# Supporting the Future of Agriculture in Fairfield

Agricultural soils, open meadowlands, and forests are truly unique, irreplaceable resources due to their unique physical qualities. Preserving such areas is vital to Fairfield’s economy and its rural landscape. Poorly planned development and poor management practices that threaten these areas should be discouraged.

solutions must be developed to accomplish our planning goals. The purchase of development rights is one such alternate strategy to preserve farmland.

While it is important to preserve such resources, the desire to maintain the present status quo conflicts with the financial pressures of our modern world. Therefore, the implementation of strict zoning may not be possible and other

Beyond the protection of farmland, the continued economic health for the Town of Fairfield lies in the maintenance of a viable agricultural industry, including dairying, sugaring, and other forms of agricultural enterprises. Fairfield should support enterprises that ensure the continued economic viability of agriculture such as on-farm businesses, agritourism, and the production of value-added products.

**Goal**

- 1. Continue efforts to preserve productive farmland & forest resources in the Town of Fairfield.

**Policies**

- 1. Encourage local landowners to participate in the Vermont Current Use program.
- 2. Promote the sale or transfer of development rights to control growth, development and foster the continuation of agricultural activity.
- 3. Support the efforts of the Vermont Land Trust to conserve farmland in the town.
- 4. Discourage development within agricultural areas on the prime or very good agricultural soils where alternative locations exist.
- 5. Encourage siting buildings outside of meadows wherever possible.
- 6. Protect and enhance forest productivity by encouragement of sound management practices.
- 7. Encourage that agricultural and forest land be maintained for viable economic use.
- 8. Encourage the implementation of agricultural/forestry best management practices.
- 9. Encourage value added business and promote locally accessible markets for locally grown products.
- 10. Encourage young farmers and support farm succession and transfer efforts.



# Promoting Small-Scale Business in Fairfield’s Village Centers

## Village Designation

Fairfield has two village areas: Fairfield Center and East Fairfield. Each has received status as a Vermont Designated Village Center (See Figure 4.4 and 4.5), which affords these villages with benefits, including priority consideration for state grants, priority site consideration by the State Building and General Services (BGS) when leasing or constructing buildings, and a variety of tax credits available to commercial property owners in the district. The tax credits provide incentives to improve commercial structures in the district, which will in turn encourage revitalization and reinvestment. Priority consideration for grants allows the Town to take on planning and other implementation activities that support the Village, such as the Decentralized Wastewater Feasibility Analysis

and the Sidewalk Feasibility Analysis completed for the villages.

## Businesses in the Village Centers

The agricultural industry remains central to the economy of Fairfield. However, businesses which provide goods & services necessary that support an agrarian economy, home based businesses throughout the town and small businesses in or near the existing Village centers are also of importance. Tax credits available through the state’s Village Designation program and the maintenance of appropriate infrastructure in the villages can support such small business. Expansion of broadband internet will also be necessary to support many types of businesses.

## Goal

1. Promote a balanced, diverse economic base, with a focus on locally owned enterprises.

## Policies

1. Encourage the diversification of the economic base, including the development of compatible businesses and light industry, and the promotion of home occupations.
2. Economic development should be pursued to provide maximum economic benefit with minimal environmental impact.
3. Maintain village center designation status for the villages and encourage businesses to take advantage of the various tax credits made available through this designation program.
4. Support regional and statewide efforts to expand broadband internet access.

Figure 4.4

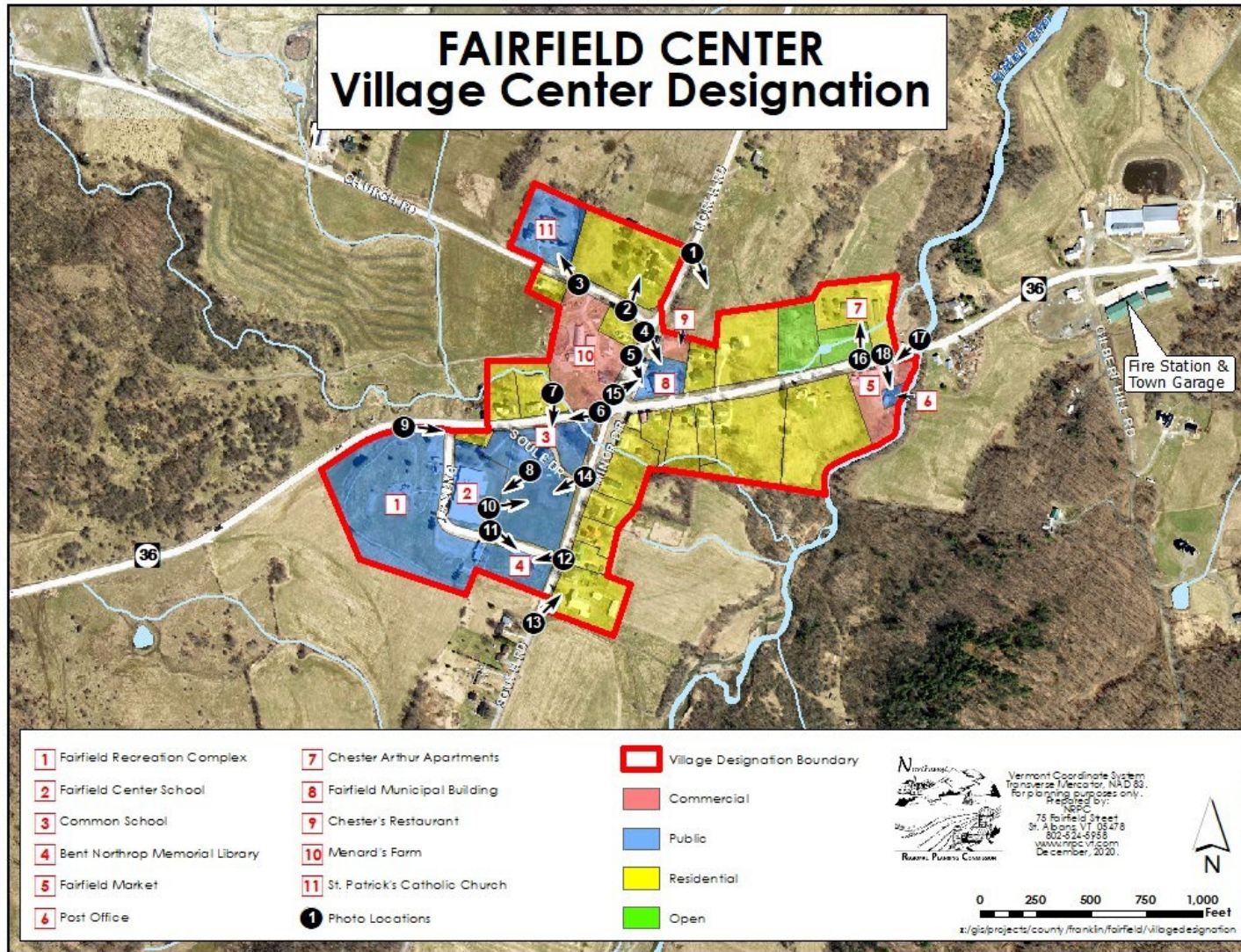
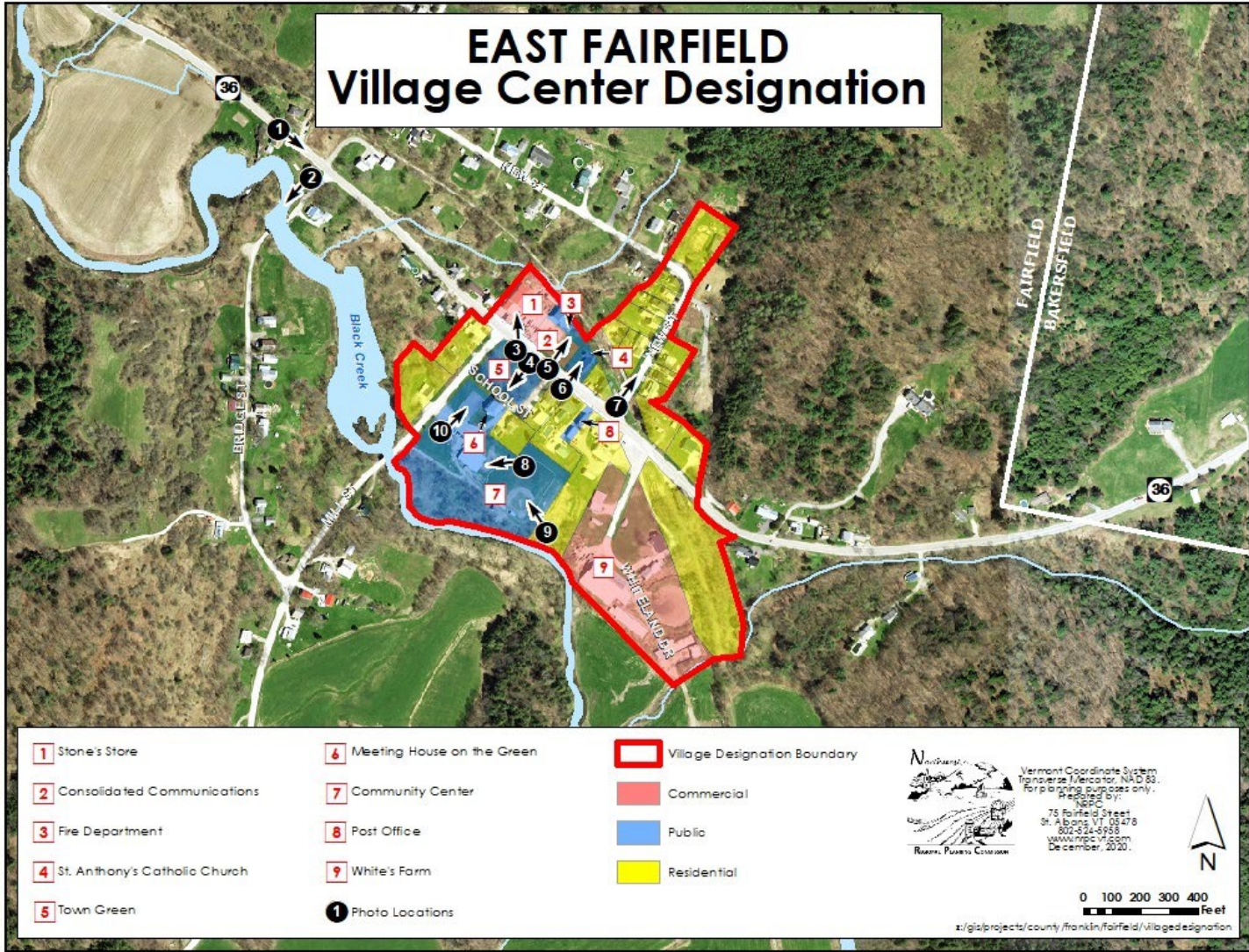


Figure 4.5



# Preserving Fairfield’s Natural Landscape and Historic Features

## Archeological and Historic Resources

In light of the fragile and irreplaceable nature of archeological resources, development in archeologically sensitive areas should proceed with caution. Our prehistoric and historic archeological sites constitute an essential link to our recent and distant past. These sites are often the only source of information for the longest part of human history in Vermont.

The Town of Fairfield has a long and varied past which has been responsible for the values and traditions held today. The town should ensure that the history behind the town is available for residents new and old to enjoy. Over the years, pieces of that past have been captured in Fairfield Vermont

Reminiscences and in the history portions of this town plan. But gaps in the historic record exist – most notably the late nineteenth and twentieth century. Therefore, we support the Fairfield Historical Society and their efforts to compile and preserve the history of Fairfield. Fairfield has many structures which have historical significance. To preserve the architectural and cultural character of the community as well as the contribution these buildings make to the overall attractiveness of the town, consideration should be given to the protection of those structures of historical and architectural interest. Similarly, the historic pattern of village centers surrounded by agricultural countryside is supported and encouraged.

## Goals

- 1. Preserve and record Fairfield’s heritage, history, and archeological record for current and future generations.
- 2. Encourage the preservation of buildings and districts of historical value.

## Policies

- 1. Support the efforts of the Fairfield Historical Society and others to protect, preserve and display items and artifacts of historic significance to Fairfield.
- 2. Support designation and protection of historic buildings including barns.
- 3. Promote the use of historic buildings for public purposes where feasible.
- 4. Support efforts to protect and maintain historic cemeteries.

## Natural Resources

### *Streams, Headwaters and Shorelines*

Stream headwaters (located in the upper reaches of a watershed) are usually cool, and have a high oxygen and low nutrient content. For this reason, upland streams tend to be highly productive per unit area and are extremely sensitive to

sedimentation and pollution discharge.

Many of these streams are ephemeral, only flowing after heavy precipitation when surface runoff and rising water tables intersect the stream channel. All of these factors make pristine stream headwaters

extremely sensitive to disturbances resulting from forestry and urbanization.

Shoreland conservation practices contribute to the prevention and control of water pollution, protection of spawning grounds for fish and aquatic life, preservation of shore cover and natural beauty, and the multiple use of waters.

*Source Water Protection Areas*

The Town of Fairfield contains two delineated Source Protection Areas. The first area is located within both Fairfield and Fletcher and exists because of the wells which provide water for East Fairfield Fire Department #1 and the Village of East Fairfield. Sources of potential contamination include leach fields and agricultural activities but there is little to no potential for contamination of the well or reservoir due to topography. The second area covers a small area north of Castle Road west of Fairfield Center.

The state recommends, where economically feasible, the purchase of all lands within a source water protection area. Where not economically feasible, the town should adopt regulations prohibiting activities which pose a significant risk of contaminating a well such as storage of hazardous materials, salt sheds, landfills, junkyards, cemeteries, telecommunications facilities, and electrical substations. Agricultural activities are permitted uses although BMPs are recommended.

*Wetlands*

Wetlands are of crucial importance to the surface water regime. These areas store large quantities of water during periods of high runoff and gradually release water

during low flow periods. Therefore, the wetland regulates stream discharge both during low flow and peak flow. Loss of this storage capacity will not only adversely affect stream behavior but will also increase floods and reduce stream flow during crucial low flow periods.

Wetlands are also important for the maintenance of water quality. The biological activity of a wetland area enables the absorption and assimilation of nutrients and thus purifies to some extent the water which is discharged.

*Earth Resources*

A number of resources located underground in the Town of Fairfield have commercial value, either at the present time or for the future. While there may be an obligation on the part of the town to allow these resources to be reasonably developed for the good of the general public, such extraction or processing activities must not be allowed to impose an adverse impact upon town residents. It is intended that the public interest be protected by regulations assuring that both the present and future effects of such extraction or processing operations are not adverse to the public health, safety, comfort or convenience or damaging to the value of surrounding properties.

*Natural Areas*

Natural areas have educational, scenic, recreational or scientific value to the present and future populations. They include areas that constitute unique ecological or natural science value and are suitable areas for education and research, or areas which are unique within a community and possesses scenic or recreational values.

**Goal**

- 1. Protect the water quality of streams, Fairfield Pond, wetland areas and groundwater.
- 2. Development in proximity to natural areas should take place in such a way as to preserve their value for education, science, research, aesthetics, and recreation

**Policies**

- 1. Regulate densities and uses within Source Water Protection Areas in order to prevent the potential contamination of public water supplies.
- 2. Ensure that development within the shoreline areas of lakes, streams and rivers is compatible with the natural beauty of the area, protects existing vegetation, is set back sufficiently to prevent erosion along stream banks or pollution from subsurface sewage disposal systems, and where possible retains visual and physical access to the water bodies.
- 3. Prohibit land development resulting in the loss of wetland storage capacity or additions to the marsh areas of any substances which are likely to increase the concentration of materials beyond the assimilative capacities.
- 4. Require that that all earth extraction or processing operations are appropriately permitted to limit potential detrimental impacts.
- 5. Require that development being proposed near or over important earth resources accounts for the potential loss of that resource.

**Sustaining a Vibrant Community**

In the 2020 Town Plan public outreach process, many residents identified the community connections and support as key to the future of Fairfield. Supporting a vibrant Fairfield community means addressing issues such as town services,

housing affordability, recreation, and education.

**Housing**

All of Fairfield’s residents should have the opportunity to pursue safe and affordable housing. How future housing developments occur (the location, type and size of the development) is critical to perpetuating the

rural and agricultural character of Fairfield. Further, housing development necessarily increases demand on services and may potentially adversely affect environmentally sensitive areas or have negative impacts on agricultural lands.

**Goal**

- 1. Encourage the availability of safe and healthful housing for all segments of the population.

**Policies**

1. Support the provision of adequate housing of a variety of types for all income, age, minority, and transient groups in an environment which is safe, and satisfies the day-to-day living and recreational requirements of the residents.
2. Encourage the development of senior housing in Fairfield Center and East Fairfield.
3. Encourage low densities where low levels of services are to be provided and higher densities only where they can be properly served.
4. Continue to not differentiate between mobile homes and other single family homes.

**Education**

Quality educational services are crucial to supporting families in Fairfield. The Town especially recognizes the importance of the Fairfield Outdoor Classroom, a program

which provides Fairfield students the opportunity to engage in hands-on learning about the town’s agricultural and cultural heritage.

**Goal**

1. Provide educational and vocational services to meet the needs of Fairfield’s residents.

**Policy**

1. Support efforts to broaden access to educational and vocational training.
2. Continue to support the efforts of the Fairfield Outdoor Classroom program.
3. Share town educational resources with the Fairfield Center School.

**Town Services & Fiscal Condition**

The primary service provided by Fairfield is the maintenance of an extensive road network. Other services are provided in order to maintain a suitable rural life style to its citizens and visitors including fire protection and public water (within village

areas). The Town supports the Fairfield Community Center, which provides community meals, child care, activities for families, and a food shelf. The Town’s conservative fiscal policies should ensure a relatively stable tax rate well into the future.

**Goals**

1. Ensure adequate public facilities and services to maintain a suitable rural lifestyle for residents and visitors.
2. Maintain a stable tax rate and avoid significant fluctuations in annual capital expenditures.

**Policies**

1. Give preference to capital projects involving the maintenance and upgrade of existing facilities necessary to provide current levels of service over capital projects designed to provide new or expanded services, unless such projects are clearly tied to the goals and

policies set for in this town plan.

- 2. Continue to support the Fairfield Community Center.
- 3. Continue to support the Bent Northrop Memorial Library.

**Energy**

See Appendix.

**Transportation**

The majority of the transportation issues in Fairfield have to do with the maintenance of the many roads that dissect the town. Agricultural, natural, lake and recreation areas all require care in location of roads and

access. Additionally, the Town has recently developed sidewalks in Fairfield Center and should continue to maintain these sidewalks.

**Goals**

- 1. Provide a safe and economical transportation network.
- 2. Maintain existing pedestrian infrastructure.

**Policies**

- 1. Provide no services to Class IV town roads levels which currently exist.
- 2. Prohibit the conversion of seasonal dwellings and camps not accessible via a public or private road that conforms to the standards of the Fairfield Development Regulations.
- 3. Allow reasonable requests for simple access to property. Access for the purposes of land development shall be allowed only in accordance with all relevant town regulations.
- 4. Allow Class IV roads to be maintained by landowners, with Selectboard approval, only to the degree necessary to provide simple access to property.
- 5. Require permission for all new road cuts from the Selectboard according to the town’s Road Policy, as well as approval from the Planning Commission as required by the town’s land use regulations.
- 6. Require all private rights-of-way to be constructed to standards set forth in the Fairfield Development Regulations.
- 7. Support efforts to connect the Lamoille Valley Rail Trail with the Fairfield Village.

**Recreation**

Maintaining and developing Fairfield’s natural beauty and resources for recreational purposes is an important aspect of the overall town plan for several reasons. First, recreational resources are compatible with the preservation of the rural character

of the town. Second, recreation is a necessary, beneficial and essential activity in the lifestyles of the residents. Third, recreational resources encourage the development of vacation dwellings which helps to form a solid tax base for the town.



**Goal**

1. Maintain and enhance recreational and scenic resources.
2. Continue to support the efforts of the Fairfield Recreation Committee.

**Policies**

1. Provide in convenient and suitable locations, recreational areas and facilities for the use and enjoyment of the residents and assure the provisions by the developer of adequate and suitable recreational areas within existing and proposed subdivisions.
2. Maintain, improve and expand town-owned recreation areas in order to provide recreational opportunities for future generations and promote fitness, health and wellbeing. The encroachment of incompatible uses should be carefully monitored and avoided in order to preserve the integrity of these areas, as well as areas that are not yet owned by the town but have been identified as prime recreational resources.
3. Provide open space system for the preservation, protection and enhancement of major physical and environmental features such as mountains, waterways and bodies of water, wildlife and other natural resources.
4. Conserve prime recreational resources from incompatible land uses and to protect the scenic qualities including agricultural, forest and riparian lands from unnecessary despoliation.

**Food Access, Security and Sovereignty<sup>1</sup>**

Producing and ensuring access to local food, is important to the health of Fairfield’s residents and its economy. Fairfield should

encourage programs and measures to support local food production and consumption.

**Goals**

1. Promote the production and consumption of local foods.
2. Allow local food and agriculture sector to expand and promote residents’ increased access to healthy, local food.

**Policies:**

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<sup>1</sup> \* *“Food security exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”*

*\*\* Food sovereignty is the right to define agricultural and food policy, to include autonomy over one’s methods of producing, obtaining, and distributing food, potentially creating new forms of local to international market cooperation that prioritize fair prices for farmers and sustainability of land.*

1. Support the development of commercial food-based and agriculture operations where appropriate, such as small-scale processing businesses.
2. Support using existing facilities such as schools and churches for growing, processing, and storing food.
3. Increase the proportion of locally grown food in Fairfield School
4. Support food-related businesses endeavors such as commercial compost production, farm stands, and on-farm agritourism enterprises
5. Support existing agricultural efforts, both commercial and non-commercial, and encourage new and diversified agricultural development

## Priority Actions

A mere statement of the town’s past, its present situation and desired direction will not ensure that this direction is followed; action must be taken to implement the plan and work toward the objectives developed therein.

The local boards and commissions charged with the implementation of this plan must adhere to its basic tenets of the plan. Similarly, the District Environmental Commission and other state agencies will use the plan as part of Act 250 and elsewhere as provided in state law.

The chief component of implementation will be the administration and enforcement of the town’s land use regulations. Additionally, implementation of the Plan should include undertaking priority actions identified in implementation table located at the front of the plan.

Throughout the implementation of the plan, periodic reviews and future consideration of other implementation devices, increased public involvement in the town planning process will be essential.

## Regional Connections

### Compatibility with Neighboring Communities

As a rural town, Fairfield is much more likely to be affected by outside development pressure than to generate growth or impacts that will affect its neighbors. As part of developing this plan, Fairfield has examined the plans of adjoining towns and has found its goals and policies to be compatible with

those of its neighbors. In particular, Fairfield compared its plans for future land use and development along its town line with those of its neighbors and found no conflicts.

### Bakersfield

Bakersfield has designated the entire length of its boundary with Fairfield as part of its Rural District. This borders Fairfield’s Agricultural/Rural Residential and Uplands Districts. These land uses are compatible. Both Fairfield and Bakersfield have designated the area along Route 36 between their villages (East Fairfield and Bakersfield village) as rural in order to limit the potential for strip development along the highway and to maintain the two centers as distinct.

### Enosburgh

Enosburgh has designated the lands along its shared border with Fairfield as part of its Rural Residential District. Enosburgh calls for low-density, cluster development so that large contiguous open space is protected for farming and pockets of housing will occur in less productive areas. The Fairfield side of the border is part of the Agricultural/Rural Residential District. These uses are compatible.

### Fairfax

Fairfax’s Rural and Conservation Districts abuts the town line with Fairfield. Their plans calls for agriculture and forestry to remain the dominant land use and for the maintenance of rural open countryside and forestland. This is generally consistent with the Fairfield’s Agricultural/Rural Residential and Fairfield Pond & Swamp District that

border Fairfax.

**Fletcher**

Fletcher has placed the land along its town line with Fairfield into its Agricultural/Rural Residential District, Conservation District or Forest District, which is consistent with Agricultural/Rural Residential and Uplands District land uses envisioned on Fairfield’s side of the border.

**St. Albans**

The Town of St. Albans has placed much of its land along the Fairfield town line in its Rural District while the remaining land, largely around Fairfield Swamp, is in the Conservation District. This is consistent with Fairfield’s proposed land use of the Agricultural/Rural Residential District and Fairfield Pond & Swamp District to conserve the area around Fairfield Swamp.

**Sheldon**

Sheldon has designated all the lands along the Fairfield border as Rural Lands 1 or Rural Lands 2. There is an area of rural land between Sheldon village and the town line. This is consistent with Fairfield’s designation of lands along the Sheldon border as Agricultural/Rural Residential.

**Swanton**

Around Fairfield Swamp, Swanton has land in a Recreation/Conservation District. The remaining land along the town’s shared border with Fairfield is part of the Agricultural/Residential District. This is consistent with Fairfield’s planned land use of Agricultural/Rural Residential and a Fairfield Pond & Swamp District around the Fairfield Pond and Swamp.

**Compatibility with the Regional Plan**

Fairfield recognizes that it is part of a larger region and has considered the compatibility of its planning goals with that of the region. Fairfield’s land use planning areas are similar to the proposed land use plan adopted by the Regional Planning Commission. The Regional Plan identifies Fairfield’s village centers and supports the continuation of historic village and hamlet centers through village center planning and designation efforts that preserve their traditional character. The Regional Plan also designates Fairfield’s agricultural lands as an important resource, and further states that the best farmland in the region should be given the highest level of support for continued agricultural use.

## 4. APPENDIX: ENHANCED ENERGY PLAN

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further local, regional, and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 (90 x 50 goal), and the following:

- A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
- B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
- C. Vermont's building efficiency goals under 10 V.S.A. § 581;
- D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
- E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005.

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Fairfield to achieve “substantial deference” instead of “due consideration” in Certificate of Public Good (CPG) proceedings for energy generation facilities (ex. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. In short, this means that Fairfield will have a greater “say” in CPG proceedings before the Vermont Public Utility Commission about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and contain the following information:

- A. An analysis of current energy resources, needs, scarcities, costs, and problems.
- B. Targets for future energy use and generation.
- C. “Pathways,” or implementation actions, to help the municipality achieve the established targets.
- D. Mapping to help guide the conversation about the siting of renewables.

**More on Certificate of Public Good (CPG) Proceedings**

Rather than being regulated by local zoning, the development of new energy generation facilities is regulated at the state level by the Public Utility Commission through a quasi-judicial process. These CPG proceedings are often referred to as “Section 248” proceedings, in reference to the enabling legislation (30 V.S.A. § 248).

The intent of this process is to guarantee proposed projects meet eleven specific criteria in the statute that assess need for a facility, its reliability, economic benefit, environmental impacts, and the “land conservation measures” in the municipal plan. Land conservation measures and other policies included in an enhanced energy plan receive a greater standard of consideration than those in a standard municipal plan.

The Town has the ability to provide recommendations related to a CPG application to the Public Utility Commission. Where such recommendations are clearly linked to the goals and policies of an enhanced energy plan, they are likely to be treated with greater weight than recommendations linked to the goals and policies of a standard municipal plan

**Energy Resources, Needs, Scarcities, Costs and Problems**

The following subsection reviews each sector of energy use (thermal, transportation, electricity), electricity generation in Fairfield and other factors important to achieving the state energy goals. Several different units of measurement are used in this section. Please refer to Table 7.13 for more information about unit conversions.

***Land Use & Energy***

Maintaining Fairfield’s rural development pattern of clustered development surrounded by large areas of productive agricultural and forestry land is crucial to achieving the state energy goals. Clustered residential and commercial development is more energy-efficient as it reduces the need for vehicle travel.

Another important benefit of compact land development is that it preserves existing forest and agricultural lands. These lands are important for several reasons. First, with appropriate management techniques, forest lands can provide a local renewable energy source in the form of wood biofuel. A map of forest lands with good potential for biofuel is included below. Second, these lands sequester and store carbon. According to data from the U.S. Forest Service, the average acre of forest in Vermont stores 107 metric tons of carbon. There is 15,625 acres of land enrolled as forest land in the current use program in Fairfield. Based on this statewide estimate, these forest lands may be capable of storing as much as 1.7 million metric tons of carbon. Exact amounts of can depend on the types of tree species and forest management practices. With appropriate management, certain soils found in agricultural areas can also act as stores for carbon. Exact figures for the amount of carbon stored in agricultural soils are difficult to estimate because the type of soil and the types of land management practices employed both significantly impact carbon storage potential.

**Thermal Energy Use**

Table A.1 shows an estimate of current residential thermal energy demand in Fairfield, based on data from the American Community Survey (ACS 2011-2015). The data shows that 34.7% of households in Fairfield depend on wood and 45.8% of household rely on fuel oil as their primary source for home heating. Wood includes both cord wood and wood pellets. The remainder of homes heat primarily with propane. The nearest natural gas pipeline is located in St. Albans and is not likely to be extended to Fairfield in the future.

<b>Table A.1 - Current Fairfield Residential Thermal Energy Use</b>				
<b>Fuel Source</b>	<b>Fairfield Households (ACS 2011-2015)</b>	<b>Fairfield % of Households</b>	<b>Fairfield - Households Square Footage Heated</b>	<b>Municipal Thermal Energy Use in British Thermal Units (BTUs) BTU (in Billions)</b>
Natural Gas	3	0.5%	5,712	0
Propane	73	11.6%	119,984	7
Electricity	19	3.0%	22,800	1
Fuel Oil	289	45.8%	528,432	32
Coal	0	0.0%	0	0
Wood	219	34.7%	390,224	23
Solar	0	0.0%	0	0
Other	28	4.4%	53,312	3
No Fuel	0	0.0%	0	0
<b>Total</b>	<b>631</b>	<b>100.0%</b>	<b>1,120,464</b>	<b>67</b>

Estimates for commercial and industrial thermal energy use are more difficult to calculate due to the lack of accurate information available. Table A.2 provides an estimate of total commercial energy use (thermal and electricity). The estimate is based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 15 billion BTUs per year, is used as thermal energy for commercial uses.

<b>Table A.2 - Current Fairfield Commercial Energy Use</b>			
	<b>Commercial Establishments in Fairfield (VT DOL)</b>	<b>Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)</b>	<b>Estimated Thermal Energy BTUs by Commercial Establishments in Fairfield/year (in Billions)</b>
Municipal Commercial Energy Use	21	0.725	15

**Electricity Use**

Table A.3 shows 2017 electricity use in Fairfield per date available from Efficiency Vermont. Fairfield’s total electricity use has increased since 2015 from 10.5 million kWh in 2015 to about 11.1 million kWh per year in 2017. According to Efficiency Vermont, the average residential usage per household has decreased from 8,063 kWh per year to 8,023 kWh per year between 2015 and 2017. During the same period, overall commercial and industrial electricity usage increased from 3.3 million kWh to 3.8 million kWh. Fairfield’s average residential usage in 2017 was about 1000 kWh higher than the average residential kWh use in the region.

Fairfield is served by two electric utilities. Vermont Electric Cooperative serves the majority of Town and Green Mountain Power serves properties along Route 36 in Fairfield.

<b>Table A.3 - Current Fairfield Electricity Use</b>		
<b>Use Sector</b>	<b>Current Electricity Use in Fairfield - 2017 (Efficiency Vermont) (kWh)</b>	<b>Current Electricity Use (in Billion BTUs)</b>
Residential	7,316,561	24.9
Commercial and Industrial	3,838,198	13.1
<b>Total</b>	<b>11,154,760</b>	<b>38</b>

<b>Table A.4 – Current Fairfield Transportation Energy Use</b>	
<b>Transportation Data</b>	<b>Municipal Data</b>
Total # of Passenger Vehicles (ACS 2011-2015)	1,397
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	15,864,332
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
<b>Total Gallons Use per Year</b>	<b>852,921</b>
<b>Transportation BTUs (Billion)</b>	<b>103</b>
Average Cost per Gallon of Gasoline in 2016 (NRPC)	2.31
<b>Gasoline Cost per Year</b>	<b>1,970,248</b>

**Transportation Energy Use**

Table A.4 contains an estimate of transportation energy use in Fairfield. NRPC estimates that Fairfield residents drive personal vehicles approximately 15.8 million miles per year and spend about \$1.9 million on transportation fuel expenses per year. This calculation does not include expenses for commercially owned and operated vehicles.

As of January 2017, there were 3 electric or hybrid vehicles registered in Fairfield according to the Vermont Department of Motor Vehicles.

Fairfield has one park & ride facility, located behind the Town office with 16 spaces. This represents an important asset to reducing transportation energy use in Fairfield.



**Electricity Generation**

<b>Table A.5 – Existing Renewable Electricity Generation</b>		
<b>Generation Type</b>	<b>MW</b>	<b>MWh</b>
Solar	0.74	907.54
Wind	0.03	77.57
Hydro	0.00	0.00
Biomass	0.00	0.00
Other	0.00	0.00
<b>Total Existing Generation</b>	<b>0.77</b>	<b>985.11</b>

There is currently .77 MW of electricity generation capacity from renewable generation facilities located in Fairfield. This capacity results in approximately 985.11 MWh of electricity generation per year. All of this generation is from net-metering solar facilities located in Fairfield. The amount of electricity generation in Fairfield is roughly equal to the annual electricity use of about 147 households in Vermont based on information available from the U.S. Energy Information Administration (6696 kWh per VT household per year).

Table A.5 organizes information about existing generation in Fairfield by type of facility. Map 7.4 shows the location of all electricity generators in Fairfield with a capacity greater than 15 kW. A full list of electricity generators in Fairfield can be found at the end of this section (Table A.12).

Fairfield has relatively good access to electric three-phase distribution lines. These types of lines are used to distribute large quantities of electricity and are needed to serve large industrial users and commercial centers. The relatively good access to three-phase distribution lines in Fairfield may make development of renewable energy facilities more likely and cost-effective than in other surrounding communities with less existing grid infrastructure. While there is relatively good access to three-phase distribution lines, there are no transmission lines in Fairfield. These lines transmit large quantities of electricity from one place to another.

Map 7.2 shows the three-phase distribution line infrastructure in Fairfield. The map shows a three-phase distribution line in the town along Swamp Road, most of VT Route 36, North Road, Pumpkin Village Road, Duffy Hill Road, and parts of Pond and Lapland Roads. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

One barrier to the development of new energy generation facilities in Fairfield is constraints on the electrical transmission grid. After the addition of the Kingdom Community Wind plant in the Town of Lowell, the Sheffield-Highgate Export Interface (SHEI) was created to monitor the system and flows in relation to system capacity in Northern Vermont. Generation resources in this area are often required to curtail their output due to the lack of capacity to export power. Distribution utilities have made some improvements to address these issues, but there are no plans to develop new transmission lines at this time.

**Economic Impacts of Current Energy Usage**

Currently, Fairfield’s residents and businesses are highly dependent on imported sources of energy. On average, Vermonters consume 74 percent of their non-transportation energy in the

form of fossil fuels and another 17 percent in the form of electricity. Energy used for transportation is almost entirely fossil fuel based. Because these nonrenewable forms of energy are produced outside the region, most of the money spent on that energy is exported from the local economy.

Dependence upon energy resources is generally taken for granted. The costs and vulnerability of outside sources, especially fossil fuels, has increased drastically during the past decade. Yet, use of these outside sources of energy has continued to increase. Several studies have shown that for every dollar spent on outside energy resources 85 percent of that dollar leaves the community. Energy costs have become a major expense in government, business and personal budgets. Successfully reducing the impact of the costs and vulnerability of energy will benefit the town and its people.

**Targets for Use and Generation**

The second required element of an enhanced energy plan is creation of targets for future energy use. Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and renewable electricity generation to meet the State of Vermont’s 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal and these standards do not necessarily set a mandatory target to achieve nor set a penalty. For more information about the regional targets, please see the Northwest Regional Energy Plan ([www.nrpcvt.com](http://www.nrpcvt.com)).

Regional targets for energy use and renewable electricity generation were disaggregated to create municipal targets. These municipal targets were also designed to ensure compliance with the Department of Public Service’s Municipal Determination Standards. Tables A.6, A.7 and A.8 show the targets for future energy use for Fairfield by sector (totals are cumulative). There are many strategies that will help Fairfield attain the state energy goals, but these strategies cannot be achieved by Fairfield alone and require the action of the state agencies, regional organizations, public utilities, and private individuals.

**Statewide Energy Organizations**

*Vermont Energy Investment Corporation (VEIC):* VEIC administers Efficiency Vermont, the state’s electric efficiency utility funded by electric ratepayers.

*Vermont Department of Public Service (PSD):* The PSD is housed within the executive branch of Vermont state government, and is charged with representing the public interest in energy, telecommunications, water and wastewater utility matters. The Public Utility Commission is part of the Department.

**Future Thermal Energy Use**

One thermal target for Fairfield in 2050 is to have 87.4% of structures be heated by renewable energy sources. Much of this transition is likely to come from conversion to electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. Electric heat pumps work best in well-weatherized homes. To promote the efficient use of such technologies, Fairfield encourages resident’s participation in home weatherization programs. Additionally, new homes in Fairfield should be built to the Residential Energy Building Standards.

Regionally, the target also relies on wood heating being a continued source of residential heating. However, Fairfield does not have a high target for new efficient wood heat systems. This is due primarily to the high proportion of existing households in Fairfield that already use wood heating systems. Although there is only a small target (1), Fairfield strongly encourages residents’ conversion of existing wood heating systems to more advanced wood heating systems. Newer wood heating systems are more efficient and have less greenhouse gas emissions than older wood heating systems. Table A.6 also includes targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

<b>Table A.6 - Thermal Targets</b>			
<b>Thermal Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	46.0%	59.5%	87.4%
New Efficient Wood Heat Systems (in units)	0	0	1
New Heat Pumps (in units)	75	172	322
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	25%	73%

Increased use of biofuels and additional home weatherization may also support reduced reliance on nonrenewable heating sources.

**Future Transportation Energy Use**

The transportation energy targets for Fairfield are similarly ambitious. By 2050, almost 90.1% of transportation energy will need to come from renewable sources in order to meet the 90 x 50 goal. This will primarily be done through the conversion light-duty passenger vehicles from fossil fuels energy sources to electric energy. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. Biodiesel technology and infrastructure will certainly need to advance tremendously in coming years to meet this ambitious target.

<b>Table A.7 - Transportation Targets</b>			
<b>Transportation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	9.3%	30.8%	90.1%
Electric Vehicles	122	915	2177
Biodiesel Vehicles	204	407	784

**Future Electricity Energy Use**

Targets for electricity use are complex to interpret. Electricity use in Fairfield is targeted to double by 2050 (Table A.8). This increase in use will likely be driven by conversions to electric heat pumps and electric vehicles. These consumer changes will cause electricity use to grow. At the same time, total energy use (energy, not electricity) will become more efficient. This is because electric cars and electric heating sources are more efficient than using other energy sources, such as fossil fuels.<sup>2</sup>

<b>Table A.8 - Electricity Targets</b>			
<b>Electricity Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Increased Efficiency and Conservation (BTUs)	25.2%	48.3%	100.7%

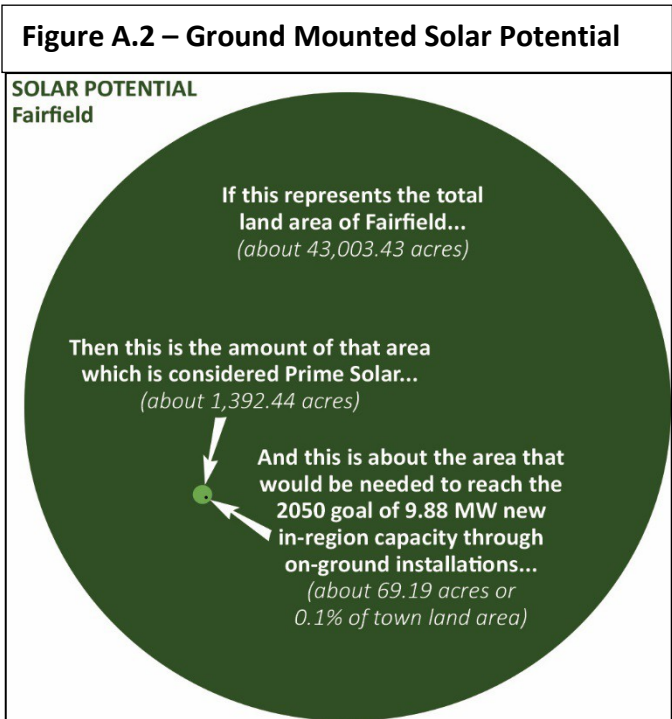
<sup>2</sup> Vermont Comprehensive Energy Plan - 2016, page 44.

**Future Energy Generation**

Table A.9 shows the electricity generation targets for new electricity generation in Fairfield in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (15,258.9 MWh) is about 15 times more than the current generation capacity (985 MWh) within the Town of Fairfield.

<b>Table A.9 – Renewable Electricity Generation Targets</b>			
<b>Renewable Generation Targets</b>	<b>2025</b>	<b>2035</b>	<b>2050</b>
Total Renewable Generation Target (in MWh)	5,035.44	10,070.87	15,258.90

<b>Table A.10 - Renewable Electricity Generation Potential</b>		
<b>Resource</b>	<b>MW</b>	<b>MWh</b>
Rooftop Solar	1	903
Ground-mounted Solar	1,437	1,761,767
Wind	997	3,056,794
Hydro	0.064	224
Biomass and Methane	0	0
Other	0	0
<b>Total Renewable Generation Potential</b>	<b>2,434</b>	<b>4,819,689</b>



Based on mapping and calculations completed by NRPC, Fairfield has sufficient land to meet the above electricity generation targets. Fairfield has access to the renewable electricity generation capacity outlined in Table A.10. This estimate shows that Fairfield has considerably more potential for renewable electricity generation than what is needed to meet the renewable electricity generation targets in Table A.9. This generation capacity was calculated using the “base” layers for solar and wind. For an explanation of what constitutes a “base” layer, please see the mapping subsection below.

Fairfield supports NRPC’s position regarding “commercial” and “industrial” wind facilities. The NRPC Regional Plan

finds that the construction of new “industrial” or “commercial” wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an “industrial” or “commercial” wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Fairfield encourages the use of these sources for electricity and thermal energy generation, especially on farms.

**Mapping Energy Resources and Constraints**

The third required element of an enhanced energy plan is the inclusion of maps that will provide guidance to the community and developers regarding the location of new renewable generation facilities. Fairfield has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Municipal Determination Standards, including access to energy resources and constraints to renewable development. All maps may be found at the end of this section.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable electricity generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When an electricity generation facility is proposed, the presence of all natural resources constraints on site shall be verified as a part of the application.

**Mapping Methodology**

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass “potential” in Fairfield based on information provided by the Vermont Sustainable Jobs Fund. “Known” and “possible” constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable electricity generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table A.11. The known constraints and possible constraints used to create the maps include constraints that are required per the Municipal Determination Standards from the Department of Public Service and regional constraints selected by NRPC. The Conservation District in Fairfield was included as regional possible constraint.

**Solar and Wind**

The solar and wind maps show both “base” and “prime” areas. Base areas are areas with electricity generation potential, yet may contain possible constraints. Prime areas are areas that have electricity generation potential that do not contain known or possible constraints. Areas that do not contain electricity generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general concentration of base and prime solar areas in western and northern Fairfield. The following are preferred locations for solar generation facilities by the Town of Fairfield: rooftops, parking lots, and landfills. Brownfield sites located outside of the village areas of East Fairfield and Fairfield are also considered preferred locations.

Fairfield has a strong preference for solar facilities that have less than 5 MW in generation capacity. This preference is a reflection of the community’s dedication to preserving the aesthetic and rural qualities of Fairfield by restricting the geographic size of solar facilities. In addition, Fairfield prefers that solar facilities greater than 149 kW in generation capacity to be sufficiently separated from other similarly sized solar facilities to “break up” the visual impact of two or more solar facilities located next to each other and to preserve Fairfield’s rural character.

All solar facilities to be sited in Fairfield shall include proper screening. The Town of Fairfield may to adopt a municipal solar screening ordinance in the future.

There generally isn’t much land available in Fairfield that has base and prime wind resources. The small areas that do exist are generally concentrated in the southwest Fairfield along Rugg Road, near the intersection of VT Route 36 and West Street, and in extreme northeastern Fairfield.

**Hydro and Biomass**

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays “base” and “prime” areas. However, these categories are not necessarily indicative of electricity generation potential. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide electricity generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites. Fairfield has two existing dam sites in East Fairfield and on Fairfield Pond. The redevelopment of these sites and the development of new dam sites is extremely unlikely due to Fairfield’s upland location and the extensive regulatory process involved in developing new dams.

**Conclusion**

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Fairfield is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, affordable, and secure energy future.

**GOALS:**

1. Plan for increased electric demand with the support of local electric utilities and Efficiency Vermont.
2. Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.
3. Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips and developing public transit ridership.
4. Focus growth within and adjacent to the villages.

**POLICIES**

1. Fairfield supports energy conservation efforts and the efficient use of energy across all sectors.
2. Fairfield supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.
3. Fairfield supports patterns and densities of concentrated development that result in the conservation of energy. This includes support of public transit connections from Fairfield to



other parts of the region.

4. Fairfield supports the development and siting of renewable electricity generation resources in the Town that are in conformance with the goals, strategies, and mapping outlined in this plan. Development of electricity generation in identified preferred locations shall be favored over the development of other sites.
5. Fairfield supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.
6. Support local farms and the local food system.
7. Support high intensity grazing and other agricultural and forestry practices that encourage carbon sequestration.

**IMPLEMENTATION ACTIONS:**

1. Coordinate annually with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fairfield residents.
2. Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.
3. Determine if there is a need to create a municipal Energy Committee, appoint an Energy Coordinator, or provide greater funding and support to existing municipal boards to coordinate energy-related planning in Fairfield and to educate residents about the goals of this plan.
4. Conduct an energy audit of municipal and other public buildings to identify weatherization retrofits.
5. Promote the use of the park & ride facility by the Town office.
6. Promote wood stove change-out programs that take older non-EPA certified out of service and replace them with more efficient and lower emitting cord and pellet stoves.
7. Encourage the use of advanced wood heating for commercial and municipal uses.
8. Maintain zoning standards that protect forests and agricultural soils.

- 9. Support any efforts to extend Green Mountain Transit service to Fairfield.
- 10. Investigate the installation of an electric vehicle charging infrastructure at the municipal park & ride facility.
- 11. Review municipal road standards to ensure that they reflect the “complete streets” principles as outlined by Vermont Agency of Transportation and Vermont Department of Health ([http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP\\_PA&N%20Complete\\_streets\\_guide\\_for\\_VT\\_communities.pdf](http://www.healthvermont.gov/sites/default/files/documents/2016/11/HPDP_PA&N%20Complete_streets_guide_for_VT_communities.pdf)).
- 12. Encourage the development and expansion of water and sewer infrastructure only where there is existing population centers.
- 13. Investigate installation of a community-based renewable energy project.
- 14. Provide firefighters with training in fighting fires on structures that have solar installed.
- 15. Develop and adopt a municipal solar screening ordinance.
- 16. Investigate the need for an additional municipal park and ride facility.

<b>Table A.11 – Mapping Constraints</b>		
<b>Solar, Wind and Biomass Maps - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>Confirmed and unconfirmed vernal pools</b>	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered Species</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
<b>River corridors</b>	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
<b>National wilderness areas</b>		VCGI
<b>FEMA Floodways</b>		VCGI/NRPC C
<b>Class 1 and Class 2 Wetlands</b>		VCGI
<b>Designated Downtowns, Designated Growth Centers, and Designated Village Centers</b>	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas</b>	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain -500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
<b>Ground and surface waters drinking protection areas</b>	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR

<p><b>Vermont Conservation Design Highest Priority Forest Blocks</b></p>	<p>The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)</p>	<p>ANR</p>
<p><b>Public water sources</b></p>	<p>A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.</p>	<p>ANR</p>
<p><b>Municipal Conservation Land Use Areas</b></p>	<p>Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. No areas identified in the Fairfield Town Plan were included in this category.</p>	<p>NRPC</p>
<p><b>Solar, Wind and Biomass Maps - Possible Constraints</b></p>		
<p><b>Constraint</b></p>	<p><b>Description</b></p>	<p><b>Source</b></p>
<p><b>Protected lands</b></p>	<p>This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and</p>	<p>VCGI</p>

	private parcels with conservation easements held by non-profit organizations.	
<b>Deer wintering areas</b>	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR
<b>Hydric soils</b>	Hydric soils as identified by the US Department of Agriculture.	VCGI
<b>Agricultural soils</b>	Local, statewide, and prime agricultural soils are considered.	VCGI
<b>Act 250 Agricultural Soil Mitigation Areas</b>	Sites conserved as a condition of an Act 250 permit.	VCGI
<b>Class 3 wetlands</b>	Class 3 wetlands in the region have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
<b>Municipal Conservation Land Use Areas</b>	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D of the Regional Energy Plan. The Conservation District identified in the Fairfield Town Plan was included in this category.	NRPC
<b>Hydro Map - Known Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
None		
<b>Hydro Map - Possible Constraints</b>		
<b>Constraint</b>	<b>Description</b>	<b>Source</b>
<b>"303d" list of stressed waters</b>		ANR
<b>Impaired waters</b>		ANR
<b>State Significant Natural Communities and Rare, Threatened, and Endangered</b>	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more	VCGI

<b>Species</b>	information on the specific rankings, explore the methodology for the shapefile.	
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The date in Table A.12 displays facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of Fairfield recognizes that some of the data in the table may be out of date or incorrect. The Town of Fairfield also recognizes that some identified facilities may no longer generate electricity.

<b>Table A.12 - Fairfield Electricity Generators (12.27.18)</b>							
<b>Category</b>	<b>Sub Category</b>	<b>Name</b>	<b>Address</b>	<b>CPG Number</b>	<b>Electricity Type</b>	<b>Utility</b>	<b>Capacity kW</b>
Solar	Ground-mounted PV	Benjamin & Sarah Toof	604 Hill Rd	2753	Net Metered	Vermont Electric Coop	8.9
Solar	Ground-mounted PV	Doug Grant	1963 Sheldon Woods Road	2948	Net Metered	Vermont Electric Coop	5
Solar	Ground-mounted PV	Randy Callan	645 Pumpkin Village Rd	5242	Group Net Metered	Vermont Electric Coop	10.8
Solar	Ground-mounted PV	Sun CSA 16	489 Barry Rd	5162	Community Solar Array	Vermont Electric Coop	148.2
Solar	Ground-mounted PV	Tony Beauregard	2528 Dodd Rd	3969	Net Metered	Green Mountain Power	1.5
Solar	Ground-mounted PV	William & Sara Kittell	437 Chester Arthur Road	473	Net Metered	Green Mountain Power	3.1
Solar	Ground-mounted PV	BDE Fairfield Lazar Solar, LLC		16-0050	Group Net Metered	Vermont Electric Coop	500
Solar	Ground-mounted PV	Peter Watson	71 Buck Hollow Road	17-4497	Net Metered	Vermont Electric Coop	5
Solar	Ground-mounted PV	First Terrace Solar, LLC	Egypt Road	18-2630	Group Net Metered	Green Mountain Power	274
Solar	Ground-mounted PV	Samuel Gorton	1492 Pumpkin Village Road	18-2199	Net Metered	Vermont Electric Coop	6
Solar	Ground-mounted	Branon Family Maple Orchards	539 Branon Road	2646	Net Metered	Green Mountain Power	100.1

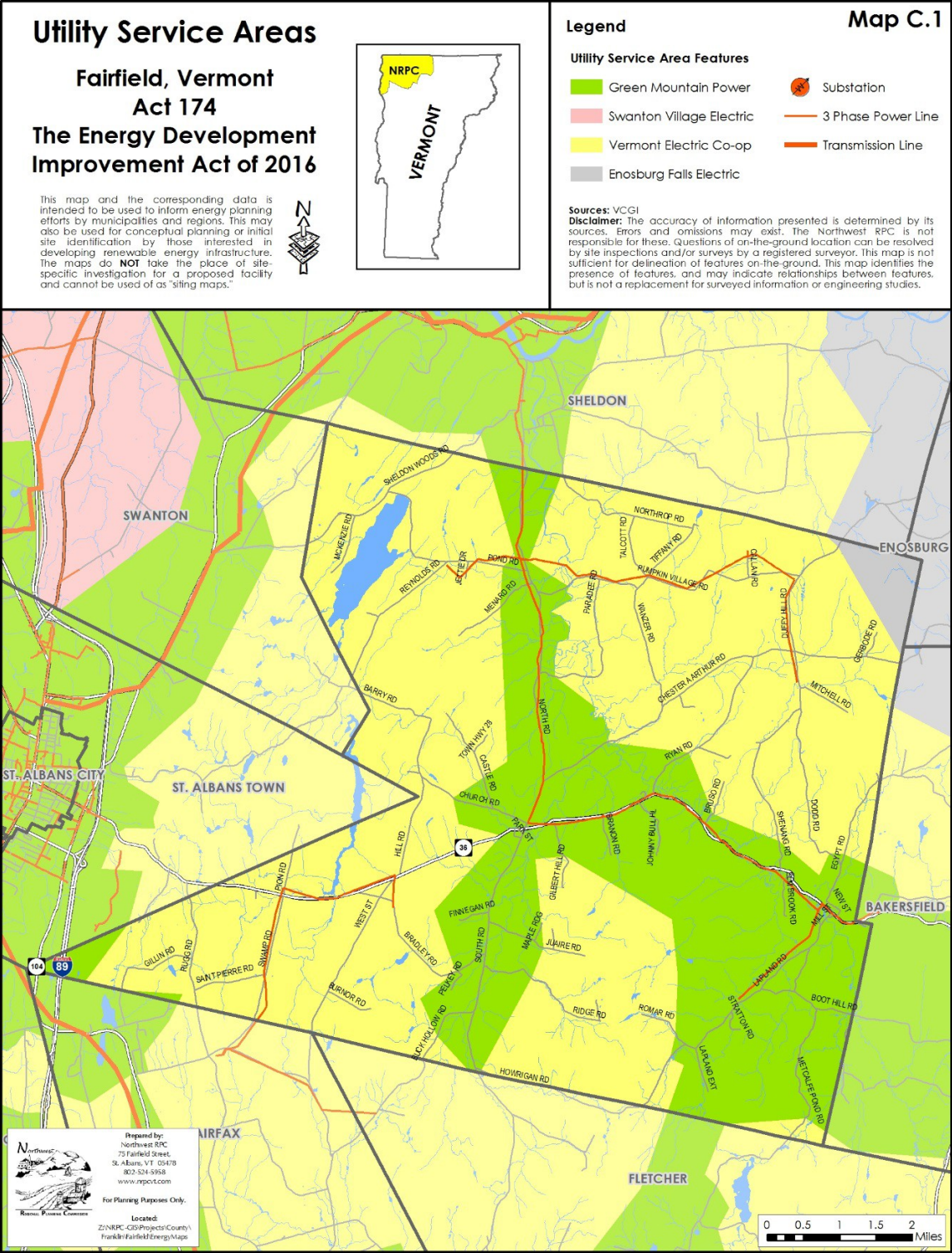
	d PV: Tracker						
Solar	Ground-mounted PV: Tracker	Charles Verderber	1364 Castle Rd	5131	Net Metered	Vermont Electric Coop	7
Solar	Ground-mounted PV: Tracker	Chester Arthur Apartments	4695 VT Route 36	2840	Net Metered	Green Mountain Power	34.2
Solar	Ground-mounted PV: Tracker	Howard Mitchell	1513 Lapland Rd	4270	Net Metered	Green Mountain Power	6
Solar	Ground-mounted PV: Tracker	Toby Fulwiler	1941 Ridge Rd North	1482	Net Metered	Vermont Electric Coop	9.5
Solar	Ground-mounted PV: Tracker	Mark & Jennifer Carpenter	5432 Duffy Hill Road	18-0928	Net Metered	Vermont Electric Coop	7.6
Solar	Roof-Mounted PV	Alisa & Craig Aylward	91 Fischer Dr	5069	Net Metered	Vermont Electric Coop	8
Solar	Roof-Mounted PV	Barbara Stone	1563 Church Road	3814	Net Metered	Vermont Electric Coop	7
Solar	Roof-Mounted PV	Charles Russell	2261 Pumpkin Village Rd	6284	Net Metered	Vermont Electric Coop	3.8
Solar	Roof-Mounted PV	Brian Pardy	5132 VT Route 36	2146	Net Metered	Green Mountain Power	7.1
Solar	Roof-Mounted PV	David Lacross	223 Hiram Hill	3977	Net Metered	Vermont Electric Coop	7.5
Solar	Roof-Mounted PV	Diana Bailey and Greg Hunter	2757 Pumpkin Village Rd	2235	Net Metered	Vermont Electric Coop	4.3
Solar	Roof-Mounted PV	Jane Paquette	1654 Swamp Road	3824	Net Metered	Vermont Electric Coop	7
Solar	Roof-Mounted PV	Jody Curry	105 South Rd	2879	Net Metered	Green Mountain Power	6.9
Solar	Roof-Mounted PV	John Schreindorfer	4552 Rt 36	2853	Net Metered	Green Mountain Power	4
Solar	Roof-Mounted PV	Larissa Hebert	1685 Rugg Rd	4073	Net Metered	Vermont Electric Coop	10
Solar	Roof-Mounted PV	Magnan Bros Dairy	4883 VT Route 36	2839	Net Metered	Green Mountain Power	65.2
Solar	Roof-Mounted PV	Matthew Howrigan	792 Bruso Rd	5314	Net Metered	Vermont Electric Coop	7

Solar	Roof-Mounted PV	Michelle Patnode	313 Hiram Rd	5313	Net Metered	Vermont Coop	Electric	6
Solar	Roof-Mounted PV	Pumpkin Village Foods	1345 Northrop Rd	6325	Net Metered	Vermont Coop	Electric	15
Solar	Roof-Mounted PV	Sean Walsh	90 Pion Rd	5192	Net Metered	Vermont Coop	Electric	6
Solar	Roof-Mounted PV	Stephen Archambault	2 VT-36	6235	Net Metered	Vermont Coop	Electric	6
Solar	Roof-Mounted PV	Steven Osgood	4112 Pond Rd	2867	Net Metered	Vermont Coop	Electric	6.9
Solar	Roof-Mounted PV	Timothy Beaman & Sylvia Lazarnick	578 Swamp Rd	2054	Net Metered	Vermont Coop	Electric	4.2
Solar	Roof-Mounted PV	Brian Moegelin	250 Maple Ridge	16-0230	Net Metered	Green Mountain Power	Electric	7.6
Solar	Roof-Mounted PV	Desiree & Jason Brace	4078 Pond Road	7197	Net Metered	Vermont Coop	Electric	6
Solar	Roof-Mounted PV	Eric Schoonbs	444 Pion Road	7290	Net Metered	Vermont Coop	Electric	5
Solar	Roof-Mounted PV	John Lapointe	394 Route 36	7267	Net Metered			6
Solar	Roof-Mounted PV	Kathryn O'Donnell and David Burnor	47 Gilbert Hill Rd	6667	Net Metered	Green Mountain Power	Electric	10
Solar	Roof-Mounted PV	Steve Doe	6065 Duffy Hill Road	7214	Net Metered	Vermont Coop	Electric	5
Solar	Roof-Mounted PV	William Roberts	1130 Barry Road	7028	Net Metered	Vermont Coop	Electric	3
Solar	Roof-Mounted PV	Nate & Margreth Patenaude	1799 Pond Road	7256	Net Metered	Vermont Coop	Electric	3.1
Solar	Roof-Mounted PV	Richard Berthiaume	125 Dorian Dr	17-3022	Net Metered	Vermont Coop	Electric	3.8
Solar	Roof-Mounted PV	Charles and Andrea Mudgett	2671 Pumpkin Village Rd	17-2886	Net Metered	Vermont Coop	Electric	6
Solar	Roof-Mounted PV	Lyndsi Cote	121 Dorian Dr	17-2719	Net Metered	Vermont Coop	Electric	5.2
Solar	Roof-Mounted PV	Kati Lambert	1758 Reynolds Rd	17-2149	Net Metered	Vermont Coop	Electric	5
Solar	Roof-Mounted PV	Shawn Labelle	927 Barry Road	18-1008	Net Metered	Vermont Coop	Electric	6.38
Solar	Roof-Mounted PV	Shelley Ismail	1311 Rugg Road	18-0989	Net Metered	Vermont Coop	Electric	3.8
Solar	Roof-Mounted PV	Christopher Leduc	625 Gillin Road	17-5239	Net Metered	Vermont Coop	Electric	12.76



Solar	Roof-Mounted PV	Shelley Paradee	3671 Chester Arthur Road	17-1691-NMR	Net Metered	Vermont Electric Coop	6
Solar	Roof-Mounted PV	Taja Hall	35 Button Road	18-0962	Net Metered	Vermont Electric Coop	3.8
Solar	Roof-Mounted PV	Harry Dewyea	605 Lapland Ext	18-0549	Net Metered	Green Mountain Power	3.6
Solar	Roof-Mounted PV	Jeff Barney	6 Jupiter Lane	2829	Net Metered	Vermont Electric Coop	6.16
Solar	Roof-Mounted PV	Loren Tracy	Fairfield Pond Road	17-4582	Net Metered	Vermont Electric Coop	3
Solar	Roof-Mounted PV	Matthew Magnan	74 Emch Road	18-0863	Net Metered	Vermont Electric Coop	6
Solar	Roof-Mounted PV	Michael Malone	57 Jupiter Lane	17-5154	Net Metered	Vermont Electric Coop	10.4
Solar	Roof-Mounted PV	Sandra Hovdenn	472 Swamp Rd	17-4637	Net Metered	Vermont Electric Coop	11.4
Solar	Roof-Mounted PV	David Burnor	193 Pion Rd	18-2818	Net Metered	Vermont Electric Coop	5
Solar	Roof-Mounted PV	Flack Family Farm	3971 Pumpkin Village Road	18-2366	Group Net Metered	Vermont Electric Coop	10
Solar	Roof-Mounted PV	Jason Walent	202 Swamp Rd	18-1258	Net Metered	Vermont Electric Coop	10
Solar	Roof-Mounted PV	John Bouchard	79 Fisher Drive	18-1998	Net Metered	Vermont Electric Coop	6
Wind	Small Wind	Doug Grant	1963 Sheldon Woods Road	460	Net Metered	Vermont Electric Coop	9.5
Wind	Small Wind	Flack Family Farm	3971 Pumpkin Village Road	383	Net Metered	Vermont Electric Coop	6.3
Wind	Small Wind	Tyler Webb	336 Emch Drive	445	Net Metered	Vermont Electric Coop	9.5

<b>Table A.13 Standard Conversions - BTU to Unit</b>			
<b>Unit</b>	<b>Unit Type</b>	<b>British Units</b>	<b>Thermal</b>
Kilowatt	Kilowatt		3,412
Gasoline	Gallon		120,404
Ethanol	Gallon		84,714
Diesel Fuel	Gallon		137,571
Heating Oil	Gallon		137,571
Residual Fuel Oil	Gallon		149,690
LPG	Gallon		84,738
Kerosene	Gallon		135,000
Biodiesel	Gallon		127,595
Wood Pellets	Ton		16,500,000
Cord Wood	Cord		20,000,000
Wood	Pounds		8,000
Natural Gas	Cubic Feet		103,200
Compressed Natural Gas	Pounds		20,160
Coal	Short Ton		19,490,000



## Transmission & 3 Phase Power Infrastructure

### Fairfield, Vermont

#### Act 174

### The Energy Development Improvement Act of 2016

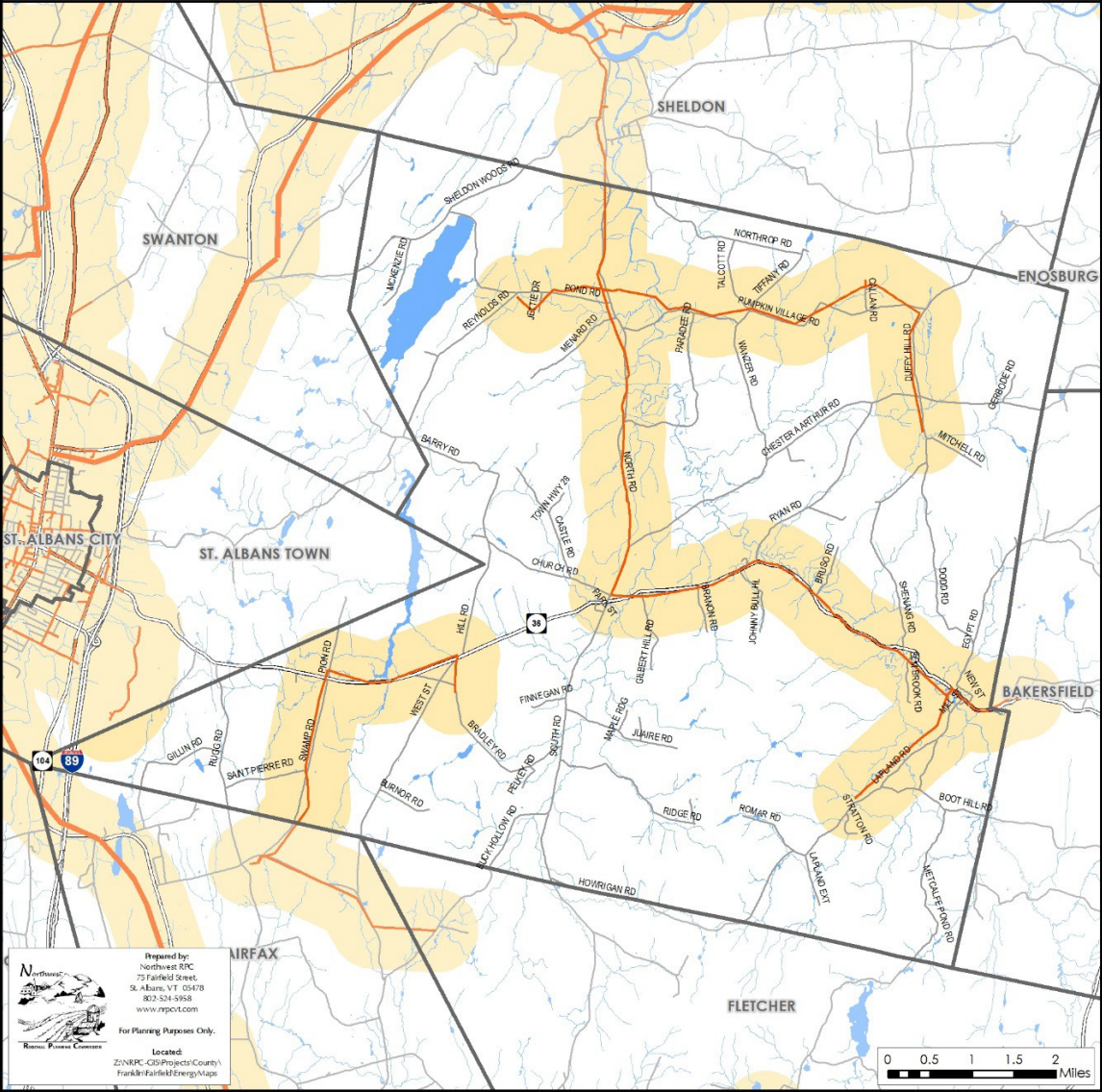
This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. This may also be used for conceptual planning or initial site identification by those interested in developing renewable energy infrastructure. The maps do **NOT** take the place of site-specific investigation for a proposed facility and cannot be used as 'siting maps.'

### Legend

- Substation
- 3 Phase Power Line
- Transmission Line
- 1/2 Mile Buffer (3 Phase Power Line & Transmission Line)

**Sources:** VCGI  
**Disclaimer:** The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Northwest RPC is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by a registered surveyor. This map is not sufficient for delineation of features on-the-ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

### Map C.2



Prepared by:  
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 802.324.9588  
 www.nrpcvt.com

For Planning Purposes Only.

Located:  
 Z:\NRPC-GIS\Projects\County\Franklin\Fairfield\Energy\Map

