CRAFTSBURY 2016 TOWN PLAN

ADOPTION DATE:
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Introduction

Craftsbury is a vibrant town in the Northeast Kingdom of Vermont. Residents have a strong sense of community and value each other and the beauty of the landscape in which they live. Craftsbury's visual beauty can be found in its geography and architecture. The area is strongly defined by the north-south chain of the Lowell Mountain range to the west. There are three lakes within Craftsbury's boundaries: Eligo, Little Hosmer and Big Hosmer, as well as many streams including the Black River, Hatch Brook, Weber Brook, Cass Brook, Wild Branch, and Whetstone Brook. The many farms in town have helped to preserve open land, offering wide vistas and rolling green fields as another source of beauty.

The village of Craftsbury and Craftsbury Common are connected by the North/South Craftsbury Road. The Common is an area defined by its iconic large grass field surrounded by a white fence and white clapboard houses, and is host to many community events and activities. The town is often represented in photographs of the Common framed by the traditional white church with steeple at the northwest corner. There are an unusual number of 19th century homes, barns, institutional and commercial buildings, which give the entire town of Craftsbury visual continuity and harmony.

Craftsbury is home to one of the longest-running K-12 schools in the country. The elementary school is located in the village and the middle and high schools on the Common, the latter referred to as Craftsbury Academy. There is a public preschool at the elementary school, and Sterling College is located on the Common, offering a wide spectrum of educational opportunities for residents and beyond.

There is a variety of recreational opportunities in Craftsbury, including hunting, fishing, cross country skiing, biking, walking, canoeing, sculling and swimming. These activities occur predominantly on privately owned land, but also on public lands and on town roads. The Craftsbury Outdoor Center offers world-class sculling and skiing facilities and is host to top athletes and those interested in casual exercise. The diverse landscape and the willing landowners are critical to the future of these multiple recreational activities throughout town.

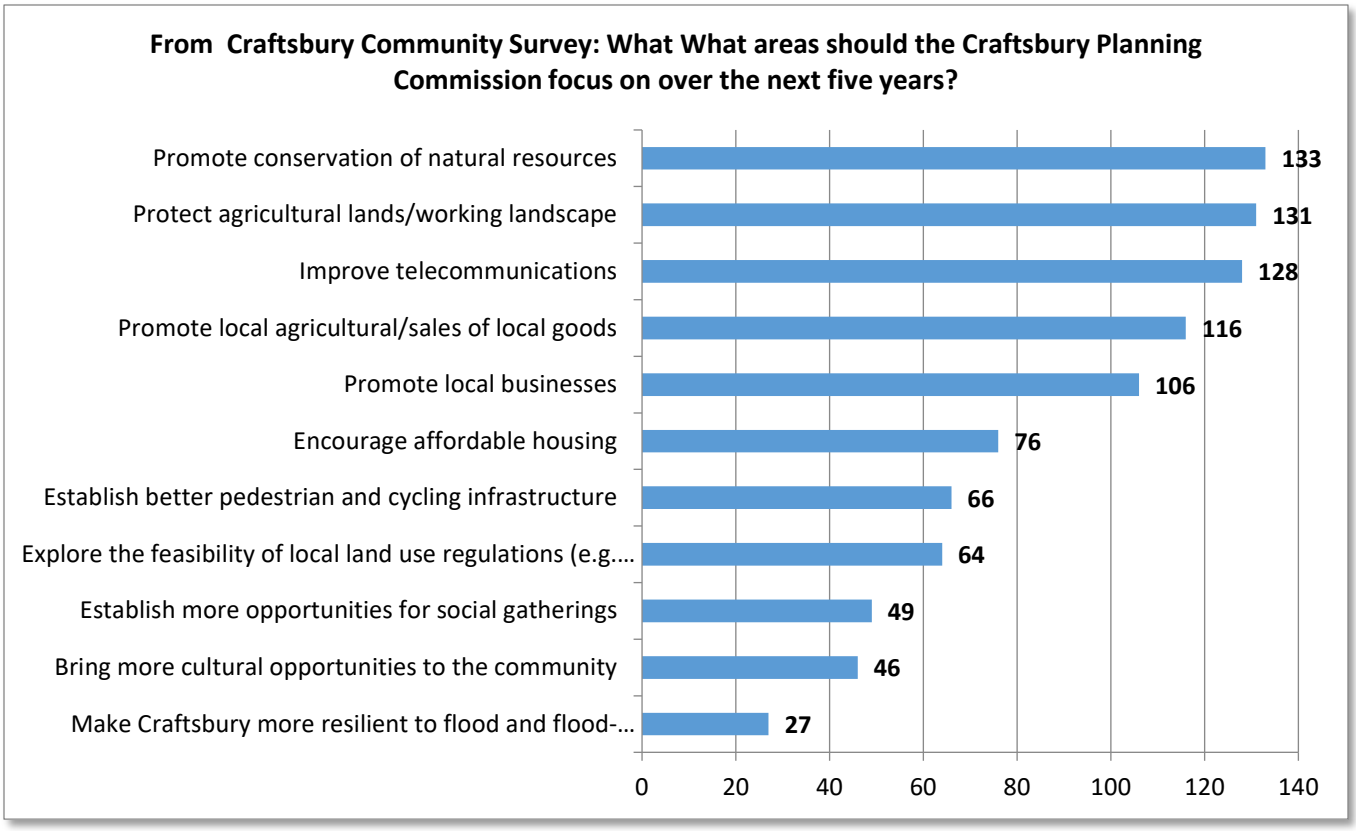
The Craftsbury landscape is also a home to a plethora of wildlife. The wide variety of ecosystems in the area offers habitat for creatures large and small. The extensive riverine system and associated floodplains and wetlands provides habitat, flood water retention, water cleansing and aesthetics which are highly valued by the residents. The undulating topography along with the mixture of deciduous and coniferous forests adds to the stunning views throughout town.

About This Plan:

In May of 2006, Craftsbury adopted its first town plan. The plan was developed with assistance from a Municipal Planning Grant from the State of Vermont Department of Housing and Community Affairs, as well as extensive input from a 2004 community survey, which yielded 409 responses from both residents and nonresidents. In 2011, the Craftsbury Planning Commission made an exhaustive attempt to review and update the information on which the original plan was based, in accordance with the provisions of 24 V.S.A. §4387 (Readoption of Plans).

In 2015 the Craftsbury Planning Commission received another Municipal Planning Grant to develop a new plan. Another widely-distributed community survey yielded insights from 233 respondents, representing an impressive 40% response rate. Nearly three-quarters (73%) of the responders were full-time residents; 26% part-time residents, and 1% students. The most salient findings from the Community Survey are integrated into this plan, and a comprehensive summary can be found in Appendix B.

The development of the 2016 Craftsbury Town Plan coincided with a three-month Community Visit facilitated by the Vermont Council on Rural Development (VCRD). This intensive community visioning



process is a grassroots initiative that assembles a broad mix of community members with a *visiting resource team*, made up of VCRD members and statewide providers (state, federal, non-profit, and philanthropic), to create intensive partnerships and tailored work plans for long-term local success. Community members identified three areas for further action:

- Advance Craftsbury Land Protection;
- Improve Cell Phone and Broadband Access, and
- Build Partnership between the Schools and the Community.

The purpose of the Town Plan is to emphasize the continued desire for local control while exploring the area of special need that will shape the development of the town over the next several years. Although the work on those initiatives will hopefully continue well into the future, this Plan attempts to reflect the ideas and concerns that were expressed during the Community Visit Process and suggest resources and strategies that may help the respective Task Forces in their efforts.

Vision for Craftsbury's Future

These points of vision were developed from vision statements that were shared during the Community Visit. The statements represent broad hopes that community members have for the long term good of Craftsbury.

Craftsbury residents look to a future for the community where:

- Craftsbury has a vibrant school that is the center of educational excellence and expertise. Preschool is available to every child. There is a positive connection between Sterling College, the Outdoor Center, and the Schools.
- Craftsbury has an active working landscape; farmland is preserved and farmers are given special emphasis for their role in maintaining and preserving open spaces.
- Craftsbury has beautiful and open landscapes. Its viewsheds and watersheds are protected. The lakes are protected from milfoil infestation as well as from development, and are maintained for recreation such as paddling, fishing, and hunting.
- As a community there is a sense of conservation of resources.
- Craftsbury is an inclusive community where people from all backgrounds and identities feel welcome and at home. It is a multi-generational community for residents of all ages.
- Craftsbury has economic vitality that makes it possible for our young people to stay in the community.
- Craftsbury is a safe place for our most vulnerable, the very young and very old. Nobody goes hungry or is food insecure, and affordable housing and emergency services are available to all.
- Craftsbury is a community of neighbors where residents are neighborly to those next door as well as those that live across town. Residents engage in respectful and civil dialogue and are well practiced in those skills.
- Craftsbury is a walkable, bike-able community that is not too dominated by cars. Road travel is safe and slow through town and roads are safe for horseback riders and bikers.
- Craftsbury embraces outdoor recreational opportunities, such as cycling and equestrian activities, that encourage a lifelong active lifestyle for community members.
- There is a gathering place, a restaurant, café, or tavern where community members connect and relax together. Local access to art, theater, and music is promoted.
- As a community, we encourage businesses to locate in town that are compatible with community values.
- High speed internet is available to everyone.
- We recognize, value, and highlight the good things we can do as a small rural place that wouldn't be possible in a larger place.

This Plan is organized into two sections:

A series of **Profiles** that depict the overall conditions, challenges, opportunities. Each profile has a set of goals and proposed action steps.

- An appendix of **Assets and Resources**. Here is where the reader can find more data and technical information supporting the profiles.

Ledger-sized copies of the accompanying maps are appended to this Plan for the reader's convenience. The original, wall-sized color maps are available in the Craftsbury Town Clerk's Office for review. These maps highlight the details of the following Plan including the required features of: the present and prospective land uses, the present and prospective transportation and circulation facilities, the present and prospective community facilities and public utilities, and the present and projected educational facilities; as well as many other features.

PROFILES

1: Land Use

The town of Craftsbury is comprised of 23,040 acres and still has a working landscape with many farms and several managed forests. There are roughly 6,661 acres of public and private conserved lands in Craftsbury, which represents 26% of the town's total land area. There has been a significant increase in conservation activity since the 2011 Craftsbury Town Plan, when just under 1,383 acres had been conserved. The increase can be mainly attributed to sales of conservation easements to Vermont Land Trust.

In addition, over 53% of the farm and forest acreage in town is in the Current Use Program (Use Value Appraisal Program). This program insures that the land is actively managed and thus taxed as forest or farmland, not for the development potential. These land stewards in town are working to conserve this landscape through management.

Recent Changes and Accomplishments:

5,278 acres of land conserved since 2011.

21 more parcels enrolled in Current Use program since 2010.

Craftsbury Village and Craftsbury Common redesignated as Village Centers in 2014 – a total of $242,500 in tax credits awarded for fitup and rehabilitation of village properties.

Challenges

Development patterns, though incremental, are away from traditional development centers.

Residents have expressed concern about development pressures on Craftsbury's open landscape and village character.

Land use regulation in Craftsbury has been a divisive issue.

A Brief History of Land Use Regulation in Craftsbury

A long-held statewide planning goal has been to "plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside." This goal has had limited relevance in Craftsbury for a number of reasons:

- A number of constraints to development, including hydric soils in the villages and no off-site septic system (examined further in the Utilities and Facilities Profile);
- Preference for living close to the land and on larger outlying lots (examined further in the Housing Profile and on the Development Trends map); and
- A population that has been deeply divided over of land use regulations.

In the 2004 Craftsbury Town Survey, zoning as a tool for land use control was supported by 43% of the residents while 56% did not support it. Others suggested that clustering housing and business development would be a way to address the land use concerns but this too would require regulations.

The 2015 Community Survey did not address zoning in such a pointed manner; however, the survey was designed to accommodate extensive open-ended comment. Not surprisingly, the topic still came up. Twelve respondents voiced their support for zoning in the 2015 Community Survey. The selected comments below reflect the concerns among those who supported zoning.

> *I fear we need zoning - even though not popular - it comes with more population.*
>
> *There needs to be zoning. If there are areas we want to protect, they should be zoned. For instance, there is nothing, other than goodwill, stopping anyone from building anything they want on Little Hosmer. I'm surprised someone hasn't bought land to build 'Stowe-like' condo developments or subdivisions.*

Create a strong town plan that preserves natural resources and contiguous habitats and protects against sprawl and large-scale development. Educate the residents about the importance of zoning for protection of land and land values. Create financial resources for farmers to place conservation easements on their land.

Opponents of zoning were no less passionate in their views. Five discrete respondents stated how they viewed zoning as an infringement of their rights. Here are statements that exemplify that sentiment.

No residential zoning. My property is mine. As long as what I do there doesn't hurt anyone leave me alone. I already pay too much for the privilege of owning land I've already paid for. I am not interested in giving away my right to do what I wish there.

I do not want zoning. I do not want someone on a committee to be able to stop me if I want to put livestock or if I want to put up a business or a rental unit. The taxes in this town are high and as long as I am the one paying, I'll do what I want. That means how I heat my home or how I get electricity.

Please do as much as possible to respect the landowners' right to do with their property what they wish.

In the early 1970s the parcelization of a former farm property ignited concern among Craftsbury residents. The Town passed zoning regulations that followed a multidistrict separation-of-uses model (still the most common form of zoning in Vermont today). There were six zoning districts intended to establish future development patterns. The highest densities (minimum of a half-acre) were envisioned for Craftsbury Village, Craftsbury Common, and East Craftsbury. Rural residential development (minimum of one acre) was relegated to areas along most public roads, and the lowest densities were sited further back away from the roadways on lands lacking frontage. Craftsbury's Zoning Bylaw was repealed about a year later. A description of Craftsbury's zoning districts in included in Appendix A.

The discussion of future land use became an important topic in the 2015 Craftsbury Community Visit. Many residents are concerned about development pressures on Craftsbury's open and forested landscape and village character. The Land Use Task Force has been established to evaluate ways to protect and enhance community assets, including the potential for well designed land use tools to protect, sustain, and enhance beloved community assets.

Development Patterns in Recent Decades

The period from 1993 through 2004 saw approximately 10 new homes constructed per year. The Great Recession brought about a significant decrease. From 2005 to 2011, there were 43 new homes built and 19 homes removed from the housing stock due to fires or removal of mobile homes. The 2015 Current and Prospective Land Use map depicts two decades of housing development in the context of permanently conserved lands (such as Vermont Land Trust) and disincentives to development (such as enrollment in the Current Use Program).

Education can be a powerful tool when considering both current and future land use in our community. This type of information is useful as it provides a broader understanding of our land use over time. With this type of information, we may be able to anticipate where future residential development is most likely to occur.

Understanding the Regulatory Environment

There are already regulations that have influenced land development at the state and local level. At the local level, the town has regulations regarding the development of lands in areas subject to flooding, as well as regulations for the siting and dismantling of cell towers. The state regulatory environment also influences land development, such as the statewide septic regulations, development of shorelands, and required agricultural practices.

Appendix A contains a comprehensive inventory of the local and state regulatory environment.

Non-Regulatory Tools for Guiding Development

Three highly effective land use tools are already shaping the future Craftsbury development: Conservation easements, Current Use, and Village Center Designation.

Conservation Easements

Thousands of acres of Craftsbury's working lands have been protected through the sale of conservation easements to the Vermont Land Trust. A conservation easement purchase enables a landowner to sell development rights while retaining ownership and continued use of their farm or forestland. Conservation easements also prohibit mining, commercial development, or other activities detrimental to the ecological, agricultural, or silvicultural values of a property. The property owner continues to own and manage the land and pay property taxes. The lands may be sold as well, although the easement will stay with the land. Properties with conservation easements are shown on the Craftsbury Development Trends Map.

Current Use

The Vermont Use Value Appraisal Program, also known as the Current Use Program, is an alternative property tax valuation for those Craftsbury property owners, who own either farmland or manage woodlands, to be taxed at the current use appraisal rather than a fair-market appraisal. Enrollment in the forestland program requires that the applicant owns 25 acres or more and has a forest management plan approved by the State. (The minimum acreage for lands enrolled under the agricultural programs is lower.) Within the Use Value management plan, the forest land is categorized into productive, nonproductive, environmentally sensitive, and special wildlife habitat areas.

Carrying out these plans provides income for landowners and for local logging contractors and their employees. Well managed forests provide clean air and water, diversity within the forest ecosystem, wildlife habitat, and potential recreational opportunities, as well as a quality timber asset in private ownership.

Prior to Current Use in Craftsbury, annual property taxes often exceeded gross income from land. The Current Use alternative was offered in 1978 to adjust property taxation back to a basis that land-based enterprises could pay and still make income. Savings on taxes enables landowners to keep the land for future generations rather than succumb to the pressure of development.

In 2015, there were 143 parcels in Craftsbury enrolled in the Current Use Program, both forest and agricultural. The total number of agricultural acreage is 4,008.85, forestland acres in Craftsbury that are enrolled in the program equals 10,809, with about 565 acres in nonproductive forest lands. Craftsbury parcels with lands enrolled in the Current Use Program are identified on the Craftsbury Development Trends Map.

Village Center Designation

An objective of Craftbury's 2006 Town Plan was to seek Village Center Designation for the three historic districts in Craftsbury. Village Center Designation is granted through the State of Vermont Downtown Program. "Village Centers" are defined by statute as:

> *a traditional center of the community, typically comprised of a cohesive core of residential, civic, religious, and commercial buildings, arranged along a main street and intersecting streets. Industrial uses may be found within or immediately adjacent to these centers.*

Village Center Designation can influence future development by providing powerful incentives for reinvestment in traditional village centers. The primary benefits of this program are state tax credits for fit-up and rehabilitation of income producing properties built before 1983. Credits are awarded on a competitive basis. In 2009, Village Center designation was granted for Craftsbury Common and Craftsbury Village and redesignated in 2014. There is also significant interest in pursuing designation for East Craftsbury. To date, two tax credits have been awarded through this program. This designation permits commercial properties to generate tax credits for historically significant improvement and code compliance fit-up. The tax credits can be sold to a bank in exchange for a mortgage adjustment or cash. Income-producing properties constructed prior to 1983 are eligible for the tax credits. (Government and religious buildings, as well as single-family residences, are not eligible.) Tax credits are relatively easy to apply for and sell, and unlike federal tax credits, there is no recapture if the property is sold. In 2010, the Craftsbury Academy Gymnasium received $137,500 for accessibility, sprinkler, code compliance, and improvements to the façade. In 2015, the Craftsbury Public House received $105,000 in tax credits to rehabilitate the Craftsbury Inn and make major code improvements.

More information about the benefits of Village Center Designation is available online at http://accd.vermont.gov/sites/accd/files/Documents/strongcommunities/cpr/131125_Village_Center_benefits.pdf

Goals:

- To maintain and protect Craftsbury town character by encouraging and directing growth using local non-regulatory and incentive-based tools.
- Facilitate a broadly inclusive discussion of how land use and regulation work to protect natural resources, the working landscape and community character while addressing a range of community needs ranging from home-based occupations and business development to renewable energy development.

Action Steps:

- Use the Land Use Task Force to support the Planning Commission and Conservation Commission to move action items forward.
- Continue to redirect investment into the villages by maintaining village center designation. Reach out to owners of income-producing properties to make sure they are aware of potential tax credits for fit-up and improvements.
- Consider the creation of a local working lands network composed of individuals with a stake in local agriculture or forestry. The group could identify their current and future challenges – such as access to capital and land – and regularly report to the planning commission.

- Investigate open space planning, possibly including a land evaluation and site assessment to develop a consensus-based vision for future conservation efforts, taking into consideration the long-range implications on taxes.
- Continue the development of the town Web site as a consistent and reliable source of information.
- Develop brochures for the town that are available in the Town Hall to help people understand the development desires and requirements. Examples could include information on tax credits for income-producing properties in the village centers, low-impact development standards, the 2007 Wastewater System and Potable Water Supply Rules, the State Shorelands Regulations, and flood hazard regulations.

2: Culture

Craftsbury is an engaged community deeply invested in a sense of place. Its unique array of institutions and life experiences are what define it. Spanning many generations, people have been drawn to Craftsbury to build on its agricultural heritage, find inspiration in its artistic community, participate in Craftsbury's rich recreational traditions from hunting to cross-country skiing, and for its value of education.

With a population of 1,206 and within just a little over 39 square miles, one could chat with a multi-generational farmer about the history of Craftsbury, attend a talk by a bestselling author at Sterling College, get a trendy haircut or tattoo, walk through a mushroom cave or through the town forest, take a ski lesson from an Olympic athlete, or zip around on the VAST trail after Story Hour at the library. One could also enjoy a picnic on the Common listening to The Radio Rangers or the Craftsbury Chamber Players, take a felting class at The Art House, pick up the Friday Night Special at the C Village Store or Globe Trotting Dinner at Craftsbury General Store, spend some time ice fishing on Eligo, and warm up with Zumba in the basement of the church or at a Craftsbury Academy basketball game.

Unlike many towns in rural Northern Vermont, Craftsbury has not become a bedroom community. Throughout the years, people in Craftsbury have strived for autonomy and a diverse economy. 44% of respondents to the Craftsbury Planning Commission survey either currently operate a business in Craftsbury or have done so in the past. More than half of the respondents indicated that they work in Craftsbury. When needs arise, Craftsbury residents tend to recognize and fulfill those needs creatively. When a group of people expressed a need for the Craftsbury Gym to be open to the public for recreation and play, a task force was organized to articulate what this would entail.

Craftsbury's many volunteers demonstrate that Craftsbury is indeed an engaged and independent community. From its local government, committees and commissions, to the library and school boards, Craftsbury residents still adhere to the age old tradition of civic engagement and neighbors helping neighbors. Modern pressures threaten to challenge volunteer positions that demand more time and training than they have in the recent past. Currently, the volunteer fire department struggles to find volunteers who can meet

Recent Changes and Accomplishments:

Task force formed to study public use of Academy Gym.

Collaboration between The Art House and other nonprofits and educational institutions.

Regular Art shows at Sterling College's Brown Library and the Art House

Farmer's Market on the Common from May through October and during the winter months.

The Town now manages Antiques and Uniques.

Block Party (established 2014) is now an annual event.

Challenges

Social activities are largely supported by volunteers – which may be harder to find.

Not all public spaces are fully ADA accessible.

Small-town environment, though supportive of neighbors, can be isolating for some.

Relevant Statewide Planning Goals

To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of all Vermonters.

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.

the rigorous training criteria, without major sacrifices to their own life demands.

"Keeping it small is important to maintaining what is most important about Craftsbury…"

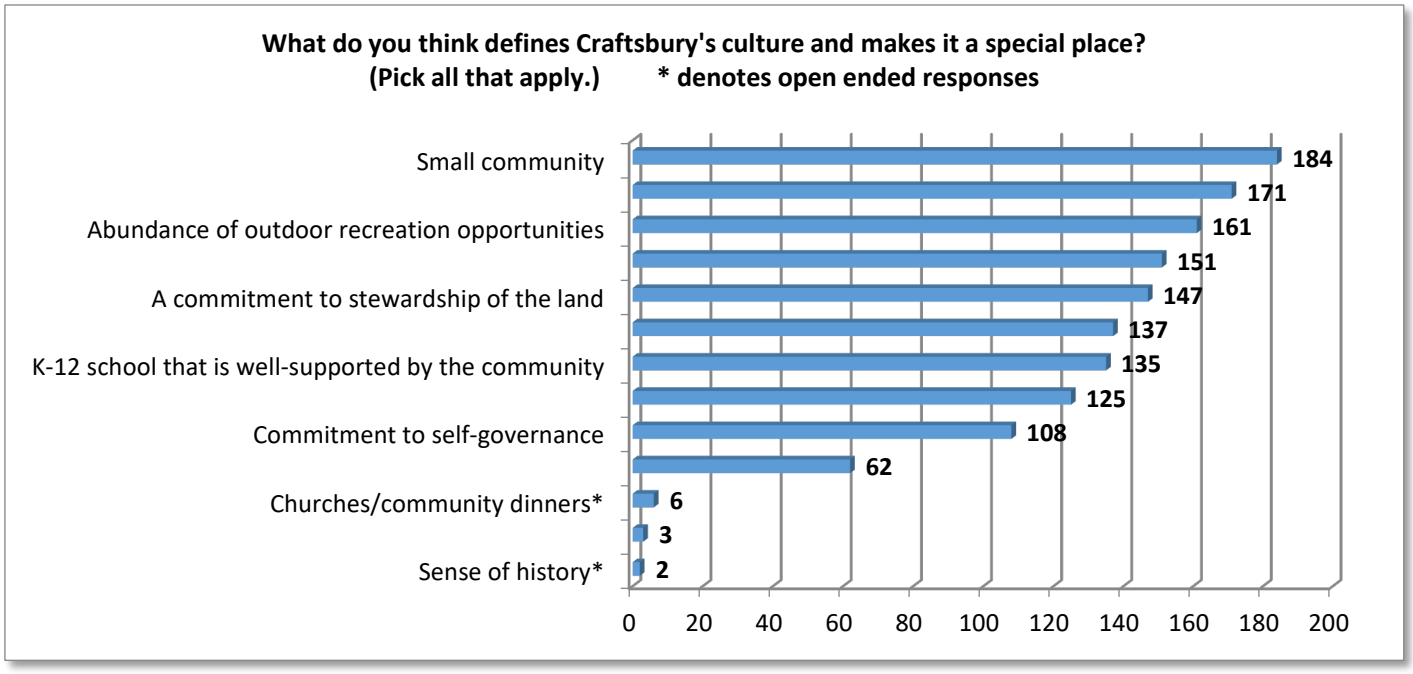
-- Craftsbury Community Survey

Craftsbury is becoming more diverse age-wise, as the influx of young families seem to counter the Vermont trend of a graying demographic. While Craftsbury is not ethnically diverse, its population represents a diverse range of life experiences, class, and education level. Part-time residents also contribute a measure of diversity to the town.

While Craftsbury has many traditions - for example Town Meeting and Old Home Day - it is also a town open to new ways of stimulating a conversation with residents about what they value in Craftsbury and how to insure that we are meeting the needs of as many people as possible. In the 2015 Community Visit Process, residents identified Craftsbury's strengths and weaknesses in several forum style meetings designed to open the town's eyes to what we want Craftsbury to look like in the future and to take steps in that direction. Through this process, three different task forces have formed to make strides toward bettering the community. The Land Use Task Force was formed to investigate how all of our residents feel about Craftsbury's landscape and its uses and what tools we have in place or at our disposal to meet the needs of the community. Another task force was formed to improve our cell phone and broadband access throughout town, and lastly a group was formed to build a partnership between the schools and the community. Some other items that came up through this process that may not have been picked as the three priorities have still stimulated discussion and action. A bakery will be opening in the old school house and Sterling College is looking into childcare possibilities as Craftsbury residents struggle to find day care services close by, and Wonder & Wisdom is creating Greenspace in the Village.

Survey Snapshot:

Survey respondents felt strongly about the small-town environment of Craftsbury as a defining cultural attribute. "Community works together-the churches support each other, community members attend school



events even without family members participating," wrote one respondent.

An inventory of Craftsbury's Cultural Assets can be found in Appendix A.

Goals:

- The town will work with local businesses and organizations to make sure all of Craftsbury's public spaces are handicap accessible.
- The town will continue to support and encourage opportunities for educational, cultural and artistic opportunities for citizens of all ages and abilities.
- Expand the availability of the Common, school, and public spaces for cultural activities.
- Community groups will communicate and coordinate activities and work together to develop grants to support each other.
- Continue to support the local libraries' effort to meet the information needs of the community as well as to have adult basic educational programs and early education opportunities available to all.
- Create a community that is welcoming to all people.
- Continue to foster a community rich in volunteerism.

Actions:

- Study the possibility of a performance space within the community.
- Study the continuous availability of daycare facilities.
- Identify public spaces that are currently not handicap accessible and provide regulatory information pertaining to accessibility.
- Encourage discussion around important issues via film screenings, discussion groups, and any other gatherings.
- Support further development and dissemination of the community wide calendar.
- Identify and pursue grants that could further cultural endeavors and improve accessibility. (E.g. Vermont Arts Council, USDA Community Facilities, Preservation Trust)
- Continue the development of the town Web site as a consistent and reliable source of information.
- Develop an inventory of skills sets in the Community.

3: The Economy

Craftsbury with its three major drivers in our growing local economy; Agriculture, Education, and Recreation were able to rebound from the economic downturn of 2008. Enrollment is up at both Craftsbury schools and Sterling College, there is more year round traffic at the Craftsbury Outdoor Center, and a growing agricultural landscape with diversified farms. Increased traffic into the community has stimulated an increase in commerce that can be felt in many arenas from the stores, to a new hair salon and numerous auto repair shops.

Nearly 70 percent of those surveyed in Craftsbury's 2015 Town Survey stated that spending their dollars here in Craftsbury was very important. This same survey showed support for a limited growth in the following industries here in town: value added processing, farming and forestry, tourism and hospitality, as well as cottage industry.

Even with a growing economy Craftsbury still faces some major economic challenges such as a higher than state average unemployment rate, a lack of internet and cell phone connectivity, limited housing and daycare, and a shortage of jobs here in town.

Current Commerce

Currently there are 2 general stores, 6 auto repair businesses, a funeral home, 2 bed and breakfasts, 10 dairy farms, 4 organic farms, a blueberry farm, a goat farm, 2 Christmas tree farms, 2 nurseries, several landscape and excavating businesses, a wool shop, a pottery shop, a real estate business, a tattoo parlor, and a hair salon. There is a weekly farmer's market on the Common from May through October and a monthly farmer's market in the winter. Many farms and individuals have maple sugar businesses and tree farms. Several residents are involved in construction, carpentry, and furniture making.

There are a growing number of persons who work from home in diverse e-commerce fields.

Outdoor Tourism and Recreation

During July and August many people visit the town because of its beauty, fairs, and diverse cultural events. There are bicycle tours, sculling camps, soccer camps, a Shakespeare camp, a non-profit camp on Big Hosmer, and two lakes, which attract visitors. The Craftsbury Outdoor Center has both long term and overnight accommodations and four season recreational activities. The sculling instruction in the summer and the cross country skiing in the winter are nationally recognized programs. In

Recent Changes and Accomplishments:

Craftsbury businesses have seen double-digit increase in gross and retail receipts from 2009-2014.

Rebuilding of the barn at Pete's Greens, which has added more than 20 jobs since the fire.

Substantial growth in regional food economy.

Sterling College enrollment up by 30% since 2012.

Reported increase in visitor traffic by the Craftsbury Outdoor Center.

Challenges & Opportunities

Persistent unemployment.

Spotty Internet access and severely limited cell phone coverage.

Limited housing options for Craftsbury's workforce.

Strong community-wide support for local businesses.

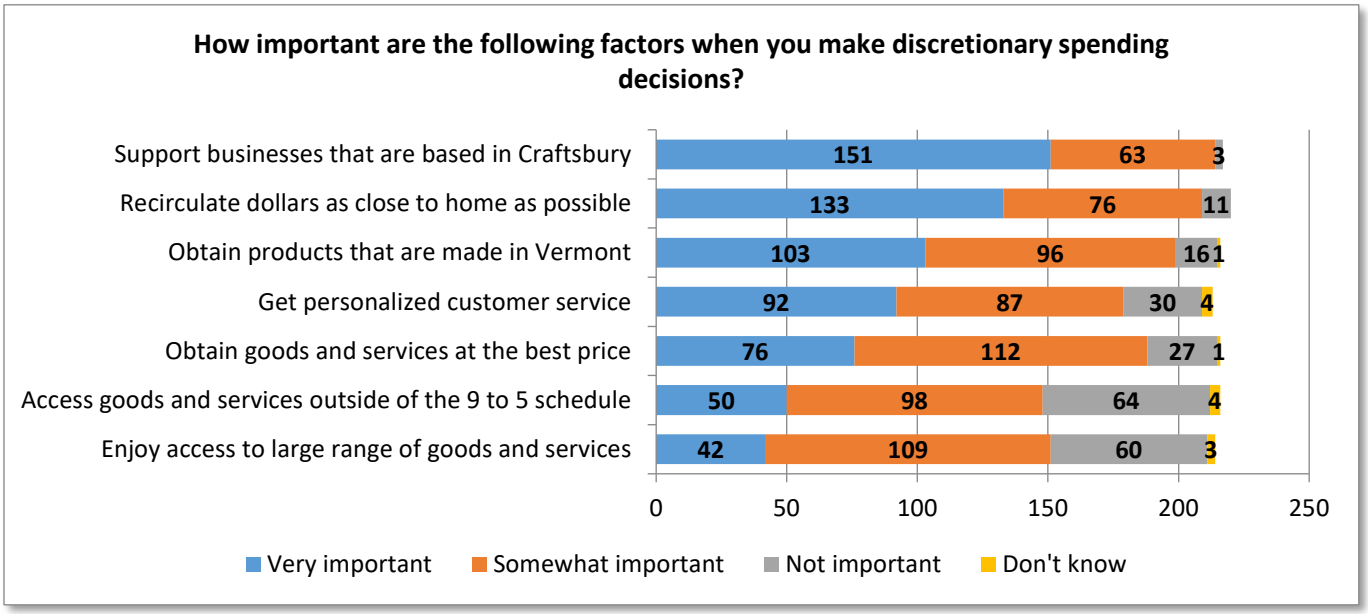
Relevant Statewide Planning Goal

To provide a strong and diverse economy that provides satisfying and rewarding job opportunities and that maintains high environmental standards, and to expand economic opportunities in areas with high unemployment or low per capita incomes.

2008, the Outdoor Center was sold, converted to a non-profit organization, and expanded its four season recreational offerings. Under new ownership, The Craftsbury Outdoor Center has built a state of the art nordic facility and now has snow making capabilities. This has made the Center a destination for early season training and nationally recognized races. The Outdoor Center employs up to 95 seasonal and 20 full-time employees.

Survey Snapshot

Supporting local businesses and spending close to home were the strongest motivating factors for discretionary purchases. Price, convenience, and range of goods and services were less important. "I do like the convenience of store hours outside of the 9 - 5 range, but discourage business hours that take away the value of living in a small rural village," wrote one respondent. This sentiment concurs with the preferences for future commercial development to focus on the land-based economy – farming and forestry, value-added processing, and cottage industries.



Other findings: 44% of survey respondents indicated that they currently have or had operated a business in Craftsbury. Eight of those respondents indicated that their business was in forestry, agricultural, or value-added production. Two respondents specified hospitality and tourism. 26% of full-time residents indicated that they held multiple jobs.

Education

Craftsbury takes a great deal of pride in its schools, Craftsbury Elementary and Craftsbury Academy. The community continues to embrace the concept of small school learning and recently celebrated top test scores in the state for NECAP testing. This in itself is a draw for families to move into the area. As one of the major employers in town with over 30 full-time employees and 13 part-time it is also a major contributor to our local economy.

Sterling College has expanded its experiential educational courses and now offers three full semesters of instruction annually—truly a year-round academic institution. One of only seven federally funded work-

learning programs in the country, students are attracted to its offerings in sustainable agriculture and food systems, ecology, outdoor education, environmental humanities, diverse internship opportunities, and global field study programs. Sterling students offer mentoring in the Craftsbury schools and have organized programs of service to a variety of area businesses and nonprofit organizations. Sterling has a total of 44 full-time equivalent employees.

Agriculture and Forestry

More than 60% of the town's acreage is enrolled in the Current Use tax valuation program. Most enrollees manage their land for forestry or agriculture. Nearly 25 establishments generating agricultural products are located in Craftsbury, and many of them cooperate with each other to provide benefit to the entire community.

As an agriculturally established community, Craftsbury is positioned to benefit from the increased interest in the state and northeast region of Vermont in expanding the agricultural economy. In 2009, state legislation was passed to create a Farm to Plate Investment Program. Two of the primary goals of this program are to increase economic development in Vermont's food and farm sector and create jobs in the food and farm economy.

Craftsbury is also included in the ongoing efforts of the Center for an Agricultural Economy, out of neighboring Hardwick. The Center has been working to strengthen and build ties between components of the food system in the greater Hardwick area. The outcome they foresee is a stronger local economy with new opportunities for agricultural entrepreneurs. The Northeast Kingdom Food System Plan was first published in 2011 and was the first regional food system plan in the state. The Center has received funding from USDA Rural Development to update the regional food system plan. It has partnered with the Northeastern Vermont Development Association and is on target to release a new plan by the end of September 2016.

A Rebounding Economy

When adjusting for inflation, gross receipts in Craftsbury increased by 17% from 2009 (the depths of the recession) through 2014. Retail receipts grew by 14.3%. The most recent figures (May 2015) from the Vermont Department of Taxes indicate robust growth in gross receipts and retail receipts over May 2014 – an increase of 30% and 25% respectively.

Both general stores have seen growth over the last couple of years upwards of 20%. College enrollment is up 30% from 2012, and The Outdoor Center is reporting 30% more people on the ski trails in the winter and a 20% increase in campers at Hosmer Point. While there has been a loss of a number of inns and bed & breakfasts in town, many residents have taken advantage of renting out their homes, or rooms in their homes using platforms such as Airbnb. There are more and more draws to the town for out of town guests from national ski races, Antiques and Uniques, Sterling Intensive workshops, Circus Smirkus, our lovely lakes, and strong agricultural backbone.

Pete's Greens, Vermont's largest organic vegetable farm continues to grow even after a fire that destroyed the barn in 2011. A new facility now houses 34 employees, up from a year-round staff of 11 at the time of the fire.

The Town's Village Center Designations for Craftsbury Village and Craftsbury Common were renewed in 2014. Maintaining designation has two significant implications for Craftsbury's economy.

- The barn at Pete's Greens was rebuilt in part with a low-interest loan that is now being repaid into a regional revolving loan fund. The original loan was established with funds from the Vermont Community Development Program, a grant program that assigns a competitive advantage to projects located within designated Village Centers.
- In 2015, $105,000 in tax credits were awarded to the The Craftsbury Public House. Once the Craftsbury Inn, the building was constructed in 1850, and has been closed since 2012. Now a non-profit organization is working to rehabilitate the building and complete major code improvements with the goal of bringing back the property as a community gathering place with a pub/restaurant, lodging rooms, and exhibition/performance space. The grounds will become a public park with a trailhead for cross-country ski trails between the Craftsbury Outdoor Center and Greensboro.

Unemployment

Unemployment remains an obstacle for the Town of Craftsbury. Historically, the town has enjoyed a lower unemployment rate than county-wide . Nevertheless, the town's unemployment rate has been consistently higher than the statewide rate since 2011. According to the Vermont Dept of Labor, Craftsbury's Average Annual Unemployment rate for 2014 was 4.6%. This is only a .1% decrease from 2008 which leaves the town .5% above the 2014 Vermont unemployment rate of 4.1%.

Income & Wages

Traditionally, Orleans County has had some of the lowest incomes in the state. According to American Communities Survey the median household income in Craftsbury is $47,841, which is higher than the county median, but lower than the state median ($41,437 and $54,447 respectively). Median family income in Craftsbury is $61,103, which also falls between the county median ($54,020) and state median ($68,787). Median earnings for Craftsbury workers are $22,333, lower than the county or state ($25,885, and $29,854 respectively). Incomes in Craftsbury tend to be weighted more heavily toward the middle range from $35,000 to $100,000.

Orleans County has traditionally had some of the highest poverty rates in the State. Craftsbury currently has about 11.5% people living below the poverty line, and poverty rates have been consistently lower than county wide figures.

The Vermont Livable Wage is defined in statute as the hourly wage required for a full-time worker to pay for one-half of the basic needs budget for a two-person household, with no children, andemployer-sponsored health insurance, averaged for both urban and rural areas. "Basic needs" include food, housing, childcare, transportation, health care, clothing, household and personal expenses, insurance, and 5% savings. The larger the family, the more income is required to fulfill those needs. In 2015 the figures show a single person living alone in a rural area needs to earn $15.42 per hour ($31,457 per year) to meet basic needs. This increases to $80,213 for a family with two wage earners and two children (each paid $19.66 an hour, or $40,106 a year.) Note that these income figures assume healthcare is paid by the employer. According to the Vermont Department of Labor, average annual wage offered by employers in Craftsbury in 2014 was $28,168 – well below the livable wage for two-wage earners with two children, as a well as a single wage earner living alone.

Work Commutes

There are still a number of residents traveling out of town for work. According to American Community survey, commuters are traveling an average of 27 minutes to work, which is slightly higher than the county

and state median. The latest figures from the U.S. Census (using 2013 W2s) indicate that 464 individuals live in Craftsbury but are employed elsewhere, and 225 individuals work in Craftsbury but live elsewhere.

Internet and Cell Coverage

High speed internet has continued to be a struggle for residents and businesses along with a lack of widespread cell phone service. When asked what areas the Planning Commission should focus on over the next years, respondents to the Community Survey identified "improving telecommunications" among the top three initiatives. Improving telecommunications was identified as a key opportunity in the 2015 Community Visit, and it was selected as a top priority for action.

"PLEASE improve telecommunications…please. I can't move my business to Craftsbury if I don't have it."

-- Craftsbury Community Survey

Limited Housing

Survey respondents also identified limited housing options for young families. The Community Visit also identified developing affordable and efficient housing as a key opportunity.

Statistical data about Craftsbury's economy is provided in Appendix A.

Goals:

- Encourage small clean business development.
- Strive to lower the Unemployment Rate and increase the liveable wage.
- Foster a communicative business environment in town.
- Improve broadband internet service and cell service throughout the community.
- Foster creation of local jobs by building on the strong educational, agricultural, and outdoor recreation anchors in the community.
- Formalize network between established businesses.

Action Steps:

- Form a Craftsbury Business Association to accomplish the following:
  - Promote job creation.
  - Develop a reliable method for measuring the recirculation of dollars spent on local goods and services.
  - Identify unmet industry/service gaps in town.
  - Identify local markets for local goods.
- Research Internet and cell options for our community.

4: Agriculture

Craftsbury has a strong agricultural history that continues to this day. Agriculture in Craftsbury has evolved considerably, following the trend of agriculture in Vermont of fewer solely dairy operations and the growth in more diversified farming operations.

The most obvious change from dairy as the agricultural backbone occurred in the 1960s with the requirement that farmers install bulk tanks. This change caused several farms to leave dairy farming. Those who remained generally increased in size in order to repay the cost of the investment in a tank.

Today, evident both quantitatively and anecdotally, there are more diversified agricultural operations with an increase in the number of younger farm operators, both owners and workers. Today, there are 33 farms in Craftsbury that meet the USDA definition. (See Appendix A., Farms and Farm Products in Craftsbury.) Collectively, they account for about 4,000 acres of land enrolled in the Current Use program.

A Northern Counties Investment Corporation (NCIC) 2014 study identified 1,650 acres of prime agricultural soil in Craftsbury and 1,572 acres of agricultural opportunity. Craftsbury ranks high in terms of agricultural opportunity in relation to other towns in Orleans County. "Agricultural opportunity", from the Jobs Accelerator Action Plan for Agriculture and Food System Development is the area of land that contains prime agricultural soil, but has had various infrastructure elements spatially extracted through GIS, including structures, parking lots and roads. For more information, on Craftsbury's agricultural land, see Appendix A: Agricultural Land Use Data.

Diversification

Most of Craftsbury residents who farm are growing vegetables for personal consumption. **(See Survey Snapshot.)** While the number of vegetable operations is likely swayed by those respondents who grow vegetables for personal consumption, it is congruent with the county-wide trend of 130% growth of acreage in vegetable production and an increase of 62.5% vegetable operations since 2007 (Ag Census).

Agriculture in Craftsbury:

Number of farms in Craftsbury: 33

Current use acreage in agriculture: 4,008 acres (about 75% of all open/agricultural land).

Of all Current Use enrolled acreage, more than half is considered "farmer by income."

Public and privately conserved acreage: 6,611 acres (up from 1,383 acres reported in 2011 Town Plan)

Challenges & Opportunities

Concerns about water quality and runoff.

Increased competition for lands with prime agricultural soil.

Relevant Statewide Planning Goal

To encourage and strengthen agricultural and forest industries.

Strategies to protect long-term viability of agricultural and forest lands should be encouraged and should include maintaining low overall density.

The manufacture and marketing of value-added agricultural and forest products should be encouraged.

The use of locally-grown food products should be encouraged.

Sound forest and agricultural management practices should be encouraged.

Public investment should be planned so as to minimize development pressure on agricultural and forest land.

One of the main trends evident in the 2012 US Agricultural Census of Orleans County (see Appendix A: US Agricultural Census 2012: Orleans County) is diversification in type of production on farms. There is

significant growth in the number of farms in vegetable production (62.5% growth county-wide), total acres in vegetable production (130% county-wide), and in total non-dairy cow livestock, notably, pigs and sheep. Other trends apparent in the 2012 Census include:

- Decrease in average farm size - potentially tied to increase in smaller, diversified operations
- Decrease in number of farms with milk cows, and only a slight increase in the number of milk cows county-wide (compared to slight decrease state-wide).
- Both maple and cut Christmas tree production are growing agricultural sectors in Orleans County.

Dairy

Dairy is a significant contributor to the Craftsbury agricultural economy. Of the 33 farms in Craftsbury, 8 are dairy farms.

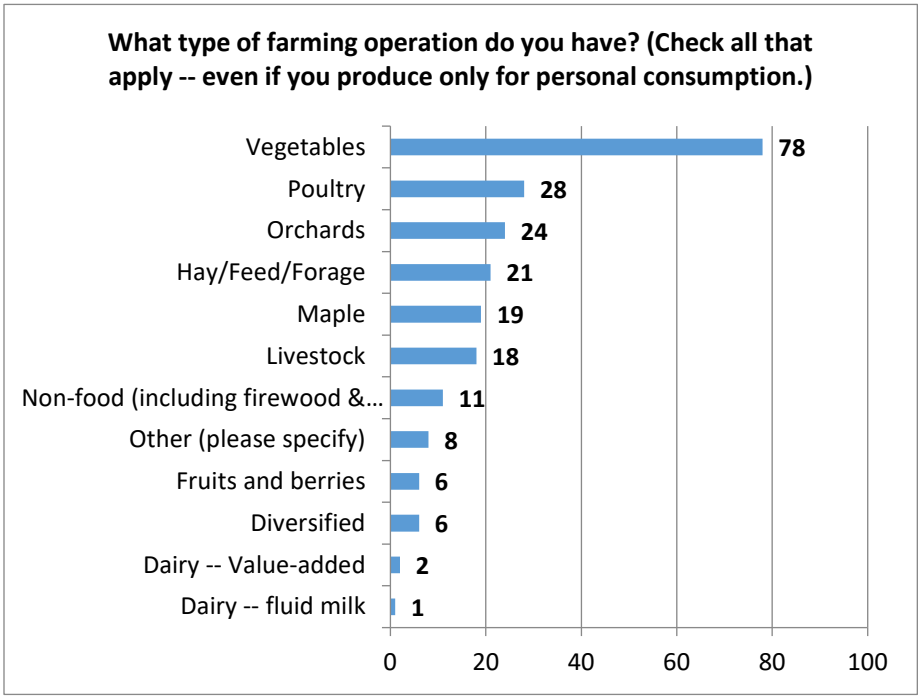
Orleans County is third largest dairy producer county in the state -- behind Addison and Franklin -- and accounts for 15.3% of milk sales.

Recommendations in the 2014 Milk Matters economic assessment created by the Vermont Dairy Promotion Council most applicable to Craftsbury dairy farms include pursuing value added production to help protect farmers from price fluctuations from milk. The 2015 Farm to Plate Annual Report notes that value-added food manufacturing is nearly a $1 billion industry, half of which can be attributed to dairy. Orleans County alone has seen an 87% increase in employment activity in food manufacturing since 2001.

Survey Snapshot

Craftsbury residents feel that agriculture and forestry contribute in a large way to defining the culture and make Craftsbury a "special place." The majority of survey respondents voiced concerns about water quality, particularly agricultural runoff.

Craftsbury survey respondents indicated that the majority of those who farm for their profession or for personal consumption grow vegetables (73%). This is in comparison to 1% (n=1) of respondents indicating that their farming operation is dairy or value-added dairy.



Anecdotal trends in Agriculture:

- Larger machinery will be required to reduce labor requirements.
- Like other farms in Vermont, Craftsbury farms will be greatly implicated by the federal 'Food Safety Modernization Act' which rolls out in the next year. Vermont agricultural resources expect this act will be a significant burden on small farms to comply with the regulations.
- Open land will continue to decrease as larger machinery makes some fields impractical to work, and corners of fields are rounded off since larger equipment is harder to maneuver into tight corners.
- As different agricultural sectors grow, from dairy to vegetables to cheese, there will be increased competition for land with prime agricultural soil.
- Farms may buy good tillable land only, rather than entire farms including woodland, as the price and taxes are so high that investments in land cannot bring a positive economic return.
- Some farmers may diversify or find a second income to keep the farm going. Diversification can allow farmers to tap into markets for locally grown foods and/or value-added food agriculture, i.e. manufacturing processes that increase the economic value of a primary agricultural commodity.
- The creation of Sterling College's Rian Fried Center for Agriculture will introduce more resources for new and existing farms in Craftsbury. These resources not only cover areas relating to on-farm practices, but also to an agricultural culture in the way of events and speakers.
- Agricultural planning organizations such as Vermont Farm to Plate, the Center for an Agricultural Economy, and Northern Vermont Development Association, recognize that more land suited for agriculture will need to be protected in order to make way for agricultural expansion. Conservation programs and continuing the Current Use program have been suggested as ways to ensure protection of important agricultural lands. The Craftsbury Land Use Task Force will work to engage the community and provide resources on this topic.

Goals:

- Preserve the economic viability of agriculture in Craftsbury
- Strive to keep Craftsbury's open landscape working and beautiful.
- Encourage farming and forestry development (82% "strongly encourage" in survey).
- Promote conservation of natural resources.
- Promote local agriculture, local business, and the sale of local goods (54% survey respondents selected as priority).

Policy:

- Craftsbury residents value working lands. Protecting the ongoing viability of working agricultural lands is a priority that should be taken into consideration on any development review decisions, including the consideration of offsite mitigation for renewable energy projects.

Action Steps

- Provide the Land Use Task Force with the necessary education, tools, inventory on planning tools to support agricultural land use, (e.g. "Sustaining Agriculture, the new training modules developed by Farm to Plate).

- Consider the creation of a local working lands network composed of individuals with a stake in local agriculture or forestry. The group could identify their current and future challenges – such as access to capital and land – and regularly report to the Planning Commission.
- Reach out to community beyond Land Use Task force to understand and incorporate public opinion on land use and history of land use in Craftsbury.
- Provide information about voluntary/incentive-based land use programs like the Current Use Program.
- Support accurate mapping of agricultural resources and activities (e.g. Current Use enrollment, conservation).
- Make resources about supporting agricultural businesses broadly available - see Appendix A for list of resources.
- Ensure proper training and outreach regarding development in flood hazard areas, including forms of development exempt from local regulation, such as required agricultural practices.

5: Historic Craftsbury

Craftsbury was the first settlement of Orleans County and an early center of commerce for the Northeast Kingdom of Vermont. The picturesque quality of Craftsbury Common, especially the view across the Common of the Church on the Common, is a favorite subject for photographers and one of the most published pictures of Vermont scenes.

A survey conducted in 1983 for the Vermont State Register of Historic Places identified three separate areas of historic interest in Craftsbury: Craftsbury Common, Craftsbury Village, and East Craftsbury. A copy of the Craftsbury information contained in the State Register is kept in the public library. The entries for each district include a map of the structures, a description of the boundaries, and a statement of historical significance. In addition, each of the 77 individual structures of historical importance within the town is identified by a picture, a description of the architectural features and a statement of any historical significance.

The Craftsbury Historical Society has restored the Babcock House and uses this structure for historical research, displays of artifacts, and meetings of the Society. This building is located on the west side of the Common, next to the Church on the Common and the Public Library.

The preservation of the historical significance of Craftsbury is of concern to many of the residents and property owners.

Goals:

- Develop a partnership between the town and the Historical Society to educate the residents and property owners on the value of maintaining the historical aspects of the community.
- Preserve the historical features of the community.
- Encourage the maintenance of both public and private buildings of historic significance.

Action Steps:

- Explore the possibility of preparing a comprehensive history of the Town of Craftsbury, including oral histories.
- Explore the possibility of publishing a booklet illustrating the historic structures that have been preserved to date. Update the information contained in the Register of Historic Places and encourage their maintenance and preservation.

Recent Accomplishments:

Village Center designation achieved for the Common and the Village.

Collaboration with the schools on curriculum studies.

Completed the initial renovation of Babcock House.

A major renovation to Craftsbury Academy has been completed.

The Historical Society has done much to improve Craftsbury's image in the media and on the internet.

The Historical Society has been actively involved in assisting and encouraging historic sites and structures in town.

Challenges and Opportunities:

Some historic buildings are beyond the point of repair.

The Historical Society consists of volunteers.

Relevant Statewide Planning Goal:

To identify, protect, and preserve important natural and historic features of the Vermont landscape, including: important historic structures, sites, or districts, archaeological sites, and archaeologically sensitive areas.

- Continue to digitize historical documents and photos, and find a venue for making them widely available.
- Explore various financial incentives including rehabilitation of historic buildings and seeking preservation grants.
- Identify programs than can help make historic buildings ADA accessible (e.g. Preservation Trust, Village Center Designation Program, Department of Historic Preservation, USDA Community Facilities Program.

6: Natural Heritage

Craftsbury is home to an abundance of natural resources. Located in the northern Vermont Piedmont, Craftsbury is an area of rich soils combined with a cool climate, which supports mixed forests, cedar swamps, wetlands and other interesting natural communities.

Craftsbury's "natural heritage" includes productive forests, clean waters, healthy wildlife populations, core and connective wildlife habitat, rare species, significant natural communities and a working landscape that provides opportunities for hunting, fishing, trapping, recreation, enjoying nature, and working the land. To sustain our natural heritage and protect the biodiversity of Craftsbury for present and future generations, it is important to conserve these natural resources which play a critical ecological role and are part of the fabric of our town. We need to use our landscape carefully in order to maintain excellent water quality, to keep wildlife habitat intact, and to ensure the future of our natural heritage.

It is important to approach town natural heritage planning from a variety of perspectives, recognizing that our natural resources provide ecological values and functions on many levels. A landscape-level inventory includes identification of contiguous habitat and corridors, and enduring features such as geology, topography, and elevation. These elements provide the foundation of our natural heritage and a better sense of the availability of necessary habitats for larger wildlife. Inventorying natural communities gives us a better understanding of critical features such as wetlands, riparian and aquatic habitat, and vernal pools. Consideration of elements at the species level includes critical habitat such as early-successional forest and shrubland, deer wintering areas, and mast stands. Our natural communities provide habitat components for uncommon, rare, threatened, and endangered species.

For planning purposes, it is important to gather information available to us from state agencies such as the Vermont Department of Fish and Wildlife and the Vermont Department of Environmental Conservation's Water Quality Division. These state offices can provide information regarding natural areas and resources in our town and include information on wetlands, surface waters, wildlife habitat, and habitat for rare and endangered species. The Natural Resources Conservation Service (NRCS) has also prepared extensive information on the soils throughout Craftsbury.

It is also important for us to consider the information that we, as citizens, may gather. This can include surveying of our water resources in our local watershed, forest resources, open space, and local wildlife

Recent Accomplishments:

Groundwater mapping project completed.

Upper Black River Stabilization Project completed 2015.

Access on Big Hosmer deeded as State lands in 2015.

More than 10,000 forestland acres enrolled in Current Use.

Challenges and Concerns:

Agricultural runoff and general water quality.

Runoff from dirt roads

Invasives species and plants

Lack of information regarding vernal pools.

Relevant Statewide Planning Goals:

To identify, protect and preserve important natural and historic features of the Vermont landscape, including: significant natural and fragile areas outstanding water resources, including lakes, rivers, aquifers, shorelands and wetlands, significant waterways and views;

To maintain and improve the quality of air, water, wildlife and land resources. Vermont's air, water, wildlife, mineral and land resources should be planned for use and development according to the principles set forth in 10 V.S.A 6086(a).

species and their core and connective habitat. Information gathered by community members and groups such Sterling College, Vermont Center for Ecostudies, Staying Connected, Craftsbury Academy science classes, Craftsbury Forestry Committee, etc. has proven valuable in ascertaining and documenting Craftsbury's natural resources.

In addition to the information here, Appendix A of this Plan includes general information on the geology and groundwater, and soils; watersheds; wetlands and other water resources; forestland; and wildlife habitat.

The Craftsbury Conservation Commission - The voters of the Town of Craftsbury voted at the 2007 Town Meeting to create the Craftsbury Conservation Commission. Operating under 24 V.S.A. Chapter 118, the major goal of a Conservation Commission is to establish community responsibility or stewardship for its natural and cultural resources.

Specific tasks of the Craftsbury Conservation Commission include:

- To help meet the goals and objectives of the natural heritage section in the most current Craftsbury Town Plan.
- To assist the selectboard and planning commission with natural resource issues.
- To inventory and encourage the public's understanding of the town's natural, historic, and cultural resources.

Groundwater mapping

In 2010, Craftsbury received funding through the Vermont Geological Survey for groundwater resource and recharge area maps of the Town. These maps provide the Town with an understanding of groundwater resources within Town boundaries. Potential aquifer and recharge areas are identified on the maps, as well as general groundwater flow directions. Since aquifers are located in sand and gravel deposits and interconnected bedrock fractures, surficial and bedrock mapping of the Town was necessary in order to produce the groundwater maps. Bedrock and surficial mapping was conducted by geologists from the Vermont Geological Survey along with students from a number of Vermont colleges and universities. The new maps, along with information from existing water wells gathered at the time of drilling (gallons per minute, rock type, surficial materials), were used to derive the groundwater maps. The groundwater maps are valuable for long-term future planning and protection of groundwater resources, and provide useful information for locating new building and well sites, percolation rates, soils information and other land use capability. The maps are housed in the Town Hall and available to the public.

Nonpoint Source Pollution and Erosion

Each of the watersheds that our waters drain into has been affected by nonpoint source pollution. Nonpoint source pollution occurs when runoff, as rainfall or snowmelt, moves over the land surface picking up human-made or natural pollutants and then depositing them into lakes, rivers, wetlands and even groundwater. The main nonpoint source contaminants are sediment, bacteria, nutrients, toxic chemicals and metals. Land uses such as agriculture, forestry, construction, residential areas and septic systems are all potential nonpoint pollution sources. The Vermont Division of Water Quality, Basin Planning Program's watershed plans are available online for the Craftsbury area:
http://www.vtwaterquality.org/planning/htm/pl_lamoille.htm

Portions of some streams, especially the Black River and the Wild Branch, suffer from severe stream bank erosion. Stream bank instability is a complex issue not usually resolved by short term solutions of narrow focus. Such erosion is due to a number of contributing factors, among them soil type, volume of flow,

gradient, stream bank vegetation, livestock damage, beaver population, and previous stream channel alteration. Solutions must therefore address each factor related to soil loss. Such soil loss is alone unfortunate; however, the effects are compounded once it enters the stream. Soil deposition tends to reduce or change food supplies and spawning areas for native fish.

In 2014, The Craftsbury Conservation Commission developed the Upper Black River Stabilization Project, an effort to define the health of the Black River from the river's headwaters in South Albany, through the town of Craftsbury. This project has included: an extensive survey of the streambank stability, documentation of Japanese knotweed infestation, and mapping of this information using Geographic Information Systems (GIS). Through this survey, those areas of streambank failure, sedimentation, and/or knotweed infestation, were documented and remediation options were recommended to the Select Board.

Dirt roads are a significant source of soil erosion in Vermont. In order to maintain clean water and aquatic habitats, it is imperative to pay close attention to road maintenance practices, especially since 77% of Craftsbury's public roadways are unpaved. Such practices have changed over the years. Our roads are wider and straighter and deliver a higher volume of traffic traveling at higher speeds. Techniques now focus on road designs, which shed water as soon as possible in order to avoid the mud season driving conditions we all have experienced. Such techniques require more manipulation of the road surface and the shoulders. The nature of this work requires more soil disturbance and is more expensive. Resources, education, and money are available via the Agency of Transportation and the Vermont League of Cities and Towns.

Municipal Roads General Permit

Research and water quality monitoring has indicated that roads are responsible for 6-10% of phosphorus loads to Lake Champlain, and other waterways, and roads contribute over 10% of sediment loads. Excessive sediment and phosphorus can cause algae blooms, increase water turbidity (cloudiness), and degrade fish and invertebrate habitat.

The 2015 legislative session created a new regulatory framework addressing all work on Town Highways, **The Municipal Roads General Permit**, as part of the Act 64- the Vermont Clean Water Act. This general permit is intended to achieve significant reductions in stormwater-related erosion from municipal roads, both paved and unpaved.

Municipalities will develop and implement a customized, multi-year plan to stabilize their road drainage system. The plan will include bringing road drainage systems up to basic maintenance standards, and additional corrective measure to reduce erosion. More information about the Municipal Roads General Permit can be found in the Transportation Profile.

Craftsbury's Wetlands and Vernal Pools

The Town of Craftsbury's landscape encompasses approximately 1,920 acres of wetlands, identified on the Vermont Significant Wetlands Inventory, most of which are located on privately owned land. The majority of wetlands in Craftsbury are classified as Class 2 wetlands. Many of the Town's wetlands are located in the floodplain, adjacent to the Black River. In addition to being classified as "Class 2" many of the Town's wetlands are part of Significant Natural Communities, including: Northern White Cedar Swamp, Spruce Fir Tamarack Swamp, Alluvial Shrub Swamp, and Sedge Meadow.

Vernal pools are also a type of wetland, which provide critical breeding habitat for amphibians and reptiles during the spring of the year. Limited information is available on the vernal pools of the Craftsbury area. The development of inventories and maps should be done to identify the vernal pools within town.

Forestland

The land in the town of Craftsbury is over 75 percent forested. These forests have provided a utilitarian base for the local economy since times of early settlement. As well, Craftsbury forests offer an aesthetic backdrop for the town's pastoral setting and for the distant vistas.

The forests are often affected by insects and diseases: spruce budworm defoliated balsam fir and spruce trees and caused mortality in 1978-1984; we are currently approaching the time when this insect's population cycle is increasing again. Other insects and diseases which are currently present include forest tent caterpillars, sugar maple borers, white pine blister rust, Dutch elm disease and hypoxylon canker. Another threat to our forests is the nonnative, invasive plant species that are aggressively occupying the understory.

Potentially rapid changes in our climate will most likely change forest growing conditions. Adaptive responses to deal with this problem are underway. The U.S. Forest Service and universities are providing insightful research into how to practice forestry to prepare forest stands to be more resilient to these changes. Another concern in Craftsbury has been some heavy cutting and water violations, but for the most part, the quality of the work in our forests has been steadily improving.

The present ownership pattern is almost exclusively private with only one tract owned by Atlas Timber Partnership with the Vermont Land Trust and Nature Conservancy. The town and the Craftsbury Academy own five tracts totaling approximately 300 acres; these are the only publicly owned forests. The Municipal Forest Committee in town manages these forests for the benefit of the community. Within the past thirty years, an increasing number of private forestland owners in Craftsbury have sought to apply the principles of forestry in managing the lands. These principles and the resulting practice of forestry were borrowed and adapted from European forestry techniques. With this concern for proper care of forests and the continued development of a local land ethic to guide the relationship between the people of Craftsbury and their forests, this valuable resource will continue to play an important role in the town's future. More than 10,000 acres of Craftsbury's forestlands are enrolled in Vermont's Use Value Appraisal program, also known as Current Use. This program is fostering active stewardship of our forestlands for today and tomorrow. More information about enrollment can be found in the Land Use Profile.

Significant Natural Communities and Species

The Vermont Nongame and Natural Heritage Program through the Vermont Department of Fish and Wildlife, in February 2009, mapped fourteen sites in Craftsbury that have state-significant natural communities or rare, threatened or endangered plant and animal species. Significant Natural Communities include: Northern White Cedar Swamp, Sedge Meadow, Alluvial Shrub Swamp, Sweet Gale Shoreline Swamp, and Spruce-Fir Tamarack Swamp. Plant species include: Showy Lady's Slipper, Small Lady's Slipper, Large Yellow Lady's Slipper, Ram's Head Lady's Slipper, Mild Water-pepper, Mare's-tail, Straight-leaf Pondweed, Marsh Valerian, and Shining Rose. Animals include: Common Loon, Black-backed Woodpecker and Long-eared Owl.

Bats, which provide important control of insect populations, are declining precipitously because of white-nose syndrome. Bat roosting areas (found in dead trees, tree crevices and buildings) should be searched for, identified and conserved.

To maintain and conserve these plants and animals and their habitats (and also those that may be cataloged in the future), landowners are encouraged to utilize programs such as the Vermont Current Use program, Vermont Coverts: Woodlands for Wildlife, USDA Natural Resources Conservation Service, and conservation easements with land trusts. The Craftsbury Conservation Commission is available to assist landowners with more information about these programs and other conservation techniques.

Invasive Species

Invasive species are a threat to the town's natural heritage. Being introduced to locations outside their native range, they have no natural competitors or predators. Invasive species can be aquatic or terrestrial plants, or animals.

Both Great Hosmer and Eligo Lakes are infested with Eurasian milfoil, a plant that overpowers native plants, decreases habitat value for underwater life, and decreases recreational usage. Milfoil is spread by boaters moving craft from one body of water to another. To control its spread, avoid boating through milfoil areas; on hauling out, check and wipe down watercraft, and discard, onto dry land, any vegetation caught in motors or elsewhere.

Invasive animal species, which harm Vermont's waters, can be introduced by disposing baitfish, bilge water, or aquariums into lakes and streams. These invasives consume food resources, spread disease, and prey on native organisms resulting in decreased biodiversity and impact on the food chain.

Land invasives include Japanese knotweed growing along Craftsbury roadsides and streambanks where its non-stabilizing roots break off to spread more plants and enable erosion. Purple loosestrife grows in wet areas. Non-native buckthorn, bush honeysuckles, Japanese barberry, bishop's weed (also called goutweed or snow-on-the-mountain), wild chervil, and burning bush (Euonymus) are also crowding out native plants in our roadsides, meadows, and forests. Some of these plants produce fruit that birds eat but is low in nutritional value.

Concern has been expressed about giant hogweed, an alien, which is easily confused with cow parsnip, a native plant occurring in Craftsbury. Unlike cow parsnip, giant hogweed is a true giant with leaves that can grow up to 5 feet in diameter. There have been fewer than 15 documented infestations of giant hogweed in Vermont over the last decade.

Invasive insects pose a serious threat to our forests as well. The hemlock woolly adelgid attacks hemlock trees and has been found in Vermont. The emerald ash borer, which decimates ash trees, has yet to be found in Vermont, but it occurs in all surrounding states and Quebec. The Asian longhorn beetle attacks hardwood trees and an infestation has been found covering more than 18 square miles in Massachusetts. More information is available at http://www.fpr.vermont.gov/forest/forest_health/current_health

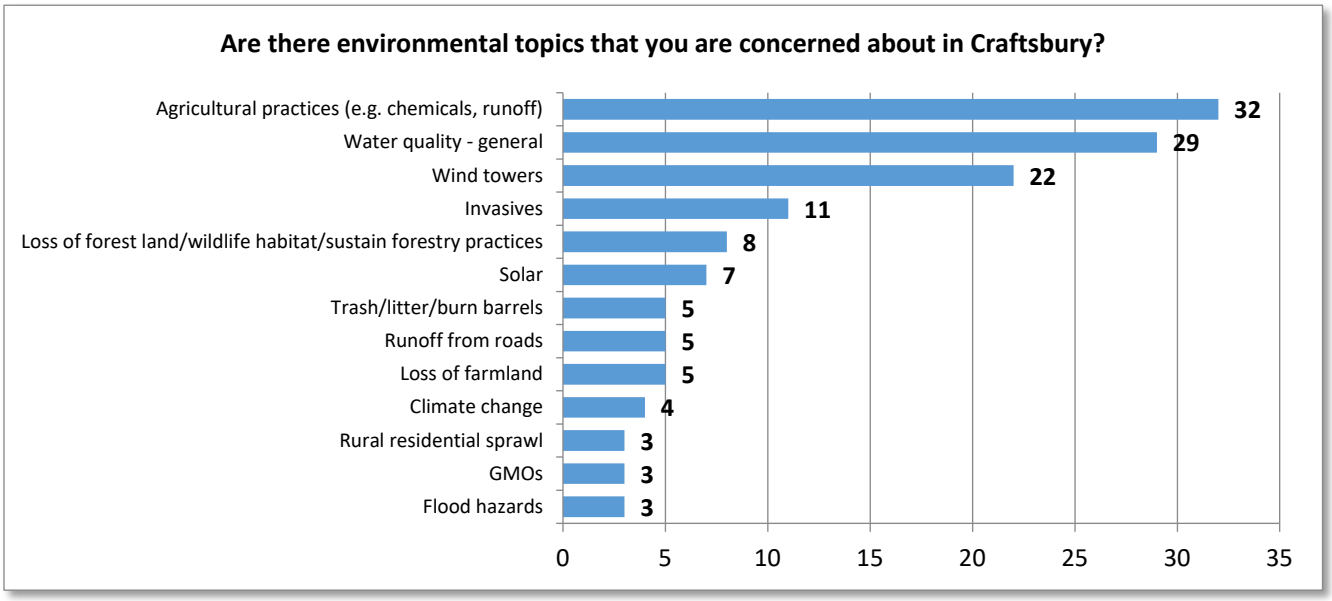
In order to protect the natural heritage of the town, invasive species should be monitored and dealt with. Some Craftsbury residents have begun to recognize these species on their properties and question how to deal with them. Once established, many species are difficult to control and the impacts they have on the ecosystem pose devastating consequences for the town's natural resources. A list of invasive plants in Vermont as well as tips for identifying and controlling them can be found at: http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/vermont/volunteer/invasives-in-vermont.xml

State Lands

Several State owned parcels within Craftsbury allow for residents and the general public to have access to the lakes and rivers in town. An important access on Big Hosmer was deeded to the Vermont Department of Fish & Wildlife as a gift from the Steven Glass family on March 5, 2015; the .03-acre parcel is the only public access to the big lake. Additionally, the State has a fishing access at the south end of Little Hosmer Pond. The State owns two streambank parcels associated with the Black River: one includes both sides of the river for several rods north of the Cemetery Road bridge and one lies along the east bank of the Black River near the Albany line.

Survey Snapshot

Over 63% of Craftsbury residents who responded to the 2015 Craftsbury Community Survey identified conservation of natural resources as an important area to focus town planning in the next 5 years. Specific areas of concern about our local environment included water quality of our lakes and rivers, the spread of invasive plant species throughout town, and the impacts of siting energy projects (large scale wind and solar development) on our landscape.



Goal:

- Protect and manage Craftsbury's natural heritage and biodiversity.
- Identify and understand the natural resources within Craftsbury and their ecological significance.
- Raise community awareness about Craftsbury's natural heritage through education and local conservation planning.
- Manage our town and school forests as models of land stewardship.
- Restore ecological health and integrity of rivers, streams, lakes, and ponds.

Action Steps:

- Collaborate with Sterling College, Craftsbury Academy, Craftsbury Outdoor Center, town committees, government institutions, agencies, and organizations regarding education and conservation activities.
- Develop and utilize maps on land use patterns to understand current agricultural areas, contiguous forestland, and residential/commercial development impacts on natural heritage.
- Investigate open space planning, possibly including a land evaluation and site assessment to develop a consensus-based vision for future conservation efforts, and address the long-range implications on taxes.
- Maintain the natural heritage database located at Sterling College.
- Identify and map natural communities and critical wildlife features, including deeryards, bear production areas, vernal pools, and wildlife corridors.

- Identify and map species of greatest conservation concern such as bats, bees, butterflies, and their habitats.

7: Utilities and Facilities

Electricity

Craftsbury is served by two utility companies, Hardwick Electric Department and Vermont Electric Cooperative. Both utility companies are discussed at length in the Energy Profile as is information about renewable energy and independently generated power and recommendations about siting of same.

Water

Water in Craftsbury is supplied by drilled wells and springs. Of the respondents to the 2015 Craftsbury Community Survey, 63% (127 people) indicated they have a drilled well, 19% (38 people) access a central water supply, 14% (29 people) have spring water, and the remaining 4%(8 people) have other water supply.

In Craftsbury Common, 58 customers are supplied with water by Craftsbury Fire District #2, the only central water supply. There are two 600 foot deep drilled wells. The primary well supplies 55 gallons/minute and the alternate 11 gallons/minute. The water is pumped to a 23,000 gallon storage tank which feeds two 1000 gallon pressurization tanks that alternate in operation. This assures reliable delivery in that either one can operate continuously while the other is being serviced. The water quality is good as confirmed by samples sent to the state monthly. A small amount of chlorine is added to control bacteria. A trace amount of volatile organic compounds is present. New customers wishing to join the system contact the administrators, who determine if the customer is within the defined boundaries served. If so, a line will be lengthened or a new line put into a curb stop, and the customer is responsible for bringing the line from the curb stop to the building.

There is no backup generator to maintain service during a power outage. This may be particularly important since the Craftsbury Academy is identified as an emergency shelter.

Recent Accomplishments:

School Board's policy regarding parking around the Common has alleviated some parking congestion.

Fire Department's effort to recruit volunteers has resulted in six trained EMTs.

Funds received to develop new Local Hazard Mitigation Plan.

Challenges and Concerns:

Town is outgrowing space for town offices – more parking and a fireproof vault needed.

No backup generators for the Common water system, which serves the town's emergency shelter.

Lack of off-site sewer restricts development in and around the Common.

Lack of telecommunications service identified as a priority issue in the Community Visit.

Town can articulate a vision for telecommunication installation in Act 250 and PSB reviews.

No sites identified for collecting food scraps.

Trash burning a concern.

Relevant Statewide Planning Goals:

To plan for, finance and provide an efficient system of public facilities and services to meet future needs.

To maintain and improve the quality of air and water resources.

Sewer

All of Craftsbury's wastewater is handled by private on-site septic systems. This is dependent on the type of soil present and sufficient area to accomplish satisfactory operation of the system. One-third to one-half acre is required in most cases. These systems typically consist of a 1,000 gallon septic tank followed by a leach field, and are generally satisfactory when properly maintained. If this is not done, the solids will pass into the leach field causing the flow to back up and the leach field to not operate properly. There are technologies available such as effluent pumps and filters to enhance the performance of these systems. These features require regular inspection and maintenance.

The Vermont Wastewater and Potable Water Supply Rules took effect in 2007 and apply to soil-based systems with design flows of less than 6,500 gallons per day and sewerage connections of any size. These regulations are triggered when land is subdivided or when new construction takes place. They can also apply when an existing building or structure is modified in manner that increases the design flows or changes the operating requirements of a wastewater or potable water system (e.g. adding an accessory apartment, which has been identified as one form of affordable housing in Craftsbury.)

Failure to obtain a wastewater permit may ultimately create a cloud on the title that can delay or prevent the sale of a property. Addressing replacement of failed or noncompliant system may be costly for homeowners. In 2012 the State introduced on-site loan program to provide low-cost financing for the repair or replacement of failed septic or water supply systems. Terms of financing are typically 15 years but can be expanded to 20 years. To qualify the loan recipient must live in the single family home year round, have a gross household income that does not exceed 200% of the state median household income, and must have been denied financing by at least one financing entity.

The neighboring communities of Johnson, Morrisville, and Hardwick have sewer systems and wastewater treatment plants, whereas Greensboro and Wolcott do not have wastewater treatment facilities. However, some towns of Craftsbury's size have started to study the issue of wastewater treatment.

The availability of wastewater treatment solutions is shaping the way that Craftsbury develops and the siting of new housing and businesses. As an example, during the 2015 Community Visit Process, interest was expressed both in affordable housing development and in clustering new development. Current wastewater treatment options are a large factor in determining the feasibility of these concepts. The publication Wastewater Solutions for Vermont Communities provides an excellent starting point for considering these issues.

http://accd.vermont.gov/sites/accd/files/Documents/strongcommunities/cd/planning/DHCA%20WW%20Guide%20final.pdf

Should Craftsbury decide to consider expanding wastewater treatment options, municipal planning grants provide funds for wastewater planning. The Vermont Community Development Program also provides funds for planning. USDA funding resources could be available for implementation.

Agency of Natural Resources offers two possibilities for wastewater planning:

1. **Planning advance loans**: These become loans when the project goes to implementation. They are generally earmarked for towns without any muni wastewater infrastructure. Currently there's about $50K in the program (the legislature appropriates funds) and no one has called it.
2. **Clean Water State Revolving Fund**: These loans are structured at 0% interest and repayment is held off as long as possible so that the funds can be structured into the financing when it's ready for construction.

Flood Plain Ordinance

Craftsbury's Flood Plain Ordinance is based on the existing Flood Insurance Rate Map dated September 27, 1985. If a question arises concerning structure's location relative to the flood plain, an official from the State of Vermont visits the site and renders an opinion. More information is available in the Flood Resilience Profile of this plan.

Source Protection Plans

Existing residential and commercial/industrial uses, as well as future development depends on the availability of adequate and clean groundwater supplies. Many homes and businesses in Craftsbury obtain their water from the four active public water systems shown in Appendix A. Combined, these systems have seven wells and serve approximately 650 people. Maps of Source Protection Plans are depicted on the Base Map, which accompanies this plan.

The total public source protection area for the town of Craftsbury is approximately 165 acres (0.26 sq miles). Most of the land within the source protection areas is residential or forested, with some agricultural activities and both paved and unpaved roads. Based on these land uses, the biggest threats to groundwater quality in Craftsbury are failing septic tanks, leaking underground storage tanks, spills to above ground fuel oil tanks, farm runoff, and potential spills on the roadways.

Protection of existing and potential groundwater supplies, including important aquifers and aquifer recharge areas, is of great importance to the Town. In the 2015 Craftsbury Community Survey, many respondents highlighted water quality as an area of concern. No development should be allowed which would impact the water supplies provided for by the above Source Protection Areas.

Solid Waste

Craftsbury is a member of the Lamoille Regional Solid Waste Management District (LRSWMD), which was formed by the voters of its member towns on November 8, 1988. LRSWMD operates a collection station located on the Creek Road in Craftsbury Village which accepts recyclables and trash. As of 2015, this facility does not yet accept food scraps.

Act 148, Vermont's Universal Recycling Law, was passed in 2012. The purpose of this law was to increase recycling, reduce greenhouse gas emissions, decrease the dependence on landfilling, and reduce municipal expense by diverting recyclables and compostable materials from the waste stream. This law enforces the practice of unit-based pricing for trash disposal as of July 2015. Disposal of recyclable materials (glass, metal, plastics #1 and #2, cardboard and paper) is also banned by July 2015. The law will ban the disposal of leaves, yard debris and clean wood in July 2016 and food scraps by July 2020. All solid waste facilities (transfer stations, drop-offs, and landfills) that collect trash were required to offer collection of baseline recyclables by July 2014. Solid waste facilities -- including commercial haulers – must offer collection of leaf and yard debris by July 2015 and food scraps by July 2017. Facilities cannot charge an additional fee for the collection of recyclables, but they can charge for the collection of yard debris and food scraps.

Craftsbury residents who desire curbside service for trash disposal must use private haulers working in the area.

Emergency Services

The Craftsbury Fire Department

The town's volunteer fire department first appeared in the town reports in 1938. It has grown from a one-horse pump company to a large department with 22 volunteer firefighters. It now has four vehicles, including 2 pumpers, a tanker, and a rescue vehicle. The fire department responds to fire and rescue requests from Craftsbury and supports the surrounding area as well.

The fire department has recently made an effort to increase the number of first responders to provide emergency medical service. Five firefighters have completed the basic EMT class and passed the state and national tests. This gives Craftsbury a total of six first responders to respond to medical emergencies.

Craftsbury's volunteer firefighters receive roughly 50-55 calls a year. About half are for medical assistance, and the other half for fires. Their annual budget in 2015 was $40,050

The Fire Department also encourages all homeowners to install and maintain their 911 address signs. These are available at no cost at the Town Clerk's office or the fire department at no cost to the homeowners.

Police

Police protection is provided by the State Police Department in Derby. Crime rates in Craftsbury (based on 1 per thousand in population) have been consistently and considerably lower than overall crime rates in Orleans County. In 2013, the crime rate in Craftsbury was 15.89 per thousand, compared to 35.70 for all of Orleans County.

Rescue

Hardwick Emergency Rescue Squad Inc., a nonprofit volunteer ambulance service provides service to Craftsbury. Annual requests for appropriations are based on the annual average number of calls placed from the town over a five-year period.

Emergency Planning

The Local Emergency Operations Plan (LEOP) establishes lines of responsibility during a disaster and identifies high risk populations, hazard sites, procedures and resources. It is crucial that the LEOP has the correct people and phone numbers listed. It should be updated annually after Town Meeting and submitted by May 1st. Maintaining the LEOP is one of the four requirements for receiving level State funding in the event of a federally declared disaster (Emergency Relief and Assistance Fund). In order to get the LEOP approved by Vermont Emergency Management, at least one contact at the town needs to have completed ICS 100 or ICS 402 training made available through FEMA.

Craftsbury had an "all-hazard mitigation plan" that was adopted as an addendum to a FEMA-approved regional plan. Craftsbury's plan expired in 2010 Since that time, the process for getting FEMA approval of a plan (now called a "local hazard mitigation plan") is fairly rigorous. NVDA has secured funds to develop a plan for Craftsbury and the planning process should start in 2016.

Developing a local hazard mitigation plan is important to the town because it identifies policies and actions that can be implemented over the long term to reduce risk and future losses. Mitigation plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

There are financial benefits to the town as well. A FEMA-approval local hazard mitigation plan is required for towns that wish to receive funds from FEMA for specific disaster mitigation projects, such as purchasing a generator for a critical facility or improving drainage or culverts to prevent future washouts. If the town's water system still doesn't have a backup generator, the town could access funds from FEMA to purchase one. Having a FEMA-approved local hazard mitigation plan is also one of the four requirements for receiving additional state funding in the event of the federally declared disaster (from the Emergency Relief and Assistance Fund) which is described in greater detail in the Flood Resilience Profile.

Emergency Shelters

Craftsbury has identified two emergency shelters. They are the Craftsbury Academy and the Presbyterian Church for more sleeping quarters. Residents in Mill Village would likely be isolated in the event of a flood, so alternative arrangements (possibly with a neighboring community) should be considered when the local hazard mitigation plan is updated.

Medical facilities

Hardwick Area Health Center is a regional medical facility 12 miles away serving Craftsbury. The nearest hospitals are Copley Hospital in Morrisville (20 miles away) and North Country Hospital (32 miles away). DHART helicopter (Dartmouth-Hitchcock) is 35 miles away for immediate rescue.

Craftsbury Community Care Center is a residence facility that employs 27 full and part- time staff and provides a variety of services to senior citizens in Craftsbury and surrounding communities. The facility also provides Meals on Wheels.

Craftsbury is also served by Orleans/Essex Visiting Nurse and Hospice Inc.

Town Government

Craftsbury has a three member Selectboard who meet twice a month to discuss town business and keep the town running smoothly. There is a Town Clerk and an Assistant Town Clerk. Town officers are elected at the annual Town Meeting, which takes place the first Tuesday in March. At this event, the town elects its Moderator, Collector of Taxes, Listers, School Directors, Auditors, Town Agent, Town Grand Juror, Cemetery Commissioners, Trustees of Public Funds, World War II Memorial Fund Trustees, Supervisor to Solid Waste District, and Library Trustee. The Selectboard then appoints many additional officers as representatives and to committees. The community members then proceed to vote on all issues that represent spending of tax dollars.

Town Clerk's Office

Located at 85 South Craftsbury Road, the Office is open Tuesday through Friday, 8:30 a.m. to 4:00 p.m., Monday and Saturdays by appointment. The town is outgrowing the present municipal office space. There is a need for better parking and a fireproof walk-in vault for safe record storage. If moved, the current building should remain a public space. Ceasing public use would cause ownership of the building to revert to its original heirs, per the deed.

Town Garage

Located in the Village, the town garage houses the fire department and the road crew's equipment. Salt and gravel purchased by the town are also stored at the town garage. The gravel is purchased from a privately owned gravel pit near Lake Eligo.

Post Offices

Craftsbury has two Post Offices. They are located on South Craftsbury Road and on Craftsbury Common. In recent years hours at both Post Offices have been reduced. Current hours are posted on the Town of Craftsbury website.

Cemeteries

There are four cemeteries in town: East Craftsbury, Craftsbury Common, Wild Branch, and Craftsbury Village. They are maintained by a Town Cemetery Committee.

Town Facilities

Schools

Craftsbury Schools and Sterling College both offer meeting and performance space. Town Meeting is held in the Craftsbury Academy gym. Please refer to the Education Profile of this plan for more information related to schools.

Libraries

Craftsbury is served by three libraries: John Woodruff Simpson Library in East Craftsbury, Sterling College's Brown Library, and the Craftsbury Public Library on Craftsbury Common. The Craftsbury Public Library is one of 3 libraries in the state to be given the rank of Five Star Library, based on four per-capita service indicators, library visits, circulation, program attendance and public internet computer use. This library has become a default coworking space in town, offering 24/7 wireless access, and is investing in computer, printer, copier, scanner and fax upgrades to address community needs.

The Simpson Library in East Craftsbury is in the proposed village center designation. If designated, the library would not necessarily be eligible for tax credits for fitup or improvement to the facility, but it would receive priority consideration for the Department of Historic Preservation grants, which are highly competitive.

Craftsbury Historical Society

More information available in the Historic Craftsbury Profile.

Public Parking

There are no areas in town designated as public parking. Both the Community Visit Process and the 2015 Community Survey highlighted the need to address parking. In 2015, the Craftsbury School Board implemented policy changes which have alleviated some of the parking congestion near the Common. Cultural events on the Common and in the Village, commuting, and dropping cars as part of recreation (for

example, a ski from the Village to Highland Lodge in Greensboro) all generate a need for safe parking solutions. Parking is also addressed in the Transportation and Recreation Profiles of the Town Plan.

Public Lands

The Town of Craftsbury is fortunate to be the steward of over 200 acres of public land. These include three town forests, and the Common itself. There are walking trails on Wylie Hill that are part of the Craftsbury Academy Woodlot.

Beach

The Town of Craftsbury maintains a public beach on Eligo. More information is available in the Recreation Profile of this plan.

Churches

Craftsbury has three churches, East Craftsbury Presbyterian Church, Our Lady of Fatima Church, and United Church of Craftsbury. In addition to worship services (times listed on Town of Craftsbury website), the churches provide meeting and performance space to the public. The United Church offers a free community meal once a month, and may be a future site for a Craftsbury Food Pantry. The closest food pantry is 12 miles away in Hardwick, and the Community Visit Process identified a Craftsbury food pantry as a need.

Communications

Improve Cell Phone and Broadband Access rose to a top level of focus during the Craftsbury Community Visit Process in Fall 2015. It was also a top area of concern among respondents to the 2015 Community Survey, and 128 respondents asked for the Planning Commission to focus on improving telecommunications. Currently, broadband service and access are a limiting factor for telecommuters, and a barrier to providing people in Craftsbury with access to jobs and education. This is particularly an impediment to keeping younger generations in Craftsbury. Additionally broadband access and service limit Craftsbury residents' ability to operate businesses. In addition to the above concerns, lack of cell phone coverage is a safety concern.

The Task Force formed as part of the Community Visit Process will actively work with regional, state, and federal partners to bring improved cell and broadband coverage to the community.

There is no cable television service in Craftsbury. Television is available through satellite dish, broadband is available through DSL, wireless internet service providers (WISPs), or satellite.

Telecommunication Towers

Towers and related infrastructure require careful consideration. These structures tend to be located on highly visible locations on mountaintops, ridgelines and in residential areas. The need for additional facilities is projected to increase dramatically.

The Craftsbury Planning Commission drafted a telecommunication ordinance, which was adopted by the Selectboard in 2006. In 2010, the Planning Commission proposed an ordinance that would bring the Town into compliance with regulations regarding *de minimis* impacts.

In 2007, the Vermont Legislature created 30 V.S.A. § 248a. Section 248a provided telecommunications carriers seeking to construct telecommunications facilities the option of obtaining a Certificate of Public Good (CPG) as an alternative to local zoning and Act 250 environmental review.

The law was amended in 2011 to allow for more rapid CPG for de minimis (very minor) changes to existing facilities.

Since the creation of Section 248a hundreds of facilities have been permitted statewide, effectively circumventing the local permitting process (i.e. telecommunication regulations). Section 248a, however, is a temporary law, and is slated to sunset in 2017. The 2014 Vermont Telecommunications plan calls for the continuation of Section 248a – at least until telecommunications infrastructure is deemed adequate.

Legislation in 2014 sought to clarify the role of the municipal and regional plan in Section 248a proceedings and directed the Public Service Board to describe how it interprets the terms "substantial deference" and "good cause" as used in the statute. These terms were intended to provide direction to the PSB as to how to weigh recommendations of municipalities with regard to their town plans and conservation measures.

The Public Service Board adopted the following definitions:

- "Good cause" means a showing that deferring to the land conservation measures in the plans of the affected municipalities and the recommendations of the municipal legislative bodies and the municipal and regional planning commissions regarding the municipal and regional plans, respectively, would be detrimental to the public good or the State's interests articulated in 30 V.S.A. § 202c.
- "Substantial deference" means to give significant and meaningful weight to the land conservation measures in the plans of the affected municipalities and the recommendations of the municipal legislative bodies and the municipal and regional planning commissions regarding the municipal and regional plans, respectively.

It is important that municipalities clearly describe their visions for telecommunication planning within their town plans, since the plans are consulted by both the Act 250 commission and the Public Service Board when reviewing projects.

The NEK Fiber Network

In the Northeast Kingdom, an initiative of the Vermont Telecommunications Authority was the Northeast Kingdom Fiber Network. The network includes the following connections in Craftsbury:

- Albany to Craftsbury, Craftsbury Road
- Craftsbury to Hardwick, Route 14

In 2015, the activities of the Vermont Telecommunications Authority were absorbed by the Connectivity Division in the Vermont Department of Public Service. The NEK Fiber Network service area map can be found in Appendix A.

Goals:

- Ensure town facilities are maintained and remain appropriate for town needs.
- Ensure the long-term protection of public drinking water supplies.
- Create a contingency plan in the event of compromised water quality.
- The planning commission should keep informed on the regulatory environment pertaining to the siting and permitting of telecommunication towers and advise the Selectboard accordingly.

- Investigate the feasibility of wastewater treatment facilities.
- Plan for public parking needs.

Action Steps:

- Disseminate the Craftsbury Groundwater Mapping project to better inform the residents who use well or spring water supplies about the quality and condition of the water sources.
- Update telecommunication ordinance.
- Town officials and interested citizens should work with the Waste District to educate residents about the harmful effects of trash burning.
- Determine needs for Town Clerk's Office and future of current building.
- Explore establishing a town collection site for reusable household items.
- Encourage establishing a food composting center in town or in collaboration with nearby facilities.
- Pursue Village Center designation for East Craftsbury.
- Ensure that Local Emergency Operations Plan information is current.
- Consider a wastewater planning grant from the Agency of Natural Resources
- Investigate the long-term viability of an emergency food access site in Craftsbury.

8: Energy

Purpose of the Energy Plan

The 2015 Craftsbury Community Survey indicated a broad concern among residents about the siting of renewable facilities, especially large-scale industrial projects. More than 70% of respondents want siting standards for large-scale projects, especially wind, hydro, and biomass facilities. About 50% of respondents were concerned about smaller installations, and about 35% were concerned with household scale.

Energy generation and transmission systems that are linked to the electrical grid are preempted fromlocal land use regulation by 24 V.S.A. §4413(b). They are instead regulated by the Vermont Public Utility Commission ("PUC") under 30 V.S.A. §248. These include net-metered distributed energy installations, as well as commercial, utility-scale generation, transmission, and distribution facilities. The Town encourages the PUC to consider project conformance with municipal plans and regional plans prior to issuing a Certificate of Public Good.

The Town enjoys statutory party status in Section 248 PUC proceedings, pursuant to 30 V.S.A. §248(a)(4)(F), and receives notice of applications (petitions) before the PUC. The Town may participate informally by providing comments on a proposed project or request more formal status asan intervener with rights to participate and appeal.[1] Should the Town choose to intervene, it recognizes that it still must submit comments within the established timeframe in the review process.Town participation in the state's review process, based on the Community Renewable Energy Siting Guidelines of this plan, is one way to ensure that local conservation and development objectives are considered and weighed by the PUC.

Until recently, the PUC has only been obligated to give "due consideration" to the recommendations of the municipal plan when determining if a proposed project will not "unduly interfere" with the orderly development of the region. Vermont statute does not define "due consideration," not does it indicate who shall determine what constitutes "due consideration."

Recent Accomplishments:

Participation in 2013 Weatherization Challenge, leading to weatherization of 13 year-round homes.

Regular educational programming by Craftsbury Energy Committee.

More than 30 net metering projects in operation (and several off-grid installations).

Nearly 50% of survey respondents have completed some form of household conservation projects.

Challenges and Opportunities:

Community Survey indicates strong support for the development of siting standards, particularly for large-scale.

Compact, mixed use development can achieve greater energy efficiency.

Concerns defining appropriate scale of renewable energy for the community.

Relevant Statewide Planning Goal:

To encourage the efficient use of energy and the development of renewable energy resources.

[1] The Town recognizes that it must file a motion to intervene before the PUC in Section 248 cases, as was established in *Petition of SSE New Haven Solar II LLC for a) certificate of public good, pursuant to 30 V.S.A.) §§ 219a and 248, to install and operate a) 350 kW group net-metered solar electric) generation facility in New Haven, Vermont*, Docket No. 5978, Order entered 12/15/2015.

Act 174 of 2016 established a new set of energy planning standards. If these standards are met, regional and municipal plans may carry greater weight – "substantial deference" – in the Section 248process. Unlike "due consideration," "substantial deference" is codified in statute to mean:

"…that a land conservation measure or specific policy shall be applied in accordance with its terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure or policy."

The Craftsbury plan has been revised to meet receive substantial deference under Act 174. It is important to note, however, that substantial deference does not carry the weight of zoning. Projects that fall under the jurisdiction of Section 248 are still exempt from local zoning and permitting. Nevertheless, this plan reflects our attempt to have a greater say in the siting of renewable energy projects.

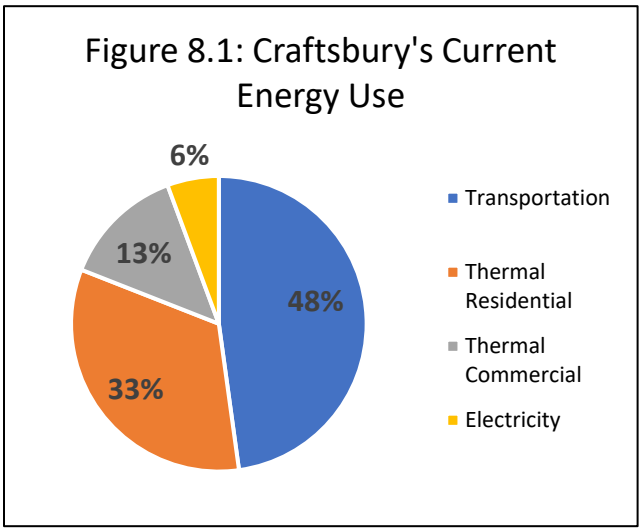
Craftsbury Energy Committee

The Craftsbury Energy Committee ("CEC") recommends continued efforts toward the goals of reducing energy consumption, promoting greater comfort and reduced annual energy costs for all citizens, and protecting the Town of Craftsbury's historical and natural heritage. The CEC believes this serves a larger societal goal of reducing the Town's carbon footprint, improving the Town's stability and resilience in meeting our daily energy requirements, while protecting our historical and natural heritage.

Founded to provide active focus on energy issues and support initiatives to educate, assist, and encourage the Town and its residents to use energy wisely, the Committee has met regularly, organized workshops about energy use and conservation, provided a forum for the public discussion of policy issues, advocated for appropriate renewable energy generation, and provided advisory services to people seeking energy solutions. Since 2008 the Committee has focused on weatherization priorities, public awareness of viable energy savings solutions, and basic research about energy use in the Town of Craftsbury. The CEC has sought to align its efforts with other statewide initiatives, such as those efforts of Efficiency Vermont and the PACE (Property Assessed Clean Energy) program, in order to leverage the impact of limited financial resources. In addition, the Committee seeks to align efforts with the goals of the State of Vermont's Comprehensive Energy Plan. As the CEC moves ahead, its intention is to review changes and impacts of the last six years of work, set specific targets for energy use to guide future efforts and elicit support for them, continue outreach and education efforts, and help the Town stay abreast of best practices and opportunities for efficiency and the reduction of our carbon footprint.

Activities sponsored by the Energy Committee have been annual weatherization workshops, trainings for and the enactment of informal energy assessment walkthroughs for Town residents, and multiple annual public meetings about energy technologies and building techniques. Outreach efforts at fairs and in Town venues have included promoting energy programs that are available to help Town residents and working with local schools and students on energy awareness and conservation of the use of electricity. In addition, the CEC notes a substantial increase in the number of renewable electrical generation facilities in the Town, and as of 2015, over 30 net metering projects are in operation in the Town, along with a number of off-grid installations. PACE (Property Assessed Clean Energy) is also in place as of 2015.

Energy Usage



NVDA estimates indicate that transportation accounts for the largest energy use in Craftsbury, followed by very closely by thermal (heating space and water). (Figure 8.1)

Thermal Residential and Commercial

NVDA developed its residential thermal estimates using American Community Survey 5-Year Estimates for primary heating sources. Average household square footages were developed from ACS estimates, as well as American Housing Survey estimates. Although this calculation uses best available data, it clearly has some limitations. Like most Northeast Kingdom residents, Craftsbury residents are likely to use multiple heating sources. NVDA's estimate accounted for the age of the housing stock, since pre-1940 housing structures are likely to be "leaky" and poorly insulated. Craftsbury has some fairly old housing stock: About 30% of owner-occupied and 44% of renter-occupied housing units are pre-1940. NVDA assumed 80,000 BTUs per square foot for pre-1940 housing stock, 45,000 BTUs for all other. Total thermal usage for occupied housing stock is estimated at 45,776 MM BTUs.

Table 8.1: Residential Thermal Energy Use

Fuel Type: Space Heating	Households	Total avg. Use (Annual)		% Use: (All HHs)	Percent of Use: Owner	Percent of Use: Renter	% of Cost (All HHs)
Tank/LP/etc. Gas	55	60,197	gallons	12%	12%	16%	22%
Electricity	6	178,934	KwH	1%	1.5%	0%	4%
Fuel Oil	175	125,668	gallons	38%	36%	54%	40%
Wood	217	1,095	cords	48%	50%	30%	35%
Coal/Coke	-	-	tons	0%	0%	0%	0%
Other	3	-		1%	1%	0%	-

No information is available on heating sources for non-occupied seasonal housing units, but Department of Public Service guidelines suggest that it is reasonable to assume that a seasonal unit accounts for about 5% of the average owner-occupied housing unit. There are 233 seasonal housing units in Craftsbury. Assuming 5% of the average owner-occupied unit (102), seasonal units account for another 1,185 MMBTUs annually.

Non-residential thermal estimates were developed using data from the Department of Public Service and the Vermont Department of Labor's economic and Labor Market Information. The Census does not have estimates on heating sources, but the Department of Public Service is able to estimate average heating loads on types of business.

Table 8.2: Non Residential Heating Uses	
Estimated number of commercial buildings, per Vt. Dept. of Labor:	25
Average annual heating load per building:	**759 MMBTUs**
Estimated total heat energy consumption:	**18,975 MMBTUs**

The Town Survey results show that more than 20% of Craftsbury respondents have installed more efficient heating systems in the past five years. Local heating sources, according to 183 respondents, are comprised of nearly 50% wood and wood pellets, 32% oil, 12% propane, and a mix of others. The majority of people also have a second, backup heating source, fueled mostly by wood, propane, and then oil. Craftsbury Academy is heated by wood pellets.

Table 8.3: Cost of Fuels, 2011-2016

		November 2011			*November 2016*				
Types of Energy	**BTU/Unit**	**Adj. Effic.**	**$/Unit**	**$/MM BTU**	**Typical Effic.**	**$/Unit**	**$/MM BTU**	***High Effic.****	***High Efficiency$/MM BTU***
Fuel Oil, gallon	138,200	80%	$4.08	$36.89	80%	$2.23	$20.14	*95%*	*$16.96*
Kerosene, gallon	136,600	80%	$4.45	$40.71	80%	$2.80	$25.65		
Propane, gallon	91,600	80%	$3.37	$46.05	80%	$2.54	$34.64	*95%*	*$29.17*
Electricity, kWh (resistive)	3,412	100%	$0.16	$46.37	100%	$0.15	$43.46		
Electricity, kWh (heat pump)**	n/a					$0.15	##	*240%*	*$18.32*
Wood (cord-green)	22,000,000	60%	$192.03	$14.55	60%	$227.00	$17.21		
Pellets (ton)	16,400,000	80%	$263.51	$20.09	80%	$275.00	$20.96		

Source: Department of Public Service, Vermont Fuel Price Report (2011 Adjusted for Inflation)

Table 8.3 demonstrates the various costs of heating sources available to Craftsbury residents. When oil prices were high, many NEK residents turned to alternative fuels, especially wood pellets, which are cleaner burning, more efficient than cord wood, and relatively easy to use. Stoves and furnaces can be controlled by a thermostat. Their prices have remained relatively stable in recent years, although there have been some shortages in recent heating seasons. Wood pellet stoves and furnaces may be a significant investment for most homeowners, so they have continued to use pellets even after the price of heating oil dropped.

In 2015 the Vermont Fuel Price report was amended to account for "High Efficiency" ratings of furnaces, which are manufactured to meet higher efficiency standards and can result in savings on energy for the customer.

Heat Pump Technologies:

The Vermont Fuel Price Report has also begun including information on electric-powered heat pump technologies, which deliver proportionately more heat than the energy required to power them. This high return rate – called a coefficient of performance (COP) – offsets the increased electricity usage.

Geothermal, or "ground source heat pump systems", extract natural low-temperature thermal energy from the ground during colder months for heating, and transfer thermal energy from the building to the ground in warm months for cooling. A geothermal system in Vermont can save roughly $1,000 to $2,000 annually in heating costs and have a "simple payback time" of between 10-20 years. This technology operates much like a refrigerator, utilizing a heat pump, heat exchanger and refrigerant.

While geothermal systems do require electricity to operate the pumps, the systems generally deliver between 3 to 5 times more heat than the electrical energy they consume (depending on the type of system).

In recent years, manufacturers have developed air-sourced heat pumps that operate more consistently over Vermont's vast temperature ranges, thanks to new refrigerants and more advanced air compressors. Also called "cold climate heat pumps" or "mini splits", these units also have a high COP over propane and fuel oils. Unlike geothermal units, they do not require excavation or duct work and are therefore less expensive to install. Typically, one pump per room, or a multi-zone setup is required, which may pose a challenge for larger older homes with multiple wings or ells.

Despite recent improvements in effectiveness on cold days, a backup heating source is required for sub-zero temperatures. Despite these considerations, cold climate heat pumps may be particularly useful in Craftsbury as a highly effective supplemental heating source – and as a primary heating source for outdoor work spaces.

Transportation

Energy use in transportation is most influenced by the development patterns of the region. Long commutes and incidental trips require NEK drivers to drive an average of 14,000 miles per year. Estimates based on the number of light-duty vehicles, Craftsbury residents probably drive about 12.7 million miles annually, accounting for $1.3 million in fuel costs. As Table 8.4 indicates, nearly all this energy is non-renewable. Ethanol currently accounts for nearly all renewable transportation energy usage – about 6% of total BTUs – while electricity accounts for a mere .05%.

Plug-in electric vehicles (EVs) have the greatest potential to reduce Vermont's statewide greenhouse gas emissions. "Refueling," which is as simple as plugging into an electric outlet, costs the equivalent of about $1.00 per gallon.

There are two types of EVs:

All-Electric Vehicles (AEVs): An AEV can range as far as 80 miles on a single charge, but on very cold days, this range can be cut in half. AEVs are therefore best used as a second car.

Plug-in Hybrid EVs (PHEVs): A PHEV generally does not range as far as an AEV, but they can switch over to gasoline when the battery charge runs low, making this a more likely choice for those with longer drives (and greater distance from public charging stations). About 75% of EVs registered in Vermont are PHEVs.

Table 8.4: Transportation Energy Use in Craftsbury	
Total Light Duty Vehicles	906
Total Internal Combustion Engine (ICE) Vehicles	902
Average Miles per gallon for ICE	22
Average annual Vehicle miles travelled ICE	14,000
Total annual VMTs ICE	12,628,000
Total Gallons ICE	574,000
MM BTUs, Fossil fuel	63,338
MM BTUs, Ethanol	4,376
MM BTUs Total ICE	67,715
Total Electric vehicles (EVs) (as of Jan. 2017)	4
Average annual VMT for EVs	7,000
Total annual VMTs for EVs	28,000
Average fuel economy per kWh	3
Total kWh for EVs	9,333
MMBTUs for EVs	32
Sources: American Community Survey, Department of Public Service, and NVDA estimates.	

Not surprisingly, Chittenden County has the highest concentration of EVs on the road – about one-third of all EVs in the state. Nevertheless, Northeast Kingdom residents are beginning to use them as well. As of January 2017, there were 4 EVs registered in Craftsbury (and 134 in the entire Northeast Kingdom.) The highest use is found in the region's population centers – St. Johnsbury, Lyndon, Hardwick, Derby, and Newport. The nearest dealership (and public charging station) is Lamoille Valley Ford in Hardwick. All the public charging stations within an approximate 20-mile radius of Craftsbury are "level 2" charges, which means drivers will need at least one hour to get a charge sufficient for 10 miles. (In very cold weather, drivers might need at least two hours to get the same charge.) Several level 2 public charging stations are available in Stowe. DC fast charges are more suitable for drivers on occasional errands because they only require 20 to 30 minutes to get an 80% charge. The nearest DC fast charge, however, is more than 25 miles away in Danville.

Table 8.5: Public Charging Stations within a 20-Mile Radius for Craftsbury

Town	Location	Approx. Distance
Hardwick	Lamoille Valley Ford	8 miles
Hyde Park	McMahon Chevrolet Buick	12 miles
Morristown	Municipal Offices	12 miles
Barton	Village Offices	12 miles
Johnson	Municipal Offices	15 miles
Johnson	Vermont Electric Coop	16 miles
Source: US Department of Energy's Alternative Fuel Locator		

Price volatility of gasoline in the first half of the past decade helped to spur an interest in the development of alternative fuels. Biodiesel is commonly made from soybeans, rapeseed (canola), and sunflowers; all of which can be grown in Vermont. Biodiesel can be blended with diesel up to5% (B5) to be safely used for on-road vehicles. Higher blends, including pure biodiesel (B100) can be used in off-road equipment and farm vehicles. Black Bear Biodiesel, located just outside of theregion in Plainfield, is a B100 fueling station.

Research has found that oilseed crops, when grown in rotation with other crops, can help to support sustainable, diversified, and profitable agricultural enterprises. The Vermont Bioenergy Initiative, a program of the Vermont Sustainable Jobs Fund, provides early-stage grant funding, technical assistance and loans to producers. The Town encourages further innovation and research into this area as a long-range economic opportunity.

Electricity Use

Craftsbury's electric utility data is collected by Vermont Energy Investment Corporation. Customers are primarily residential, the number of which have dropped in recent years. Thanks to efficiency measures, residential customers have dramatically reduced their average use in recent years – from an average of 22 MMBTUs per customer, to only 11. Similar data for commercial and industrial users is not available, but this sector has also seen a considerable reduction in use.

Table 8.6: Annual Electricity Usage in Craftsbury (in kwH)

Sector	2014	2015	2016
Commercial & Industrial	857,049	897,104	511,276
Residential	3,666,267	3,740,458	1,833,539
Total	4,523,316	4,637,562	2,344,815
Count of Residential Premises	650	662	663
Average Residential Usage	6,547	6,574	3,211

Source: Vermont Energy Investment Corporation

Craftsbury's Energy Committee has been aggressive in pursuing efficiency measures, in both residential and commercial & industrial sectors. This has resulted in a three-year total reductionof 322,794 KWh in electricity use and 1,329 MM BTUS in thermal uses. (Table 8.7).

Table 8.7: Annual Savings for Craftsbury				
	2014	2015	2016	Total
Electric Savings (KWh)	76,872	114,625	131,297	322,794
Residential	68,524	69,563	76,547	214,634
Commercial & Industrial	8,348	45,063	54,750	108,160
Thermal Savings (MMBTU)	7	596	725	1,329
Residential	9	35	99	143
Commercial & Industrial	(1)	561	626	1,186
Total Customer Cost Savings	$12,691	$36,778	$29,479	$78,948
Residential	$11,539	$12,050	$14,951	$12,050
Commercial & Industrial	$1,152	$24,729	$14,529	$24,729

Table 8.8 shows the types of efficiency measures that have been carried out by residential and commercial and industrial utility customers. The bulk of measures consist of light bulb replacements, but additional measures have been taken to upgrade equipment and hardwiring, and improve thermal efficiency.

Table 8.8: Efficiency Measures in Craftsbury, Residential and Commercial & Industrial				
	2014	2015	2016	Total
Air Conditioning Efficiency	0	1	1	2
Cooking and Laundry	6	12	8	26
Health and Safety	0	0	1	1
Hot Water Efficiency	11	4	10	25
Industrial Process Efficiency		0	2	2
Light Bulb/Lamp	1698	1,686	1,482	4,866
Lighting Efficiency/Controls	0	59	0	59
Lighting Hardwired Fixture	86	67	234	387
Motor Controls	0	1	0	1
Motors	7	2	18	27
Office Equipment, Electronics	71	32	8	111
Refrigeration	4	4	9	17
Space Heat Efficiency	23	14	19	56
Space Heat Fuel Switch	0	0	4	4
Space Heat Replacement	0	2	1	3
Thermal Shell	0	1	4	5
Ventilation	0	2	1	3
Source (Table 8.7 and 8.8): Vermont Energy Investment Corporation				

Generation and Distribution

Craftsbury is served by two electric utilities, Hardwick Electric Department (HED) and the Vermont Electric Coop (VEC), both of which have become increasingly involved with the issues and policies associated with renewable energy production, particularly distributed, small-scale power generation. Hardwick Electric (like all municipal utilities in Vermont) is represented by the Vermont Public Power Supply Authority (VPPSA), which has broad authority to buy and sell wholesale power on behalf of all the municipalities. VEC is a member owned electric distribution facility. Both primarily serve residential customers (about 72% and 88% respectively.) Both utilities maintain diverse power supplies using a variety of fuel mixes and combinations of short- and long- term contracts to minimize costs and maintain price stability. There is no one set equation for achieving this delicate balance.

Figures 8.2 and 8.3 depict the current power supply of each utility.[2]

Hydro – a major part of the fuel mix – is generated on a run of the river facility in Wolcott owned by HED. Both utilities obtain hydro from other sources, including Hydro Quebec and New York Power Authority. Biomass production includes the McNeil Plant in Burlington and Ryegate Power Station, which distributes power through Vermont's Standard Offer Program.[3]

Both utilities are expanding solar capacity. In late 2016, VEC opened a "community solar" project" in Alburgh, which allows VEC customers to sponsor solar panels in return for a credit on their monthly utility bill. In 2015, VPPSA was awarded two standard offer contracts for solar projects in Lyndon, sized at 475 kW and 500 kW.

Figure 8.2: HED 2013 Fuel Mix

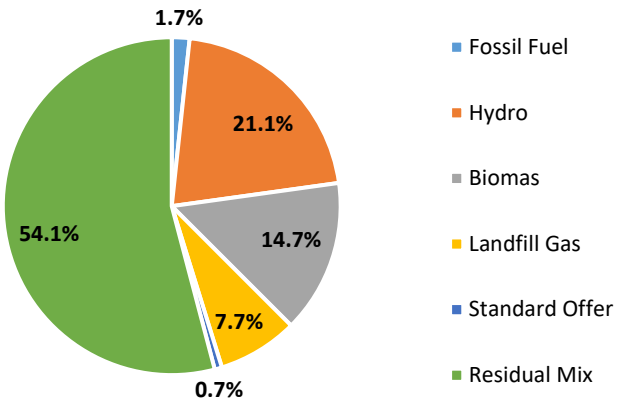
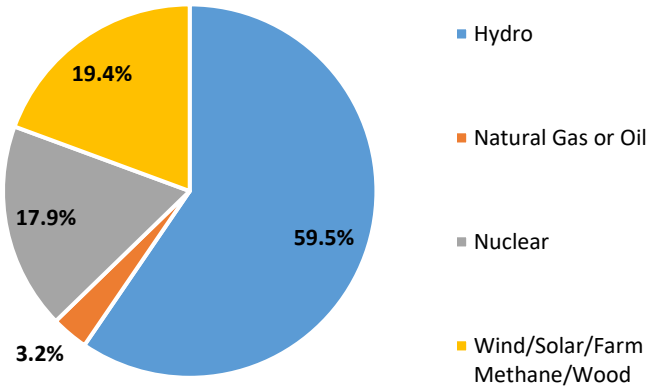


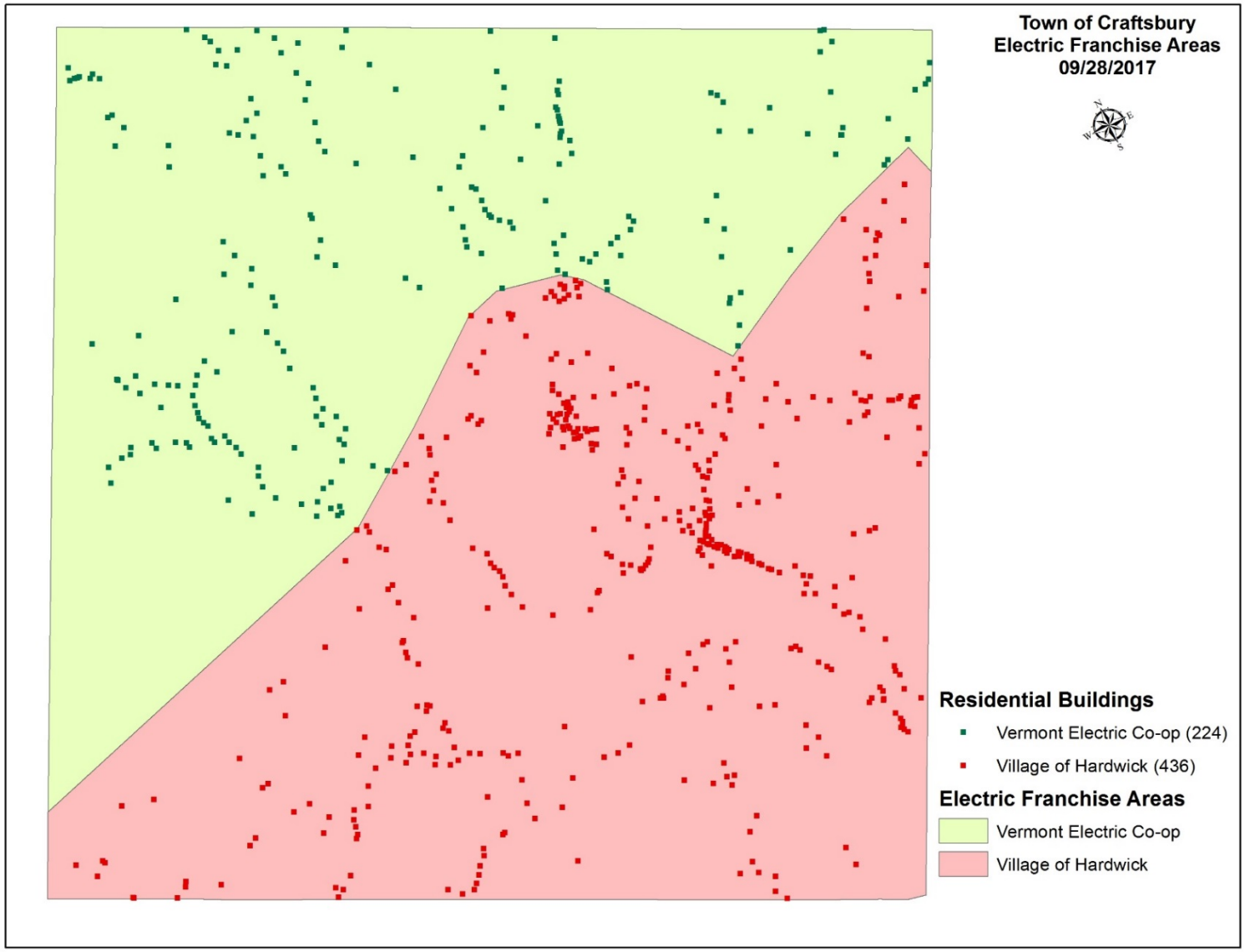
Figure 8.3: VEC 2016 Power Supply



[2] Figure 8.1 Vermont Public Power Supply Authority: Town of Hardwick Electric Department Integrated Resource Plan, 2015-2034; Figure 8.2 http://www.vermontelectric.coop/keeping-the-lights-on/power-supply

[3] Standard Offer, is a program created by the Vermont General Assembly that allows developers of renewable projects to negotiate a multi-year contract to sell power at a fixed rate to utilities. The rates are set in an annual bidding process.

Figure 8.4 shows the service boundaries of the two utility companies.



The Town has seen a rapid growth in the installed capacity of renewable energy systems in the past five years. Over 30 households (better than 5% of households in the Town) generate most or all of their electricity from renewable systems. In addition, several substantially larger arrays with a total production of over 100,000 kwh per year became fully operational at the end of 2015. The Town has begun to meet its own electricity needs with the installation of a solar tracker producing 6,000 kwh annually to help meet the Town buildings' electrical use (estimated to produce 30% of the annual electric consumption for the Town Hall and Town Garage).

Based on the results of the 2015 Town Survey, 12% of the 160 respondents have installed renewable energy systems on their property and an average of 49 % have completed basic household conservation. The Craftsbury Energy Committee lauds this progress and encourages continued growth, while recognizing the need to work closely with our utilities as they seek to manage their operations to effectively utilize grid-tied distributed generation.

As of December 2016, the Town of Craftsbury was generating annual total of 759.7 MWh of solar energy, accounting for about 9% of the entire county's output. (Table 8.9)

Table 8.9: Existing Solar Generation in Craftsbury

Solar Type	Type	Location	Utility	Capacity (kW)	Annual Production (kWh)
Ground-mounted PV: Tracker	Institution	230 Dustan Road	HED	8	9,811
Ground-mounted PV: Tracker	Residential	306 Seaver Brook Rd	VEC	4	4,906
Ground-mounted PV: Tracker	Residential	407 Wells Pl	HED	4	4,906
Ground-mounted PV: Tracker	Institution	535 Lost Nation Road	VEC	41.8	51,264
Ground-mounted PV: Tracker	Residential	654 N Craftsbury Rd	HED	3	4,675
Ground-mounted PV: Tracker	Residential	295 Creek Rd	HED	4	6,568
Ground-mounted PV: Tracker	Residential	1747 King Farm Rd	HED	4	4,906
Ground-mounted PV: Tracker	Institution		HED	96	117,734
Roof-Mounted PV	Residential	91 Young Rd	HED	1.8	2,208
Roof-Mounted PV	Residential	2426 Collinsville Rd	VEC	3.8	4,800
Roof-Mounted PV	Residential	1163 W Hill Rd	HED	4.8	5,887
Roof-Mounted PV	Residential	23 Summer Drive	HED	6	7,358
Roof-Mounted PV	Institution	535 Lost Nation Road	VEC	66.3	81,310
Roof-Mounted PV	Residential	450 Whetstone Brook Road	HED	1.9	2,330
Roof-Mounted PV	Residential	1291 Town Line Rd	VEC	2.9	3,557
Roof-Mounted PV	Residential	453 Ketchum Hill Road	HED	3.5	4,292
Roof-Mounted PV	Residential	375 Young Rd	HED	6.8	8,340
Roof-Mounted PV	Residential	1410 South Albany Road	HED	2.9	3,557
Roof-Mounted PV	Residential	147 Creek Rd	HED	6	7,358
Roof-Mounted PV	Residential	450 Whetstone Brook Road	HED	2	2,453
Roof-Mounted PV	Residential	622 Wylie Hill Road	VEC	4.2	5,151
Roof-Mounted PV	Residential	321 N. Craftsbury Rd	HED	2.8	3,434
Roof-Mounted PV	Municipal	46 Town Garage Road	HED	6.2	7,604
Roof-Mounted PV	Residential	89 Breitmeyer Dr	HED	9	11,038
Roof-Mounted PV	Residential	275 Shatney Road	VEC	5	6,132
Roof-Mounted PV	Residential	1529 Lost Nation Road	VEC	5	6,132
Roof-Mounted PV	Business	1543 East Craftsbury Road	HED	144	176,602

Roof-Mounted PV	Residential	288 Dustan Rd	HED	4.6	5,641
Roof-Mounted PV	Residential	1859 Mill Village Rd	VEC	1.35	1,656
Roof-Mounted PV	Residential	4510 East Hill Road	VEC	5	6,132
Roof-Mounted PV	Farm	266 S. Craftsbury Rd	HED	142.5	174,762
Roof-Mounted PV	Residential	2411 South Albany Rd	VEC	9	11,038
Roof-Mounted PV	Residential	948 Wylie Hill Road	VEC	5	6,132
Total				**617.15**	**759,671**
Source: Renewable Energy Atlas, accessed from the Vermont Community Energy Dashboard. Output is calculated using the following formula: (kw capacity) * (8,760 hours per year) * (0.14 capacity factor)					

Craftsbury also annually produces about 16.5 MWh of wind energy from a farm on Strong Road. This generation is net-metered by HED and is a small-scale wind tower with a 9.5 kW capacity.

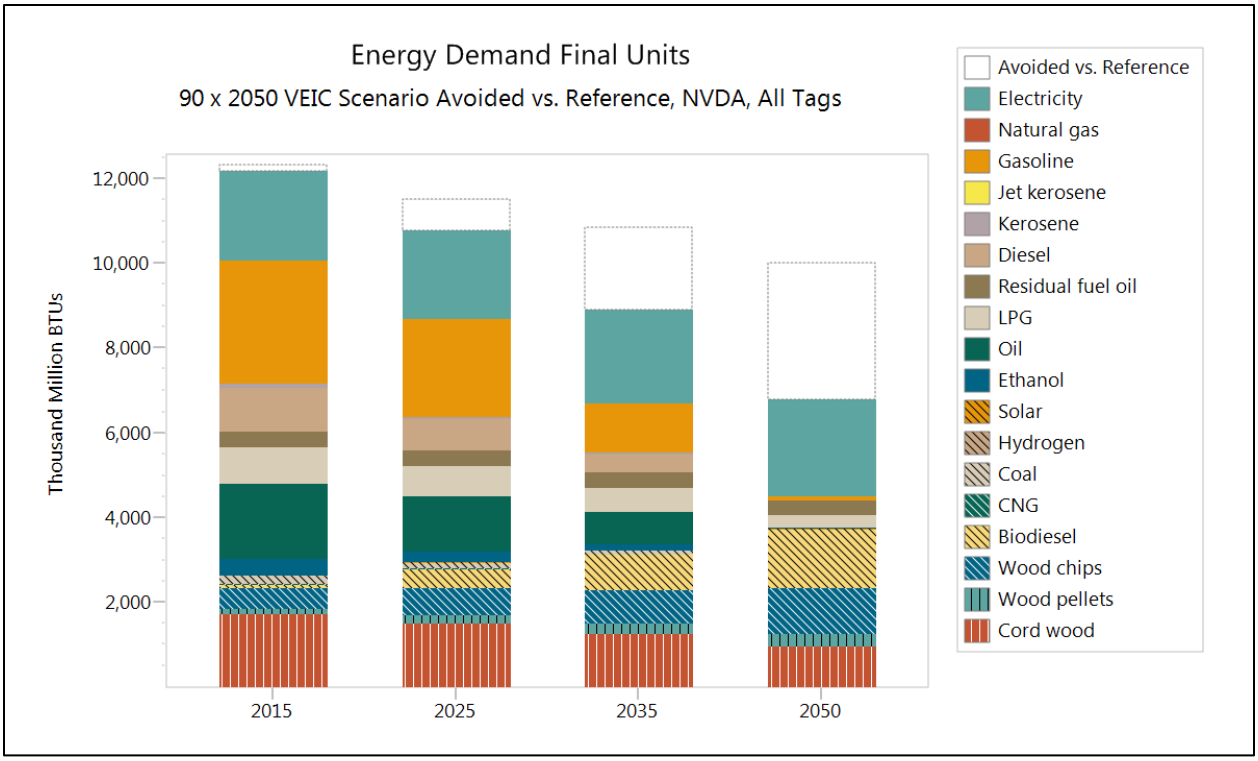
The Craftsbury Energy Committee specifically recommends that the Town avoid disincentives, such as taxing renewable projects, and recommends that the Town continue to increase its own electrical generation and carefully site renewable projects so that historical values and good neighbor policies are maintained without inhibiting renewable generation installations.

Getting to 2050: Craftsbury's Plan for Meeting Statewide Energy Goals

Craftsbury's Energy Plan supports Vermont's 2016 Comprehensive Energy Plan (CEP), which contains the following goals:

- Reduce total energy consumption per capita by 15% by 2025, and by more than one third by 2050.
- Meet 25% of the remaining energy need from renewable sources by 2025, 40% by 2035, and 90% by 2050.
- Achieve three renewable end-use sector goals for 2025: 10% transportation, 30% buildings, and 67% electric power.

The chart below shows what the region's total end use of ALL fuels might look like if the "90x2050" goals of the CEP were met. This scenario is based on Long-Range Energy Alternatives Planning (LEAP), an integrated modeling tool that can estimate and track consumption across all sectors, based on a set of assumptions, such as population growth. This LEAP scenario reduces demand enough to make 90% renewable supply possible. This scenario makes use of wood energy, but there is more growth in electric heating and transportation to lower total energy demand. Where the graphs show "Avoided vs. Reference," that is the portion of energy that is no longer needed because of the efficiency improvements through weatherization, equipment upgrades, and fuel switching. Despite a modest growth rate of population and economy, overall energy use declines because of efficiency and electrification. Electrification of heating and transportation has a large effect on the total demand because the electric end uses are three to four times more efficient than the combustion versions they replace.



Source: Vermont Energy Investment Corporation

Efficiency and weatherization

Energy efficiency is, generally, the most cost-effective method of saving energy and reducing the Town's carbon footprint. Therefore, it is recommended that residents pursue energy efficiency solutions first, such as home energy audits and energy efficiency retrofits, before investing in the installation of renewable energy systems. The 2016 Vermont Comprehensive Energy plan states that efficiency will ensure an affordable and stable cost of doing business, increase entrepreneurship opportunities, improve labor market conditions, drive production, and drive improvements in demand-side thermal and electric efficiency and conservation. Vermont energy committees work to help their towns meet those goals.

The Town of Craftsbury participated in the 2013 Weatherization Challenge Program sponsored by Efficiency Vermont. The goal was for 15% of all year-round homes in each VT town to be weatherized based on Energy Audit recommendations. CEC members were trained to perform walk-through layman audits to help homeowners save fuel and make their homes more comfortable in winter. About 15 audits have been done in Craftsbury, which contributed to Craftsbury residents weatherizing 13% of our homes. Town funding was appropriated at the 2015 Town Meeting for the assessment and weatherization of the Craftsbury Elementary School building.

Below are targets for reducing heat energy demand (through weatherization), which is an absolutely essential component of meeting 90x50 goals. Increased fuel switching (from non-renewables to renewables) will not compensate for lower weatherization targets. On the other hand, moreaggressive weatherization strategies will reduce fuel switching targets.

These projections estimate a 6% increase in number of housing units/commercial establishments over each period. Weatherization projects are assumed to achieve an average of 25% reduction in MMBTUs for residential units and 20% for commercial establishments, although some weatherization projects can achieve

deeper savings. For Craftsbury, that would represent an average reduction of 26 MMBTUs per residence and 138 MMBTUs per commercial establishment.

While electricity currently accounts for the smallest share of overall use, its use will increase exponentially. For non-thermal uses alone, it could reach 3,000 MWh by 2050. Therefore, improving electrical efficiency will be vital.

A number of efficiency improvements have already been achieved in Craftsbury through electrical upgrades – hardwiring, fixtures, etc. This assumption is based on the projected number of households through 2050 and multiplies by 1.5 (generally, there are more utility customers than households) and assumes an average savings of 400 kWh.

The projected number of vehicles in the area is estimated to be roughly commensurate with projections of population and households. Estimates assume a gradual increase in EV fuel economy from 3 miles per kwh to 4 miles per kwh by 2050.

Table 8.10: Craftsbury Weatherization Targets, Electrical Upgrades, and Fuel Switching Targets

	2025	2035	2050
Estimated number of households	483	512	543
% of households to be weatherized	29%	48%	48%
# of households to be weatherized	141	245	262
Estimated number of commercial establishments	30	31	33
% of commercial establishments to be weatherized	6%	10%	18%
# of commercial establishments to be weatherized	2	3	6
Estimated number of customers	725	769	815
% of customers to upgrade electrical equipment	29%	42%	58%
# of customers to upgrade electrical equipment	207	325	476
New Efficient Wood Heat Systems in Residences	247	203	147
% of households with Wood Heat Systems	51%	40%	27%
New Efficient Wood Heat Systems in Commercial Establishments	5	7	10
New Efficient Wood Heat Systems in Commercial Establishments	5	7	10
% commercial establishments with wood heat systems	18%	22%	29%
Estimated commercial establishments with Heat Pumps	2	4	6
Projected number of light-duty vehicles in the area, by year	1,019	1,147	1,290
Number of vehicles powered by electricity	121	386	830
% of vehicles powered by electricity	12%	34%	64%
Number of vehicles using bio-fuel blends	821	565	99
% of vehicles using bio-fuel blends	81%	49%	8%

Craftsbury's Future Energy Portfolio

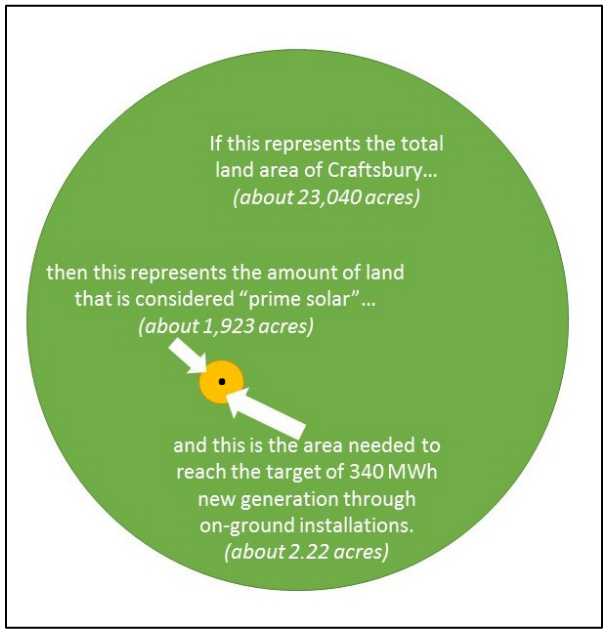
Craftsbury's new net generation in support of 2050 goals is 340 MWh. This is based on Craftsbury's share of the regional population. Existing generation in Craftsbury does not count toward this target, but the region already has a low net generation target, mainly because of the industrial wind production in Sheffield and Lowell. The region's net generation target for new solar ranges from 246 MW to 377 MW. There is no regional net generation target for wind.

Craftsbury has sufficient land for the

orderly development of solar, according to NVDA's mapping analysis. These maps, which are to be used to gauge overall siting potential rather than a definitive siting tool, identify known constraints, as well as potential constraints:

- **Known** constraints are areas not likely to be developed for renewable energy because they contain one or more of the following: vernal pools; river corridors; FEMA floodways; significant natural communities; rare, threatened and endangered species, national wilderness areas, wetlands (Class 1 and Class 2).
- **Possible** constraints are areas that would likely require mitigation because they contain the one or more of the following: agricultural soils; special flood hazard areas (outside of the floodway); protected (conserved) lands; deer wintering areas; Act 250 mitigated agricultural soils; hydric soils, and highest priority forest blocks.

Solar



Using a conservative estimate of prime solar acreage alone (i.e. no constraints), Craftsbury has 1,923 acres with potential for development. About eight acres are required to produce 1 MW of solar power. Obviously, not every prime acre in Craftsbury is actually available. Property owners may not be interested in leasing their land, interconnection costs may be too high in some areas, and certain sites may still be unsuitable due to neighbor objections or other factors. This plan therefore assumes a more conservative estimate of 1 MW for every 60 acres.

The potential of rooftop solar should not be overlooked. While not every rooftop is viable, a conservative estimate of one out of every ten residential structures could produce considerable output by 2050. This estimate includes seasonal residences as well, since seasonal use in Craftsbury tends to be year-round. There is also some limited opportunity for rooftop commercial, which might include barns and other outdoor structures.

Table 8.12: Craftsbury Solar Potential

	Total MW	Total MWh Output
Residential Rooftop	.3	373
Commercial Rooftop	.04	49.1
Ground Mounted	32.05	39,3118.0
Total Solar	32.39	393,540.1

Wind

Craftsbury has few high elevation areas conducive to speeds needed for commercial wind. There are, however, some opportunities for residential- and farm-scale wind, in addition to what already exists. Our analysis assumes about 9.5 kW (typical of a small-scale turbine) for every 25 acres of 335 acres of prime wind areas. As with solar not every acre will actually be able to accommodate residential-scale wind. With this more conservative scenario, we estimate a potential output of .13MW, with a total output of 223 MWh.

Methane

Methane, a common gas found in the environment, can be burned to produce electricity. Large amounts of methane are produced through the anaerobic digestion of manure, agricultural wastes, and other organic wastes. In agricultural practices, the procedure also destroys harmful pathogens, reduces water quality impacts, reduces manure odors, and provides a new source of income to local farmers. The solids left over from the anaerobic digestion process can also be used as animal bedding. Excess heat can be used to heat greenhouses. Currently there are three farms in Orleans County with methane digesters. Collectively, their permitted capacity represents about 675 kW. Nevertheless, onsite systems are costly with multi-year payback periods and only feasible for very large farms. Access to three-phase power is necessary. It is possible that by aligning financial and technical resources, Craftsbury could host one methane generator.

Hydro

Craftsbury has no areas identified as suitable for hydro, and with existing licensing regulations, it is highly unlikely that the town could establish a hydro facility of any scale. Nevertheless, hydro should be considered an important part of Craftsbury's energy portfolio. While it is understood that hydro power facilities can also alter the ecosystem of a waterway, causing stress to fish populations and riparian-habitat wildlife, the existing FERC relicensing requirements may reduce or even eliminate some of the in-state hydro facilities that serve our region and utilities. Overall, hydro- power is considered a long-term resource and is relatively secure and stable. Many of the facilities in the region were built in the early 1900s and have required significant upgrades over the years. At this time, facilities in other regions of the state are facing some significant challenges in relicensing. The Town of Craftsbury supports region-wide efforts to maintain existing generation infrastructure, upgrade aging infrastructure, and improve safety standards.

Opportunities and Challenges

Land Use and Development

Compact, mixed-use development can reduce residents' reliance on the automobile, vehicle miles traveled, and inherent system energy costs — including energy costs associated with maintaining roads and related infrastructure. Targeting economic and residential growth within areas intended for more concentrated development allows people to walk to their destinations and makes public transit services between growth centers more economically feasible. At the site level, a south facing building orientation and landscaping can effectively reduce energy demand. Clustering and other energy efficient development patterns should be encouraged. While smart growth principals are worthy goals for Craftsbury, they remain in many ways aspirational, with a number of land and socio-political constraints. There are limited opportunities for development in Craftsbury's existing village centers, which are characterized by poor soils without access to off-site waste water systems. An analysis of long-term development trends in Craftbury has shown that market demands favor scattered and dispersed development. While Craftsbury has been wary of land use regulations to drive development back to the centers, some measures have been taken to provide incentives for reinvestment. The town has sought and obtained Village Center Designation for Craftsbury Village, Craftsbury Common, and East Craftsbury.

Transmission Constraints and Electricity Demand

The central-west and northwestern area of the Northeast Kingdom (which includes Craftsbury) is served by a severely constrained transmission line, which already carries the significant outputs from Kingdom Community Wind and the Sheffield Wind projects. Both wind generations sites have faced transmission

challenges and shut-downs, leading to financial losses to the developers and utilities.

While the transmission line upgrade is a short-term fix, it is a costly one. Constraints are further exacerbated by the reality that the area generates far more power than it consumes, leading utilities to oppose a number of recently proposed renewable projects in the area. Ironically, our area has been highly efficient in reducing electric demand through a variety of efficiency measures. While this is in principal, good for the community and the environment, the reduced demand for electricity further hampers the financially viable development of new renewable generation.

While the short-term solution is the upgrade of the transmission line, the long-range solution is **beneficial electrification**, the replacement of traditional fossil-fuel sources with electricity. Fuel switching, as in the installation of heat pumps and the increased use of EVs, is critical to the reduction of greenhouse gasses and attaining energy independence.

To meet the new renewable energy portfolio requirements, utility companies and energy service providers provide incentives for fuel switching to build demand for electricity. Vermont Electric Coop, for example, is offering financial incentives to individuals who purchase EVs. Additionally, its Clean Air Program offers customized service to underserved and off-grid customers. There is a significant opportunity for Craftsbury to identify its electrification needs as incentives programs are refined and implemented.

Siting Standards

The purpose of municipal energy policies is to promote the development of renewable energy resources and energy facilities in the Town, while limiting the adverse impacts of such development on public health, safety and welfare, the Town's historic and planned pattern of development, environmentally sensitive areas, and our most highly-valued natural, cultural, and scenic resources - consistent with related development, resource protection, and land conservation policies in this plan. Additionally, all new facilities and proposed system upgrades must be consistent with the Vermont Comprehensive Energy Plan, the Vermont Long-Range Transmission Plan, and the utilities' Integrated Resource Plans (IRPs). These policies are to be considered in undertaking municipal energy projects and programs and in the review of new or upgraded energy facilities and systems by the Town and the PUC under 30 V.S.A. § 248.

General Standards

1. **In-place upgrades of existing facilities, including existing transmission lines, distribution lines, and substations as needed to serve the town and region:** To the extent physically and functionally feasible, existing utility systems, including transmission lines, distribution lines, and substations, should be upgraded or expanded on site or within existing utility corridors before new facilities or corridors are considered.
2. Energy facility development must benefit the Town of Craftsbury and its adjacent communities (residents and businesses). The benefit must be in direct relation and proportion to the documented impacts of the proposed development on community facilities, services, economy and resources.
3. The region has recently experienced a sharp increase in the number of renewable energy applications which will worsen already congested transmission, particularly in the Sheffield- Highgate Export Interface (SHEI), where several existing generators are frequently curtailed by the ISO. While the Town of Craftsbury encourages appropriately scaled renewable energy development, we have a commitment to ensure that such development is sustainable and feasible and does not merely substitute one renewable resource with another. The Town of Craftsbury therefore supports energy development that will not exacerbate curtailment at issue within the SHEI. It is unlikely that any

single solution will solve congestion within the SHEI and, as such, it is anticipated that incremental progress will be achieved as partial solutions are implemented. In the meantime, the Town of Craftsbury will support projects that are consistent with the land use and conservation measures in this plan.

4. Additionally, we will expect project developers to work with utilities and other stakeholders to explore innovative strategies that shift generation away from the hours when generation exceeds load within the SHEI area or otherwise avoids exacerbating congestion on the grid. An example of such a project would pair a battery with a solar facility to control when the project's power is exported to the grid.
5. The height, setbacks, and access of renewable energy projects must be carefully considered with the goal to minimize impact to the viewshed and neighboring landowners.
6. Siting should involve the Agency of Natural Resources at the start of the project to avoid problems with wetlands and protected and threatened species. Siting must avoid hazard area such as floodplains and steep slopes, conservation areas where there will be an adverse impact on surface waters, primary agricultural land as mapped by the USDA Natural Resource Conservation Service for the state and significant wildlife habitat areas. Impacts to forestland should be minimized by using existing roads and locating along existing tree lines to avoid forest fragmentation.

Wind Generation Siting Standards

- Craftsbury has limited potential for wind energy development, and the municipality lacks areas with elevations sufficient to support utility scale wind development (100KW or greater). Moreover, the Town of Craftsbury supports the policy of the NVDA's regional plan, which states that upland areas of 2,000 ft or more, headwaters, forest coverage of site class 1, 2, or 3, priority forest habitat blocks, and state natural areas and fragile areas are unsuitable for utility-scale energy development. The Town has consistently objected to and testified against such development in Lowell. Expansion of such development, or new development on adjacent ridgelines will exacerbate an already profoundly negative impact on the natural profile of the mountain, which forms an iconic backdrop visible from many points in Craftsbury. Because no locations in Craftsbury have suitable wind resource, infrastructure availability, or areas free from significant environmental constraints, no utility-scale wind energy facilities should be located in town. Smaller scale wind projects, including residential-scale turbines (generally less than 10 kW) may be appropriate as long as noise from the turbines does not adversely affect neighboring residential properties.
- **Decommissioning**: All facility certificates shall specify conditions for system decommissioning, including required sureties (bonds) for facility removal and site restoration to a safe, useful, and environmentally stable condition. All materials and structures, including foundations, pads, and accessory structures, must be removed from the site and safely disposed of in accordance with regulations and best practices current at the time of decommissioning.

Solar Siting Standards

- The Town of Craftsbury encourages solar energy development, of any scale, on building rooftops.
- The Town strongly supports the development of small-scale (150 kW capacity or less) electricity generation from solar energy at homes, businesses, schools, and other institutions, as well as community solar projects, which may benefit people who might not otherwise be able to participate in a clean energy project. (For purposes of this plan, "community solar projects" are group net

metered installations between 15 kW and 150kW in capacity, with shares in the facility sold to the site owner, neighbors, community members, nonprofits organizations, and local businesses.)

- The Town strongly supports the integration of on-farm solar generation into active agricultural uses that can help farms reduce expense, generate extra income, and remain viable. The town supports siting solar on existing farm structures, or in a manner that supports grazing, the establishment of pollinator crops, or the creation of buffers between organic and non-organic production areas.

For all new ground-mounted solar facilities with a capacity of 15 kW or greater:

- All new solar facilities must be evaluated for consistency with community and regional development objectives and shall avoid undue adverse impacts to significant cultural, natural, scenic, and aesthetic resources identified in the Craftsbury Town Plan. When evaluating the impacts of a proposed solar facility under the criteria set forth in this Town Plan, the cumulative impact of existing solar facilities, approved pending solar facilities, and the proposed solar facility itself shall be considered. It is explicitly understood that a proposed solar facility which by itself may not have an adverse impact, may be deemed to have an adverse impact when considered in light of the cumulative impacts of the proposed solar facility and existing and pending facilities.
- All new solar facilities shall be sited in locations that do not adversely impact the community's traditional and planned patterns of growth, of compact (village) centers surrounded by a rural countryside, including working farms and forest land. Solar facilities shall, therefore, not be sited in locations that adversely impact scenic views, roads, or other scenic areas identified in this plan, nor shall solar facilities be sited in locations that adversely impact any: views across open fields, especially when those fields form an important foreground; prominent ridgelines or hillsides that can be seen from many public vantage points and thus form a natural backdrop for many landscapes; historic buildings and districts and gateways to historic districts; and, scenes that include important contrasting elements such as water.
- The impact on prime and statewide agricultural soils currently in production shall be minimized.
- The impact on productive forested lands -- either enrolled in Current Use or with a site class of 1, 2, or 3 -- shall be minimized.
- **Screening**: All new solar facilities shall be sited and screened so that visual impacts of such facilities, including but not limited to, solar panels, transformers, utility poles, fencing, etc., are mitigated as viewed from public streets and thoroughfares, scenic viewpoints, and/or adjacent properties. Screening shall provide a year-round visual screen and shall occur on property owned or controlled by the owner and/or operator of the solar facility. A diversity of materials shall be used to create a diverse, naturalized screen rather than a large expanse of uninterrupted, uniform material. Materials may include: trees and shrubs indigenous to the area, and berms, or a combination thereof, to achieve the objective of screening the site. All screening shall be maintained to optimize screening at all times by the owner and/or operator of the solar facility until the solar facility is decommissioned and removed. Plantings that die or become diseased shall be replaced within six months of dying or becoming diseased.

- **Preferred Areas**: The following areas are specifically identified as preferred areas for solar facilities, as they are most likely to meet the siting and screening requirements:
  - Roof-mounted systems;
  - Systems located in proximity to existing commercial or industrial buildings;

- Proximity to existing hedgerows or other topographical features that naturally screen the entire proposed array;
- Former brownfields;
- Facilities that are sited in disturbed areas, such as gravel pits, closed landfills, or former quarries;
- Working farms, where more than 50% of the energy generated by the solar development is used by the farm.

- Prohibited (Exclusion) Areas: In addition to those areas that do not meet the siting and screening requirements set forth above, development of solar generating facilities shall be excluded from (prohibited within), and shall not be supported by the Town, in the following locations:
  - Floodways shown on Flood Insurance Rate Maps (FIRMs);
  - Fluvial erosion hazard areas (river corridors);
  - Class I or II wetlands;
  - A location that would significantly diminish the economic viability or potential economic viability of the town's working landscape, including productive forest land and primary agricultural soils (as defined in Act 250 and as mapped by the U.S. Natural Resource Conservation Service);
  - Rare, threatened, or endangered species habitat or communities as mapped or identified through site investigation, and core habitat areas, migratory routes and travel corridors;
  - Significant Ridgelines: Ridgelines are defined as the line formed by the meeting of the
  - tops of sloping surfaces of land. Significant ridgelines are ridgelines which, in general, are highly visible and dominate the landscape;
  - Steep slopes (>25%);
  - Surface waters and riparian buffer areas (except for stream crossings);
  - Topography that causes a facility to be prominently visible against the skyline from public and private vantage points such as roads, homes, and neighborhoods.
- Solar energy installations, trackers and roof mounts, should be sited in such a way to prevent adverse impacts to historical or cultural resources, including state or federal designated historic districts, sites and structures, and locally significant cultural resources identified in the Craftsbury Town plan. Prohibited impacts to historical and cultural resources include:
  - Removal or demolition;
  - Physical or structural damage,
  - Significant visual intrusion, or threat to the use;
  - Significant intrusion in a rural historic district or historic landscape with a high degree of integrity;
  - Significant visual intrusion into a hillside that serves as a backdrop to a historic site or structure;
  - Creation of a focal point that would disrupt or distract from elements of a historic landscape;
  - Impairment of a vista or viewshed from a historic resource that is a significantcomponent of its historic character and history of use;

- Visually overwhelming a historic setting, such as by being dramatically out of scale;
- Isolating a historic resource from its historic setting, or introducing incongruous orincompatible uses, or new visual, audible or atmospheric elements.

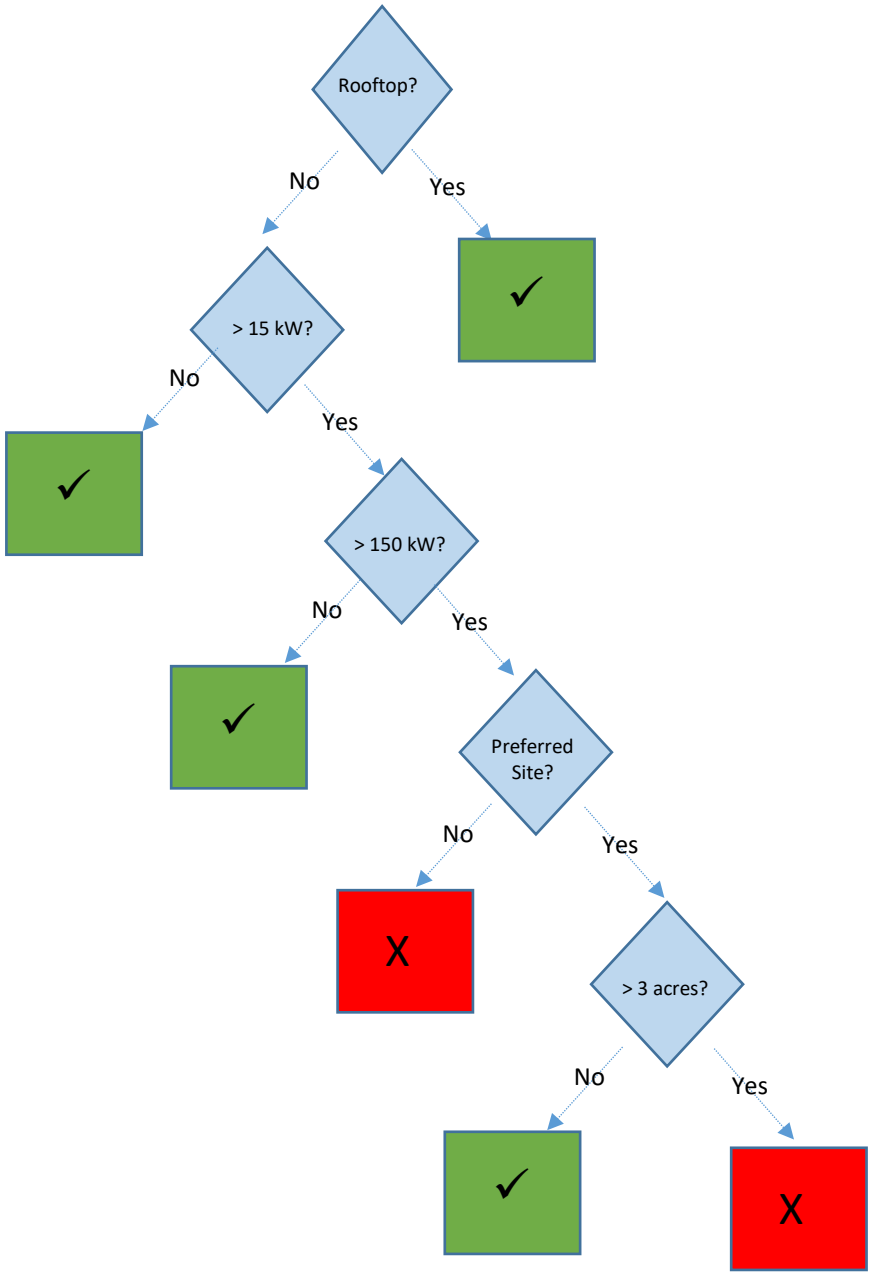
- **Mass and Scale:** Except for projects located on preferred sites, solar facilities larger than three acres, individually or cumulatively, cannot be adequately screened or mitigated to blendinto the municipality's landscape and are, therefore, explicitly prohibited.
- **Decommissioning**: All facility certificates shall specify conditions for system decommissioning, including required sureties (bonds) for facility removal and site restorationto a safe, useful, and environmentally stable condition. All materials and structures, includingfoundations, pads, and accessory structures, must be removed from the site and safely disposed of in accordance with regulations and best practices current at the time of decommissioning.

For all new solar facilities with a capacity of 150 kW or greater:

- Only sites identified as Preferred solar sites on the Solar Resource Map or Preferred Areas as identified above may be developed for solar generation facilities with a capacity of more than 150 kW. All siting and screening requirements as identified above must be met.

Solar Siting Decision Flow Chart:

Note: all solar siting must meet screening and general siting standards.



Energy Planning

The Craftsbury Energy Committee recommends continued efforts to increase efficiency in energy use, to increase the proportion of energy needs met by renewables while improving our general standard of living in terms of cost, comfort, and convenience. In the absence of specific zoning or planning mandates, individuals have been responsible for making improvements in energy use and generation. Residents have shown a strong interest in such efforts and have a laudable record of investing in home improvements and small power generating facilities.

GOALS:

- Build robust community awareness about the available resources and ongoing activities in energy efficiency, both privately and publicly, to encourage further participation.
- Intensify efforts to promote energy conservation and weatherization activities at the household and Town levels.

Action Steps:

- Publicize successful examples of efficiency, weatherization, and renewable energy production to promote change.
- Make information available about lending programs that can improve the efficiency of older housing stock, such as Efficiency Vermont's "Heat Saver" loan and USDA Direct and Guaranteed Loan Programs, for single homes and multi-family homes.
- Collect data on current energy usage in Town Buildings.
- Complete energy audits of Town Building and carry out the recommendations.
- Collect data on energy use after implementation of audit recommendations.
- Publicize the results of energy savings from the Town audit, weatherization, and energy savings.
- Publicize the results of weatherization and energy efficiency changes in the school buildings.
- Publicize success stories from Town residents that have installed renewable systems.
- Continue the Town funding of a bulk purchase of LED light bulbs to sell to Craftsbury residents.
- Continue public education and publicize success stories on weatherization, heating systems and renewable energy projects.
- Provide on-going education and identification of professional resources (See Appendix A, Internet Resources on Energy for Craftsbury Residents.
- Establish town policies that encourage good practices, e.g. not taxing renewables or energy efficiency home improvements.
- Develop more complete baseline data on energy usage including electricity, heating energy, and fuel for road operations in order to identify ways to make additional improvements such as more

generation of power, conservation, building improvements, and operational practices. The Energy Committee will continue to raise awareness by gathering information, using tools such as the Vermont Community Energy Dashboard.

- Promote pedestrian friendly, bike friendly systems to encourage less motor vehicle driving.
- Reduce vehicle idling in private and public spaces.
- Ensure fire fighters have training for solar installations.
- Promote net-zero and near-net zero development, such as "passive design" principles, and Vermod.
- Work with the Northeast Kingdom food leadership coalition and others to leverage resources for food producers (such as Rural Energy for America Grants).

9: Education

Craftsbury is home to a K-12 school, a public preschool, and Sterling College, a four year institution. Craftsbury Academy, which serves students in grades 9-12, is one of the oldest continuous high schools in the state of Vermont, established originally as a private academy in 1829 and converted to a public high school around 1920.

According to the Beers Atlas, in 1878 there were 15 grammar school districts in the town of Craftsbury. By the 1950s those districts had been consolidated to two schools located in the village and on the Common, serving grades 1-12. Since the 1960s there has been pressure at various times from the Department of Education to consolidate or close small schools due to the cost of education, its effect on property taxes, and a statewide decline in student numbers. The town of Craftsbury has been consistent in its support of the K-12 school if one considers voter support for the school budget which regularly passes by significant margins. However, there is continued discussion among community members about the future of the school, particularly with the passage of Act 46 in 2015 by the Vermont legislature. Craftsbury's student numbers are increasing and in 2015 the property taxes decreased by 3%, both of which are exceptions to the current trend in the state. In 2010, the student population of Craftsbury schools was 160. During the 2014-15 school year there were 170 students and it appears that, as of this writing, this trend of increasing numbers is likely to continue. The town has much to be proud of in its students and their outcomes. In 2014, Craftsbury 11th grade students had the highest average NECAP scores in the state and our students are meeting or exceeding state standards, but standardized tests are just one measure of success. A majority of students participate in music, athletics, and/or other after school activities.

Through generous financial support and work of the Craftsbury Academy Trustees, the alumni, community members and a strong community school support network, the institution continues to offer exemplary educational opportunities to its students, along with access to the Green Mountain Technical Center, courses at Sterling College as well as Community College of Vermont and Johnson State College through the dual enrollment program.

In 2010 Craftsbury completed a major renovation of the Academy building and gymnasium, which has led to significant energy savings and efficiency. Currently there is consideration about the future of the

Recent Accomplishments:

6% increase in Craftsbury School enrollment since 2010.

3% drop in property taxes in 2015.

Craftsbury Academy gymnasium renovation complete.

Juniors had highest average NECAP average scores in Vermont in 2014.

Rian Fried Center for Sustainable Agriculture and Food Systems established in 2013.

Challenges and Opportunities:

Industrial Arts building needs repairs and upgrades to heating system.

Act 46 increases pressure to consolidate school districts.

Community visit identified need for stronger connection between Craftsbury Schools, the College, and the Outdoor Center.

Relevant Statewide Planning Goal:

To broaden access to educational and vocational training opportunities sufficient to ensure the full realization of the abilities of all Vermonters.

Industrial Arts building, which is home to the Art department and wood shop. It is in need of repair and is comparatively costly to heat.

In 2014, the state of Vermont passed a law requiring that all towns offer free pre-school access to four-year old children. East Hill Preschool has been housed in the East Craftsbury church for many years, offering preschool to 3 and 4-year old children. At the beginning of the 2015-2016 school year, the school moved to a new location in the Craftsbury Elementary School.

I feel so comfortable having the kids get on the bus in the morning to the elementary school, and love that I can trust they are in good hands with the teachers. They are served decent food, and appreciate the sense of community they are learning.

--- Craftsbury Community Survey

Portrait of a Craftsbury Graduate

The Craftsbury School Board developed the **Portrait of the Craftsbury Graduate** in 2014. Overarching goals of the Portrait are reflected in this plan. The comprehensive Portrait, which has been shared throughout the community, appears in Appendix A. All are strongly encouraged to evaluate this comprehensive statement and provide input on its appropriateness as an "ends" statement for Craftsbury schools.

Sterling College

On the other end of the educational spectrum, Sterling College has expanded its experiential education courses and now offers three full semesters of instruction annually—truly a year-round academic institution. One of only seven federally funded work-learning programs in the country, students are attracted to its offerings in sustainable agricultural, conservation ecology, outdoor education and leadership, diverse internship opportunities, and global field study programs. The students offer mentoring in the Craftsbury schools and have organized programs of service to a variety of area businesses and nonprofit organizations.

Sterling College announced in October, 2013 that it was partnering with community leaders and other non-profit organizations to create a fund to support the establishment of the Rian Fried Center for Sustainable Agriculture and Food Systems. The Sterling Board of Trustees named its Sustainable Agriculture & Food Systems program in honor of Rian Fried, in recognition of his lifetime commitment to environmental and social justice, and for his vision for Sterling College and the Northeast Kingdom of Vermont. The College has embarked on a major capital investment in the infrastructure of the sustainable agriculture program, including new and improved farm and instructional facilities. Sterling values its location in Craftsbury Common as a defining characteristic and considers its surroundings essential to the educational experience it provides. Along with the Academy and the Outdoor Center, Sterling is a critical part of the public and not-for-profit landscape that drive the economy and community wellbeing. The College therefore takes its civic duty to the town and to the Northeast Kingdom very seriously. The College provides an office for the Orleans County Forester. It also hosts talks by renowned authors, shows films in partnership with the Art House; provides space for information sessions and meetings, and serves as a venue for local performances. Its recently-launched School of the New American Farmstead will bring more opportunities for the town to be involved with the academic life of the College.

Craftsbury Community Care Center

Craftsbury Community Care Center offers an extensive range of programming activities that contribute to the continuum of lifelong education and enrichment opportunities in town. The events range from mind

and body exercise programs to movies, musical programs, arts and craft sessions to visits from young students in the area.

A Stronger Partnership with the Community

The Community Visit identified the establishment of a stronger partnership between the schools and the community as a top priority for future action. Academy students and community members expressed a desire to better connect the Craftsbury schools with the community, the Outdoor Center, and Sterling College. A task force has been formed to develop community-wide activities and programming, building internships and service opportunities, collaborative learning opportunities with the Outdoor Center and the College, and opportunities to raise funds for this effort.

GOALS:

- The town will continue to support and encourage opportunities for educational, cultural and artistic opportunities for citizens of all ages and abilities.
- Support the continued existence of the Craftsbury Schools, and continue to sustain a vibrant school system that is the center of educational excellence and expertise..
- Prepare the Craftsbury graduate for college or career, equipped with the following knowledge, skills and dispositions: Knowledge and critical thinking skills; Self-direction; Communications and Information Processing; Leadership and Collaboration; Citizenship; and Personal Wellness. (See Appendix A, Portrait of a Craftsbury Graduate.)
- Preschool will be available to every child.
- There will be a positive connection between Sterling College, the Outdoor Center, and the Schools.
- Craftsbury residents will be active participants in addressing the critical issues of the day in public events offered by Sterling college, Craftsbury Public Library, the Art House, and others.

Action Steps:

- Study the continuous availability of daycare facilities.
- Continue dialog with Craftsbury Academy and Sterling College regarding the needed repairs of the Industrial Arts building. Explore the viability of funding sources and tax credits for this project.
- Support the Schools and the Community Task Force in their work to further connect the school to the community.
- Develop an inventory of skill sets in the Community.

10. Housing

82 percent of respondents to the Craftsbury Community Survey live in single-family homes. This figure is fairly consistent with most recent American Community Survey five-year estimates: One-unit detached dwellings account for about 86% of total housing stock in Craftsbury. Also according to ACS estimates, mobile homes only account for about 6%, which is lower than the county wide share of housing stock (about 10%.)

Just under five percent of Craftsbury Community Survey respondents live in an apartment. This figure is also roughly in line with recent ACS estimates, which show that two-, three- and four-unit dwellings account for less than 5% of the town's housing stock. Since ACS estimates show that about 17% of all occupied units are renter-occupied, renters in Craftsbury are more likely to live in single-family homes. There has been an increase in the number of apartment housing units in Craftsbury that are available for rent in the past 5 years, including several units that are rented primarily on a short-term basis. Although there are currently enough apartments to meet rental demand, there is a need for more single-family homes in the long-term rental market.

Recent Changes:

Increase in apartment housing units over the past five years.

Challenges and Opportunities:

Dispersed residential development patterns away from villages.

Lack of affordable housing opportunities for young people and families.

Relevant Statewide Planning Goal:

To ensure the availability of safe and affordable housing for all Vermonters.

Housing stock in Craftsbury is slightly older than the county-wide average. Most recent ACS estimates put pre-1940 stock at about 42% (compared to just about a third in Orleans County). Only about a third of respondents to the Craftsbury Community Survey indicated that their homes predated 1940; however, several respondents noted that their homes were "very old," even though they were unsure of the exact age.

Development Patterns

A long-held statewide planning goal has been to plan development so as to "maintain the historic settlement pattern of compact village and urban centers separated by rural countryside." This means that "intensive residential development" should be encouraged in established community centers, and located convenient to employment and commercial centers, and coordinated with the provision of necessary public facilities and utilities.

These goals bear little resemblance to Craftsbury's residential development patterns, which are not intensive, rather incremental and largely dispersed. A recent NVDA GIS analysis shows that over the past decade (2005-2014), more than 95% of residential development in the Northeast Kingdom occurred outside of development centers (areas characterized by compact settlement patterns and clusters of mixed uses). Craftsbury is no exception to this rule: There were 52 residential structures identified during that period, and none were in the Common and the Village areas. There are development constraints, such as hydric soils, in and around the Common. Market preferences, however, are a major driving force. While "neighborliness" is a core value in Craftsbury, it does not necessarily entail living in close quarters. Among full-time Craftsbury residents responding to the Craftsbury Community Survey 76% appreciate the sense of community, but

73% also value "living close to the land" and enjoying the rural beauty of the community. These values may be reflected in residential development patterns of larger lots in outlying areas.

Some residential development is occurring on along Griggs Road and Coburn Hill Road. Neither road is currently maintained by the town, and additional development in those areas may create a demand for town services. Three wastewater permits were recently issued for new houses in this area, although one was to replace a house destroyed by fire.

Home ownership

According to the 2010 Census, there are 408 owner occupied homes in Craftsbury, and more than half (229) are mortgaged. About 44% of owner-occupied homes are owned free and clear. This rate is rather high for Orleans County and is second only to neighboring Greensboro. A possible explanation for this higher-than-average rate is tenure: About 44% of full-time residents responding to the Craftsbury Community Survey indicated that they had lived in Craftsbury for at least 20 years.

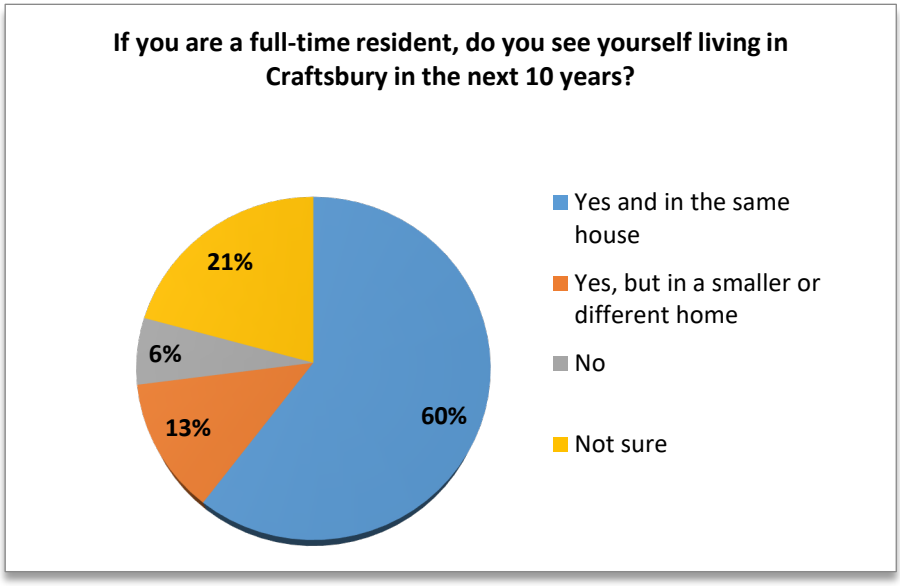
The 2010 Census shows an increase in both owner-occupied, and renter-occupied housing units in Craftsbury over the previous decennial Census. However, owner-occupied units in Craftsbury now account for a smaller share of all occupied housing units. The difference appears to be offset by a larger share of renter-occupied units. (See Appendix A, Occupied Housing Units in Craftsbury and Surrounding Towns, 2000-2010.)

Vacant and Seasonal Housing Units

The majority of vacant housing units identified on the US Census are vacation homes reserved for "seasonal, recreational or occasional use." Craftsbury saw a net loss in vacation homes over the previous decennial Census, and the loss may be attributed to conversion or redevelopment of seasonal properties. (See Appendix A, Vacant and Seasonal Homes, 2000-2010.) Interestingly, 17 of part-time residents responding to the Craftsbury Community Survey indicated that they were considering a permanent move to Craftsbury over the next ten years.

Demographic Changes in Craftsbury

Vermont has an aging demographic, and population projections for the Northeast Kingdom indicate a decrease in every age group under 60 by 2030, accompanied by an increase in every age group over 60. While this demographic shift could impact future housing demand for Kingdom residents who wish to age in place, most full-time residents responding to the Craftsbury Community Survey expect to remain in Craftsbury in the next ten years and live in the same house.

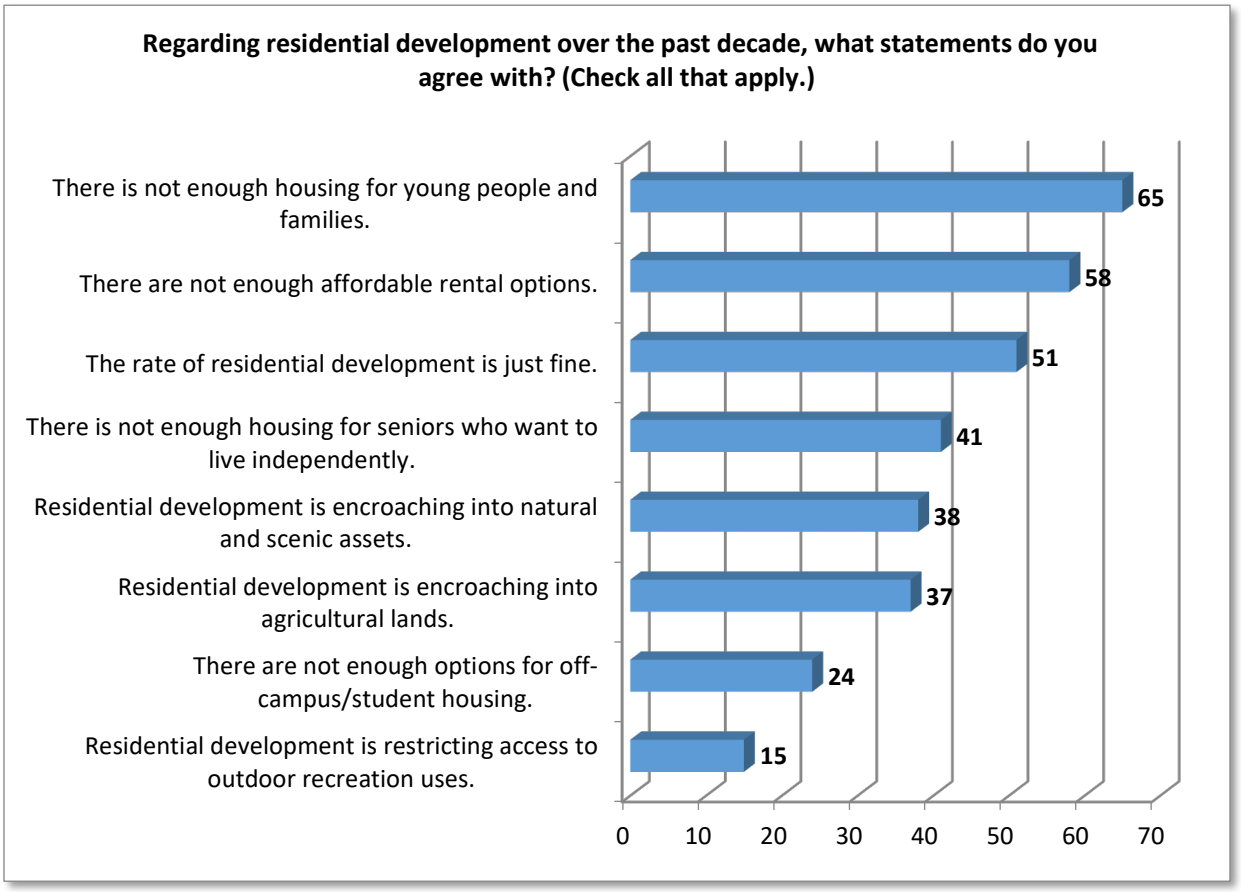


Craftsbury's population shift, however, may be running counter to this regional trend. The town has seen an influx of young families with children in recent years, as evidenced by a stable school population and a modest year-to-year natural population increase.

Finding housing for these young families was a concern among respondents to the Craftsbury Community Survey (See Survey Snapshot below.) Affordable and efficient housing was also identified as a concern by participants in the Community Visit. While the town is growing and attracting young families, the lack of affordable housing opportunities remains a barrier for many. The Visit process recommended forming a task force to connect developers in the region to design and build affordable and efficient housing to attract young families to town. The task force force could also explore co-housing opportunities and the potential of a new senior housing development. Although this affordable housing initiative was ultimately not selected as a top priority for implementation, this idea merits additional consideration.

Survey Snapshot

While 40% of all respondents were satisfied with the rate of residential development, 44% were concerned about finding housing options for young people and families. (There is some overlap – 20 of the respondents who were satisfied with the rate of residential development also expressed concern about housing for young people and families.)



Affordability

A household's total housing costs should be 30% or less of the household income in order to be considered affordable. By statutory definition of "affordable," housing costs for homeowners include principal, interest, taxes, insurance, and association fees. For renters, costs include rent, utilities, and association fees.

A significant majority (69 percent) of survey respondents self report that taxes are the primary cost driver of their housing. Interestingly, only 22 % of respondents pointed to their mortgage payment as a primary cost driver, less than the 24% of respondents for whom heating is the primary driver.

While 74% of all survey respondents found their housing costs to be either "affordable" or "somewhat affordable," those figures change when considering the 13 respondents who rent their housing in Craftsbury: five considered their housing costs to be "barely affordable." While this is a small sampling, most recent ACS estimates seems to support their concerns: Cost of rental housing is more likely to exceed 30% of household income. (See Appendix A, Housing Units that Exceed 30% of Household Income.)

Young families in Craftsbury – especially those with young children – may be struggling to find housing because their incomes are less likely to allow them to break out of the rental cycle and become homeowners. According to most recent ACS estimates, just under 6% of all families in Craftsbury had incomes that fell below the poverty level in the past year. However, 36% of all families with children under the age of 5 were living below the poverty line.

The young and their children are the future. Craftsbury needs them and [we] must make it possible for them to live here.

--Craftsbury Community Survey

The cost of new housing construction is also a barrier for young families. Materials are most expensive in the region, and construction costs are higher than well-developed or suburban areas.

Alternative Housing

Affordability of housing remains a concern in Craftsbury, and there is some openness to addressing the question of affordability via alternative housing arrangements. About 26% of respondents to the Craftsbury Community Survey are open to providing an accessory apartment in their home for others to rent, and 7% percent of respondents have already done so.

Only 2.5 % of respondents indicated that they live in a shared home, while 15% are open to providing housing via a home-share arrangement.

Resources for Home Buyers and Owners

USDA offers home purchase and repair assistance. Individuals who earn up to $32,500 a year (or for a family of four, up to $52,700) may be eligible for the USDA Direct Home Ownership program. Loan terms can be as long as 33 years, and interest rates vary from 1 percent to 3.65 percent. No down payment is required. USDA also offers home repair loans to make homes safer and more accessible (e.g. wiring, roof, energy efficiency, ramps and other accessibility modifications). Home repair loans are only 1 percent with a 20 year term. Seniors and very low-income individuals may even qualify a direct grant of up to $7,500 to improve livability. USDA grants and loans are made directly to qualifying individuals. Unfortunately, these programs are often under-used. Municipalities (and NVDA) can do more to make people aware of them.

Goals:

- Encourage housing for residents at all income levels via creative approaches that are community-based.
- Support Craftsbury's population with specific housing needs, such as the Craftsbury Community Care Center.

Action Steps

- Explore the availability of affordable housing options in Craftsbury, including the rental availability of single family homes.
- Encourage residents on creative approaches to sharing housing resources, addressing the persistent challenge of affordability.
- Encourage the maintenance of houses of historic significance using incentive based strategies, such as grants, tax credits, etc.
- Utilize social media and the Town Web site to publicize rental opportunities.
- Develop an emergency housing resource call list and flyers that are available at key public spaces.

11: Transportation

Any history of Craftsbury is also a history of local transportation. From the 18th Century origins of the Bayley-Hazen Road, to the present time, Craftsbury's people have built and used a complicated system of roads.

This highway system reached its zenith in the late 19th century, when family farms had spread out to the far reaches of the township, and the villages were at their most populous. The road system went into decline during the second quarter of this century as an immediate result of the flood of 1927. Subsequent decline in farming was brought about, at least partly, by the increase in mechanization, decrease in available labor and remoteness of some of the small holdings when bulk carriers were introduced.

Today, the evidence of these lost roads are the several dead end lanes including Farrar's Auld Lang Syne, the Lee Harvey Road, Coburn Hill, Byington's Addy Lane, the Common Hill Road, Robert Anderson's pent road and the North Coburn Hill Road. Most of the town's ancient roads will not be added to the Town Highway map unless the landowner requests it. In 2013, the Craftsbury Selectboard adopted an ordinance addressing a long-standing issue regarding the public rights of town trail (formerly part of Coburn Hill Road) past Mission New England in the northwest corner of town. Use of that trail is limited to pedestrians, horses, and non-motorized vehicles.

There is strong sentiment in the town for keeping the status quo on both new construction and current road surfaces. An inventory of uses of Craftsbury's town roads revealed that most, if not all of the Class 3 and 4 roads have year round multiple uses. A list, by no means exhaustive, of such uses, in addition to private autos, includes farm vehicles, snowmobiles, cross-country skiing, running, walking, birding, horseback riding, sledding and bicycling. The recreational aspects of our roads, both for residents and visitors, cannot be overstated. The maintenance of the surface of existing roads needs to be a continuing priority. It is recommended that as many roads as possible be maintained in their current gravel state.

This maintenance is contingent, in the long term, on the acquisition of adequate and affordable sources of quality gravel or contractual agreement with other towns. The town is currently dependent on private gravel holdings and the leasing of a stone crusher which makes usable the low quality gravel. The town has recently reserved the right to take gravel from the pit on South Craftsbury Road.

Craftsbury Roads

Class Two Mileage: 18.24

Class Three Mileage: 42.5

Class Four Mileage: 6.12

Legal Trails: 2.67

Changes and Accomplishments

Replacement of culverts

Pending replacement of Whitney Brook Bridge.

Part of Coburn Hill Road now a trail for non-motorized uses.

Challenges and Opportunities:

Complete Streets Legislation (Act 34)

Assessment of town bridges with a span of less than 20' is needed.

Full implications of Act 64 (Municipal Roads General Permit) unknown.

Relevant Statewide Planning Goal:

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

Traffic Counts and Commuting Patterns

NVDA has performed periodic traffic counts in Craftsbury as a service to help gauge traffic flow patterns for transportation planning purposes. These counts are not an exact science, as they are conducted only one week out of the year. Nevertheless they provide a general idea of traffic volumes as they evolve over the years. Current and historic traffic counts can be found in Appendix A. A decade's worth of data suggest that traffic volumes in Craftsbury are very stable and even declining in some areas.

Craftsbury is not a bedroom community to any particular region or town. According to the 2015 Community Survey nearly 60% of full-time residents work in Craftsbury. This is fairly consistent with the community survey done more than a decade ago, which also indicated that nearly 60% either worked out of their homes or in the Craftsbury area. According to Census data, those who do work out of the area are heading in disparate directions to Newport, St. Johnsbury, Morristown, Derby, Barton, Montpelier, and Lyndon. According to Census data (On the Map, 2013), the vast majority of Craftsbury workers commute less than 24 miles.

Bridges and Culverts

The town, because of its abundant streams and rivers, has many bridges to maintain. An inventory of bridges can be found in Appendix A.

There are 527 culverts in the 54 roads and loops in town. The Creek Road with 30, and the Collinsville Road with 36 have the most. Six roads have no culverts in the portions that are located in Craftsbury. There has been an effort to update many of the old culverts, with new and often larger ones installed every year. Nearly all of the culverts have been replaced.

The bridge at the bottom of Ketchum Hill by Ed Hodgdon's is closed, and that section of road has been downgraded to a legal trail. The replacement of Whitney Brook bridge – a $1.2 million project – is scheduled for 2016.

The town's bridges and culverts were devastated during the 1927 flood. Most of the wooden and virtually all of the cement bridges date from that time. It is inevitable that as these structures age they will need to be replaced. In 2005, a bridge and culvert inventory was completed and was updated in 2011. This valuable information enables state agencies to formulate more effective long-term plans for infrastructure maintenance and improvements. The state passes this benefit along to participating communities by lowering the match requirement for state highway funding programs from 80/20 to 90/10 – which can amount to considerable savings for the community.

Future Planning Considerations

Town Short Structures

VTrans is required to inspect all bridges with a span of 20 feet or longer, whether they are located on a federal-aid system or a town highway. These inspections occur once every two years, and reports of the inspections are sent to the Town.

The bridge and culvert inventory does not, however, contain information on town highway "short structures," which are bridges with a span of less than 20 feet but equal to or greater than 6 feet. These are neither inspected nor prioritized by the state, and no formal system for identifying or assessing them currently exists. In fact, short structures have not been depicted on the Town Highways Maps since 2003.

Towns are responsible for the inspection of their own short structures. In 2015, the regional planning commission began facilitating condition assessments on town short structures, classifying them as "Good," "Fair," or "Poor." Craftsbury's "shorts" will be evaluated in 2016. An index of short structures targeted for assessment can be found in Appendix A, Town Bridges Inventory. The conditions assessment will be an important tool for identifying medium- to long-range costs for maintaining, upgrading, and repairing short structures.

Municipal Roads General Permit (MRGP)

Act 64, the Clean Water Act, will require municipalities to develop and implement a customized, multi-year plan to stabilize their road drainage system, bring road drainage systems up to basic maintenance standards, and implement additional corrective measures to reduce erosion.

The plan will be based on a comprehensive inventory of the road network that identifies priority road segments that are connected to surface waters through ditches, culverts or other drainage structures. Towns will prioritize road segments and develop remediation plans and implementation schedules (capital budgets). Towns can apply for funding through the Better Back Roads Program for both the inventory and remediation process. There is technical assistance through the County Conservation District, VTrans Maintenance District, Vermont Local Roads and NVDA.

How this is implemented is yet to be determined. The Vermont Department of Environmental Conservation (DEC) will be developing a draft Municipal Road General Permit and standards by 12/16 and a final version one year later. Towns will begin applying for MRGP coverage between 2018-2021. Towns can be apprised of the coming requirements through participation in the Regional Road Foreman Group facilitated by NVDA and their VTrans District or by going to the DEC MRGP website above. Before the MRGP and standards are finalized, towns can begin identifying road erosion sites that could potentially impact waterways and begin implementing road best management practices. Towns identifying sites and implementing best management practices will be credited for this work as part of the MRGP.

Complete Streets (Act 34)

In 2011, Vermont's "Complete Streets" bill was signed into law. The legislation is based on an concept that state and town streets, roads and highways should safely accommodate all transportation system users, regardless of age, ability, or what mode of transportation they prefer – walking, biking, driving, or use of transit. The purpose of the Complete Streets bill is to ensure that the needs of all transportation system users are considered in all state and municipally managed transportation projects and project phases, including planning, development, construction, and maintenance, except in the case of projects or project components involving unpaved highways. The policy applies when new roads are being constructed, and when paved roads are being reconstructed, rehabilitated, or otherwise maintained.

Typical elements that make up a complete street include sidewalks, bicycle lanes (or wide, paved shoulders), shared-use paths, safe and accessible transit stops, and frequent and safe crossings for pedestrians, accessible pedestrian signals, and curb extensions. In rural areas examples could be the striping of shoulders on paved roads to accommodate bicyclists and others or the development of a separate multi use path. Balancing safety and convenience for all users is the common denominator.

Note that the bill is not a mandate to retrofit existing roads. There are instances when these principles would not be incorporated, such as when use by pedestrians or cyclists is prohibited by law, or when the cost of retrofit is disproportionate to the need or probable use. The full wording of Act 34 is available here (http://www.leg.state.vt.us/docs/2012/Acts/ACT034.pdf)

Parking/Pedestrian Safety

Parking space in the town is a periodic concern. Current parking problems center around Inn on the Common, Craftsbury Academy and the Town Hall.

In 2005, a Pedestrian/Vehicle Safety Committee presented a number of recommendations to the School Board. These recommendations, which are an appendix to the Town Plan, provided a starting point for addressing safety concerns at the Academy. Daytime parking in front of the school is now limited to north of the crosswalk. Handicap parking is being relocated to the north end also. This has freed the south end for deliveries and loading/unloading busses during the day. It is anticipated that this will be an ongoing process and regular evaluation of existing measures will be needed.

Additionally, a similar process has been started with the Elementary students, staff, and parents.

Pedestrian and Cycling Access

The roads in Craftsbury offer a variety of on-road and backroad cycling adventures. The Town recognizes the importance of biking in the area. The Town has resources for bike rentals and tours. In fact, a bicycle loop trail has been mapped by the "Cycling in the Kingdom" pamphlet which includes a 10.9 mile loop called the "Craftsbury Classic." A much longer on-road loop, starting from Hardwick, passes through Craftsbury along Route 14. Additionally a trail published in the Backroads Cycling Guide covers East Craftsbury Road, Ketchum Hill, Creek, and King Farm Roads, crosses the intersection of Town Highway 7 and Mill Village Road, near the Outdoor Center on Big Hosmer, and continues up Wylie Hill Road and finally leaves Craftsbury from Route 14 into Albany.

Other Infrastructure

Public Boat Launches:

Dam on Little Hosmer Pond and public access on Big Hosmer Pond.

Public Transit

Rural Community Transportation, Inc. (RCT) is the only public transit provider in the Northeast Kingdom. It also serves Lamoille County. RCT provides transportation for a fee on its fixed bus routes.

Railroad Service

Craftsbury has no rail line in the town, but is situated between the Lamoille Valley Railroad to the south and the Washington County Railroad to the northeast. The Lamoille Valley Railroad is no longer used as a working rail line and the entire length of the 96- mile rail bed (between St. Johnsbury and Swanton) is currently being converted to a four-season recreational trail managed by the VAST (snowmobile) trail system. Major portions of the trail have already opened between St. Johnsbury and Danville, and work is underway in Hardwick.

Airports:

The Morrisville-Stowe state airport serves the region's general aviation and charter needs (as well as being a center for glider rides and instruction). This is a small airport supporting charter and private aircraft only. Also the Caledonia Airport in Lyndonville and the Newport Airport are available for small-scale aviation

services. For national and international flights, this area is generally serviced by Burlington, VT, Manchester, NH and Montreal, Canada.

Goals:

- The Select Board will work to keep the Craftsbury roads safe for all users.
- Decrease the dependence of Craftsbury's residents on private automobile transportation whenever possible.
- Provide for the development and use of recreational transportation systems wherever feasible.
- Maintain a safe and passable network of roads at a cost affordable to the Town.

Action Steps:

- Parking along the road between the Academy Building and the Industrial Arts Building should continue to be discouraged during school hours.
- Consideration should be given to establishing a commuter parking area to encourage car-pooling.
- The Town should pursue options for the development of better bicycle- pedestrian lanes along the developed areas of Craftsbury
- "Share the Road" signage should be erected in order to raise awareness as roads are improved or repaired.
- A sidewalk system should continue to be investigated.
- Bikeways, walkways and scenic vistas, should such be identified through public hearings and open discussion.
- Investigate key speeding areas and strategies for slowing down traffic, such as radar speed signs.
- Ensure adequate signage for wayfinding and public safety, e.g. "Share the Road" signs on the top and bottom of the Village Hill.

12: Recreation

Craftsbury is well known beyond town borders as a special place for year-round recreation. While the town does have commercial recreational enterprises, there are also many informal, community organized, and unorganized activities, creating a unique diversity of recreational opportunities. The beautiful landscape of Craftsbury, our natural resources, and historic land use add to the recreational attraction and culture of the town.

Economic impact:

Along with creating job opportunities at the Craftsbury Outdoor Center, recreation generates revenue from visitors, which is beneficial for the general stores, bed and breakfasts, and other local businesses. For instance, the Craftsbury General Store estimates that 20% of its business is attributable to the increased traffic of non-residents coming to Craftsbury for recreational activities.

Recreation Opportunities in Town:

The Craftsbury Outdoor Center (COC) was purchased in 2008 and reorganized as a nonprofit organization. The mission of the Craftsbury Outdoor Center is to support and promote participation and excellence in lifelong sports with a special focus on rowing, nordic skiing, and running; to use and teach sustainable practices; and to protect and manage the surrounding land, lake and trails.

The COC grooms and maintains over 100km of trails in Craftsbury, Albany, and Greensboro. Trails can be used for skiing, mountain biking, running, hiking/walking, disc golf, orienteering, and wildlife observation. There is also a biathlon course. There will likely be some expansion in the coming year of both ski trails and single-track mountain bike trails.

In 2014, the COC built a new nordic center and fitness center, both of which have increased the COC's capacity to host more ski, bike, and running races as well as host more fitness classes. On a weekly basis, the COC hosts CrossFit, rowing (indoor and outdoor), Qi Gong, Yoga, Community Fitness, and Feldenkreis classes. Over 130 youth participate in winter ski programs. In addition, up to 500 students/week visit to ski from area schools. In the summer, there is a weekly running series that draws over 200 individual racers.

Recent Changes and Accomplishments:

$2.6 M renovation to the Craftsbury Academy Gymnasium (2012).

New Nordic Center and Fitness Center at Craftsbury Outdoor Center (2014).

Expanded use of social media is effectively publicizing town events.

Academy sign built in high-traffic area to publicize events. (2013)

Challenges & Opportunities

Lack of playgrounds that are sufficiently equipped.

Potential conflicts over the Craftsbury Outdoor Center's use of Big Hosmer.

The 2015 Community Visit identified the following potential actions: Improve Community Communications; Improve and Expand Community Trails, Paths and Walkways; and Open a Community Center.

Relevant Statewide Planning Goals

To maintain and enhance recreational opportunities for Vermont residents and visitors.

Growth should not significantly diminish the value and availability of outdoor recreational activities.

Public access to noncommercial outdoor recreational opportunities, such as lakes and hiking trails, should be identified, provided, and protected, wherever appropriate.

Other Activities

Beyond the town borders there are multiple recreational opportunities such as the cross country ski trails of the Highland Lodge in Greensboro (maintained by the Craftsbury Outdoor Center) and boating and fishing lakes and rivers. Many of these recreational activities are connected to those in Craftsbury, creating a network beyond our town.

There is a town beach for public use on the east side of Lake Eligo. The beach is well used by both residents and nonresidents. There exists a need to upgrade the town beach. Volunteers on the Recreation Committee have been working to maintain the beach area, but more help is needed to ensure that the beach is kept clean and safe. Swimming lessons take place on Caspian Beach in neighboring Greensboro and are open to a limited number of Craftsbury children.

In winter, those same ponds and lakes make great places for cross country skiing, ice fishing and snowmobiling. Thanks to the landowners in town who permit cross country and snowmobile trails on their land, there are many miles for a variety of winter sports. In addition to the Craftsbury Outdoor Center ski and snowshoeing trails, there are many VAST trails that traverse the town, maintained by the statewide snowmobile club. These winter trails are a tremendous benefit to the residents and are both highly valued and used.

As for organized activities, Craftsbury Academy has ongoing sports throughout the year. These include soccer, basketball, baseball and softball. An outdoor club has also recently been established that provides our youth with multiple outdoor activities.

Though several playgrounds exist throughout the community – elementary school, Presbyterian Church, Church on the Common and Community Care Center –none are truly sufficient for a variety of reasons. The Elementary School playground is somewhat limited for preschool children since it is designed for those children in school. The equipment is the very basic – slide, monkey bars, and a few swings. The best aspect of this playground is the surrounding environment which includes access to the woods, a great hill for sledding and an open field. The playgrounds at the churches are also very limited in equipment. While the Church on the Common playground has limited equipment, it is in proximity to the Craftsbury Public Library and is heavily used.

The Craftsbury Recreation Committee sponsors a series of events on the Common in summer. The Town also sponsors the "Antiques and Uniques" Fair and a summer music series during the summer. The bands are paid for by the Village Improvement Society. There is Old Home Day, a Halloween Party, and a New Year's Movie Night for all young people in town. The Second Annual "Common Day" occurs at the end of August, which highlights recreational activities like ping-pong and dancing. In 2015, the First Annual Town Kickball Tournament was held on Craftsbury Common, with over 60 people in attendance.

One major development since the last town plan in 2011 is the construction and opening of the new Craftsbury Academy Gymnasium in 2012, a 2.6 million project that was awarded $137,500 in tax credits through the State of Vermont Village Center Designation Program. The gym is a regulation size basketball court complete with a stage and balcony seating for spectators. This building has not only been a major contributor to facilitating the growth of sports activities at the school, but also provides a larger gathering space for town activities like Town Meeting Day and concerts. The outdoor recreation fields, from Dustan Field to Sterling Field to the Common green, offer expansive space for fall and spring sports.

There are many pick-up sports games that happen throughout the year. In the summer, pick-up soccer is a main-stay on Dustan Field two nights a week; its winter counterpart is broomball three nights per week at the Craftsbury Outdoor Center. More irregular pick-up games include basketball, dodgeball, kickball, among others.

Overall, there is interest in having more social activities, like dances and other types of gatherings with new ways for our teens and adults to interact outside of school. This is especially relevant for those who do not participate in school sports and would serve many in the community, including those who are homeschooled.

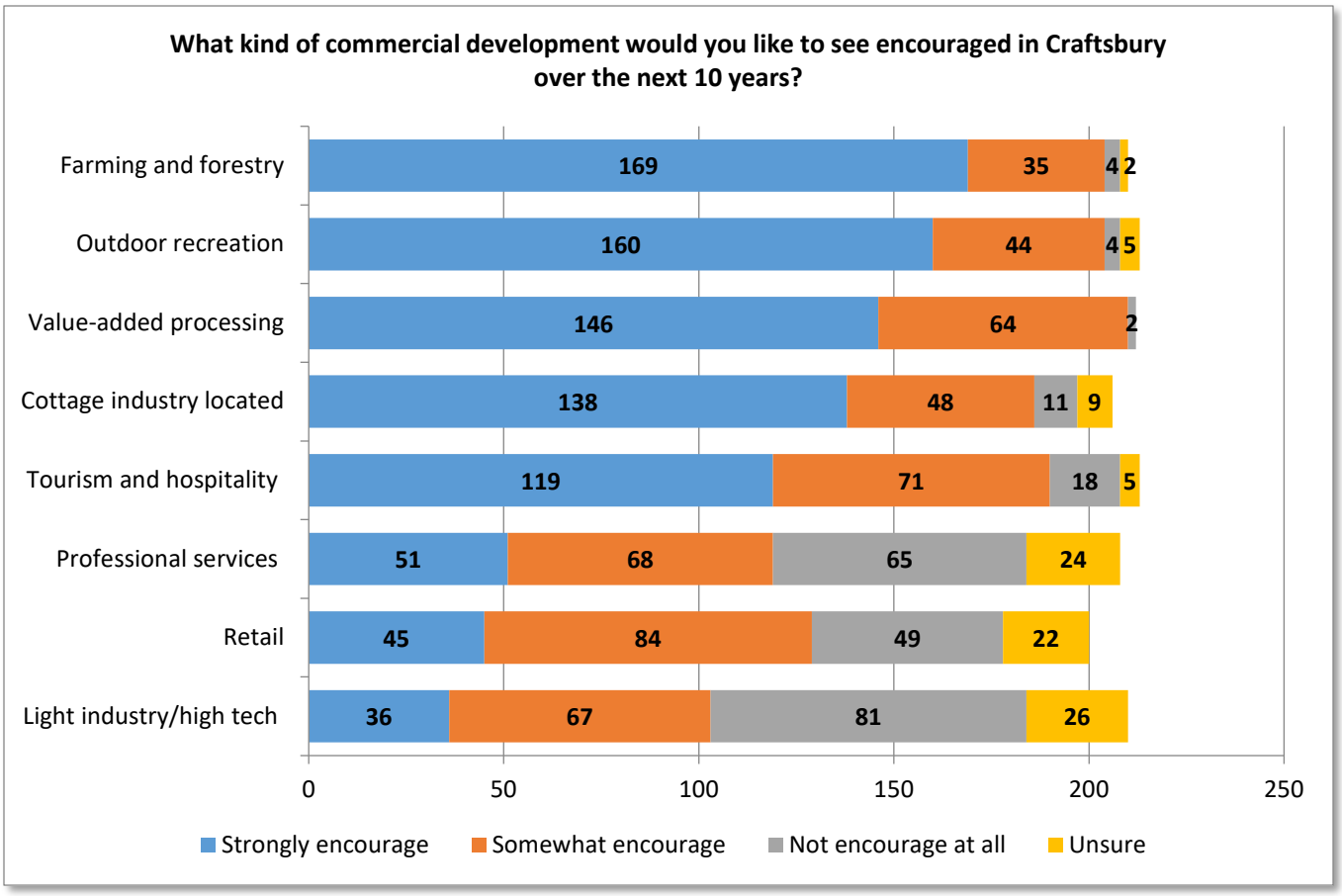
Spreading the Word

Built in 2013, the Craftsbury Academy sign has become an important communication tool to update residents about upcoming events. This is beneficial both for those who are connected on social media and those who are not, due to the high amount of traffic that passes through the Common and that the sign is kept regularly updated.

Social media has become more heavily used in town. Front Porch Forum has proven to be an effective way to notify residents about town activities. The Town of Craftsbury and the Village Improvement Society maintain Facebook pages, and the Town of Craftsbury website is kept up to date with event details, like those relating to the Summer Concert Series and Old Home Day. In 2016 a new community calendar was launched on the town's website.

Survey Snapshot:

Craftsbury residents value the abundance of outdoor recreation opportunities as an economic driver and as a cultural asset. 73% (of 220 respondents) want to strongly encourage outdoor recreation as commercial development. Additionally, Craftsbury residents consider "an abundance of recreation opportunities" as one of the defining aspects of Craftbury's culture. (See Cultural Profile). Nevertheless, 21 respondents indicated that residential development has restricted their access to outdoor recreation. (See Housing Profile). A complicating and possibly connected factor was the use of Big Hosmer by the Outdoor Center, was characterized as occurring to the "significant exclusion of local residents."



Goal:

- Maintain, enhance, and promote recreation opportunities for all Craftsbury residents and visitors.
- Encourage the broadly coordinated planning of playgrounds among the Recreation Committee, churches, school, libraries, and other non-profits.
- Maintain the Eligo beach.
- Encourage sharing of mapping data layers of recreational uses (e.g. trail systems) and work to keep the information current.

Action Steps

- Use existing maps (e.g. Craftsbury Outdoor Center) as the basis for plans to create additional recreational trails.
- Publicize the events that are currently planned by the Recreation Committee through many marketing platforms, from posters to social media and shared town calendars.
- Continue to support the effort to update the Elementary School playground and other outdoor spaces.

13: Flood Resilience

Note: After the devastation statewide by the floods from Hurricane Irene in 2011, the Vermont Legislature passed Act 16, an act relating to municipal and regional planning and flood resilience. After July 1, 2014, municipal and regional plans must contain a Flood Resilience Element. More information about Act 16, as well as technical information about flooding and common terminology can be found in Appendix A.

Craftsbury Flood Plain Regulations

The town of Craftsbury adopted Floodplain Regulations in 2001 to promote public health, safety and general welfare, to prevent increases in flooding caused by uncontrolled development of lands in areas of special flood hazard, and to minimize losses due to floods. This will be done by restricting or prohibiting uses that are dangerous to health, safety, or property in times of flood or cause excessive increase in flood heights or velocities. The regulations also require that uses vulnerable to floods, including public facilities that serve such uses, be protected against flood damage at the time of initial construction.

Enacting flood regulations allows all Craftsbury property owners – regardless of whether they are located in the Special Flood Hazard Areas – to purchase flood insurance through the National Flood Insurance Program at more affordable rates.

The Town currently regulates development in the Special Flood Hazard Area in accordance with FEMA's minimum standards. Allowable land uses in the special flood hazard areas are listed in the Craftsbury Floodplain Regulations and include certain recreational, and residential uses such as lawns, gardens, parking areas and play areas. All development in the Special Flood Hazard Areas – including fill, excavation, grading, erection, placement, or substantial improvement of structures – must first receive a permit. (The Town of Craftsbury Flood Plain Regulations can be found on the town website: http://www.townofcraftsbury.com/selectboard/)

Communities participating in the National Flood Insurance Program must issue permits for all development proposed in flood hazard areas. If new development is to occur in the Special Flood Hazard Area, it must meet certain standards, such as elevation and floodproofing. However, the regulations should not be seen as an effective way to minimize flood risks. The minimally compliant standards still allow development in the Special Flood

Recent Changes and Accomplishments:

Statewide river corridor maps published in late 2014.

Funding and technical assistance available to Craftsbury to develop a Hazard Mitigation Plan.

1 bridge scheduled for replacement.

Failing culverts replaced or upsized.

Challenges & Opportunities

10 culverts are in critical or urgent condition, or are closed.

Craftsbury's financial assistance in the next federal disaster will be reduced.

Existing floodplain maps are hard to read and lack technical detail.

Floodplain regulations do not address erosion, a significant source of risk.

Relevant Statewide Planning Goals

New development in identified flood hazard, fluvial erosion, and river corridor protection areas should be avoided. If new development is to be built in such areas, it should not exacerbate flooding and fluvial erosion.

The protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion should be encouraged.

Flood emergency preparedness and response planning should be encouraged.

Hazard Area, so it is possible to cut off access to critical floodplain storage, resulting in increases to the base flood elevations and flood velocities to other properties.

Craftsbury's Flood Map

Craftsbury's Floodplain Regulations must reference the FEMA Flood Insurance Rate Map (FIRM), which was first identified in 1974, revised in 1976, and made effective in 1985. This is a paper map (i.e. not georeferenced) and is organized on 14 separate panels, two of which are not printed by FEMA because they contain no information. FEMA did not conduct a Flood Insurance Study, so the map lacks critical detail such as base flood elevations or delineation of floodways.

Most areas of special flood hazard appear as an approximate Zone A and include the Black River, Seaver Brook, Whitney Brook, Little Hosmer, Duck Pond, Mud Pond, Wild Branch, Eligo Lake, and Webber Brook. While the age of the maps and lack of detail make it difficult to determine how many structures may actually be prone to flooding, it's possible that about 50 structures are located in the Special Flood Hazard Area. There have been fewer than a dozen permits issued in Craftsbury since the flood hazard regulations were adopted. Only one permit actually involved a project in the Special Flood Hazard Area. The remainder were either found to be outside of the Special Flood Hazard Area, or resulted in the issuance of a Letter of Map Amendment (LOMA). FEMA issues a LOMA when it is determined that a structure is above the base flood elevation. (See Appendix A for more information.)

There are currently two flood insurance policies in effect in Craftsbury, representing a combined coverage value of $133,000. There are no repetitive loss structures. The vast majority of flooding damage has been to public infrastructure, such as roads, bridges, and culverts. There have been seven federally declared disasters in Craftsbury that caused damage to public infrastructure. (Two disasters involved heavy snowfall.) To date, Craftsbury has received more than $127,000 in federal disaster assistance through FEMA's Public Assistance Program, which typically covers about 75% of the cost of repair to public infrastructure. More information can be found in Appendix A.

Erosion and Flash Flooding

Other flood hazards result from flash flood situations, in particular along steeper stream sections. Clearing of vegetation cover and constructing impervious surfaces, like roofs and parking lots, increases storm runoff particularly in higher elevations. To prevent flash flood situations, developments cannot increase the volume or velocity of streams. Channelizing and straightening streams increases stream velocity and increases the risk of flash floods. Many times roads and driveways up steep hills create perfect conditions for flash floods because they are designed to rapidly drain water from the surface and send it downhill in a straight steep ditch. The Better Backroads Program has grants and technical assistance to avoid erosion and flash floods resulting from road design and construction. In 2015, the Town received a $10,000 Better Backroads Grant to stabilize a streambank that is now only 10 feet away from Collinsville Road. That portion of the streambank will be armored with stone.

Meeting the minimal requirements for participation in the National Flood Insurance Program will not necessarily protect Craftsbury from future flood losses. The FEMA standards – which are reflected in Craftsbury's Floodplain Regulations – do not address the risks of fluvial erosion. Areas subject to erosion due to shifting rivers and streams are not identified on the FEMA FIRM. Ironically, this form of damage occurs frequently in Vermont, due in part to the state's mountainous topography.

In late 2014, the Agency of Natural Resources published a **river corridor** map data depicting areas that may be subject to fluvial erosion. The map consists of two components:

- On streams with a drainage area of more than two square miles, the river corridor identifies the minimum area needed to accommodate lateral movement of the stream channel, PLUS a 50-foot vegetation buffer on either side.
- On streams with a drainage area of two square miles or less, the river corridor is identified as a 50-foot vegetation buffer.

The river corridor maps need to be ground-truthed to account for bedrock and steep valley slopes. Nevertheless, river corridors account for the fact that rivers change vertically and horizontally over time, and, therefore, are not as likely to become outdated as FEMA maps, which are based on the elevation and location of the river at the time when the maps are produced. Within river corridors, floodplains may be formed and maintained over time. This means that corridors may consistently help mitigate both erosion and inundation hazards in comparison to the FEMA map counterpart.

Other Flood Attenuation Assets

Proper management of upland areas plays an important role in flood hazard management. While these areas are very important for supporting wide-ranging species of wildlife, their flood resilience function is also critical. Limiting clearing of upland slopes will help to attenuate flood flows and reduce stormwater runoff. Craftsbury's forest cover, particularly in areas with steep slopes and high elevations (where headwaters are located) are fairly well protected from clear-cutting and development pressures. The highest concentration of lands with a 1,800 foot elevation or higher are in the western area of town, and include lands that are either conserved through Vermont Land Trust/Nature Conservancy or are enrolled in the Current Use Program. High elevation lands to the south of the town also contain several parcels enrolled in the Current Use program. High elevation lands to the northeast corner of town contain conservation easements held by the Vermont Land Trust. Another concentration of high elevation lands can be found on Coburn Hill Road.

Wetlands also have the capacity to retain significant amounts of floodwaters. The State of Vermont regulates activities in and adjacent to wetlands. These rules apply to the wetlands and associated buffer zones within 100 feet of Class 1 wetlands, and 50 feet of Class II wetlands. Any activity in a Class I or II wetland requires a state permit.

Culverts & Bridges

The combination of roads, steep slopes, and running water not only constitute areas of higher road erosion risk, it also often marks areas where the town of Craftsbury has installed and maintains culverts and bridges. The Vermont Online Bridge and Inventory Tool (VOBCIT) database shows that Craftsbury has 527 culverts, with the majority found to be in good condition.

- Critical: Auld Lang Syne (2), Hatch Brook Road (2), Morey Hill Road, Black River Road
- Poor: Cemetery Rd., Post Road (2), Wylie Hill (3), Guy Lot Road, Echo Hill Road, King Farm Road, and Vt Route 14 (near Sterling)
- Urgent/Closed: Mill Village Rd near Fox's (Closed), South Albany Rd (Urgent), S. Craftsbury by Pete's (closed), Ketchum Hill Road (closed)

Critical (failing) means that less than 25% of the culvert was open at the time it was assessed. This is due to sediment load which is deposited during storm events. Undersized or "plugged" culverts often result in storm runoff flowing over the road or highway, rather than under it, and damaging or even washing out the roadway. The Northeastern Vermont Development Association (NVDA) annually assists towns in updating their culvert data by hiring consultants to do the field work using GIS and then uploading this to the

VOBCIT. The VTrans Maintenance Districts ideally want an inventory done every three years, but NVDA can only do 4-5 towns per year. NVDA is working to get towns to use VOBCIT to input their annual updates so that they will always have an up to date inventory.

Critical Facilities

Critical facilities are essential to a community's resilience and sustainability. In general, there are two kinds of facilities that a community would consider "critical" during and after a flood:

- Those that are vital to the health and safety of the public before, during, and after a flood, such as emergency responders, schools, and shelters; and
- Those that, if flooded, would exacerbate the problem, such as a hazardous materials facility, power generation facility, water utilities, or wastewater treatment plant.

Because they are defined by their ability to quickly and efficiently respond to and recover from floods, critical facilities should never be flooded, and their critical actions should never be conducted in floodplains if at all avoidable.

Craftsbury's Town Garage is not in the Special Flood Hazard Area, but it is possible that it is in the 500 year floodplain. In the event it is repaired or improved at an expense that represents more than 50% of the value of the structure, more careful site assessments should be made to determine its vulnerability to flood damage. If necessary, the facility should be floodproofed or elevated to the 500 year flood elevations.

Emergency Relief and Assistance Fund (ERAF)

When a community requires public assistance, FEMA funds generally cover 75% of the loss. To date, Vermont's Emergency Relief and Assistance Fund (ERAF) has provided half of the matching funds (about 12.5%) required by FEMA, and the town has assumed the remainder of the cost. In October 2014, however, new legislation tied the State's percentage of ERAF funding to specific local initiatives to reduce flood-related risks and prepare for emergencies.

For federally declared disasters that occur after October 23, 2014, ERAF will contribute half of the required match only if the town has taken all the following steps to reduce flood damage:

1) Adopt the most current Town Road and Bridge Standards (which can be found in the VTrans Orange Book: Handbook for Local Officials).
2) Adopt flood regulations that meet the minimum standards for enrollment in the National Flood Insurance Program.
3) Maintain a Local Emergency Operations Plan.
4) Adopt a FEMA-approved Local Hazard Mitigation Plan.

Otherwise, the level of State funding will be reduced to 30% of the remaining match, which will usually be about 7.5% of the total cost of the loss. The Town of Craftsbury currently meets the first two requirements.

Local Emergency Operations Plan

The Local Emergency Operations Plan (LEOP) establishes lines of responsibilities in the critical hours immediately following a disaster. This information is particularly important in coordinating responses through mutual aid towns, and regional and state entities. The LEOP should be updated and adopted annually after Town Meeting Day.

Hazard Mitigation Plan

The Hazard Mitigation Plan was approved by FEMA in 2005 and expired in 2010. Since then FEMA's standards for approving the Hazard Mitigation Plan have become more rigorous. Funds are available to assist the Town with developing a new hazard mitigation plan. Once approved, the Town will be able to apply for FEMA funds to mitigate flood risks, such as elevating structures, purchasing generators, or upgrading or improving public infrastructure.

Above and Beyond

The legislative changes to ERAF funding propose to address the limitations of the National Flood Insurance Program by providing an incentive: Under ERAF, the Town may receive an increased state match for federally declared losses, if the town adopts flood regulations that are more aggressive than the minimum standards of the National Flood Insurance Program. These above-and-beyond standards include prohibiting most forms of new development in the river corridor, prohibiting most forms of new development in the Special Flood Hazard Area, and requiring structures that are more than 50% damaged to be elevated or floodproofed to at least one foot above the base flood elevation.

Agricultural Uses

Vermont statute limits the authority of local regulations, such as required agricultural practices and the construction of farm structures, which are often located near flood hazards. Until recently, the Agency of Natural Resources operated under a Memorandum of Understanding with the Vermont Department of Agriculture to regulate agricultural practices in flood hazard areas. Under this MOU, the Agency of Natural Resources acted in a consultative capacity and established recommendations that only met the minimum standards of the National Flood Insurance Program. In March of 2015, **Vermont's Flood Hazard Area and River Corridor Rule** became effective. The new rule formalizes ANR's role in the regulatory process for agricultural practices and enforces more stringent standards. For example, most new developments in the river corridor (including fill) are prohibited. Developments that displace floodwaters must create compensatory storage and must not divert floodwaters onto adjacent property. The rule marks a significant policy change that requires outreach and education to farmers and local officials. The new rule can be found here: www.watershedmanagement.vt.gov/rivers/docs/FHA&RC_Rule_Adopted_10.24.2014.pdf

Flood Resilience Goals:

- Mitigate Craftsbury's flood hazards.
- Minimize the risk exposure and associated expense to Craftsbury residents.
- Ensure that the Town and its facilities are prepared to meet the demands of the next flood.
- Ensure that the Town can receive the maximum outside assistance in the event of the next federally declared disaster.

Flood Resilience Strategies:

- Continue to identify and map Craftsbury's natural flood protection assets, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forested areas.

- Revisit Craftsbury's participation in the National Flood Insurance Program. Consider adopting regulations that will protect erosion-prone and floodwater storage areas from additional development and encroachment.
- Maintain and regularly update the Local Emergency Operations Plan.
- Continue to meet the VTrans Road and Bridge standards. Participate in regional road foreman trainings and Transportation Advisory Committee meetings to stay abreast of flood resilience measures for the Town's roads and bridges.
- Attempt to achieve yearly updating of the Town's transportation infrastructure information in the Vermont Online Bridge and Culvert Inventory Tool.
- Identify and replace undersized and failing culverts.
- Ensure proper training and outreach regarding development in flood hazard areas, including forms of development exempt from local regulation, such as required agricultural practices.

14: Adjacent Towns & the Region

Craftsbury (2010 Census population: 1,206)

Craftsbury has its own unique and attractive characteristics as a town adding to the high quality of life for the residents. Several key features set it apart from the area, such as the historic Craftsbury Common, but the rural nature of the town also allows it to blend seamlessly into the surrounding area. In fact, beyond the signs identifying town lines, it is barely noticeable when one enters or exits the borders of the town. The geography of the area plays a part in this, as the Lowell Mountains to the west of Craftsbury form a slight valley rich with beautiful waterways, wooded hillsides and hidden nooks for houses. There are many dirt roads connecting Craftsbury with the surrounding towns and this plays a part in keeping development patterns rural. In addition, the village of Hardwick serves as one of the main hubs for the area and provides the towns with essential services. The close proximity of Hardwick thus allows the surrounding towns to retain their rural character.

Although Craftsbury lies at the convergence of three counties (Lamoille, Caledonia, and itself in Orleans), the development trends for these adjacent municipalities and regions seem to blend agreeably with the development patterns in the town.

Orleans County: Albany (2010 Census population: 941)

Albany shares much in common with Craftsbury. A major point of entry into Craftsbury is Route 14 thru Albany. The two village centers lay within five miles of each other and therefore both towns rely upon each other's services for day to day activities. Great Hosmer Pond is shared by the two towns. Albany has no Town Plan or Zoning Bylaws to describe the land use patterns and recommendations for the town.

Glover (2010 Census population: 1,122)

Glover and Craftsbury only touch on the northeastern corner of Craftsbury and they share just two "back" roads: Andersonville Road and Mud Island Road. This area is very rural with residential homes and quite a few farms. Glover adopted its very first Town Plan in 2006, and its development patterns are consistent with those of Craftsbury. Glover has no Zoning Bylaws, but it does have freestanding Flood Hazard Regulations.

Greensboro (2010 Census population: 762)

Greensboro shares much in common with Craftsbury. The village of East Craftsbury is essentially located at the border of Greensboro on one of Greensboro's main roads called the Craftsbury Road. Most of East Craftsbury has been conserved by the Vermont Land Trust which will limit any future development in this area. In addition, Route 14 runs through the corner of Greensboro alongside Lake Eligo, connecting both towns to Hardwick. There is very limited development potential along this lake in either town. The objectives stated in the Greensboro Town Plan are consistent with those of Craftsbury: to retain the rural qualities, to preserve the waters, to expand the tax base, to encourage affordable housing, and to develop services for residents. The Greensboro Town Plan indicates the willingness of the town to work cooperatively with Craftsbury on cross-border issues. In addition, Greensboro states that the town would like to encourage growth in the existing two villages, which do not directly border Craftsbury and therefore do not pose any burden on Craftsbury. Greensboro has also enacted policies to preserve its lakes, including Lake Eligo, which is shared by the two towns. Specifically, Greensboro has enacted zoning bylaws around

their lake using a lakeshore district designed to regulate the area for the protection of surface water resources and recreational uses. Also, Greensboro has encouraged the Eligo Lake Association to install and monitor a Milfoil wash point which should assist both towns with fighting off this invasive aquatic species which has rooted itself in the lake.

Caledonia County: Hardwick (2010 Census population: 3,010)

Although Craftsbury does not actually touch Hardwick's town line, the close proximity (within a mile south on Route 14) and the services provided by Hardwick greatly influence the town of Craftsbury. Hardwick acts as a hub for the surrounding towns due to its location where major state routes join both north-south and east-west. Hardwick's industrial and commercial infrastructure are being developed. However, due to its distance from major interstate routes and airports, the town does not expect to attract large corporations, but rather to expand and attract local and regional businesses, primarily those in the value-added agricultural processing sector. The town has two industrial parks, and one is already at capacity. Both the Town Plan and Zoning Bylaws are set up to encourage growth in the existing centers and to maintain the traditional patterns of rural settlement on the outlying areas of town. Should Hardwick grow economically, there could be results seen in additional residential development in Craftsbury.

Lamoille County: Eden (2010 Census population: 1,323)

Eden lies to the west of Craftsbury and as the Eden Town Plan explains, both of these towns are rural and conflicts in land use are not expected. In addition, the travel is easier moving north-south than east-west over the East Hill Road/Collinsville Road. However, this western route out of Craftsbury does connect the Town to Route 100, a major north south regional truck route carrying goods from Canada and the Northeast Kingdom south to Interstate 89. Eden has no Zoning Bylaws.

Hyde Park (2010 Census population: 2,954)

Hyde Park touches on Craftsbury's southwestern corner. Only Hatch Brook Road connects the two towns which will not amount to much development pressure. This corner of Hyde Park holds the Green River Reservoir which assures that there will not be much development here. Hyde Park's zoning map shows this as a rural residential district which has 5 acre minimum lot sizes which "intends to decrease the possibility of residential development conflicting with traditional working landscapes."

Wolcott (2010 Census population: 1,676)

The town of Wolcott is located along the southern border of Craftsbury. Along with a few other roads, these two towns share the North Wolcott Road which follows the Wild Branch River of the Lamoille Watershed and connects Craftsbury to Route 15, the major east-west corridor of northern Vermont. As the Wolcott Town Plan states, many commuters from Craftsbury use the North Wolcott Road to reach employment opportunities in the south. Wolcott Zoning Bylaws and Subdivision Regulations, which were amended in 2006, specify a zoning district that, with the exception of village areas, includes all land within 1,000 feet of the edge of the Route 15 right-of-way. Most uses are conditionally approved in this district, and design and siting of accesses are monitored to ensure that any development will not create an impediment or danger for the traveling public. Wolcott's Zoning Bylaws and Subdivision Regulations are consistent with the development patterns of Craftsbury.

Regional Plan (Northeast Vermont Development Association, Adopted 2015)

(NVDA serves the three counties of Caledonia, Essex & Orleans with a 2010 Census population of 66,469)

NVDA's Regional Plan cites Craftsbury's villages as a classic example of a traditional Vermont "Village Center," which is typically characterized by: some small-lot residential housing, and such community buildings as libraries, schools, town halls, clubs, and churches. Many villages offer services for visitors from outside of the region, including inns, bed and breakfasts, dining, and access to recreational activities.

The balance of land in Craftsbury would fall under the "Rural Areas," as does most of the region's land lies outside of the town and village centers. It consists mainly of the farms and forestlands of the traditional Vermont landscape. These land uses are supported by the regional urban centers, service centers, and rural villages, where most of the people and commerce are located. These rural areas should receive very little commercial or industrial development unless it occurs in an established industrial park, or in an area specifically designated in the local zoning by law or identified in the Town Plan as being well suited to such uses.

15. Implementation Plan

Land Use

Goals

- Maintain and protect Craftsbury town character by encouraging and directing growth using local non-regulatory and incentive-based tools.
- Facilitate a broadly inclusive discussion of how land use and regulation work to protect natural resources, the working landscape and community character while addressing a range of community needs ranging from home-based occupations and business development to renewable energy development.

Action Steps and Responsible Parties

- Use the Land Use Task Force to support the Planning Commission and Conservation Commission to move action items forward.
- Continue to redirect investment into the villages by maintaining village center designation. Reach out to owners of income-producing properties to make sure they are aware of potential tax credits for fit-up and improvements. *(Planning Commission)*
- Consider the creation of a local working lands network composed of individuals with a stake in local agriculture or forestry. The group could identify their current and future challenges – such as access to capital and land – and regularly report to the planning commission. *(Land Use Task Force)*
- Investigate open space planning, possibly including a land evaluation and site assessment to develop a consensus-based vision for future conservation efforts, taking into consideration the long-range implications on taxes. *(Planning Commission, Conservation Commission)*
- Continue the development of the town Web site as a consistent and reliable source of information. *(All Town committees and commissions)*
- Develop brochures for the town that are available in the Town Hall to help people understand the development desires and requirements. Examples could include information on tax credits for income-producing properties in the village centers, low-impact development standards, the 2007 Wastewater System and Potable Water Supply Rules, the State Shorelands Regulations, and flood hazard regulations. *(Planning Commission)*

Culture

Goals

- The town will work with local businesses and organizations to make sure all of Craftsbury's public spaces are handicap accessible.
- The town will continue to support and encourage opportunities for educational, cultural and artistic opportunities for citizens of all ages and abilities.
- Expand the availability of the Common, school, and public spaces for cultural activities.
- Community groups will communicate and coordinate activities and work together to develop grants to support each other.
- Continue to support the local libraries' effort to meet the information needs of the community as well as to have adult basic educational programs and early education opportunities available to all.
- Create a community that is welcoming to all people.

- Continue to foster a community rich in volunteerism.

Action Steps and Responsible Parties

- Study the possibility of a performance space within the community. *(Craftsbury Chamber Players, Planning Commission)*
- Study the continuous availability of daycare facilities. *(Planning Commission, Schools)*
- Identify public spaces that are currently not handicap accessible and provide regulatory information pertaining to accessibility. *(Town government and private sector)*
- Encourage discussion around important issues via film screenings, discussion groups, and any other gatherings. *(Outdoor Center, Art House, Sterling College)*
- Support further development and dissemination of the community wide calendar.
- Identify and pursue grants that could further cultural endeavors and improve accessibility. (E.g. Vermont Arts Council, USDA Community Facilities, Preservation Trust) *(Schools, Town Government, Nonprofits)*
- Continue the development of the town Web site as a consistent and reliable source of information. *(All Town Committees and Commissions)*
- Develop an inventory of skills sets in the Community. *(Community and School Task Force)*

Economy

Goals

- Encourage small clean business development.
- Strive to lower the Unemployment Rate and increase the liveable wage here in our community.
- Foster a communicative business environment in town.
- Improve broadband internet service and cell service throughout the community.
- Foster creation of local jobs by building on the strong educational, agricultural, and outdoor recreation anchors in the community.
- Formalize network between established businesses.

Action Steps and Responsible Parties

- Form a Craftsbury Business Association to accomplish the following:
    - Promote job creation.
    - Develop a reliable method for measuring the recirculation of dollars spent on local goods and services.
    - Identify unmet industry/service gaps in town.
    - Identify local markets for local goods.
- Research Internet and cell options for our community. *(Cell and Broadband Access Task Force)*

Agriculture

Goals

- Preserve the economic viability of agriculture in Craftsbury
- Strive to keep Craftsbury's open landscape working and beautiful.
- Encourage farming and forestry development (82% "strongly encourage" in survey).
- Promote conservation of natural resources.

- Promote local agriculture, local business, and the sale of local goods (54% survey respondents selected as priority.
- Policy: Craftsbury residents value working lands. Protecting the ongoing viability of working agricultural lands is a priority that should be taken into consideration on any development review decisions, including the consideration of offsite mitigation for renewable energy projects.

Action Steps and Responsible Parties

- Provide the Land Use Task Force with the necessary education, tools, inventory on planning tools to support agricultural land use, (e.g. "Sustaining Agriculture, the new training modules developed by Farm to Plate). *(Planning Commission)*
- Consider the creation of a local working lands network composed of individuals with a stake in local agriculture or forestry. The group could identify their current and future challenges – such as access to capital and land – and regularly report to the Planning Commission. *(Land Use Task Force)*
- Reach out to community beyond Land Use Task force to understand and incorporate public opinion on land use and history of land use in Craftsbury.
- Provide information about voluntary/incentive-based land use programs like the Current Use Program. *(Planning Commission)*
- Support accurate mapping of agricultural resources and activities (e.g. Current Use enrollment, conservation). *(Planning Commission)*
- Make resources about supporting agricultural businesses broadly available - see Appendix A for list of resources. *(Planning Commission)*
- Ensure proper training and outreach regarding development in flood hazard areas, including forms of development exempt from local regulation, such as required agricultural practices. *(Planning Commission)*

Historic Craftsbury

Goals

- Develop a partnership between the town and the Historical Society to educate the residents and property owners on the value of maintaining the historical aspects of the community.
- Preserve the historical features of the community.
- Encourage the maintenance of both public and private buildings of historic significance.

Action Steps and Responsible Parties

- Explore the possibility of preparing a comprehensive history of the Town of Craftsbury, including oral histories. *(Historical Society)*
- Explore the possibility of publishing a booklet illustrating the historic structures that have been preserved to date. *(Historical Society)*
- Update the information contained in the Register of Historic Places and encourage their maintenance and preservation. *(Historical Society)*
- Continue to digitize historical documents and photos, and find a venue for making them widely available. *(Sterling College, Historical Society)*
- Explore various financial incentives including rehabilitation of historic buildings and seeking preservation grants. *(Planning Commission, Historical Society)*

- Identify programs than can help make historic buildings ADA accessible (e.g. Preservation Trust, Village Center Designation Program, Department of Historic Preservation, USDA Community Facilities Program. *(Planning Commission, Historical Society)*

Natural Heritage

Goals

- Protect and manage Craftsbury's natural heritage and biodiversity.
- Identify and understand the natural resources within Craftsbury and their ecological significance.
- Raise community awareness about Craftsbury's natural heritage through education and local conservation planning.
- Manage our town and school forests as models of land stewardship.
- Restore ecological health and integrity of rivers, streams, lakes, and ponds.

Action Steps and Responsible Parties

- Collaborate with Sterling College, Craftsbury Academy, Craftsbury Outdoor Center, town committees, government institutions, agencies, and organizations regarding education and conservation activities. *(Planning Commission/Conservation Commission)*
- Develop and utilize maps on land use patterns to understand current agricultural areas, contiguous forestland, and residential/commercial development impacts on natural heritage. *(Planning Commission/Conservation Commission)*
- Investigate open space planning, possibly including a land evaluation and site assessment to develop a consensus-based vision for future conservation efforts, and address the long-range implications on taxes. *(Planning Commission, Conservation Commission)*
- Maintain the natural heritage database located at Sterling College. *(Conservation Commission/Sterling College)*
- Identify and map natural communities and critical wildlife features, including deeryards, bear production areas, vernal pools, and wildlife corridors. *(Conservation Commission)*
- Identify and map species of greatest conservation concern such as bats, bees, butterflies, and their habitats. *(Conservation Commission)*

Utilities and Facilities

Goals

- Ensure town facilities are maintained and remain appropriate for town needs.
- Ensure the long-term protection of public drinking water supplies.
- Create a contingency plan in the event of compromised water quality.
- The planning commission should keep informed on the regulatory environment pertaining to the siting and permitting of telecommunication towers and advise the Selectboard accordingly.
- Investigate the feasibility of wastewater treatment facilities.
- Plan for public parking needs.

Action Steps and Responsible Parties

- Disseminate the Craftsbury Groundwater Mapping project to better inform the residents who use well or spring water supplies about the quality and condition of the water sources. *(Sterling College, Planning Commission)*
- Update telecommunication ordinance. *(Planning Commission)*

- Town officials and interested citizens should work with the Waste District to educate residents about the harmful effects of trash burning. (Selectboard, Planning Commission)
- Determine needs for Town Clerk's Office and future of current building. *(Selectboard, Planning Commission)*
- Explore establishing a town collection site for reusable household items. *(Selectboard, Planning Commission)*
- Encourage establishing a food composting center in town or in collaboration with nearby facilities. *(Selectboard, Planning Commission)*
- Pursue Village Center designation for East Craftsbury. *(Planning Commission)*
- Ensure that Local Emergency Operations Plan information is current. *(Selectboard)*
- Consider a waste water planning grant from the Agency of Natural Resources *(Planning Commission)*
- Investigate the long-term viability of an emergency food access site in Craftsbury. *(Planning Commission, the Faith Community, Hardwick Area Food Pantry)*

Energy

Goals

- Build robust community awareness about the available resources and ongoing activities in energy efficiency, both privately and publicly, to encourage further participation.
- Intensify efforts to promote energy conservation and weatherization activities at the household and Town levels.

Action Steps and Responsible Parties

- Publicize successful examples of efficiency, weatherization, and renewable energy production to promote change. *(Energy Committee, Planning Commission)*
- Make information available about lending programs that can improve the efficiency of older housing stock, such as Efficiency Vermont's "Heat Saver" loan and USDA Direct and Guaranteed Loan Programs, for single homes and multi-family homes.
- Collect data on current energy usage in Town Buildings. *(Energy Committee)*
- Complete energy audits of Town Building and carry out the recommendations. *(Energy Committee, Selectboard)*
- Collect data on energy use after implementation of audit recommendations. *(Energy Committee)*
- Publicize the results of energy savings from the Town audit, weatherization, and energy savings. *(Energy Committee, Planning Commission)*
- Publicize the results of weatherization and energy efficiency changes in the school buildings. *(Energy Committee, Planning Commission)*
- Publicize success stories from Town residents that have installed renewable systems. *(Energy Committee, Planning Commission)*
- Continue the Town funding of a bulk purchase of LED light bulbs to sell to Craftsbury residents. *(Energy Committee, Selectboard)*

- Continue public education and publicize success stories on weatherization, heating systems and renewable energy projects. *(Energy Committee, Planning Commission)*
- Provide on-going education and identification of professional resources (See Appendix A, Internet Resources on Energy for Craftsbury Residents. *(Energy Committee, Planning Commission)*
- Establish town policies that encourage good practices, e.g. not taxing renewables or energy efficiency home improvements.
- Develop more complete baseline data on energy usage including electricity, heating energy, and fuel for road operations in order to identify ways to make additional improvements such as more generation of power, conservation, building improvements, and operational practices. The Energy Committee will continue to raise awareness by gathering information, using tools such as the Vermont Community Energy Dashboard.
- Promote pedestrian friendly, bike friendly systems to encourage less motor vehicle driving.
- Reduce vehicle idling in private and public spaces.
- Ensure fire fighters have training for solar installations.
- Promote net-zero and near-net zero development, such as "passive design" principles, and Vermod.
- Work with the Northeast Kingdom food leadership coalition and others to leverage resources for food producers (such as Rural Energy for America Grants).

Education

Goals

- The town will continue to support and encourage opportunities for educational, cultural and artistic opportunities for citizens of all ages and abilities.
- Support the continued existence of the Craftsbury Schools, and continue to sustain a vibrant school system that is the center of educational excellence and expertise.
- Prepare the Craftsbury graduate for college or career, equipped with the following knowledge, skills and dispositions: Knowledge and critical thinking skills; Self-direction; Communications and Information Processing; Leadership and Collaboration; Citizenship; and Personal Wellness. (See Appendix A, Portrait of a Craftsbury Graduate.)
- Preschool will be available to every child.
- There will be a positive connection between Sterling College, the Outdoor Center, and the Schools.
- Craftsbury residents will be active participants in addressing the critical issues of the day in public events offered by Sterling college, Craftsbury Public Library, the Art House, and others.

Action Steps and Responsible Parties

- Study the continuous availability of daycare facilities. *(Planning Commission, Schools)*
- Continue dialog with Craftsbury Academy and Sterling College regarding the needed repairs of the Industrial Arts building. Explore the viability of funding sources and tax credits for this project. *(School board, Sterling College, Selectboard)*
- Support the Schools and the Community Task Force in their work to further connect the school to the community.

- Develop an inventory of skill sets in the Community. *(Schools and Community Task Force)*

Housing

Goals

- Encourage housing for residents at all income levels via creative approaches that are community-based.
- Support Craftsbury's population with specific housing needs, such as the Craftsbury Community Care Center.

Action Steps and Responsible Parties

- Explore the availability of affordable housing options in Craftsbury, including the rental availability of single family homes. *(Planning Commission)*
- Encourage residents on creative approaches to sharing housing resources, addressing the persistent challenge of affordability. *(Planning Commission)*
- Encourage the maintenance of houses of historic significance using incentive based strategies, such as grants, tax credits, etc. *(Planning Commission, Historical Society?)*
- Utilize social media and the Town Web site to publicize rental opportunities. *(Web site Committee)*
- Develop an emergency housing resource call list and flyers that are available at key public spaces. *(Planning Commission, Vermont 211, Faith Community)*

Transportation

Goals

- The Selectboard will work to keep Craftsbury roads safe for all users.
- Decrease the dependence of Craftsbury's residents on private automobile transportation whenever possible.
- Provide for the development and use of recreational transportation systems wherever feasible.
- Maintain a safe and passable network of roads at a cost affordable to the Town.

Action Steps and Responsible Parties

- Parking along the road between the Academy Building and the Industrial Arts Building should continue to be discouraged during school hours. *(School principal, with support of the School Board)*
- Consideration should be given to establishing a commuter parking area to encourage car-pooling. (*Planning Commission/Energy Committee)*
- The Town should pursue options for the development of better bicycle- pedestrian lanes along the developed areas of Craftsbury *(Selectboard)*
- "Share the Road" signage should be erected in order to raise awareness as roads are improved or repaired. *(Selectboard)*
- A sidewalk system should continue to be investigated. *(Selectboard)*
- Bikeways, walkways and scenic vistas, should such be identified through public hearings and open discussion. *(Planning Commission, Land Use Task Force, Selectboard)*
- Investigate key speeding areas and strategies for slowing down traffic, such as radar speed signs. *(Selectboard)*
- Ensure adequate signage for wayfinding and public safety, e.g. "Share the Road" signs on the top and bottom of the Village Hill. *(Selectboard)*

Recreation

Goals

- Maintain, enhance, and promote recreation opportunities for all Craftsbury residents and visitors.
- Encourage the broadly coordinated planning of playgrounds among the Recreation Committee, churches, school, libraries, and other non-profits.
- Maintain the Eligo beach.
- Encourage sharing of mapping data layers of recreational uses (e.g. trail systems) and work to keep the information current.

Action Steps and Responsible Parties

- Use existing maps (e.g. Craftsbury Outdoor Center) as the basis for plans to create additional recreational trails. *(Recreation Committee)*
- Publicize the events that are currently planned by the Recreation Committee through many marketing platforms, from posters to social media and shared town calendars. *(Recreation Committee)*
- Continue to support the effort to update the Elementary School playground and other outdoor spaces. *(Recreation Committee)*

Flood Resilience

Goals

- Mitigate Craftsbury's flood hazards.
- Minimize the risk exposure and associated expense to Craftsbury residents.
- Ensure that the Town and its facilities are prepared to meet the demands of the next flood.
- Ensure that the Town can receive the maximum outside assistance in the event of the next federally declared disaster.

Action Steps and Responsible Parties

- Continue to identify and map Craftsbury's natural flood protection assets, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forested areas. *(Planning Commission, Conservation Commission)*
- Revisit Craftsbury's participation in the National Flood Insurance Program. Consider adopting regulations that will protect erosion-prone and floodwater storage areas from additional development and encroachment. *(Planning Commission)*
- Maintain and regularly update the Local Emergency Operations Plan. *(Selectboard)*
- Continue to meet the VTrans Road and Bridge standards. Participate in regional road foreman trainings and Transportation Advisory Committee meetings to stay abreast of flood resilience measures for the Town's roads and bridges. *(Selectboard/Road Commissioner)*
- Attempt to achieve yearly updating of the Town's transportation infrastructure information in the Vermont Online Bridge and Culvert Inventory Tool. *(Road Commissioner)*
- Identify and replace undersized and failing culverts. . *(Selectboard/Road Commissioner)*
- Ensure proper training and outreach regarding development in flood hazard areas, including forms of development exempt from local regulation, such as required agricultural practices. *(Planning Commission)*

APPENDIX A: Assets and Resources

From Land Use Profile

Craftsbury's Former Zoning Districts

Note: a scale map of the zoning districts cannot be located:

District	Purpose	Description	Minimum Lot Size
Village	"Support the role of the village as the focus of many social and economic activities." Allowed for a variety of uses, including public facilities, multifamily dwellings, restaurants, and "neighborhood" commercial.	North/South Craftsbury Road, including areas just south of Craftsbury Village near the intersection with East Craftsbury Road, and just north of Craftsbury Common, where the road meets Dustan Road. Another Village District included the East Craftsbury village core at the junction of East Craftsbury and Ketchum Hill Roads.	20,000 sq. ft.
Rural Residential	Encourage residential development "in so far as terrain, available water supply and soils lend themselves to development."	This district appears to have run about 500 feet from the center of nearly all remaining roads. Allowed for a similar array of residential and neighborhood-scale uses and also provided for restaurants, drive-in restaurants, manufacturing, and mobile home parks as a conditional use	One acre
Agricultural & Natural Resource One and Two	One: To protect lands with "an economic capability for agriculture and forestry and which are now essentially undeveloped except for uses associated with agriculture and forestry." Two: considered important for wildlife habitat, have potential for forestry use, have physical limitations to development, or contact "irreplaceable or significant natural, recreational, or scenic resources."	One generally backed up the Rural Residential district, meaning it lacked frontage on public roads. Two was even further away from public roads, where "only limited services could be expected to be provided in the future."	5 and 10 acres respectively
Conservation	Characterized as having shallow soils, important wildlife habitat and significant groundwater recharge areas	Lands at or above 1,300 feet in elevation. The largest concentration of these lands included areas around Far Out Road and lands now conserved by the Vermont Land Trust Nature Conservancy.	25 acres
Shoreland	All lands within 500 feet of Little Hosmer Pond, Greater Hosmer Pond, and Eligo Pond.	"Provide for recreational use of lakes and ponds while maintaining lake quality and protecting areas unsuitable for residential and commercial development. Structures had to be buffered at least 40 feet from the lakeshore.	15,000 ft.

Existing Regulations in Craftsbury that Affect Land Use

Telecommunication Regulations: In 2006, the Town adopted regulations to address the construction, alteration, development, and decommissioning of wireless telecommunications structures and ancillary improvements. There are limits to the Town's authority: antenna of a certain size and height (such roof-mounted structures that do not extend more than 12 feet above the roof) are exempt. Facilities that have no impact or a *de minimus* impact must be permitted. **[24 V.S.A. §2291]**

Floodplain Regulations: The Town adopted floodplain regulations in 2001 in order to participate in the National Flood Insurance Program (NFIP), which allows all Craftsbury residents to purchase federally-sponsored flood insurance. This is especially important to property owners with structures in a floodplain, because flood insurance is mandatory for any federally-backed mortgages. In order to become eligible for enrollment in the NFIP, Craftsbury is required to regulate development in the 100-year floodplain using standards that are minimally compliant with FEMA. Development standards address the construction of structures; as well as man-made changes, such as dredging, filling, grading, excavation, storage of equipment or materials, or improvement to existing structures in the floodplain. **[24 V.S.A. §2291, §4424]**

Class 4 Road Policy: Adopted in 2013, this ordinance establishes the Town's control over Class 4 roads, which includes weight limits, restriction of wheeled vehicles during snow and mud season, permit requirements for heavy equipment access, and speed limits. This ordinance also limits the Town's responsibility for maintenance of Class 4 roads to replacement of culverts, ditching, and removal or obstructions. Finally, the ordinance establishes a basis for reclassifying a road (*See below*). **[Title 19, Chapter 3; Chapter 7]**

Mission New England Ordinance: Also adopted in 2013, this ordinance reclassifies a road: The town trail that runs through the property now owned by Mission New England (formerly part of Coburn Hill Road) is now restricted to pedestrians, horses, and non-motorized vehicles.

All Terrain Vehicle (ATV) Ordinance: This ordinance authorizes use of ATVs on Hatch Brook Road, Merrill Loop, and Collinsville Road and restricts ATV use of these roads from December 1st to April 15th. **[23 V.S.A. §3510]**

Town Road & Bridge Ordinance: Adopted 2013, this ordinance clarifies that the town will adhere to the VTrans standards for maintaining roads and bridges. These standards are commonly referred to as "Orange Book" and are periodically updated and republished. Conformance with these standards is one of the requirements for receiving state funding following a federally declared disaster.

The State Regulatory Environment

This list pertains to individual property owners and therefore does not include regulations such as the operation of community water systems. It is not guaranteed to be an exhaustive list of all regulations that may pertain to a specific proposed development. Anyone is proposing to develop their land should contact the District Permit Specialist first.

Regulation	What it does and when it comes into play	Local control option?
Wastewater System and Potable Water Supply Rules http://drinkingwater.vt.gov/wastewater/pdf/finalwspwsrules.effective2007.09.29.pdf	Every parcel of land has been under this jurisdiction since 2007. A state permit is needed for most repairs, upgrades, and new construction of on-site wastewater treatment and disposal facilities, on-site potable water supplies, and connections to municipal water distribution and wastewater collection systems. Subdivisions of land also trigger this rule.	Yes. A municipality take "local delegation" of these regulations, with the approval of the Agency of Natural Resources. To receive approval, the municipality will have to show that it has the authority and technical expertise to administer the regulations (such as hiring a licensed designer to review and approve applications.) No towns in the NEK have taken local delegation. If a town has zoning, the zoning administrator can request proof of compliance prior to issuing the permit. (This does not constitute local delegation.)
Shoreland development http://www.watershedmanagement.vt.gov/permits/htm/pm_shoreland.htm	Applies to most new development, redevelopment, or clearing of an area within 250 feet of the mean water level of lakes and ponds that are greater than 10 acres. In Craftsbury, this includes Lake Eligo, Great Hosmer, Little Hosmer, and Mud Pond.	Yes. A municipality may take "local delegation" with the approval of the Agency of Natural Resources. To receive approval, the municipality has to adopt regulations that are at least as restrictive as the State Shoreland Regulations, and it has to demonstrate that it has the capacity to enforce them. Greensboro is the only town in the NEK to take local delegation.
Stormwater Management http://www.watershedmanagement.vt.gov/stormwater/docs/sw_rule-impaired.pdf For an overview of Act 64: http://legislature.vermont.gov/assets/Documents/2016/Docs/ACTS/ACT064/ACT064%20Act%20Summary.pdf	There are currently five distinct Federal and State permits which regulate the runoff of stormwater. A permit could be required for impervious surfaces (roads, buildings, parking lots, etc), for restoration of impaired waters in a few select watersheds, for stormwater runoff from certain industrial activities, for municipal management of stormwater in certain large municipalities, and for construction site runoff. General permit requirements are typically triggered when there is a discharge from an impervious surface of one acre or more. Existing development with at least three acres of impervious surface coverage will likely be	No. Municipalities may enact regulations that enforce low impact development standards (such as grassed swales, limitation of impervious surface coverage, etc., but these regulations would not take the place of stormwater regulations.

	required to make some stormwater retrofits under Act 64, Vermont's Clean Water Act. Standards are still under development.	
Encroachments into lakes and ponds http://www.watershedmanagement.vt.gov/lakes/docs/lep/lp_29vsachap11.pdf	Docks, boathouses, walls (including rip-rap and streambank stabilization), cables, dredging will typically require a permit from ANR.	There is no local delegation. In theory, zoning regulations may ban certain types of development that would encroach into lakes and ponds, although such regulations should be carefully written to avoid constitution of a "taking."
Stream Alteration http://www.watershedmanagement.vt.gov/rivers/docs/rv_SARule_12_24_13.pdf	A permit will be required if the construction in a river or on a streambank involves 10 or more cubic yards of material. Construction may also require a permit from the US Corps of Army Engineers, or a Section 401 Water Quality Permit from the Agency of Natural Resources.	There is no local delegation.
Wetlands development http://www.watershedmanagement.vt.gov/wrprules/wsmd_VWR%207-16-10.pdf#page=18	In general, a 100-foot buffer from the boundaries of Class I wetland, and a 50-foot buffer from a Class II wetland will be required. Construction may also require a permit from the US Corps of Army Engineers, or a Section 401 Water Quality Permit from the Agency of Natural Resources.	There is no local delegation. However, a municipality may request reclassification of a wetland, e.g. Class III to Class II or vice versa. In theory, zoning regulations may ban development in certain sensitive areas, although such regulations should be carefully written to avoid constitution of a "taking."
Underground storage tanks (USTs) http://www.anr.state.vt.us/dec/wastediv/ust/regs/fullUSTregs.pdf	The owner or operator of a 'category one tank' is required to get a permit. Category one tanks include most underground gasoline and fuel oil storage tanks; farm or residential motor fuel storage or storage of fuel oil for on-site use is exempt. A permit is required, without exception, for any UST used to store waste oil.	There is no local delegation. Local regulations, however, may prohibit certain industrial uses (associated with USTs) in certain districts.
Air emissions from burning or industrial uses http://www.anr.state.vt.us/air/docs/Statutes07-01-2014.pdf#zoom=100	**Open burning of wood** (such as clearing a lot) does not require a permit, but open burning of waste materials (such as demolition) might. Burn barrels (e.g. open burning of trash is illegal.) Certain **industrial operations** that produce emissions will require a state permit. Regulated activities in Vermont include: wood products industries, rock and gravel crushing operations, large fuel burning equipment, surface coating operations (such as spray painting), incinerators, and industrial processes involving the application of plastics,	There is no local delegation, but zoning regulations may prohibit certain types of industrial operations that produce emissions from certain parts of town. (Such as prohibiting heavy industry from residential areas.) Also, local regulations may establish industrial standards to go "above and beyond" by specifying times of operation, impacts felt at the edge of the lot, greater setbacks, prohibition of certain noise levels, etc.

	rubbers, and resins.	
Outdoor wood boilers http://www.anr.state.vt.us/air/docs/Statutes07-01-2014.pdf#zoom=100	OWBs fall under the jurisdiction of the air quality division.	There is no local delegation, but regulations may be more restrictive of state standards by prohibiting OWBs in certain areas, or by requiring a greater distance from neighboring properties.
Salvage Yards (Junk yards) http://www.eaovt.org/sbcap/salvage/PDF/Act_No93_S_237_2010_OpStandards.pdf	All salvage yards are required to provide full year-round screening from view from public roads. Screening may be achieved by a fence, berm, vegetation or a combination of the three. The laws apply to any place of outdoor storage or deposit of junk/junk motor vehicles whether or not in connection with a business; and any place of outdoor storage or deposit of four (4) or more unregistered motor vehicles for more than 90 days.	There is no local delegation per se, but local regulations can be more stringent (e.g. screening) and they may prohibit them in certain areas. Enforcement of salvage yard regulations can be challenging. Some communities have opted to pass local regulations in order to get more assistance with enforcement.
Required Agricultural Practices http://agriculture.vermont.gov/water-quality/regulations/rap For an overview of Act 64: http://legislature.vermont.gov/assets/Documents/2016/Docs/ACTS/ACT064/ACT064%20Act%20Summary.pdf	Traditionally, "accepted agricultural practices" have applied to farming operations in order to minimize agricultural nonpoint source pollution through soil, manure, and fertilizer management practices. Beginning 2016, the AAPs will be replaced by "Required Agricultural Practices," and will expand jurisdiction to small farms (of 10 acres) and will require new standards for application of manure, nutrient management programs, buffer zones, livestock exclusion, and a certification program for custom manure applicators.	No. As with AAPs, Required Agricultural Practices will be exempt from zoning.
Signage http://legislature.vermont.gov/statutes/section/10/021/00489	Off-premises signs, with the exception of business directional signs are prohibited in Vermont. On-premises signs are subject to state and federal regulations as well. For example, an on-premise sign cannot be in the road right of way, and it may not be larger than 150 square feet (unless attached to a building), be taller than 25 feet, or be farther than 1,500 feet from the main entrance to the business measured along the highway centerline. On-premise signs are not allowed to face limited access highways.	No, but local zoning regulations often enforce standards that exceed federal regulations for on-premises signs, e.g. size of signs, number of signs, lighting, style.
Right of way onto public roads http://legislature.vermont.gov/statutes/section/19/011/01111	Access (curb cuts) onto State highways are regulated by VTrans.	No local delegation. However, municipalities may require permits for access onto town highways. Additionally, local zoning and subdivision regulations can control

		and limit access on state and town highways by requiring shared accesses or other means.
Act 250 http://www.nrb.state.vt.us/lup/statute.htm	An Act 250 permit is required for certain categories of development, such as subdivisions of 10 lots or more, commercial projects on more than one acre (or ten acres, if the town has permanent zoning and subdivision regulations), and any development above the elevation of 2,500 feet.	There is limited local delegation. Municipalities may locally review projects to determine if the project will create an "unreasonable" burden to provide educational or municipal services, or if the project conforms to the town plan. http://legislature.vermont.gov/statutes/section/24/117/04420

From Culture Profile

There are five **libraries** in town and many social organizations, giving the town resources for growth and education of its citizens. The Craftsbury Schools host two libraries, which are open to the public but generally serve the school population. The Brown Library of Sterling College has a collection of materials geared to environmental and agricultural studies and is open to the public. There are two public libraries, J.W. Simpson Memorial Library and the Craftsbury Public Library. The J.W. Simpson Memorial Library located in East Craftsbury, is housed in an old general store and has many interesting artifacts as well as a varied collection of books. The Craftsbury Public Library located on Craftsbury Common was built in 2003 on the northwest side of the Common. Along with a large collection of materials it also serves as a public community space available for groups for meeting and activities. The Craftsbury Public Library provides early literacy programs, including story hours, parent education classes, book discussion programs, and summer reading programs. For adults the library offers a variety of programming including book discussions, poetry workshops, movies, author visits and computer training classes. The Library provides high-speed public access to the Internet 24 hours a day.

There are three **churches** in Craftsbury, two of which are currently active -- the Craftsbury United Church on Craftsbury Common, The East Craftsbury Presbyterian Church in East Craftsbury, and Our Lady of Fatima Catholic Church in Craftsbury Village. The churches provide spaces of worship as well as places for social gatherings. There are social organizations connected to the churches and the churches provide community space for weddings, dinners, meetings, concerts, playgroups, a preschool, and summer camps.

The **Searchlight Club** is an organization started in 1908 by several farm-women and teachers from Craftsbury Academy for the purpose of self-education. The group meets monthly and members present papers on chosen topics. They host speakers and raise funds for organizations in town. Although they mainly raise money to support the Craftsbury Public library, in the past they have raised money to support other organizations including the Historical Society and the schools.

The **Horse and Buggy Club** was started in 1960 as a social organization. They meet for fellowship at homes or at the United Church of Craftsbury on the Common. They share a meal and often have programs for games. They started the successful Fiddler's Contest, which continued into the 1980s and became a very large event involving the whole community and raising money for the schools. They continue to support activities in town like the Craftsbury Schools and recreation programs.

The **Meridian-Sun Lodge home of the local Masons** meets monthly as they have since the earliest years of Craftsbury. They sponsor dinners and a yearly chicken barbeque as well as offer help to needy families. Samuel Crafts was one of the founding members of the organization and the original charter was signed in 1800.

The **Common Place** is a non-profit organization, which includes **Stardust Books and Cafe and The Art House, Studio & School.** The Art House along with a fine arts gallery featuring local artists, offers classes, workshops, studios for students, and a variety of events taught by talented local artists. Stardust Books and Cafe offer programs for youth and adults, organizes youth activities and events such as poetry slams, provides a safe space for teens to socialize and do homework after school and some evenings.

Craftsbury is home to the **Craftsbury Chamber Players**, a non-profit organization founded in 1966, which provides concerts in Hardwick and Burlington during the summer. They also present free mini-concerts in Craftsbury, Greensboro, and Hardwick for all ages. Each summer they present a free outdoor concert on the Common.

Many **summer camps** have sprung up in Craftsbury over the past ten years. Some are - Craftsbury Soccer Camp, Craftsbury Outdoor Center Sculling Camp, Hiking Camp, Camp Kaizen, and Shakespeare Camp.

Located in East Craftsbury is the **Craftsbury Community Care Center**, an elderly care facility founded in 1995. It has apartments for 24 residents and is a source of many cultural activities. It hosts a variety of programming for the public as well as residents, such as book discussions series, music programs, art exhibits and movies. It also sponsors a weekly bone building class, a yearly Health Fair, and is the site for the Meals on Wheels program in Craftsbury and Albany.

From May through October there is a **Farmer's Market** on the Common on Saturday mornings from 9am to 1pm. The many vendors sell produce, homemade food, and crafts from their farms.

Old Home Day is still held on the second Saturday of August as it has been continually since early 1800's. Many former Craftsbury residents return to visit friends and relatives. The day begins with a pet show and children's activities on the Common. There is a crafts show in the Craftsbury Academy gymnasium, a parade at 1pm and a chicken barbeque at 4pm. **The Town Recreation Committee** sponsors Old Home Day, as well as a fishing derby, and swimming lessons. They have also been providing family entertainment summer evenings with biking and roller-skating.

There are 22 licensed/registered **child-care programs** within a 20 mile radius of Craftsbury, which includes Albany, East Hardwick, Hardwick, Wolcott and Greensboro. There are no active licensed day care providers in Craftsbury. There are 2 licensed preschools in the area for 3-5 year old children. The East Hill Preschool is located in East Craftsbury at the Presbyterian Church and the Albany Headstart is located in the Albany Elementary School.

From The Economy Profile

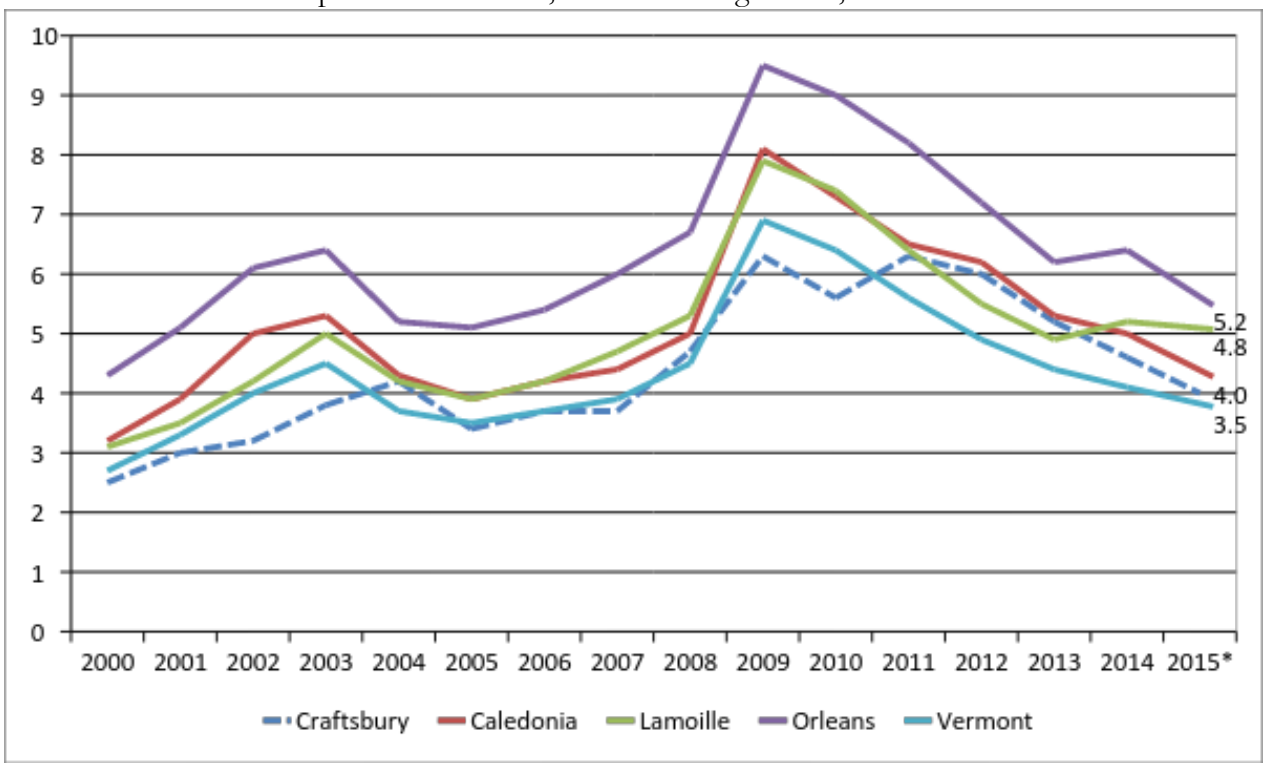
Gross and Retail Receipts in Craftsbury, Calendar 2008-2014

	2008	2009	2010	2011	2012	2013	2014
Gross	$9,247,006	$5,447,068	$6,263,469	$6,682,717	$6,894,273	$6,849,865	$7,043,571
Retail	$2,393,468	$1,781,446	$2,063,467	$2,272,769	$2,091,170	$2,062,208	$2,429,953
% Change Gross	26.6%	-41.1%	15.0%	6.7%	3.2%	-0.6%	2.8%
% Change Retail	14.7%	-25.6%	15.8%	10.1%	-8.0%	-1.4%	17.8%

Source: Vermont Department of Taxes, Sales and Use Statistics Report

Historic Unemployment Rates for Craftsbury, Orleans, Lamoille, and Caledonia Counties, and Vermont

Source: Vermont Department of Labor, Annual Average Rates, *November 2015



Selected Economic Indicators, Craftsbury, Orleans County, and Vermont

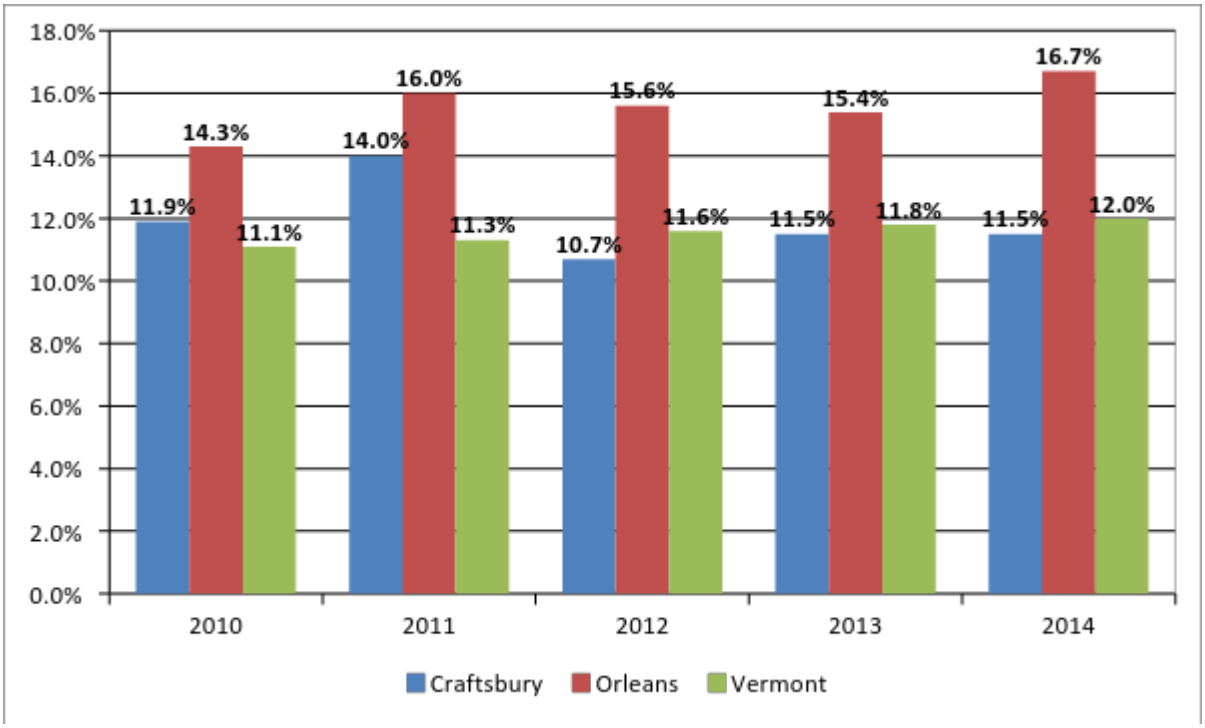
Subject	Vermont		Orleans County		Craftsbury	
EMPLOYMENT STATUS		Margin of Error		Margin of Error		Margin of Error
Population 16 years and over	517,411	(X)	22,303	(X)	995	(X)
In labor force	67.2%	+/-0.3	58.4%	+/-1.5	56.7%	+/-5.3
Civilian labor force	67.1%	+/-0.3	58.4%	+/-1.5	56.7%	+/-5.3
Employed	62.9%	+/-0.3	54.6%	+/-1.4	53.9%	+/-5.4
Unemployed	4.2%	+/-0.2	3.8%	+/-0.5	2.8%	+/-1.8
Armed Forces	0.1%	+/-0.1	0.0%	+/-0.1	0.0%	+/-1.7
Not in labor force	32.8%	+/-0.3	41.6%	+/-1.5	43.3%	+/-5.3
Civilian labor force	346,979	(X)	13,016	(X)	564	(X)
Percent Unemployed	6.2%	+/-0.2	6.5%	+/-0.9	5.0%	+/-3.1
Females 16 years and over	264,926	(X)	11,130	(X)	526	(X)
In labor force	64.0%	+/-0.4	56.1%	+/-1.8	58.0%	+/-6.1
Civilian labor force	63.9%	+/-0.4	56.1%	+/-1.8	58.0%	+/-6.1
Employed	60.3%	+/-0.4	53.1%	+/-1.8	54.2%	+/-6.6
Own children under 6 years	36,404	(X)	1,568	(X)	74	(X)
All parents in family in labor force	70.4%	+/-1.9	69.7%	+/-5.3	60.8%	+/-25.2
Own children 6 to 17 years	83,032	(X)	3,653	(X)	179	(X)
All parents in family in labor force	78.5%	+/-1.1	74.0%	+/-4.0	82.7%	+/-11.3
COMMUTING TO WORK						
Workers 16 years and over	316,919	(X)	11,886	(X)	499	(X)
Car, truck, or van -- drove alone	74.9%	+/-0.5	79.6%	+/-1.5	65.3%	+/-7.3
Car, truck, or van -- carpooled	9.7%	+/-0.3	8.8%	+/-1.0	14.8%	+/-5.0
Public transportation)	1.2%	+/-0.1	0.1%	+/-0.1	0.0%	+/-3.4
Walked	5.6%	+/-0.2	2.4%	+/-0.5	5.0%	+/-3.5
Other means	1.6%	+/-0.2	2.0%	+/-0.5	2.0%	+/-1.6
Worked at home	6.9%	+/-0.3	7.1%	+/-1.0	12.8%	+/-5.2
OCCUPATION						
Civilian employed population 16 years and over	325,336	(X)	12,169	(X)	536	(X)
Management, business, science, and arts occupations	39.9%	+/-0.5	31.7%	+/-1.7	37.5%	+/-7.5
Service occupations	17.5%	+/-0.4	18.2%	+/-1.6	22.2%	+/-6.0
Sales and office occupations	21.8%	+/-0.4	20.4%	+/-1.5	15.1%	+/-5.4
Natural resources, construction, and maintenance occupations	10.3%	+/-0.2	15.9%	+/-1.4	14.6%	+/-6.1

Production, transportation, and material moving occupations	10.5%	+/-0.3	13.8%	+/-1.2	10.6%	+/-4.8
INDUSTRY						
Civilian employed population 16 years and over	325,336	(X)	12,169	(X)	536	(X)
Agriculture, forestry, fishing and hunting, and mining	2.7%	+/-0.2	7.0%	+/-1.0	6.3%	+/-3.3
Construction	7.4%	+/-0.2	10.2%	+/-1.1	12.5%	+/-5.4
Manufacturing	10.7%	+/-0.3	11.1%	+/-1.3	4.1%	+/-2.5
Wholesale trade	2.1%	+/-0.1	1.8%	+/-0.5	0.7%	+/-0.8
Retail trade	11.6%	+/-0.3	10.3%	+/-1.1	10.1%	+/-4.9
Transportation and warehousing, and utilities	3.2%	+/-0.2	4.0%	+/-0.7	3.2%	+/-2.2
Information	1.9%	+/-0.1	1.0%	+/-0.3	1.9%	+/-1.6
Finance and insurance, and real estate and rental and leasing	4.7%	+/-0.3	3.7%	+/-0.7	1.9%	+/-1.5
Professional, scientific, and management, and administrative and waste management services	8.6%	+/-0.3	5.5%	+/-0.8	7.6%	+/-2.9
Educational services, and health care and social assistance	28.4%	+/-0.4	25.3%	+/-1.6	32.8%	+/-5.7
Arts, entertainment, and recreation, and accommodation and food services	9.2%	+/-0.3	9.1%	+/-1.2	7.6%	+/-3.9
Other services, except public administration	4.6%	+/-0.2	4.6%	+/-0.8	5.4%	+/-3.2
Public administration	4.9%	+/-0.2	6.3%	+/-1.0	5.8%	+/-2.5
CLASS OF WORKER						
Civilian employed population 16 years and over	325,336	(X)	12,169	(X)	536	(X)
Private wage and salary workers	75.5%	+/-0.4	70.8%	+/-1.7	69.8%	+/-6.9
Government workers	14.8%	+/-0.3	16.8%	+/-1.4	17.0%	+/-4.1
Self-employed in own not incorporated business workers	9.4%	+/-0.3	11.6%	+/-1.1	12.7%	+/-4.4
Unpaid family workers	0.2%	+/-0.1	0.8%	+/-0.4	0.6%	+/-0.9
INCOME AND BENEFITS (IN 2014 INFLATION-ADJUSTED DOLLARS)						
Total households	257,252	(X)	11,214	(X)	467	(X)
Less than $10,000	5.8%	+/-0.3	7.1%	+/-1.1	3.9%	+/-3.2
$10,000 to $14,999	5.7%	+/-0.3	7.7%	+/-1.0	4.1%	+/-2.5
$15,000 to $24,999	10.3%	+/-0.4	15.3%	+/-1.5	13.5%	+/-4.8
$25,000 to $34,999	10.2%	+/-0.4	13.5%	+/-1.2	16.3%	+/-6.5
$35,000 to $49,999	14.1%	+/-0.3	13.8%	+/-1.2	14.3%	+/-7.1
$50,000 to $74,999	19.3%	+/-0.4	20.7%	+/-1.7	24.2%	+/-5.8
$75,000 to $99,999	13.8%	+/-0.4	10.3%	+/-1.0	14.3%	+/-5.1
$100,000 to $149,999	13.0%	+/-0.3	7.4%	+/-0.9	4.7%	+/-3.2

$150,000 to $199,999	4.3%	+/-0.2	2.3%	+/-0.7	3.6%	+/-3.1
$200,000 or more	3.6%	+/-0.2	1.8%	+/-0.4	1.1%	+/-1.3
Median household income (dollars)	$54,447	(X)	$41,437	(X)	$47,841	(X)
Mean household income (dollars)	$70,524	(X)	$53,855	(X)	$55,347	(X)
Families	160,872	(X)	6,946	(X)	269	(X)
Less than $10,000	3.4%	+/-0.3	4.5%	+/-1.2	2.6%	+/-3.9
$10,000 to $14,999	2.5%	+/-0.3	2.8%	+/-0.7	1.1%	+/-1.6
$15,000 to $24,999	6.8%	+/-0.3	11.9%	+/-1.8	8.2%	+/-4.3
$25,000 to $34,999	8.1%	+/-0.4	12.5%	+/-1.7	11.2%	+/-6.8
$35,000 to $49,999	13.4%	+/-0.4	14.3%	+/-1.6	10.4%	+/-5.8
$50,000 to $74,999	21.0%	+/-0.5	24.2%	+/-2.2	29.4%	+/-8.1
$75,000 to $99,999	16.6%	+/-0.5	13.5%	+/-1.7	20.8%	+/-7.7
$100,000 to $149,999	17.4%	+/-0.4	10.6%	+/-1.4	11.5%	+/-6.3
$150,000 to $199,999	5.9%	+/-0.3	3.0%	+/-1.1	3.0%	+/-2.8
$200,000 or more	5.0%	+/-0.3	2.5%	+/-0.7	1.9%	+/-2.2
Median family income (dollars)	$68,787	(X)	$54,020	(X)	$61,103	(X)
Mean family income (dollars)	$85,013	(X)	$64,576	(X)	$68,470	(X)
Per capita income (dollars)	$29,535	(X)	$23,164	(X)	$22,310	(X)

Source: U.S. Census Bureau- American Community Survey 5-Year Estimates, 2009-2014

All Persons Living In Poverty, 2010-2014, Craftsbury, Orleans County, and Vermont



Source: U.S. Census Bureau- American Community Survey 5-Year Estimates, 2009-2014

From Agriculture Profile

Farms and Farm Products in Craftsbury

Name	Products
Wild Branch Valley Farm	Organic mushrooms, mixed vegetables, grass-fed beef, eggs
Bailey Farm	Organic milk, hay
Echo Hill Farm	Maple syrup
Jones Farm	Milk, maple
Lathe Farm	Organic raw milk, grass-fed beef, organic hay
Menard Farm	Milk
Seaverbrook Farm	Working lands
Stillmeadow Farm	Flowers
Strong Hold Farm	Milk
Waterhouse Farm	Milk
Hay Fever Farm	Hay
Pete's Greens	Mixed vegetables, pork, chicken
Bub's Best	Mixed vegetables, grass-fed beef
Fairmont Farm	Milk
Sterling Farm	Mixed vegetables, milk
Clifford LaPoint	Maple
Chris Masse	Maple
Masse Poultry Processing	Poultry, Hay
Brown's Blueberries	PYO Blueberries
Clair and Diane Young	Maple
Dave Johnson and Leah Szafranski	Mixed vegetables and flowers
Moffatt's Tree Farm	Christmas Trees
William's Tree Farm	Christmas trees
Stoddard Farm	Milk
Mike Martin	Maple
Thompson Family Farm	Maple
Breezy Hill Farm	
Scott Reed	Hay
Jeannette Anderson	Hay
Jasper Hill Farm	Working lands and hay
Breakeven Farm	Hay
Bonnieview Farm	Sheep and cow's milk cheese
Huard Family Farm	Goat's milk, chevon, and cajeta (goat's milk caramel).

http://www.ers.usda.gov/topics/farm-economy/farm-household-well-being/glossary.aspx

Agricultural Land Use Data

	2007	2011	2015
Total acres in production		8,124 32% of town acreage	4625.5 acres (Source: 2014 Grand List) Total farm-owned acres *Does not capture total acres in production*

US Agricultural Census 2012: Orleans County

Category	Vermont	Orleans	Vermont 2007	Orleans 2007	Vermont Change	Orleans Change
# farms	7338	638	6984	635	5%	0.5%
Average farm size	171	204	177	205	-3%	-0.5%
# farms in vegetable production	789	52	494	32	60%	62.5%
# acres in vegetable production	3897	161	2927	70	33%	130.0%
Farms with migrant workers	120	9			No data	No data
Number of farms with migrant workers	615	56			No data	No data
# farms with milk cows	1075	135	1,219	147	-12%	-8.2%
# of milk cows	134,142	21,081	139,719	20,733	-4%	1.7%
# farms selling milk from cows	934	130	no data	no data	no data	no data
Milk sales	$504,884,00	$77,547,00	No data	No data	No data	No data
Total farms with hogs and pigs	450	46	249	19	81%	
Total number of hogs and pigs	3874	290	2701	89	43%	225.8%
# farms selling hogs and pigs	525	48	239	23	120%	108.7%
Hog and pig sales	$1,345,000	$57,000	$697,000	$16,000	93%	256.3%
Total farms with sheep and lamb	793	30	626	20	27%	50.0%
# of sheep and lamb	18803	2091	13925	895	35%	133.6%
# farms selling sheep and lamb	452	10	344	6	31%	66.7%
Sheep and lamb sales	$2,277,000	$67,000	No data	No data	N/A	No data
# farms with goats (all goats)	457	33	421	No data	9%	No data
# of goats	10589	782	6593	No data	61%	No data
# farms selling goats	175	16	129	No data	36%	No data
Goat sales	$546,000	79,000	No data	No data	No data	No data
# farms with any poultry	1814	113	1201	75	51%	50.7%
# of farms with bee colonies	454	23	276	No data	64%	No data
Pounds of honey	422983	n/a	361715	no data	17%	no data
Honey sales	$897,000	$6,000	n/a	no data	no data	no data

# farms in fruit and nut production	373	14	305	no data	22%	no data
# acres in fruit and nut production	2316	40	3480	no data	33%	no data
# farms - cut christmas trees	288	27	318	24	-9%	12.5%
# acres in cut christmas tree production	3607	909	3600	547	0%	66.2%
# of trees cut - cut christmas tree	134504	38470	168206	27067	-20%	42.1%
# of maple syrup operations	1553	142	1310	141	19%	0.7%
# maple syrup gallons	999391	85,944	644,962	50,525	55%	70.1%

Additional Resources

Vermont Housing Conservation Board's Farm Viability Program
http://www.vhcb.org/Farm-Forest-Viability/
Vermont Farm Fund
https://www.vermontfarmfund.org/
Working Lands Enterprise Board
http://workinglands.vermont.gov/
Technical Assistance on Water Quality Issues
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/vt/contact/local/?cid=nrcs142p2_010664
Other research areas:

- **Required Agricultural Practices**

http://agriculture.vermont.gov/water-quality/regulations/rap

- **Food Safety Modernization Act - federal regulations**

http://agriculture.vermont.gov/food_safety_consumer_protection/fsma

From Natural Heritage Profile

Geology and Groundwater

Geology is the natural resource foundation of Craftsbury. Bedrock and surficial deposits help determine soil types, vegetation and water flow patterns. The bedrock underlying Craftsbury is metamorphic and igneous, ranging in age from about 500 – 360 million years.

Rock types include quartzite, phyllite, marble, greenstone and granite. The rocks originated from ocean bottom sediments and volcanic debris. A significant bedrock contact, known as the Richardson Memorial Contact (RMC), runs north – south, through the middle of Craftsbury. Rocks west of the contact are about 500 - 458 million years old, while rocks to the east are younger, about 420 - 408 million years old. The RMC represents a period of erosion of the older western rocks (about 458 – 420 million years ago), before the younger eastern rocks were deposited. Rocks to the west have been deformed and metamorphosed twice, during separate mountain-building episodes. The eastern rocks have undergone only one period of deformation and metamorphism, related to the later mountain-building episode. The RMC manifests as a fault in Craftsbury.

Small, localized areas of younger igneous rocks (about 380- 365 million years old) have also been identified in Craftsbury, including the "bulls-eye granite." Craftsbury's bulls-eye granite (scientific name: orbicular granodiorite) is a unique and extremely rare geologic feature--examples are found in geology museums worldwide. The bulls-eye granite crops out along the bed of the Black River as it runs through Craftsbury Village. It has been mapped as approximately ¾ mile long and 1/8 mile wide, trending northeast – southwest through Craftsbury Village. It is very uncommon for this rock to be found in outcrops. Spectacular boulders can be found south of the Village bridge, and behind the Town Garage. These areas should be conserved. The significance of this unique and extremely rare geologic feature should be considered in future land use decisions.

Surficial deposits range in thickness from a few inches to over 400 feet. Origins of these deposits include modern streams, post-glacial lake-bottom sediments, deposits from glacial meltwater running under or adjacent to the melting ice, and till deposited directly out of melting ice. Post-glacial lake deposits are widespread in the Black River and Wild Branch valleys, with thickest surficial deposits located in the Black River valley.

Soils

Soil scientists have classified the many soils of Craftsbury into four groups according to their origins. The majority of Craftsbury soils originate from glacial till, a sand, silt, and clay deposit dropped by melting ice. Lacustrine soils were deposited under glacial lakes in the Black River valley. Alluvial soils originate from deposits moved into place by running water. Muck soils are derived from deposits with very high organic matter, such as bogs.

Craftsbury soils have been surveyed by the USDA Natural Resource Conservation Service (NRCS), located in Newport. The NRCS can provide technical assistance and funding to address natural resource concerns, including soil erosion. Several Craftsbury farmers have participated in NRCS programs to help stabilize streambanks, including the planting of trees and shrubs along the Black River. Streambank erosion continues to be an issue that will require future attention in Craftsbury.

Soil pollution may become a concern in the future. Currently, the town has no landfills or polluting industrial complexes. Government agencies should be consulted about existing laws concerning soil contamination.

Watersheds

The town of Craftsbury is part of two major watersheds, the Lake Memphremagog Basin and the Lake Champlain Basin. Taking different paths, the waters of Craftsbury ultimately drain into the St. Lawrence River in Canada and then into the Atlantic Ocean. Those waters draining into the Black River will travel through Lake Memphremagog, while the waters that flow into the Wildbranch from the Lowell Mountains or out of Eligo Lake to Alder Brook will travel to the Lamoille River and into Lake Champlain.

The entire shorelines of Little Hosmer Pond, Duck Pond, and Mud Pond lie within the town, as well as portions of Big or Great Hosmer Pond and Eligo Pond. There is development of varying degrees along the shorelines of these bodies of water. Mud Pond's shorelines contain no structures, but the body of water is almost completely surrounded by agricultural land. The two Hosmer ponds offer some of the largest undisturbed stretches of shoreline in the state.

Riparian-forested buffers and corridors, including streambanks and lakeshores, serve vital functions that have significant environmental, economic, and social value. Conserving riparian ecosystems allows them to carry out their many functions, which include: protecting water quality and aquatic habitats; providing

habitats for terrestrial wildlife, including travel and dispersal corridors; supporting significant natural communities and adjacent wetlands; and protecting river channel-forming processes and river channel stability. Riparian vegetated buffer strips can contribute to addressing residents' concerns about water quality and supply, pollution of water sources, disappearance of natural areas, and wildlife habitat.

Wetlands

The wetlands of the State of Vermont are valuable natural resources. It is estimated that Vermont's existing wetlands comprise less than 5 percent of Vermont's surface area. The State of Vermont defines a wetland as: "those areas of the state that are inundated by surface or groundwater with a frequency sufficient to support plants and animals that depend on saturated or seasonally saturated soil conditions for growth and reproduction." In addition to being Vermont's most productive ecosystems, wetlands serve a wide variety of functions beneficial to the health, safety and welfare of the general public, including: flood control, water quality protection, wildlife habitat, unique natural communities, educational resources, aesthetics, and recreational opportunities.

A substantial portion of Vermont's wetlands have already been lost or severely impaired by draining, dredging, filling, excavation, pollution and other activities. It is estimated that Vermont has already lost nearly 50 percent of its wetland resources and is continuing to lose additional wetland resources annually.

The State of Vermont regulates all wetlands within the State that are identified in either the Vermont Significant Wetlands Inventory (VSWI) or the National Wetland Inventory (NWI). The Vermont Agency of Natural Resources reserves the legal right to conduct field investigations through which additional wetlands can be determined and added to the VSWI. Regulatory authority regarding wetlands is held by the State of Vermont Agency of Natural Resources as well as Federal regulations upheld by the U.S. Army Corps of Engineers.

There are three classifications of wetlands: Class 1, Class 2, and Class 3. Class 1 wetlands are exceptional or irreplaceable in their contribution to Vermont's natural heritage and merit the highest level of protection under the rules. Class 2 wetlands are "significant wetlands" and therefore are protected under the Vermont Wetland Rules. More information about wetlands and associated regulations can be found online at: http://www.watershedmanagement.vt.gov/wetlands.htmhttp://www.watershedmanagement.vt.gov/wetlands.htm

In the State of Vermont there are various programs that can assist landowners with the restoration and conservation of wetland resources. For more information on wetland conservation go to: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/vt/programs/?cid=nrcs142p2_010534

Forests

Forests are slow growers and change is subtle, but definite. It can be assumed that most of the town has either been cleared for agricultural purposes or logged during the past 200 years. Yet, forests have reseeded and grown back; it is not uncommon to find evidence of old fields where a 75+ year old forest now stands. There have been four periods in the town history when open lands were abandoned and allowed to naturally reseed to trees: after the Civil War, after the Great Depression, after World War II and more recently, when bulk milk tanks were required in order to remain in the dairy business.

Craftsbury's forests can be categorized into seven forest types:

- Northern Hardwoods (sugar maple, yellow birch, beech)
- Spruce and balsam fir
- White pine

- Northern white cedar
- Pioneer hardwoods (grey birch, aspen and red maple)
- Hemlock
- Swamp and bog softwoods

The forests annually produce fuel wood, pulpwood for paper, and saw timber. Some of this resource is used in Vermont and adjacent states, and some timber is sold for use in the international market. There are many active sugar bushes with approximately 24,000 taps in town. There are also several active deer wintering areas in town that have been mapped. (See Natural Resource Constraints map.) These consist of softwood forests, which provide whitetail deer shelter and protection from deep snow.

Wildlife Habitat

Critical wildlife habitat is defined under Act 250 as that habitat necessary for the survival of a species. This definition has been broadened through several court decisions over time to include populations within a particular area. Identification and mapping of critical habitat is crucial to the entire planning process.

Deer wintering areas are prime examples of critical wildlife habitat in Craftsbury. Deer yards are areas of extensive conifer cover where snow accumulations in winter are not overly deep, allowing deer to move fairly freely from bedding areas to browsing areas nearby. Deer yards are considered critical habitat since large numbers of deer, which are spread out over much larger areas during other seasons, concentrate during the winter into these limited refuges. Fragmentation of the deer wintering area, from development or inappropriate logging, has lowered the overall capacity of land to support deer.

Several deer wintering areas have been mapped by the Vermont Department of Fish and Wildlife. (See Natural Resource Constraints map.) These areas total approximately 1,629 acres in Craftsbury. Certainly there are other locations used by wintering deer and it is important to provide such information to the Department.

In 1989, the Department of Fish and Wildlife mapped black bear habitat statewide, showing high-use, as well as low-use areas. This map indicates that Craftsbury is predominantly bear production habitat. These areas are regions supporting relatively high densities of cub-producing females. Generally contiguous and remote forestland, these areas contain critical habitats necessary for bear survival. The long-term stability of Vermont's bear population depends upon these areas.

In addition to those habitats considered critical by the Act 250 process, there are other types of wildlife habitat that are important, such as beaver ponds. Beavers create important wildlife habitat for many species such as bear, moose, otter, mink, waterfowl, amphibians, pond insects such as dragon and damsel flies, and a great variety of birds. Beaver dams also supply flood protection, and maintain an even and regular water supply to the stream below the dam.

While beavers and their activities are often in conflict with land uses such as roads, it is important to find ways to maintain their ponds while moderating their conflicting impacts. Methods of beaver activity control should be considered, such as the construction of structures that manage the water level of beaver ponds, i.e. Beaver Deceivers. Such devices can help communities co-exist with beavers and their activity.

As ephemeral wetlands, vernal pools in Craftsbury provide breeding habitat for Jefferson salamanders, blue spotted complex salamanders, and spotted salamanders, wood frogs, and fairy shrimp. Riparian areas are the critical habitat for wood turtles, a species of special concern in Vermont. They have been identified in the floodplain of the Black River.

Craftsbury's diverse topography creates diversity of aquatic habitats which in turn means a variety of fish species. In our lakes and ponds, we have warm-water species such as bass, sunfish and pickerel. In our upland brooks, there are cold-water species such as trout—rainbow, brown and especially brook trout. Wild trout, those that spawn in streams and brooks, have been in decline for the past 30 years due primarily to increased silt loads in spawning areas. Assuring the long-term survival of any fish population demands that we protect all our aquatic habitats.

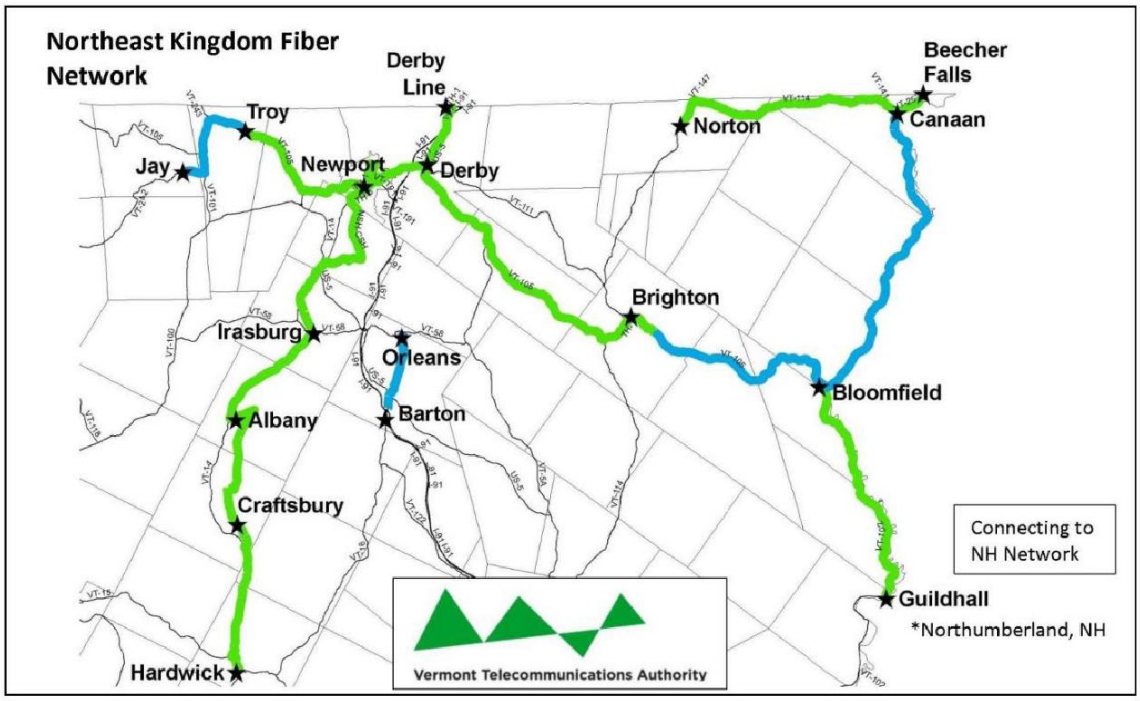
Hunting, fishing and trapping are outdoor traditions that are an important part of Craftsbury's rural heritage and have been practiced since the first settlers arrived. Most private lands in Craftsbury are not presently posted against these activities. The Vermont Department of Fish and Wildlife manages the populations of game animals, furbearers and fish. Over the years Craftsbury residents have seen many different additional wildlife species. Wildlife sightings include bobcats, fishers, bald eagles, coyotes, and many other mammals and birds. There have been unconfirmed sightings of catamount throughout town. Efforts to track these and other wildlife species have been established, such as an online wildlife map instituted by the Craftsbury Outdoor Center, and a paper map located in the Town Hall. Some Craftsbury residents participate in the statewide Audubon annual bird count, or are members of Keeping Track as well as Vermont Coverts. Residents are encouraged to contact the Conservation Commission with any wildlife sightings so that we can better understand the potential wildlife habitat needs throughout town.

From Utilities & Facilities Profile

Craftsbury Water Source Protection Areas

System Name	System Type	SPA Area	Source Protection Delineation	Sources	Population Served
Craftsbury Fire District #2	Public Community Water System	122.6 acres, 0.19 sq mi	Hydrologically determined	4 bedrock wells	420
Craftsbury Elementary School	Non-transient, non-community	18.0 acres 0.03 sq mi	Fixed radius: 500 ft	1 artesian well	75
Craftsbury Outdoor Center	Non-transient, non-community	18.0 acres 0.03 sq mi	Fixed radius: 500 ft	1 rock well	90
Craftsbury Inn	Non-transient, non-community	6.49 acres 0.01 sq mi	Fixed radius: 300 ft	1 rock well	65

NEK Fiber Network



From Energy Profile

Internet Resources on Energy for Craftsbury Residents

Internet Resources on Energy for Craftsbury Residents

Contact the Craftsbury Energy Committee: craftsburyenergycommittee@gmail.com

Efficiency Vermont: https://www.efficiencyvermont.com/, 888-921-5990: For businesses and home. Find certified energy auditors. Contractors who do energy efficient buildings. Retailers of energy efficient goods and services. Rebates after purchasing energy efficient appliances. Rebates onhome energy audits and cash incentives for work done. And more.

VECAN (Vermont Energy and Climate Action Network): Help with going solar in Vermont:

http://www.vecan.net/going-solar-in-vermont/, 802-223-2328

VECAN for Energy Efficiency and Conservation: Links on lighting, weatherization, efficientwindows, building efficient homes & more.

http://www.vecan.net/resources/efficiency-and-conservation/, 802-223-2328

Public Service Dept of the State of Vermont: h ttp://publicservice.vermont.gov/ 802-828-2811,Consumer hotline: 800-622-4496

The Public Service Department (PSD) is an agency within the executive branch of

Vermont stategovernment, and is charged with representing the public interest in energy, telecommunications, water and wastewater utility matters.

Low-income Weatherization help: http://www.vtneto.org/, 802-334-7378, 800-639-3212: Apply forassistance in weatherizing your home.

Vermont Natural Resources Council: http://vnrc.org, 802-223-2328

Energy and climate action, sustainable communities, energy planning, help for energy committeesand more. VNRC has a number of new tools on their website to help people and town Committees. Here is a link:

http://vnrc.org/resources/community-planning-toolbox/tools/http://vnrc.org/resources/community- plann ing-toolbox/tools/

USDA Rural Development Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Loans & Grants: Provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses to purchase or install renewable energy systems or make energy efficiency improvements.

http://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems or call USDA RD Vermont offices at (802) 828-6070

From Education Profile

PORTRAIT OF THE CRAFTSBURY GRADUATE

The Craftsbury School Board developed the following Portrait of the Craftsbury Graduate last summer. The Board would like community input on the appropriateness of the portrait as an 'ends' statement for our schools. Several people received copies of the portrait at the ribbon cutting and open house. Copies were also sent to families through the informational packets in August. How well does the portrait fit your vision for our schools? Please share your input with the Board.

The Craftsbury graduate is ready for college or career, equipped with the following knowledge, skills and dispositions:

KNOWLEDGE AND CRITICAL THINKING SKILLS: The graduate has a high level of content mastery and demonstrates creative and critical thinking. The student can acquire, integrate and use this information in novel situations.

STRATEGY	EVIDENCE
Increase excitement in the class with technology and project-based learning	Participation rates and exam scores in AP classes, college courses, VHS classes Participation rates in state and national competitions such as district and state music festivals, Odyssey of the mind, math competitions and science fairs SAT Scores State, district and local assessment scores Scholastic and scholarship awards Percentage of students going on to college Percentage of students who succeed in college Portfolio of work supporting Personal Learning Plan, culminating in the Senior project Through discussion based learning students are able to use a variety of complex reasoning strategies
Promote discussion-based learning	
Develop programs for career exploration	
Personal Learning Plans for each student	
Increase rigor with the implementation of the Common Core State Standards*	
Students, parents, teachers and community take responsibility for education, creating	

ownership in the process and discouraging blame	
RTI (Response to Instruction) method of instruction**	
Collaboration with other area schools and colleges and Virtual High School (VHS) to increase learning opportunities	

* The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy. For a full detail of the Common Core State Standards in English Language Arts and Math vist www.corestandards.orghttp://www.corestandards.org/

**RTI explanation attached

SELF-DIRECTION: The student pushes personal limits, sets clear goals, and manages his/her own progress toward those goals

STRATEGY	EVIDENCE
Personal Learning Plans that demonstrate progress toward individual goals	Percentage of students reaching high achievement levels in academics, sports, and the arts. Senior projects Participation rates in AP classes, college courses, VHS classes Community presentations (author's night, concerts, plays, senior projects)

COMMUNICATIONS AND INFORMATION PROCESSING: The graduate can organize and express ideas clearly and communicate effectively to diverse audiences, using a variety of media. The graduate can differentiate and assess the validity of information sources and interpret and analyze the information effectively.

STRATEGY	EVIDENCE
Implementation of the Common Core State Standards	Classroom based research and presentations Student presentations through programs such as Hugh O'Brian Leadership, Student Council, NHS, and YATST Student writing scores on state, district and local assessments Senior Projects Students are competent and confident in public speaking

Create opportunities for student presentations	

LEADERSHIP AND COLLABORATION: The graduate is able to both lead groups and follow the leadership of others in a variety of settings, monitoring and regulating his/her behavior in order to achieve group goals.

STRATEGY	**EVIDENCE**
PBIS (Positive Behavior Instruction and Support)	School behavioral data Collaboration rubrics for classroom group projects Percentage of students who take formal leadership roles in athletics, student organizations, the arts and classroom projects
Create opportunities for classroom group projects	

CITIZENSHIP: The graduate regularly volunteers his or her time and talents in the school and town. As a member of the larger state, national, and global communities, the graduate lives in a way to ensure quality of life for future generations.

STRATEGY	EVIDENCE
Create opportunities to explore other cultures and communities through residency and travel	Participation in community service activities such as Green Up Day, food drives and mentoring Participation in sustainable living activities such as recycling and waste reduction Participation in the democratic process Participation in off campus learning opportunities
Yearly thematic studies focused on sustainable living	
Create opportunities to integrate other cultures into our student body- SPIRAL International	

PERSONAL WELLNESS: The graduate is physically, emotionally and fiscally prepared and participates in a variety of sustainable activities.

STRATEGY	**EVIDENCE**

Collaboration with Sterling College and the Craftsbury Outdoor center to enhance the school program	Participation in athletic activities Participation in activities such as CAPE, enrichment afternoons, Key Bank Marathon, etc. Participation in music and drama
Create opportunities for volunteerism in the community	
Enrichment will include activities that will enhance the personal wellness of the student	

** Response to Instruction, RTI, is a multi-tiered support network for all students. It serves the needs of students who need more time and practice as well as those who need more challenge. The foundation of the model is strong core instruction in all classrooms. Teachers screen all students 3 times a year using benchmark assessments to determine which students need remediation or greater challenge. The staff regularly monitors the progress of students receiving tiers of support beyond the core program. Working in teams, teachers regularly analyze the progress data to determine if interventions are working or if changes need to be made for groups of students or individuals. Practitioners of RTI believe that every student can meet standards and achieve at high levels if time and instructional practice are matched to individual need. For more information about RTI, go to rtinetwork.org, interventioncentral.org, or www.rti4success.orghttp://www.rti4success.org/

From Housing Profile

Occupied Housing Units in Craftsbury and Surrounding Towns, 2000-2010

	Total Housing Units			Owner-Occupied				Renter-occupied			
	2000	2010	Chg. Total	2000	% of occ 2000	2010	% of occ 2010	2000	% of occ 2000	2010	% of occ 2010
Craftsbury	572	648	76	356	83.4%	408	81.3%	71	16.6%	94	18.7%
Wolcott	646	756	110	447	81.0%	517	80.7%	105	19.0%	124	19.3%
Hyde Park	1220	1372	152	915	80.4%	974	80.2%	223	19.6%	240	19.8%
Eden	582	712	130	336	82.2%	424	84.6%	73	17.8%	77	15.4%
Lowell	403	509	106	229	84.8%	282	82.9%	41	15.2%	58	17.1%
Albany	453	511	58	280	83.1%	325	82.3%	57	16.9%	70	17.7%
Glover	677	762	85	336	87.5%	372	81.6%	48	12.5%	84	18.4%
Greensboro	773	762	-11	251	80.2%	273	83.0%	62	19.8%	56	17.0%
Hardwick	1407	1423	16	883	72.6%	909	73.4%	333	27.4%	330	26.6%

Vacant and Seasonal Homes, 2000-2010

	Vacant					Seasonal				
	2000	% of total 2000	2010	% of total 2010	Chg. 2000-2010	2000	% of total 2000	2010	% of total 2010	Chg. 2000-2010
Craftsbury	145	25.3%	146	22.5%	1	115	20.1%	110	17.0%	-5
Wolcott	94	14.6%	115	15.2%	21	52	8.0%	67	8.9%	15
Hyde Park	82	6.7%	158	11.5%	76	50	4.1%	85	6.2%	35
Eden	173	29.7%	211	29.6%	38	151	25.9%	187	26.3%	36
Lowell	133	33.0%	169	33.2%	36	111	27.5%	139	27.3%	28
Albany	116	25.6%	116	22.7%	0	93	20.5%	92	18.0%	-1
Glover	293	43.3%	306	40.2%	13	266	39.3%	286	37.5%	20
Greensboro	460	59.5%	433	56.8%	-27	437	56.5%	433	56.8%	-4
Hardwick	191	13.6%	184	12.9%	-7	72	5.1%	60	4.2%	-12

Source: U.S. Census Bureau, 2000-2010

Housing Units that Exceed 30% of Household Income

	Selected Monthly Owner Costs as a % of Household Income		Gross Rent
	Housing Units w/ Mortgage	Housing Units w/o Mortgage	Occupied Units Paying Rent
Craftsbury	39.3%	26.7%	50.0%
Wolcott	47.7%	19.2%	66.2%
Hyde Park	45.3%	27.7%	68.3%
Lowell	52.4%	21.5%	35.3%
Albany	42.0%	37.6%	17.1%
Glover	40.0%	20.3%	10.7%
Greensboro	35.9%	35.6%	28.0%
Hardwick	31.2%	16.4%	71.9%
Orleans	40.3%	27.6%	54.9%
Vermont	37.0%	22.9%	52.4%

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates 2009-2014

From Transportation Profile

Traffic Counts in Craftsbury, Current and Historic

Road	Location	Date	Annual Avg. Daily Traffic	Peak AM Volume, average day	Peak PM Volume, average day
BLACK RIVER	650 ft north of Rte 14	2011	295 vehicles	21 (11:00 am)	22 (2:00 pm)
COLLINSVILLE	250 ft. West of Coburn Hill Road	2013	678 vehicles	44 (9:00 am)	68 (5:00 pm)
	600 ft west of Coburn Hill Rd	2010	700 vehicles	48 (7:00 am)	55 (5:00 pm)
CREEK	North of South Craftsbury Road	2015	627 vehicles	39 (10:00 am)	61 (5:00 pm)
	650 ft. North of South Craftsbury Road	2008	624 vehicles	49 (8:00 am)	63 (4:00 pm)
	.15 miles North of Craftsbury Road	2005	747 vehicles	48 (11:00 am)	57 (5:00 pm)
	At Albany Town Line	2009	187 vehicles	15 (11:00 am)	16 (1:00 pm)
EAST CRAFTSBURY	500 ft east of Ketchum Hill Rd	2009	832 vehicles	69 (11:00 am)	77 (3:00 pm)
KING FARM	750 ft north of Creek Road	2011	214 vehicles	15 (10:00 am)	21 (4:00 pm)
MILL VILLAGE	800 ft west of Wylie Hill Road	2012	364 vehicles	27 (10:00 am)	32 (1:00 pm)
NORTH CRAFTSBURY	650 ft south of Vt Rte 14	2010	405 vehicles	32 (8:00 am)	31 (3:00 pm)

SOUTH CRAFTSBURY	750 ft north of Rte 14	2011	723 vehicles	57 (11:00 am)	60 (1:00 pm)
	650 east of Vt Rte 14	2008	706 vehicles	61 (11:00 am)	70 (noon)
	500 ft north of East Craftsbury Rd	2009	1,309 vehicles	96 (11:00 am)	108 (1:00 pm)
	North of E Craftsbury Rd	2006	1,049 vehicles	90 (11:00 am)	87 (noon)
	East of Rte 16	2006	590 vehicles	49 (10:00 am)	48 (noon)
WYLIE HILL	700 ft north of Mill Village Road	2012	128 vehicles	11 (9:00 am)	13 (5:00 pm)
WILD BRANCH	West of Rte 14	2015	1,181 vehicles	124 (11:00 am)	164 (4:00 pm)
	850 West of Vt Rte 14	2008	1,670 vehicles	111 (8:00 am)	150 (5:00 pm)
	700 ft South of Hatch Brook	2013	1,505 vehicles	100 (10:00 am)	132 (5:00 pm)
	800 ft south of Hatch Brook Rd	2010	1,410 vehicles	106 (7:00 am)	129 (4:00 pm)
	700 ft north of Vt Rte 14	2007	1,692 vehicles	124 (7:00 am)	163 (5:00 pm)
VT ROUTE 14	1000 ft. north of Wild Branch Rd	2007	1,736 vehicles	133 (8:00 am)	156 (3:00 pm)

Craftsbury's Bridges

Branch Rd near West Hill (Paul Brojous)
Ed Hodgdon's by the Creek Rd
Seaver Bridge

Whitney Brook (Creek Road), Bridge #3, TH17, 25' Span, scheduled for replacement
Tanner Farm Atwood Don Darling
East Craftsbury Stone Bridge Lawrence Griggs
Ray Reil
Jim Moffatt
Dill Mill Bridge (Village)
Calderwood Hill
Cemetery Road
Post Road
Whetstone Brook
Town Garage Road
Boutwell Hill (Diane Young)
Town Line (Tom Wells)
Daniels
Black River Road, (recently replaced)

Town Bridges on Record – Data to be used for Town Short Assessments

Bridge # and Site	Road	Span
#2 Black River	TH #59	40' span
#3 Whitney Brook	TH #17	25'
#4 Whitney Brook	SA #4	40'
#6 Wild Branch	SA #3	50'
#9 Seaver Brook	TH #15	14'
#25 Wild Branch	TH 22	20'
#10	TH #10	13'
#11 Seaver Branch	TH #9	14'
#13 Cass Brook	TH #39	15'
#14 Whetstone Brook	TH #40	15'
#15 Seaver Branch	TH #8	19'
#16 Seaver Branch	TH #8	16'
#17 Wild Branch	TH #21	12'
#18 Wild Branch	TH #41	24'
#22 Black River	TH #18	55'
#23 Black River	TH #39	40'
#24 Wild Branch	TH #21	27'
#25 Wild Branch	TH #22	28'
#26 Black River	TH #25	41'
#27 Black River	TH #32	30'
#28 Black River	TH #35	32'
#29 Black River	TH #55	30'
#31 Webber Brook	SA #1	14'
#32 Whetstone Brook	SA #?	29'
#33 Whitney Brook??	TH #41	11'

#34 Whitney Brook??	TH #41	14’
#35 Black River	TH #23	40’
#37 Black River	SA-1	89’

From Flood Resilience Profile

Act 16

As of July 1, 2014, municipal and regional plans must contain a Flood Resilience Element. The goal is to encourage flood resilient communities by ensuring,

a) New development in identified flood hazard, fluvial erosion, and river corridor protection areas should be avoided. If new development is to be built in such areas, it should not exacerbate flooding and fluvial erosion.

b) The protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion should be encouraged.

c) Flood emergency preparedness and response planning should be encouraged.

Minimum Requirements under the law

A plan for a municipality shall include a flood resilience plan that:

1) identifies flood hazard and fluvial erosion hazard areas, based on river corridor maps provided by the Secretary of Natural Resources pursuant to 10 V.S.A. § 1428(a) or maps recommended by the Secretary, and designates those areas to be protected, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forests, to reduce the risk of flood damage to infrastructure and improved property; and

2) recommends policies and strategies to protect the areas identified and designated under section (1) above and to mitigate risks to public safety, critical infrastructure, historic structures, and municipal investments.

State of Vermont’s Obligations

Act 16 requires the Secretary of Natural Resources to aid and support municipalities in their work to adopt municipal flood resilience plans and to write related bylaws regarding river corridors, floodplains, and buffers. The State has created the Flood Resilient Communities Program / Focus on Floods initiative which hosts a one-stop web portal to support municipal officials:
http://www.floodready.vermont.gov/http://www.floodready.vermont.gov/

Additionally, Act 16 requires that the Secretary of Natural Resources shall establish a river corridor and floodplain management program to aid and support the municipal adoption of a flood resilience plan and new flood-related bylaws. Under the River Corridor and Floodplain Management Program, the Secretary shall:

1) assess the geomorphic condition and sensitivity of the rivers of the State and identify where the sensitivity of a river poses a probable risk of harm to life, property, or infrastructure.

2) delineate and map river corridors based on the river sensitivity assessments required under subdivision (1) of this subsection according to a priority schedule established by the Secretary by procedure; and

3) develop recommended best management practices for the management of river corridors, floodplains, and buffers.

Flooding 101: An Explanation of Commonly Used Terms

Cost of Flooding to Craftsbury

Many people think that if they do not live near a river or the coast, they are not in danger of flooding, giving them a false sense of security. Floods are the number one natural disaster in the United States and in a high-risk area, your home is more likely to be damaged by flood than by fire. For a 1,000 square foot home built on a concrete slab, the average cost of being subjected to only a six inch flood is $20,150 (National Flood Insurance Program). The high cost associated with even a "minor" flood helps to explain why flooding in Vermont accounted for 67% ($626 million) of the losses due to Hazard Events between 1960 and 2009.

FEMA Flood Insurance Rate Maps (FIRMS)

To identify a community's flood risk, FEMA uses data to create the flood hazard maps that outline the community's different flood risk areas. Some floodplain areas are shown as high-risk areas or **Special Flood Hazard Areas (SFHAs).** Some parts of floodplains may experience frequent flooding while others are only affected by severe storms. However, areas directly outside of these high-risk areas may also find themselves at considerable risk. Changing weather patterns, erosion, and development can affect floodplain boundaries. FEMA is currently updating and modernizing the nations FIRMs, which can be viewed online https://msc.fema.gov/portal. Unfortunately, it has been 33 years since the Effective Date for the FIRMs for Orleans County and no updates are presently scheduled.

Special Flood Hazard Area

A Special Flood Hazard Area (SFHA) is a FEMA-identified high-risk flood area where flood insurance is mandatory for properties carrying a federally-backed mortgage. It is most often in a floodplain, the comparatively low-lying land adjacent to a waterway, and is generally defined according to its frequency of flooding. For example, the "100-year floodplain" is that area subject to inundation in the "100-year flood" (a flood that has a 1%-chance of occurring in any given year). Statistically, a homeowner in the 100-year floodplain has a 26% chance of being flooded during the life of a 30-year mortgage, and many owners are unaware that standard homeowner's insurance does NOT cover damages from a flood. That is why lenders require floodplain properties to carry flood insurance. However, floods rarely follow the precise boundaries on a map, especially flash floods associated with sudden, heavy downpours. Flood damages can and often do occur outside the limits of the regulatory floodplain. In Vermont, two-thirds of flood damages occur outside of federally mapped flood areas.

If FEMA has conducted a **Flood Insurance Study**, the information from this study will be shown on the map. The insurance study includes statistical data for river flow, storm tides, hydrologic/hydraulic analyses, and rainfall and topographic surveys. Cross sections of the floodplains will be shown on the map, along with flood elevations for the 100 year floodplain. These are called **base flood elevations**. FEMA has not completed a Flood Insurance Study for Craftsbury.

The **floodway** is the area that conveys the flood-waters from the stream channel into outlying areas. This is where the floodwaters run the fastest and the deepest, so any obstruction in this area could have disastrous effects. Floodways are not delineated on Craftsbury's FIRM.

River Corridors

ANR began delineating **fluvial erosion hazard** ("FEH") areas as part of its stream geomorphic assessments in 2002. The term "river corridor" came into use in 2007 when the Agency began evaluating assessment data

to identify restoration and protection projects in river corridor plans. The Agency has since decided to use the term "river corridor" instead of FEH area, because reference to an area of fluvial erosion hazard was gaining the popular, but inaccurate notion that the ANR was definitively mapping where erosion would take place and where it would not. Using a term such as river corridor, that is not self-defining, allows ANR to explain the purpose of the corridor for minimizing erosion hazards.

River corridors have not been mapped along streams with a watershed of 2 square miles or less. Rather, these streams are managed and protected from an erosion minimization standpoint (i.e., considering meander belt and buffer functions) with a simple 50 foot setback measured from the top of the stream bank. This distance provides a setback for the bank stability function of natural riparian vegetation while also providing space for a meander belt which, for small streams, will typically range between one and four bankfull channel widths. Small streams may be found in any type of valley setting in Vermont, but the majority flow in steep narrow valleys and have meander amplitudes far less than those in wider alluvial settings with more gentle gradients. The standard 50 foot setback will meet the river corridor objectives in most cases and is intended to simplify the mapping and administration of corridor protections. In site-specific applications, the Agency may delineate, or project proponents may provide the field data to define, a corridor for a small stream that may expand the setback from the 50 foot mark.

Letters of Map Amendment Issued in Craftsbury

Date Issued	Description	1% Flood Elevation	Lowest Adjacent Grade of Structure
August 2000	Structure at 294 Creek Road	915.9 feet	931.8 feet
February 2000	Town Garage	11.0 feet	13.0 feet
February 2000	Structure at 1531 Collinsville Road	11.5 feet	14.0 feet
March 2000	Structure at 14 Calderwood Road	11.0 feet	19.5 feet
September 2007	Structure at 1499 Collinsville Road	1082.4 feet	1091.4 feet
April 2008	Structure at 340 Town line road	88.2	88.9
October 2014	Structure at 266 South Craftsbury Road	--	892.2 feet

Craftsbury Disaster Declarations and FEMA Public Assistance, 1999 to Present

Disaster #	Declaration Date	Description	# of Public Assistance Projects	Federal Funds Received
1307	11/10/1999	Severe Storm(s)	1	$6,405.47
3167	04/10/2001	Snow	1	$4,109.06
1428	07/12/2002	Severe Storm(s)	8	$16,245.15
1715	08/03/2007	Severe Storm(s)	4	$50,431.72
1995	06/15/2011	Severe Storm(s)	2 – Road washouts on Post Road and Hatch Brook	$21,809.37
4022	09/01/2011	Hurricane	4 – Road washouts on Post, Hatch Brook, Daniels, and Cemetery Roads	$16,264.70
4207	02/03/2015	Severe Storm(s)	1-Removal of branches townwide (from heavy snows)	$12,136.05
Total				$127,401.52

Source: FEMA