2023 Sharon Town Plan

Adopted: August 21, 2023

This plan was written with assistance from the Two Rivers-Ottauquechee Regional Commission, funded by a Municipal Planning Grant from the Agency of Commerce and Community Development under the Department of Housing and Community Development.

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Chapter 1: Shaping Sharon's Future: Creating a Long-Term Vision

The purpose of Sharon's Town Plan is to determine and encourage the appropriate use of all lands in the Town, and to allow development in a manner which promotes and safeguards the health, safety and general welfare of citizens.

Several specific goals and objectives surface repeatedly throughout the Plan, all designed to lead our community to a sustainable future. These are to:

1. Encourage a pattern of development which underscores the importance of forests, agriculture, and the historical uniqueness of Sharon, while balancing the needs of residential, recreational, commercial, and light industrial uses;
2. Provide opportunities for residents to have good jobs and affordable housing;
3. Protect forests, soils, water, air, and other natural resources;
4. Protect the public against floods, fires, and other natural or man-made dangers, in as efficient a manner as possible;
5. Protect the historic settlement pattern of Sharon's village center surrounded by rural areas;
6. Reinforce and strengthen a longstanding tradition of stewardship of the land, care for neighbors and involvement in affairs of the Town for the benefit of all.

The Need for Town Planning

The Town of Sharon has undergone economic and social transformations throughout its history. Events such as the construction of Interstate 89 through the village and significant changes in population (see demographics section) have shaped the community into what it is today. In 2016, Sharon, along with the neighboring communities of Royalton, Strafford, and Tunbridge (referred to as the 4-Town Region), were faced with another major event that could have impacted the rural character of the area. This corner of the Upper Valley was thrust into the national spotlight by the NewVistas project. A Utah developer was buying thousands of acres in these four communities with the goal of building a small city of 20,000 people that would dwarf the local population and overtax town services. The centuries-old character of these village-centered communities with outlying farms and woodlands was threatened. Sharon has a subdivision bylaw and flood hazard bylaw, but no mechanism for regulating large-scale development. Backlash from people in the four communities who then banded together to purchase a key parcel of land appears to have brought an end to this plan. Opposition from the National Trust for Historic Preservation also drew public attention to the issue. Sharon recognizes that even though the NewVistas threat has dissipated, there is the possibility that new out-of-scale development could be proposed in the future.

This potential development threat showed that the need for town planning is greater than ever. Prompted by the New Vistas experience, the 4-Town Region came together to look at ways to collaborate in achieving community goals. With the assistance of the Vermont Council on Rural Development (VCRD), a series of community forums were hosted to share concerns and proactive ideas for the future of these communities. These well-attended forums led to the formation of working committee groups to create actionable items and priorities to help maintain the rural character of the region.

Each of these priorities was created in a workgroup that consisted of residents of the 4-Towns and subject matter experts from the area. The four main priorities identified by the forum process were to:

- Develop area housing and build a senior housing community.

- Support economic development in the region;
- Conserve natural resources and the working landscape and create a regional agricultural network; and
- Create a regional time-bank and skill-sharing program.

The Sharon Planning Commission recognized the need to develop a Town Plan supportive of the priorities established by this public process, a Plan that will guide the community in shaping its environmental and economic future.

With funding supplied by the Agency of Commerce and Community Development (ACCD) though a Municipal Planning Grant (MPG), the Sharon Planning Commission was able to recognize the visions set forth through the 4-Town forum process in this Town Plan.

Purpose of the Sharon Town Plan

Vermont law authorizes towns to prepare and adopt town plans, although these plans are not mandatory. Sharon made the decision to start a planning program in 1972 when the Sharon Selectboard appointed a Planning Commission. One of its first tasks was to draft subdivision regulations. Those were approved by the Sharon Selectboard in 1973 and updated in 2008.

In 1976, Sharon adopted its first Town Plan. It was prepared by the Planning Commission and adopted by the Sharon Selectboard following public meetings and hearings. Under Vermont law, municipal plans are effective for a period of eight years from date of adoption and are thereafter periodically updated.

There are many applications of a Town Plan, both regulatory and non-regulatory. First, this Town Plan is intended as a long-term vision of how the community can be preserved, protected, and evolve. Specifically, the Sharon Town Plan is a comprehensive account of Sharon's residents, jobs, economy, schools, roads, energy, housing, natural resources, and land use. By analyzing the trends in these characteristics, the Plan can help the community make informed choices in directing the patterns of its future growth. This analysis can serve as guidance to Sharon residents and to elected and appointed officials.

This Town Plan also acts as a critical regulatory document in both Act 250 land use projects and Section 248 renewable energy development proceedings. Since Sharon has no formal zoning outside of protection for areas of flood risk, this Plan and its policies serve as a mechanism to protect the interests of the town and its residents from incompatible development.

It is important to remember that the Sharon Town Plan is a guidance document intended to represent the public interest. The nature of growth and change may require that this Plan be re-evaluated. The Planning Commission is legally responsible for preparation of the Plan for Sharon as well as public meetings and hearings related to it.

Our 4-Town Future

While the Towns of Sharon, Royalton, Strafford, and Tunbridge have their own unique assets, challenges, and general characteristics, in the winter of 2018-2019 residents were able to come together and identify common goals that could be achieved collectively. Through these community forums, residents shared their love for the landscape, the scenic backroads, and the way the communities support each other and come together to share, celebrate, recreate, and create. When faced with a challenge to their collective future, these communities joined together

to stand up for what they believed in, and then made the forward-looking decision to join together again to say – "What's next? Where do we go from here?"

With an eagerness to collaborate, over 300 residents of this 4-town region participated in community forums, decision-making, and action planning to develop a set of key priorities for the region to take on.

Through this program, a vision for the 4-town region was formulated by those who attended the forums and through an online survey. Together, a total of 26 visions of the future were developed. Great ideas included: regional communications, housing, social services, outdoor recreation, events and activities, strategies to attract young people, local food, a business association, and childcare. In the end, however, a strong consensus emerged around priorities that can lay the groundwork for regional collaboration to support growth, sustainability, and the vitality of the area.

This important community work that so many put their time into would not have been possible without the Vermont Council on Rural Development (VCRD) Community Visit Program. This program is a structured process that enables a community to identify and prioritize goals, foster local leadership, and serve as a catalyst for the development and realization of concrete, achievable action plans.

"We all face a lot of town-specific issues. We also share a tremendous amount in terms of common interests, common landscapes, common needs for solutions to the problems of creating affordable housing for young people and old, forging out collective ways toward saving this environment that we all cherish, improving the schools we all rely on, making it possible for young families to thrive here."
– Kate Siepman, Strafford Selectboard Member

2020-2022 Planning Process for the Sharon Town Plan

Figure 1: Sharon Planning Commission members talk with Sharon residents about the Town Plan.

As stated previously, the Town of Sharon applied for and received an MPG to do a thorough revision of the Town Plan. Funding was used to hire the Two Rivers-Ottauquechee Regional Commission (TRORC) to provide technical assistance and regional expertise for the planning process.

This planning process was unlike any the Town has dealt with before. In March 2020, the COVID-19 pandemic required the Planning Commission to switch from in-person to virtual meetings. Members drafted a community survey, distributed it, and recorded responses. Surveys were mailed to every PO Box and residence in Sharon and an electronic version of the survey was also made available. In total, 169 households responded to the survey. Results of the survey are available as an appendix to this Plan, and, where relevant, results are included throughout this document.

The all-volunteer Planning Commission met virtually each month with TRORC and edited individual chapters of the Plan. At the Old Home Day event in August 2021, Planning Commission members staffed a booth with various maps from the Town Plan and gathered thoughts from residents on a variety of topics (energy, land use, and conservation).

Demographics

Population Patterns

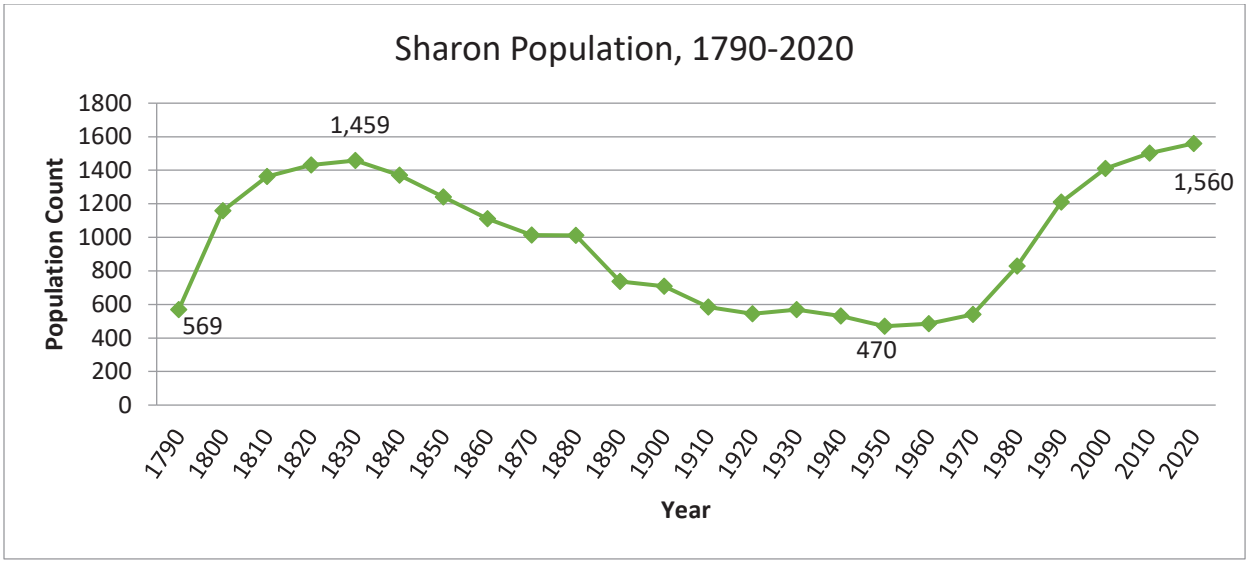


Table 1: Sharon Population, 1790- 2020

Population patterns, shown in Table 1, represent an important element in the overall development of Sharon. Planning for population change allows the town to consider the services and facilities that a growing population will demand so they can be delivered more efficiently and equitably. Rapid and unanticipated population increases can create a demand for new and expanded municipal services, such as education and fire protection, and may strain the town's financial ability to provide for them.

In 2010, Sharon's population was 1,502 and rose to 1,560 in 2020. This is an increase of 3.9%, more than the State of Vermont's growth rate of 2.8%. During the same period, Windsor County's population increased by 1.9%. In 2010, Sharon surpassed its prior historic peak of 1,459, reached in 1830.

Year	Sharon Population	Population Change	Sharon Pop. % Change	Countywide Population	Population Change	County Pop. % Change
1990	1,211	0	0	54,055	0	0
2000	1,411	200	16.5%	57,418	3363	6.2%
2010	1,502	91	6.4%	56,670	-748	-1.3%
2020	1,560	58	3.9%	57,753	1083	1.9%
2030	1,649	89	5.7%	60,328	2575	4.5%

Table 2: Population Projection for 2030, (Source: U.S. Census Bureau 2020 and DAIL Vermont, Vermont Population Projections – 2010 - 2030)

Population projections, shown in Table 2, forecast that Sharon's population will continue to increase over the next 10 years. The projected 89 new residents will have an impact on land use, housing needs, natural resources, and public utilities and facilities.

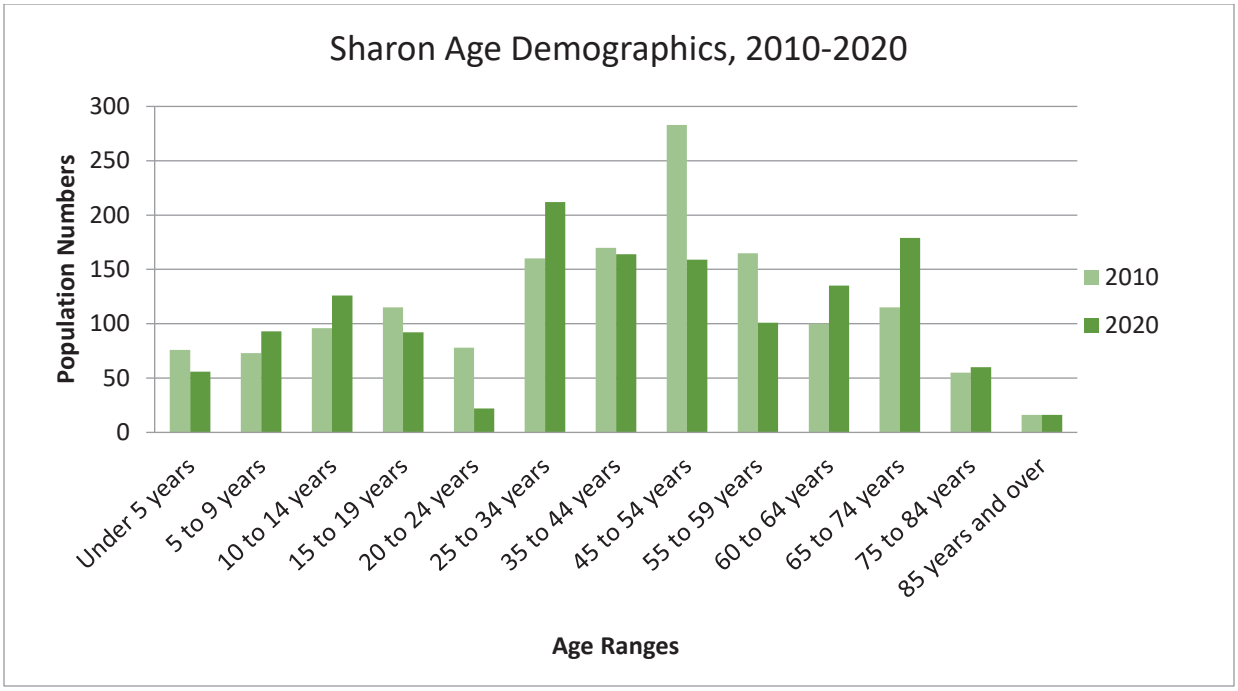


Table 3: Sharon Population by Age Group, 2010-2020 (Source: 2010 and 2020 ACS 5-year estimates)

The town's population has changed over the past decade. As indicated in Table 3, there has been a marked decrease in the number of individuals aged 45 and over, along with a mixed pattern in the number of children younger than 15 years. The number of residents aged 55 to 59 years old has decreased by more than one-third, from 165 individuals in 2000 to 101 individuals in 2020. All told, nearly 30% of Sharon's population is comprised of individuals 60 years of age or older. The increase in the over-60 age group has been seen throughout Vermont, which ranks second in the nation for percentage of retirement-aged residents. The number of young adults aged 15 to 24 years old decreased by 41% in the decade from 2010 to 2020, down from an increase of nearly 34% between 2000 to 2010.

Land Use Demographics

The Vermont Department of Taxes maintains annual Grand List records for all towns in Vermont. Each town reports the property owned by corporations, town residents, state residents, and out-of-state residents. Land ownership categories for 2018 are shown in Table 4.

Farm and forestland are valuable to the town, as tax revenues generally exceed the town's cost to service the land. Unfortunately, property taxes on farm and forest land may exceed the owner's annual income from farming and forestry. The Vermont Use Value Appraisal Program (the "Current Use" Program) allows landowners to pay taxes on open land based on the value of the land for farming or forestry. The State reimburses the town for taxes lost due to the lower valuation.

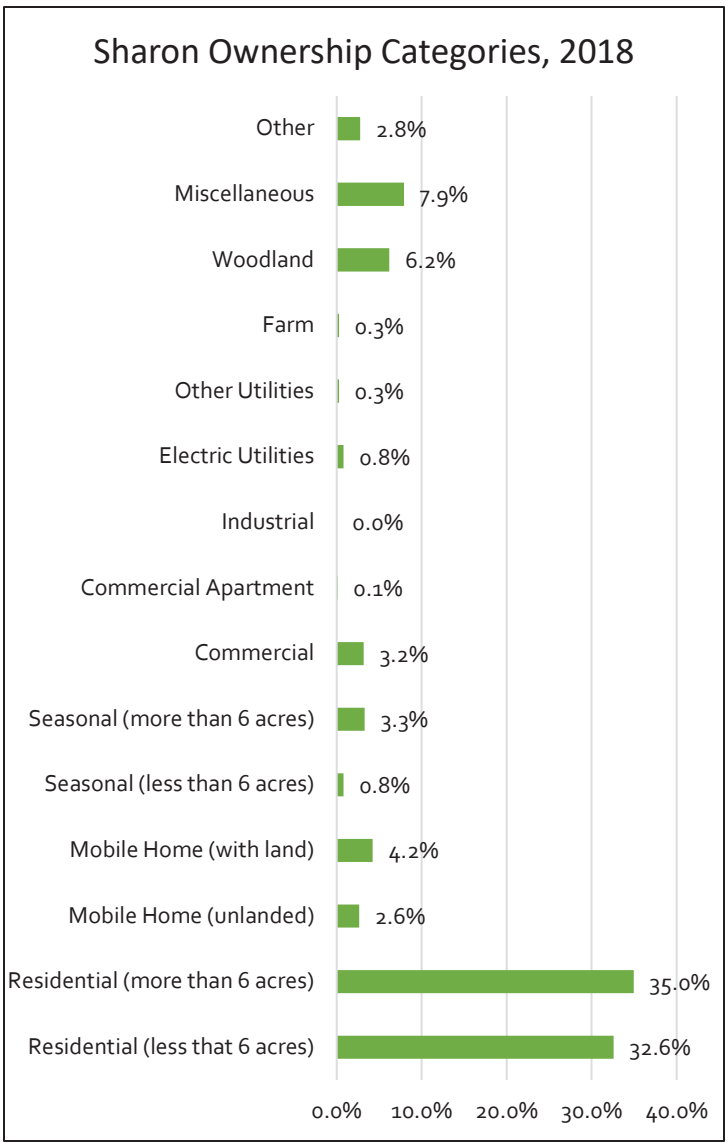


Table 4: Sharon Ownership Categories in 2018

Income Demographics

Income levels in Sharon represent a median income per household similar to the State median and higher than that of Windsor County. According to the U.S. Census Bureau's American Community Survey 5-year estimates, the 2020 median household income in Sharon was $63,571, compared to the county median of $61,503 and statewide median of $63,447.

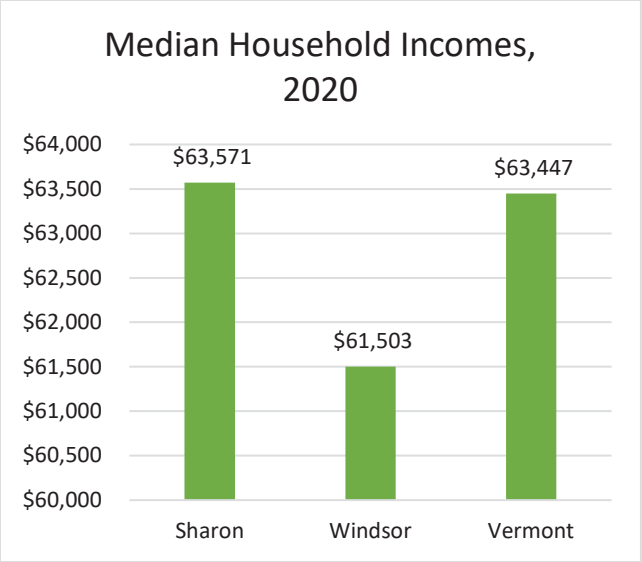


Table 5: 2020 Median Household Incomes for the Town of Sharon, Windsor County, and the State of Vermont (Source: 2020 ACS 5-year estimates)

Town Expenditures

Schools represent the largest single expense in most rural towns, including Sharon; highway maintenance and reconstruction follow. For fiscal 2021, 58% of non-school expenses were earmarked for roads, while 42% went to administration of town services (i.e., town employees and offices).

2020 Community Survey – Main Takeaways

Due to the COVID-19 pandemic, the originally planned public forum was cancelled, and in its place the Planning Commission determined that a community-wide survey would be an appropriate alternative for soliciting public input. In total, there were 169 individual responses to the survey. The following questions were asked of all respondents:

- What features make Sharon a desirable place to live?
- What challenges do you feel Sharon has?
- How many years have you lived in Sharon?
- What is your age range?
- Do you own or rent in Sharon?
- Which special areas of Sharon do you value the most (natural/scenic/recreational) which deserve mention in the Town Plan as areas to protect?
- Which community activities do you value and/or participate in?
- Should the Town of Sharon actively work with landowners and land trusts to conserve land?
- Would you support some sort of land use regulations to help protect Sharon from future, out-of-scale development in its rural area? Why?
- Should the Town of Sharon develop an Enhanced Energy Plan?
- What topics would you like to see addressed in the revised Sharon Town Plan?
- What would you like the "Town of Sharon" that you pass on to your children and grandchildren to look like?

The results of this survey are laid out throughout this Town Plan, as well as in an Appendix with the full results. Highlights of the survey are laid out in the following pages.

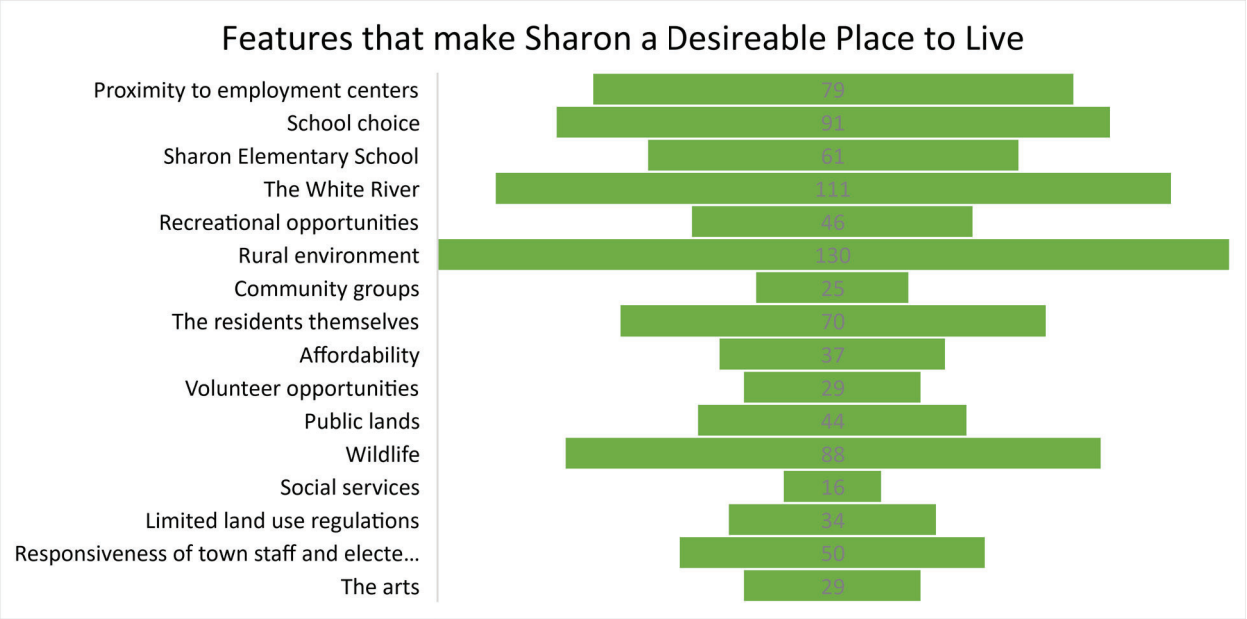


Table 6: Features that Make Sharon a Desirable Place to Live with Number of Responses

Responses to the question of what makes Sharon a desirable place to live are shown in Table 6. Responses for the write in category (in order of response) include:

Rural environment, The White River, School choice (includes The Sharon Academy), Wildlife, Proximity to employment centers, The residents themselves, Sharon Elementary School, Responsiveness of Town Staff, Recreational opportunities, Public lands, Affordability, Limited land use regulations, Volunteer opportunities, The Arts, Community groups, and Social services.

Challenging Features of Sharon

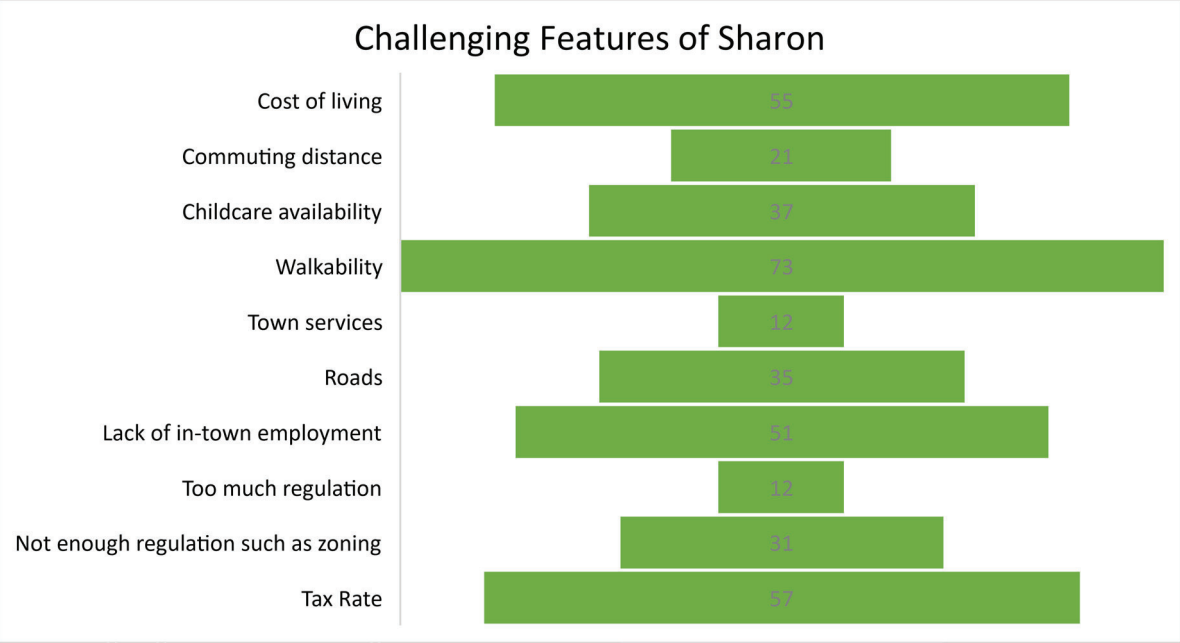


Table 7: Challenging Features of Sharon with Number of Responses

Responses to challenging features of Sharon are shown in Table 7. Write in responses include:

Lack of town center, more recreation, no gathering places, we don't need zoning, lack of affordable land, lack of restaurant/café, larger tax base, litter on roads, need central trash/compost, not affordable for seniors, enforce what we have, increase in crime/ lack of police, too much towards social programs = too much in taxes, lack of youth facility & opportunities, need affordable expanded public transportation, and no full-time professional police department.

The Sharon to Pass on to Future Generations

The word cloud in Figure 2 shows the major themes appearing in comments by survey respondents.

Figure 2: Word Cloud. This word cloud shows the major themes appearing in comments

Relationship to Other Plans Surrounding Communities

A Town Plan focuses primarily on development and policy within its community's boundaries. However, it is important to recognize that the way a community grows and changes can be directly impacted by developments outside of the community. Extreme examples affecting Sharon include region-wide out-migration to

western states following the Civil War, the decline in local farming, the arrival of railroads, and the interstate highway system. On a more local and ongoing level, development activity in neighboring towns can also affect the character of Sharon.

In order to analyze the potential for outside impacts on Sharon, the Planning Commission has reviewed the Municipal Plans and land use regulations of surrounding towns for consistency with this Plan. These communities include:

- Hartford – Hartford is Sharon's largest neighbor and is the largest Vermont community in the Upper Valley and is a major hub of employment and services. Hartford has land use regulations designed to manage the larger-scale, higher intensity types of development associated with a community with a population of 10,686 in 2020. While much of Hartford's land use plan focuses on high-density mixed-use development in its villages, downtown, and growth area, West Hartford, that shares a border with Sharon, is exclusively rural and rural residential in nature. The two plans are unlikely to conflict.
- Norwich – Norwich has zoning and subdivision regulations in addition to a municipal plan. The land use patterns outlined in the Norwich Town Plan are similar to Sharon's, with a densely populated village center surrounded by more rural countryside. Along the border it shares with Sharon, Norwich plans low-density, low-impact development that is carefully sited. The Plan pays particular attention to the suitability of the landscape when considering whether a use is appropriate within these areas. The two plans are unlikely to conflict.
- Pomfret – Pomfret has a tradition of planning and zoning that focuses primarily on rural residential, agricultural, and home occupations. Uses within the area of shared border with Sharon are similar and therefore compatible. No conflicts are foreseen.
- Royalton – Royalton maintains a Municipal Plan and a Flood Hazard Bylaw, but no zoning ordinance. The majority of Royalton's land use is designated as Forest Conservation or Rural Residential, including the area along the shared border with Sharon. The only potential area of conflict between the two communities is in the area adjacent to Sharon's "Commerce Park". This part of Royalton is intended to be low density residential with limited uses. It is possible that a future industrial use could conflict with Royalton's land use plan, but it should be noted that the majority of Commerce Park is now occupied by a solar farm – which is an extremely low impact neighbor. For the life of the solar farm, it is unlikely that conflicts will arise between these two areas.
- Strafford – Strafford has a regularly updated Municipal Plan as well as Zoning, Subdivision and Flood Hazard Bylaws. Strafford's principal land use pattern is rural residential and encourages natural resource protection. Contiguous areas of land use in both communities are similar in nature. There are no conflicts between these plans.

Relationship to the Regional Plan

Sharon is a member of the Two Rivers-Ottauquechee Regional Commission (TRORC). It is one of thirty (30) municipalities that comprise this Region of Vermont. The TRORC Region covers northern Windsor County, most of Orange County and the Towns of Pittsfield, Hancock and Granville. The Commission was chartered in 1970 by the acts of its constituent towns. All towns are members of the Commission, and town representatives govern its affairs. One of the primary purposes of the Regional Commission is to provide technical services to town officials and to undertake a regional planning program. As is the case in many areas of the State, the extent of local planning throughout the region is varied. Some municipalities are more active than others. Thus, the level of services rendered to each of the towns changes with time.

TRORC adopted its Regional Plan in July 2020. It will remain in effect for a period of eight years. The Regional Plan was developed to reflect the general planning goals and policies expressed in the local plans. It is an official policy statement on growth and development of the Region. The Regional Plan contains several hundred policies to guide future public and private development in the Region. Policies for land use settlement are identified. These areas are: Town Centers, Village Settlement Areas, Hamlet Areas, Rural Area, Industrial Areas, Mixed-Use Areas, and Conservation Resource Areas. Delineation of each land use area is mapped. There are no conflicts between this Sharon Town Plan and the TRORC Regional Plan.

Goal and Policies

Goal I: Work with neighboring towns and the region to encourage good land use practices and environmental policy that benefits the citizens of Sharon.

Policy A: Encourage continued communication, cooperation, and data sharing between Sharon and its neighboring towns.

Policy B: Continue to support the 4-Town efforts to improve the local economy and housing options.

Policy C: Continue participation in the Two Rivers Ottauquechee Regional Commission.

Policy D: In the event of a major economic shift in any of the four towns (loss of the VT Law School, for example), the Town of Sharon should maintain communication with its neighbors to generate helpful responses and options.

Chapter 2: Land Use

Overall Chapter Goals

I. Maintain an identity for Sharon as a distinct community, with a single dynamic community center.
II. Respect the community's identity and maintain qualities of scale and form with existing development.
III. Protect the environment from degradation while allowing appropriate access to natural resources.
IV. Retain clear evidence of the community's history while making provision for future needs.
V. Provide for development in a manner that does not result in environmental degradation or harm to regionally significant wildlife habitat, and also does not overtax the community's limited infrastructure.

Current Land Use and Sharon's Rural Character

Sharon's rural character is shaped by its natural setting, patterns of development, buildings and their relationship to the landscape, and the sense of community derived from the people living and working here. The beauty and rural character of the town are valued by residents and are also attractive to tourists.

Because the Town of Sharon does not have protection that comes from a regular zoning or development ordinance, it is essential to define "rural character" with specificity for the purposes of review under Act 250.[1]

86% of respondents to the 2020 Community Survey indicated their support for formal land use regulations to protect the Town from future out of scale development.

Rural character is exemplified by many attributes of the Town of Sharon: the tranquility of the vast amount of wooded and undeveloped land; its small-scale village center; the White River and its tributaries; and abundant and diverse wildlife. The Town of Sharon is a traditional Vermont village. A mixture of residential and commercial uses exists in harmony. As development pressures increase upon the Town and its less densely populated areas, it is vital that the defining characteristics of the Town be preserved.

Most surveyed residents indicate a preference for Sharon's existing rural character rather than a densely populated community. They want growth to occur at a pace and in a manner that does not destroy the character and fabric of the community or result in significant tax increases. Growth deemed good for the Town should enhance the social, environmental, cultural, and economic values of the Town. It should not undermine the ability of the taxpayers to support the Town on a sound financial basis.

Sharon is a small Vermont town, bisected by the White River, Interstate 89, Route 14, and the Railroad. Development within Sharon Village is typical of that in other small New England towns. The Village center contains approximately 40 houses on small lots with modest setbacks from the road that they share with stores, a church, post office, library and the town green. There are a total of 47 miles of roads in Sharon, approximately 33 miles of which are gravel

[1] Note that the Town of Sharon regulates development in flood zones through its Flood Hazard Bylaw.

roads. Most residents live on these rural routes, outside the village center, in a dispersed fashion. No part of Sharon, including the village center, has town water or sewer at present.[2]

The citizens of Sharon value their town and recognize the Village as the center of community life. The balance between the concentrated development in Sharon Village, the diffuse residential development of the areas surrounding the Village, and the contiguous outlying woodlands are important elements of the Town's character.

There are a number of hobby and working farms in Sharon. The continued presence of small-scale farms, and desire to keep them. emphasizes the need to identify and develop effective growth and land use development policies that will serve the long-term interests of the community and help to maintain Sharon's identity as a small rural town.

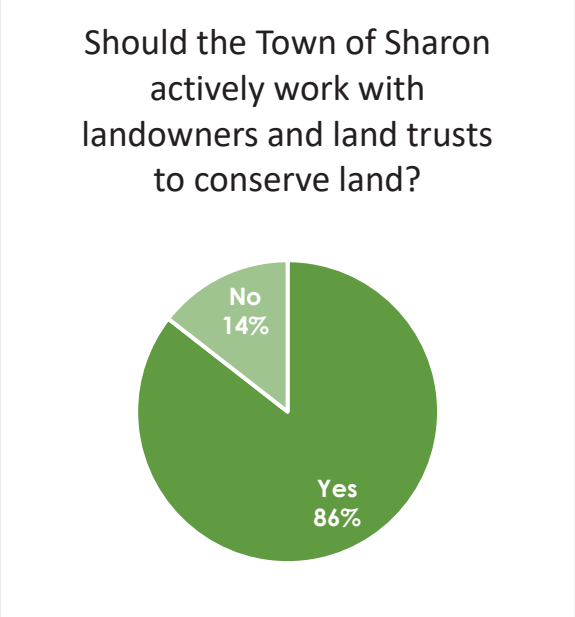


Table 8: Town Survey Response to Land Conservation Question

Because of the natural resources that exist in Sharon, there are abundant opportunities for outdoor recreation including: hunting, fishing, hiking, cross-country skiing, snowmobiling, horseback riding, trail running, cycling, canoeing, kayaking, tubing and swimming. The rural character of the Town makes many of these activities possible.

Sharon contains large tracts of contiguous woodlands that adjoin woodlands in neighboring towns. These forested tracts act as wildlife corridors, allowing animals unrestricted movement not possible in more developed areas. The undeveloped acreage extending from conserved lands south of the White River, across Quimby Mountain and north to the Strafford town line is part of a regionally significant wildlife corridor spanning multiple Vermont counties. Additional information on forest land and habitat is included below in Section 'C' under the "Forest Conservation Area" heading.

In the 2020 community Survey, respondents overwhelmingly expressed their desire for the town to actively work with landowners and land trusts to conserve land in Sharon, as demonstrated in Table 8.

Future Land Use

This Plan recognizes that not all land is equally suited for all types and intensities of development. Rather, it is the basic premise of this Plan that future land uses must be sensitive to the physical limitations of a site and that in planning for the development of a parcel, more than the market value of the property must be recognized. Accordingly, separate Future Land Use Areas have been defined in this section and the physical boundaries of each are shown on the Future Land Use Map attached to this Plan. All future land development shall conform to the policies for each Future Land Use Area described below.

[2] Current Land Use is shown on Map 1 attached to this Plan.

In addition, all projects requiring a town Subdivision approval or an Act 250 permit shall conform to the following Guidelines. Conformance with these Guidelines is required to be in conformance with the Sharon Town Plan under Criterion 10 of Act 250.

Guidelines:

1. Avoid monotonous lot layout of equally sized and shaped lots, especially along a road frontage.
2. The amount of frontage and building position will be varied from lot to lot to avoid a suburban pattern of repeated houses or other buildings situated at or near the middle of adjacent lots one after another.
3. Creating more than one adjacent lot with a depth greater than four times its frontage ("spaghetti lots") is prohibited.
4. Buildings shall be located at the edges of woodlands and fields, relatively close to roads, along hedgerows, etc., in an effort to preserve agricultural soils, whether or not under the same ownership.
5. Lots must take advantage of and preserve desirable features, such as stone walls, hedgerows, fields, natural clearings, and land contours.
6. Locating buildings at the top of ridgelines is prohibited.
7. Excavation that will cause excessive movement of material or erosion is prohibited.
8. Locate buildings and other construction so as to minimize impact on natural or scenic features, such as bodies of water or historic resources.
9. In the case of multiple unit projects, buildings shall be clustered to preserve open space and protect agricultural soils.
10. On developments involving adjacent buildings or lots, driveways must be shared.
11. Light industrial and commercial uses shall be screened so as to minimize visibility from off-site.
12. Commercial or industrial uses, such as drilling, excavating, or state-approved junk yards, which would create noise or other disturbances off-site, shall not be visible from public roads or neighboring residences. All reasonable means shall be used to lessen any detrimental off-site impacts of such uses. This provision shall not apply to agricultural uses.
13. Retail establishments (excluding home businesses and those that require substantial outside storage such as lumberyards or nurseries) shall only be located in the Village Area.
14. Developments with infrastructure and service requirements that clearly exceed existing capacities of the Town, or will cause a significant burden for the Town to establish those service capacities without harming its rural character, are prohibited.
15. Development of property along the White River and its tributaries must abide by Sharon's Flood Hazard Bylaw.

Village Area

The Sharon Village has a special character in its buildings, streetscape, and landscape. The Village is the focal point of the community. It is the center of the Town's civic, economic, and social life.

The Village of Sharon is comprised of many historic buildings (private, civic, and religious) that are listed on Vermont's Register of Historic Places. The Village has a traditional green, Town Office, a store, a gas station, a church, a library, two schools, an arts center, a museum and various historic houses as well as other commercial enterprises. It is a fundamental premise of

this Plan that the town should make every effort to ensure the continued existence of the Village as the dynamic community center. See Map 2, Future Land Use, for the Village Center boundaries.

The purpose of the Village Area is to maintain the variety of uses currently existing in the Village and promote the Area as the center of Sharon. The proximity of civic, retail, and other uses in the Village supports social interaction through chance or planned encounters with neighbors at the stores, the Post Office, the Town Office, the library, the church, and the schools.

Uses in this area should continue to be mixed, allowing for the development of multi-family housing, commercial (primary retail establishments) and civic uses where feasible without excessive parking. When possible, existing structures should be adaptively reused. The architecture and scale of new development should not detract from the historic character of the Village Area.

Village Density Challenges

Sharon Village currently has no town water or sewer systems. Coupled with the physical constraints of the White River, steep topography, Route 14, and the I-89 corridor, potential new development is limited in the village. In addition to these physical constraints, homes and businesses in the village rely on individual wells or springs for drinking water, all of which require setback distances from septic systems. Furthermore, village buildings and homes are situated on small lots. For all of these reasons, Sharon has limited available space to add new septic systems or expand existing ones. This constrains new construction, in-fill development, and expansion or new uses for existing buildings. The Town of Sharon will have to invest in sewer and/or drinking water systems before a dense mix of residential and commercial development can be achieved within the village. Limited parking is also an issue.

Because Sharon Village is immediately adjacent to Interstate 89, at times it experiences moderately heavy traffic from outlying parts of Sharon and other neighboring towns. In planning for increased economic and social development in our Village, the Town will need to evaluate the impact of traffic near the intersection of Routes 14 and 132 while promoting the values articulated in this Plan. The Town must weigh how that traffic affects the character of Sharon Village and the community's ability to enjoy it.

Since 2005, Sharon Village Center has been designated as a village center under the State's Downtown and Village Program. Village centers are eligible for benefits including tax credits and priority consideration from other state programs and agencies.

Village Area Policies

1. New development in the Village shall respond to existing settlement patterns, density, and land capacity.
2. Retail shops and services, tourist businesses, lodging and public facilities are appropriate in the Village Area, if at a scale and design consistent with the existing architectural character.
3. Retail enterprises or service centers that would principally serve the region rather than residents of the Area, (including but not limited to "dollar stores," factory outlets, fast food establishments, shopping malls, new service stations and self-storage units) shall not be located in the Village Area.
4. Converting the use of existing structures and older buildings of historic merit is encouraged to enable preservation of the town's built fabric.
5. Where new development is planned, efforts must be made to ensure that it is complementary and compatible with the architecture and configuration of existing

buildings and streetscape, and respects the traditional size and scale, proportions, and shape of the neighborhood.
6. Infill development of housing within the village is encouraged.
7. Major public investments, such as improvements to Routes 14 and 132, should be encouraged and endorsed only on finding that they will not unreasonably or unnecessarily jeopardize or endanger the unique and special character of the Village Area. VTrans Planners shall consult with the Town and affected property owners regarding such activities.
8. New businesses shall be limited to uses that do not adversely affect the quality of life, the unique character and historic atmosphere of the village, or the rural residential nature of the Town. Inappropriate development in the Village Area would include, but not be limited to, additional gas stations, self-storage units, "dollar stores," fast-food chain businesses, and commercial enterprises that generate noise and clutter.
9. Energy generation facilities are limited to existing rooftops and/or a ground mounted systems that are designed to meet the energy needs of the structures located on that particular lot, in order to preserve as much of the historic character as possible.
10. Ground-mounted energy generation facilities must be set back from lot lines by a dimension at least equal to their height.
11. The Town shall maintain the Village Area Designation with the Vermont Agency of Commerce and Community Development.

Rural Residential Area

Lands outside of Sharon Village are predominantly rural. Historically, much of this outlying area was associated with agricultural and forestry uses. With the decline in the number of dairy farms, much of the open land has reverted to forest. Over time, scattered single-family homes have been built along the rural roads. Challenging topography and the potentially higher cost of development (e.g., power, access roads and driveways) have kept much of the more remote land in Sharon undeveloped.

The purpose of the Rural Residential Area is to preserve the rural character of the Town and allow for agriculture, forestry, outdoor recreation, residential development, and home businesses as defined below.

As new residential development occurs on more remote roads or in challenging terrain, strain is put on the Town's ability to provide services and accommodate demands for road maintenance. Access by emergency vehicles is made more difficult and there is the potential need to extend school bus routes. Furthermore, this remote development fractures larger rural parcels, creating an adverse effect on wildlife, forestry, water quality, recreation, and the aesthetic character of the community.

Density in the Rural Residential Area must be low, lots of less than one acre are not appropriate in this area. New development needs to occur at a reasonable rate of growth so as not to unduly burden the ability of the Town to provide services. It needs to be sensitively planned to allow for continued forestry and agricultural uses. Special or unique resources, including critical wildlife habitats (including deer wintering areas), historic sites, archeological sites (including ancient stone chambers), scenic areas, and wetlands must be evaluated and respected when developing projects in the Rural Residential Area. Non-residential development shall locate in areas where municipal highways exist, rather than in areas that will require new or upgraded roads.

Rural Residential Area Policies

1. Projects that adversely affect the rural setting and conflict with existing rural land uses shall not be located in this Area.
2. Businesses or industry that produces excessive noise, traffic, truck traffic, or which require significant lighting, parking, or signage are considered inappropriate uses for rural residential areas.
3. Residential, agricultural, and forestry uses are the primary and dominant land uses in the Rural Residential Area. Commercial (including all retail), office buildings, or industrial development shall not be located in the Rural Residential Areas.
4. The cleaning of hazardous waste containers, storage of hazardous wastes, junk cars, or the creation of a junkyards are inappropriate for Rural Residential Areas.
5. Density in the Rural Residential Area must be low. Development of lots less than one acre in size shall not be permitted in the Rural Residential Area.
6. New development must be planned to minimize impact on current or potential forestry and agricultural uses. This can be accomplished by siting residential and other non-agricultural uses on the least productive soils. In addition, the layout of building lots shall be designed to conserve crop and pasture land and managed woodlands.
7. Major residential development shall locate only in areas where adequate municipal highways already exist. Major residential projects are defined as new developments and expansions of existing developments by five dwelling units or more, or creation of five or more lots for single-family dwelling units.
8. Non-residential development shall locate in areas where municipal highways exist, rather than in areas that will require new or upgraded roads.
9. Special or unique resources, including critical wildlife habitats (including deer wintering areas), historic sites, archeological sites (including ancient stone chambers) and wetlands must be evaluated when planning development in the Rural Residential Area. Development shall be sited to avoid adverse impact on such resources, and to minimize encroachment on priority Forest Blocks and Connectivity Blocks (described below under 'Forest Conservation Area').

Small Enterprise Area

The Small Enterprise Area is established west of the Village Area along Route 14. The purpose of the Small Enterprise Area is to provide opportunities for business expansion and relocation in an area close to the Village and a major highway. This Area, which was previously in residential and agricultural use, presently consists of several small service establishments. Through designation of this Area for business, it is intended that small enterprises will benefit from favorable access and higher traffic volumes afforded by Route 14.

Small non-retail commercial establishments are intended to be the dominant use for this Area. Non-residential uses, including small service businesses, small professional offices, and inns are acceptable land uses for the Small Enterprise Area, planned at a residential scale and form; are not primary or dominant uses in an area; would not unduly conflict with existing or planned residential, and do not unduly affect rural character. Uses that are primarily retail in nature (stores) shall not be located in this area to protect Sharon's rural nature and ensure compliance with the Regional Plan. Residential uses are secondary. Sight distances in this Area are generally favorable. Soil and slope conditions in this Area range from fair to excellent. Some sites offer favorable conditions for on-site sewage disposal and water supply. However, it should be noted that some low-lying portions of this Area north of Route 14 experienced significant flooding in the wake of Tropical Storm Irene in 2011, although not marked as at-risk properties on FEMA flood maps.

Maintenance of the natural landscape and the introduction of development compatible with the site is the principal challenge for this Area. Strip development, with its typically confusing vehicular access and layout that undermines the historical building patterns of small towns, is emblematic of sprawl in communities nationwide and is inappropriate for any commercial areas in Sharon.

The Small Enterprise Area is dedicated for commercial use, but not without some limitations. This Area is a gateway to the community. Given its high visibility and proximity to the White River, a nationally recognized recreational resource, future development needs to be sensitive to the preservation of its scenic qualities. Commercial development must be designed to promote traffic and pedestrian safety, and to provide an attractive and convenient place to conduct business. The density of development within this area should be higher than that of the Rural Residential Area, with a rough minimum density of one business per acre.

Small Enterprise Area Policies

1. Uses that are primarily retail in nature (stores) shall not be located in this area.
2. To contain development in the Small Enterprise Area in a way that makes it a more hospitable environment, design considerations must include:
   - location and size of parking areas;
   - landscaping;
   - pedestrian circulation;
   - size and scale of structures;
   - location of structures within the site; and
   - appropriate lighting and signage.

1. New projects must include the following design considerations:
   - a compact and densely developed project which uses land efficiently;
   - reducing the impact of parking by dividing areas into smaller lots, with integrated landscaping;
   - providing pedestrian and vehicular links between projects;
   - green space between the project and the street, including use of large trees; and
   - signage that effectively communicates the desired message without being large, bright or flashing.
2. The creation of numerous curb cuts, which contribute to traffic congestion and safety problems, is discouraged. The Sharon Highway Ordinance shall be followed in all new developments.
3. Commercial projects shall use the following design principles:
   - provide pedestrian and vehicular links between projects;
   - reduce impact of parking areas by breaking lots into small groups with integrated landscaping;
   - encourage compact and densely developed projects which use land efficiently;
   - preserve open space of a distinct area of visual or functional importance;
   - provide trees to act as buffers between traffic arteries and interior drives;
   - lay out the project site to allow for coordinated future use of the entire parcel;
   - reduce apparent scale of large development by pattern, number, size, and location of structures within the site;
   - employ screening plans for visually objectionable features on the site, including dumpsters, refuse disposal sites, building equipment; and
   - minimize the number of access roads or curb cuts onto public highways, and use common access drives.

Sharon Commerce Park

The Town of Sharon recognizes that business and industry offer potential benefits including tax revenue and local jobs. However, businesses can also create fiscal and environmental costs that may outweigh potential benefits. These include the need to create, maintain, or repair infrastructure, increased traffic, and health or safety risks for residents.

The Sharon Commerce Park is highly visible from I-89 and River Road and is located close to the White River. Formerly called the Industrial Park, it was created in 1975 on 41.5 acres of land that had been a farm until it was bisected by the interstate. The purpose of the Sharon Commerce Park is to serve as a site for commercial operations and light industry. Currently, it is home to several light industrial businesses and a solar energy generation facility.

Access to the park is a significant challenge for truck traffic. Truck traffic from Interstate 89 must negotiate the village center, the narrow 1927 Sgt. Carlton Clark Memorial Bridge, and an at-grade railroad crossing to reach the Commerce Park. For traffic safety reasons, businesses that rely on a large number of truck visits are discouraged from basing their operations in this park.

Because of the limitations of this site for industrial use, the Town in 2000 limited its future development to commerce and light industry. The Town also constructed a new and safer access road to the Commerce Park, which was completed in December 2003.

Sharon Commerce Park Policies

1. Acceptable uses for the Sharon Commerce Park include corporate offices, service businesses, renewable energy generation and small-scale commercial or light industrial companies. All businesses must be clean, non-polluting, and not large truck-based.
2. Businesses that would be considered inappropriate include large truck-based transfer/distribution, heavy manufacturing or assembly, storage or transfer of toxic or hazardous materials, or any businesses that are not clean, safe, or non-polluting (including pollution from noise, excess lighting or signage), or which have extensive hours of operation beyond the normal workday.
3. New development in the Sharon Commerce Park shall employ features to minimize its visual impact as seen from River Road. Elements that can help accomplish this are; architecture that is appropriate in design and scale, landscaping that reduces the apparent size of buildings, small-scale parking areas, screened storage, and reduced lighting and signage.
4. The Town shall promote use of the Sharon Commerce Park as a business incubator site, with the goal of adding to the Town's Grand List and increasing the number of local jobs. New development shall minimize the negative impact on town infrastructure (roads/bridges) and quality of life.

Forest Conservation Area

The predominant characteristics of the Forest Conservation Area are its steep slopes and undeveloped condition. Most of this land is in large, forested tracts, logged intermittently, and otherwise serving as wildlife habitat and corridors.

The purpose of the Forest Conservation Area is to maintain the land in its undeveloped state, to benefit Sharon by providing a source of clean water to streams and the contiguous space necessary to support wildlife. Much of this land is not posted. It provides recreational opportunities, such as hunting, hiking, cross-country skiing, and snowmobiling.

Sharon is home to large tracts of conserved and/or undeveloped forest land known as "Forest Blocks" by state biologists and regional planners. The Quimby Mountain area extending north into Downer Forest and conserved lands south of the White River are labeled Highest-Priority Forest Blocks owing to the diversity of wildlife they support. The large scale of these forest blocks, relatively unbroken by development, allows animals who require significant acreage in their ranges to thrive, as well as numerous other species. Most Upper Valley towns do not have comparable habitat. Although these towns may appear to be generously forested, roads and development have carved up land to the degree that a limited number of native wildlife species are supported. Therefore, maintaining the integrity of Sharon's forest blocks have positive benefits not only for the town, but for regional biodiversity as well.

A "Connectivity Block" is the state's term for a forest block, contiguous with others, that allows the movement of wildlife from one part of the state to another while avoiding more developed areas. The southwest quadrant of Sharon is identified by the state as a "highest priority" connectivity block. This corner of town, coupled with Sharon's forest blocks to the east and northeast, constitutes a bridge for wildlife moving between the upper Connecticut Valley and the Green Mountains. Wildlife taking this route can avoid developed lands in southern Windsor County and northwest of Sharon. Connectivity blocks allow young animals to disperse and allow wildlife to migrate in response to development or climate pressures. They also allow species to repopulate areas where diversity has been lost. The preservation of Connectivity Blocks, like the protection of Forest Blocks, is key to the health of Sharon's wildlife populations and the biodiversity of the region as a whole.

While the state of Vermont is 75% forested at this time, "forest fragmentation" is a challenge facing much of the state. The insertion of permanent infrastructure in forest lands, even in a piecemeal fashion, degrades the health of our forests. Roads in particular can affect wildlife movement and mortality, foster the spread of invasive species, introduce sedimentation to streams, and generally degrade the forest environment along their routes.[3] For these reasons, the construction of new roads in Sharon's Forest Conservation Areas is strongly discouraged.

Much of Sharon's Forest Conservation lands are steeply sloped. The soils that characterize these highland areas are generally shallow and susceptible to high rates of erosion. The cost of siting buildings and constructing foundations, driveways, and septic and drinking water systems is substantially higher where these conditions prevail. Because of these challenges, the economic feasibility of land development is at best marginal and the cost of public services, such as road maintenance and fire protection, is measurably higher.

Given these limitations, Forest Conservation areas are poorly suited for residential development, except at very low densities. High density development (defined as attached multi-family housing of 5 or more units) is not compatible with the Forest Conservation Area in

[3]2015 Vermont Forest Fragmentation Report, Vermont Department of Forests, Parks and Recreation, Agency of Natural Recourses, April 2015

this Plan. Any sort of development that presents a risk of significantly increased demand for town services or any substantial risk of adverse environmental effects cannot go forward in these areas, regardless of other potential benefits of the development.

Forest Conservation Area Policies

1. There shall be no commercial (including all retail) or industrial development in the Forest Conservation Area.
2. Timber and wildlife management shall be the primary or dominant uses in this Area. Logging operations must be planned and managed according to Vermont Best Management Practice to keep soil erosion and sedimentation of streams to a minimum.
3. Other uses that may be compatible with the Area's principal use for forestry include seasonal recreation sites, educational facilities, hunting, hiking or wilderness clubs, or seasonal camps. These or other uses will not be considered acceptable if they require new roads, will generate excessive amounts of traffic or noise, require substantial alteration of topography, or unduly alter the rural and undeveloped character of these outlying areas.
4. Potential development must not present a risk of significantly increasing demand for town services.
5. Potential development must not present substantial risk of adverse environmental effects.
6. In the interest of preserving forest health, the construction of new roads is not appropriate in this land use area.
7. Major Residential Development shall not be permitted in this Area. Major residential projects are defined as new developments or expansion of existing developments by five dwelling units or more, or the creation of five or more lots for single-family dwellings.
8. Limited residential development may be permitted if planned and sited to promote the continued use of forestland for wildlife corridors, forestry, and outdoor recreation. To minimize conflicts between forestry and wildlife uses, projects shall be designed with the following principles in mind:
    - Residential and accessory uses shall be designed to conserve the maximum amount of contiguous meadowland and woodland (particularly in identified Connectivity Blocks and in priority Forest Blocks); and
    - In areas with highly scenic or sensitive landscapes (see Chapter 10; Scenic Resources), the placement of buildings, structures, and power generating facilities shall be avoided when possible. If built, projects shall be minimally disruptive of the natural landscape.

Forest Conservation Implementation Actions

To encourage stewardship of contiguous forest habitat it is recommended that the Town of Sharon offer assistance to landowners for conservation actions that are in keeping with forest conservation. This includes:

1. Educate landowners about the many benefits of conserving their lands.
2. Encourage sustainable forest management through enrollment in Vermont's Current Use program (Agricultural and Managed Forest Land Use Value Program).
3. Discourage subdivisions of less than 27 acres in the Forest Conservation Area to maintain landowner eligibility for Current Use enrollment (2-acre house site plus 25 acres of forest)
4. Establish a land acquisition fund to promote conservation easements.
5. Establish an impact fee program that would require major developers to pay a fee toward protection or restoration of town-owned land, forest, and recreation areas.

White River Conservation Area

The White River is a unique natural resource that has scenic, recreational, and economic importance for the Town of Sharon. Extending northwest from its confluence with the Connecticut River in Hartford, VT, no other Vermont river features as many continuous miles of undammed flow as the White River. It is considered to be held in public trust for the people of Vermont. (See land use cases #3W0530 and #3W0819, District Commission #3, Vermont Environmental Board, Vermont Supreme Court.)

Protection of the River is an absolute priority of the Town. This was iterated in the 2020 Community Survey, where most respondents listed the White River as an invaluable resource and one that needs to be protected for recreational, natural, and scenic aspects. It is vulnerable to many potential hazards, including pollution from specific and non-point sources, bank erosion, damage to riparian buffers, surface runoff, and inappropriate development.

The White River Conservation Area has been designated by the Town of Sharon for the purposes of protecting the River and for its preservation for the continued use and enjoyment by the people of Vermont.

The White River Conservation Area includes floodplains and flood hazard areas, low-lying land along the River which periodically becomes inundated during spring runoff or other times of heavy rainfall. Floodplains are pervious and absorb water which might otherwise cause damage or destruction of property downstream. Floodplains may also be excellent agricultural land owing to alluvial soil deposits and minimal slope of the land. Therefore, the boundaries of the White River Conservation Area shall be the boundaries of areas of special flood hazard as defined in the Sharon Flood Hazard Bylaw, adopted by the Town in 2010. Flood Hazard maps are on file with the Sharon Town Clerk and accessible online.

Important wetlands also abut the River and its tributary streams. Use and management of these ecologically sensitive areas directly affects water quality. Both floodplains and wetlands are ill-suited for development. (See separate sections on Floodplains and Wetlands.)

Sharon residents have indicated that they highly value the White River as a scenic and recreational resource. It is popular with residents and tourists alike for fishing, swimming, boating, and tubing. The closing of the river for six weeks in the summer of 2000 due to upstream pollution significantly curtailed recreational activity and had a negative impact on Village businesses. Efforts to protect the river's water quality and its immediate environment help ensure that it will remain a healthy community resource.

White River Conservation Area Policies

1. The Town of Sharon recognizes the White River as a unique natural resource that has scenic, recreational, and economic value for the Town, and which has been deemed a public trust for the people of Vermont.
2. The Town recognizes that the River is vulnerable to many potential hazards, and therefore has designated the White River Conservation Area to help protect and preserve the River.
3. In consideration of the exceptional resource value of the River, appropriate land uses for the White River Conservation Area are limited to agriculture and non-commercial recreation.
4. New structural development and permanent buildings are not permitted within this Conservation Area.
5. Existing buildings and structures within the Conservation Area may be maintained. Proposed additions to these structures might be granted conditional use permits

provided they meet the requirements of Sharon's Flood Hazard Bylaw and are not located within the floodway.
6. Determination of the flood plain shall be in accordance with maps referenced by Sharon's Flood Hazard Bylaw.
7. Landowners are encouraged to maintain their riparian land in a predominantly natural vegetative state to preserve the natural character of the banks and help prevent erosion, surface runoff, and pollution.
8. Recreational use of the river is encouraged. The Town provides designated public access points. Private property should not be used to access the river without the landowner's permission.

Flood Resilience

Section Goal

Use sound planning practices that enable Sharon to recover from flooding quickly and in a manner that improves flood resilience, protects infrastructure and buildings from the potential of flood damage, and reduces cost to the town.

Background

Following the devastating impact of Tropical Storm Irene in 2011, the Vermont Legislature added a requirement that all communities address flood resilience as part of their municipal plans. Interpreted very broadly, "resilience" means that an entity—a person, neighborhood, town, state, region or society—when faced with a particular situation or event, has the ability to effectively return to its previous state or adapt to change(s) resulting from the situation or event without undue strain. As such, "resilience" is not necessarily an action that is taken, but an overall sense of preparedness and mitigation for a future event.

For the purposes of this chapter, flood resilience will mean the ability of Sharon to effectively understand, plan for, resist, mitigate, manage and, in a timely manner, recover from flooding.

Types of Flooding

Generally speaking, there are two types of flooding that impact communities in the state of Vermont—flooding caused by inundation and flash flooding. Inundation flooding is not as common in Vermont as flash flooding. Inundation flooding occurs when rainfall over an extended period of time and over an extended area of the river's basin leads to flooding along major rivers, inundating previously dry areas. This type of flooding occurs slowly, but flood waters can cover a large area. Inundation flooding is slow and allows for emergency management planning if necessary. However, unlike during a flash flood, it may take days or weeks for inundation flood waters to subside from low areas, which may severely damage property.

Flash flooding occurs when heavy precipitation falls on the land over a short period of time. Precipitation falls so quickly that the soil is unable to absorb it, leading to surface runoff. The quick-moving runoff collects in upland streams, in small tributaries, and in ditches, and the water level rises quickly and moves further downstream. Culverts and drainage ditches may be overwhelmed, and destructive erosion can occur rapidly. The White River and Sharon's many brooks are susceptible to flash flooding, as occurred during Tropical Storm Irene in 2011.

The White River watershed encompasses 710 square miles, draining portions of Addison, Orange, Rutland, Washington and Windsor Counties, including 50,000 acres of the Green Mountain National Forest. The White River is the largest undammed tributary to the

Connecticut River in New England. This means that water levels are not regulated like many other rivers, allowing the water level to fluctuate often. With Sharon's location on the main stem of the river, all runoff from upstream comes through the town. During flash flooding events the water moves at a very high velocity and the flood manifests quickly, making flash floods particularly dangerous. Due to the velocity and volume of the water, a flash flood can move large boulders, trees, cars, and even houses off their foundations.

Water collecting in channels in steep areas causes fluvial channel erosion, that can severely damage roads and public and private property. Fast moving water in the stream channel may undermine roads and structures and change the river channel itself, predisposing other roads and structures to future flooding damage. Flash floods can also mobilize large amounts of debris, plugging culverts and leading to even greater damage. In Vermont, most flood-related damage is caused by flash flooding and fluvial erosion (erosion of stream banks). Due to its topography, Sharon is vulnerable to flash flooding and fluvial erosion. Due to the steep slopes and narrow valleys in the region, heavy precipitation from a hurricane or tropical storm tends to cause severe flash flooding and widespread destruction. The speed that the hurricane or tropical storm is moving across the area and the varying severity of rainfall have an impact on rainfall totals observed from town to town. Storm impacts can be greatly magnified by previous rains that have saturated the soil.

Hurricanes and tropical storms occur during the summer and into the fall months, but ice jams and the combination of melting snow and rain leave the region vulnerable to the impacts of flooding in the winter and early spring. Ice jams typically occur during the spring when river ice begins to break up and move downstream, but may occur during a thaw period in the winter months. Sheets of ice become hung up on a narrow portion of the stream or river, such as under a bridge, culvert or another obstruction, creating a "dam" where additional ice and water begin to back up behind the hung-up ice sheets. This creates flooding immediately adjacent to the site of the "dam," and additional rapid flooding upstream. Once the "dam" breaks free, flash flooding may occur downstream as well. Ice jams in the region typically cause minimal damage, but they can damage road infrastructure and flood homes and businesses.

Historic Flood Events

Perhaps the worst flood disaster to hit the Town of Sharon, as well as the State of Vermont, occurred on November 3, 1927. This event was caused by nearly 10 inches of heavy rain from the remnants of a tropical storm that fell on frozen ground. Eighty-four Vermonters were killed, including the Lieutenant Governor. In Sharon, a mother and two children drowned when their house washed away. The flooding in the Town of Sharon and the White River valley was particularly violent due to heavy precipitation.

The last major flood that devastated the town and the state was Tropical Storm Irene, which occurred on August 28, 2011. Record flooding was reported across the state and was responsible for several deaths, and millions of dollars of home, road and infrastructure damage. Due to the strong winds, 50,000 Vermont residents were initially without power, and many did not have electricity restored to their homes and businesses for over a week. Tropical Storm Irene is considered to be the second greatest natural disaster in Vermont, after the Flood of 1927.

The Town of Sharon suffered major damage to property and infrastructure during Tropical Storm Irene, although no lives were lost thanks to the Sharon Fire Department who, prior to the flood, warned residents living in low-lying areas. It is estimated that Tropical Storm Irene dropped 6-7 inches in the Town of Sharon in a very short span of time, and 6.07 inches across the White River Basin. The flowrate as measured in West Hartford, VT was 90,100 cfs at 1:30PM that day. Many of Sharon's roads and culverts were damaged by the storm, including

parts of Route 132, Quimby Mountain Road, Fay Brook Road, Downer Road, White Brook Road, Cross Road, Keyes Road, Raymond Road, and Moore Road, among others. The county-wide damage totaled $32.5 million, and Town-wide damage was over $2.4 million for this flooding event. Following the flood damage, the state of Vermont and FEMA coordinated a home buy-out process across the state, with one property in Sharon participating in the program.

Since Tropical Storm Irene in 2011, there have been five federal disasters declarations made, three of which were attributed to flooding in 2013, 2017, and 2019 in Windsor County. The flooding in 2017 is of particular note because of the extensive damage to VT Route 132 that runs through Sharon, Strafford, and Thetford.

Flood Hazard and River Corridors in Town

Flood Hazard Areas

There are two sets of official maps which govern development in floodplains in Vermont. They are the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRMs) and VT Agency of Natural Resource's River Corridor maps. The FIRMs show the floodplain that FEMA has calculated would be covered by water in a 1% chance annual inundation event, also referred to as the "100-year flood" or base flood. This area of inundation is called the Special Flood Hazard Area (SFHA). FIRMs may also show expected base flood elevations (BFEs) and floodways (smaller areas that carry more current). FIRMS are only prepared for larger streams and rivers. Sharon has FEMA FIRM maps that are used in Flood Hazard Bylaw administration; however, they do not contain elevation data. As of the writing of this Town Plan, updated mapping of the White River in Sharon is underway, and should be available in the near future for reference.

Recent studies have shown that a significant portion of flood damage in Vermont occurs outside of the FEMA mapped areas along smaller upland streams, as well as along road drainage systems that fail to convey the amount of water they are receiving. Since FEMA maps are only concerned with inundation, and these other areas are at risk from flash flooding and erosion, these areas are often not recognized as being flood-prone. Property owners in such areas outside of SFHAs are not required to have flood insurance. Flash flooding in these reaches can be extremely erosive, causing damage to road infrastructure and to topographic features including stream beds and the sides of hills and mountains, creating landslide risk, such as what occurred south of the village during Irene. The presence of undersized or blocked culverts can lead to further erosion and stream bank/mountainside undercutting. Change in these areas may be gradual or sudden. Furthermore, precipitation trend analyses suggest that intense, local storms are occurring more frequently.

Vermont ANR's River Corridor maps show these erosion hazard areas, which may be inside of FEMA-mapped areas, or extend outside of these areas. In these areas, the lateral movement of the river, and its associated erosion, is a greater threat than inundation by floodwaters. Elevation or flood-proofing of structures may not be protective in these areas as erosion can undermine them. Vermont ANR released preliminary statewide river corridor maps in 2014; they plan to issue new statewide maps between 2025 and 2027.

Flood Hazard Regulations

The Town of Sharon Flood Hazard Bylaw prohibits new structures in the FEMA Special Flood Hazard Area and the River Corridor (aka Fluvial Erosion Hazard Area or FEH). It also places restrictions on other types of activities within these areas and specifies construction repair or rebuilding requirements in both areas. In addition, FEH Areas have been mapped for Broad, Elmers, Fay and Quation Brooks.

River Corridors encompass an area around and adjacent to a river or stream where fluvial erosion, channel evolution and down-valley meander migration are most likely to occur. River corridor widths are calculated based on actual stream measurements to determine the narrowest band of valley bottom and riparian land necessary to accommodate the least erosive channel and floodplain geometry that would be needed to maintain river or stream equilibrium within a given valley.

The Sharon Subdivision Regulations also mandate that no buildings be placed within 100 feet of the top of the bank of any perennial stream, or on the edge of any wetland, and no ground disturbance or removal of healthy vegetation is permitted within 50 feet of those boundaries, except for permitted crossings. This type of stream buffer protection preserves fragile riparian habitat, can improve or maintain water quality, and limits soil erosion.

According to floodready.vermont.gov, there are 22 buildings in Sharon's Special Flood Hazard Area, including one critical or public structure, but only two of those buildings have an active flood insurance policy in place.

River Restoration

While the main stem of the White River is undammed, many of the branches and tributaries have existing dams. Removing these dams helps with the overall health of the river, while also allowing floodwaters to naturally flow unabated by obstacles. Sharon could work with the White River Partnership and other community groups to pursue berm/dam removals, riparian buffer plantings, and river corridor easements to restore natural channel functions, to reduce the risk of streambank erosion, and to protect active floodplains from development.

Home/Property Buyouts

Following the flood damage caused by the 2011 spring flooding and Tropical Storm Irene, a number of property owners in Vermont applied for property buyouts, funded by FEMA's Hazard Mitigation Grant Program (HMGP) and HUD's Community Development Block Grants for Disaster Recovery (CDBG-DR). Over the course of this process, over 130 damaged or destroyed residential properties in the state of Vermont were purchased with this grant funding. As a stipulation of the HMGP funding, FEMA requires that the structure(s) on each buyout property be demolished, and ownership of the empty parcel of land then be transferred to the town/municipality. Future development on these sites is restricted.

Generally speaking, the buyout of homes at high-risk of flood damage is an important step in improving the resilience of a town and community to flood damage. If a town's home buyouts have significantly impacted the housing base, it is important that the town have a thoughtful and creative approach to rebuilding its housing base that will maintain its improved flood resilience and conform to the town's future land use visions or settlement patterns.

Culvert Maintenance

Many of Sharon's major roads run alongside the main stem of the White River and its tributaries such as Quation Brook, Broad Brook, Fay Brook, and Elmers Brook, are especially vulnerable to erosion and washouts. It is important that the town continue to upgrade culverts and bridges to increase the resilience of town infrastructure.

The last official culvert inventory completed for the Town of Sharon was in 2015. Sharon often contracts with TRORC to conduct these inventories and works with them to submit grant applications to upgrade culverts and bridges.

Goal, Policies, and Implementation Actions for Flood Resilience

Goal I: Use sound planning practices that enable Sharon to recover from flooding quickly and in a manner that improves flood resilience, protects infrastructure and buildings from the potential of flood damage, and reduces cost to town taxpayers due to flood damage.

Policy A: New fill, the construction of new buildings, and commercial, industrial, and residential uses in mapped flood zones and in the river corridor are prohibited.

Implementation Action 1.A: Existing homes and businesses that are at serious risk of flood damage should be identified and prioritized for mitigation actions such as elevation, relocation, purchase, or demolition.

Policy B: Non-structural outdoor recreational, agricultural, and forest management uses are permitted in mapped flood zones and in the river corridor.

Policy C: When culverts and bridges are replaced and upsized, they will be designed at a minimum to meet the VTrans Hydraulics Manual, ANR Stream Alteration Standards, and the Municipal Roads General Permit.

Implementation Action 1.C: The Town should work with VTrans and TRORC on advocating for and improving the flood capabilities of State or Town-owned transportation infrastructure.

Implementation Action 2.C: The Selectboard should continue to uphold road and bridge standards recognizing the 100-year storm impact and flood levels caused by increased intensity of storms as a result of climate changes.

Implementation Action 3.C: The Town should maintain and update the town bridge and culvert inventory, and the road erosion inventory, as town infrastructure is replaced and improved.

Policy D: Municipal buildings, emergency services, and power substations should not be located in any mapped flood hazard areas. If they are, efforts to move these functions out of mapped flood hazard areas should be made.

Implementation Action 1.D: The town should identify and purchase a suitable piece of land for the future relocation of the Fire Station. This property should be accessible to I-89 and not be vulnerable to flooding.

Policy E: Vegetated buffer strips should be maintained in riparian zones bordering streams, rivers, and other surface water areas. Rip-rap (stone armoring) and retaining walls should only be utilized to the minimum extent necessary to protect irreplaceable public infrastructure.

Implementation Action 1.E: Sharon should work with ANR, WRP, TRORC, and landowners to lessen flood risks by restoring natural channel functions through berm or dam removals, intentional lowering of streambanks, riparian buffer plantings, and river corridor easements.

Policy F: Upland forests and watersheds should be maintained predominately in forest use to preserve high quality streams and to ensure that runoff and flood flows are reduced.

Policy G: Ongoing emergency management planning for flood response, mitigation, and recovery is encouraged.

Implementation Action 1.G: The Planning Commission should work with ANR and TRORC to strengthen the Town's Flood Hazard Bylaw in order to mitigate risks from inundation, erosion, and flash flooding.

Implementation Action 2.G: The Town should continue to develop flood mitigation plans, emergency preparedness procedures, and recovery procedures.

Implementation Action 3.G: Post-event recovery and reconstruction within the river area should be managed according to the Vermont River Program's best practices in order to avoid negative impacts downstream.

Chapter 3: Transportation

Chapter Goals

I. Maintain a transportation system that is safe, energy efficient and meets the varying needs of Sharon residents while supporting the Town's rural, environmental, historic, and scenic values.

II. Ensure that future development does not unnecessarily or unreasonably endanger the public investment in town and regional transportation systems or facilities, including highways, bicycle ways, trails, and rail.

III. Maintain a transportation system that does not conflict with this Plan's Land Use policies.

This chapter is a description of the Town's current transportation infrastructure and future needs, policies, public transportation options, including bicycle and pedestrian travel. Sharon's transportation system primarily consists of a network of town roads, with the automobile as the most common means of transport. Sharon has direct access to Interstate 89. Tri-Valley Transit bus routes provide connections to Randolph and Thetford to the north, and White River Junction, Lebanon, and Hanover to the south. The Randolph and White River Junction Amtrak stations and WRJ Greyhound bus depot are each a short drive from Sharon. Dartmouth Coach bus service from Hanover/Lebanon connects with Logan Airport in Boston, MA, downtown Boston, and New York City. Nearby Lebanon, New Hampshire has a small airport. Many residents also use the larger airports in Burlington, VT and Manchester, NH.

Town Highway Infrastructure

There are a total of 63.77 miles of roadway in Sharon, as reported by the Vermont Agency of Transportation (VTrans) in 2016. The town maintains the Class 2 and Class 3 roads (totaling 47.61 miles) whose uses and functions vary from minor regional collectors to local access routes. Additionally, the town owns 6.23 miles of Class 4 roads that are minimally maintained. Aside from these local roads, the State of Vermont is responsible for 16.17 miles of roads (Route 14 and Interstate 89) within the Town. Sharon maintains more than three-quarters of the roads within its borders, which is typical for most rural communities. Table 10 shows miles of roads in Sharon maintained by the Town and State.

Class 1 includes the most heavily traveled town roads usually located in densely settled areas. Class 1 roads are extensions of State Highways and are usually assigned a State number. There are no Class 1 roads in Sharon.

Class 2 includes those major town highways selected as the most important in town. Class 2 roads serve the purpose of linking towns and high traffic areas such as village settlements and State Highways. Sharon has five Class 2 roads; VT Route 132, Beaver Meadow Road, Broad Brook Road, Howe Hill Road, and River Road, shown in Table 9. Class 2 roads are generally paved. However, both Beaver Meadow Road and Broad Brook Road are mostly gravel.

Class of Road	Miles	Maintained By
Class 2	14.52	Town
Class 3	33.09	Town
Class 4	6.23	Town
TOWN TOTAL	**53.83**	
State Highway	7.79	State
Interstate	8.38	State
STATE TOTAL	**16.17**	

Table 9: Miles of Roads in Sharon (Source: VTrans Town Highway Map)

Class 3 includes all town roads not Class 1 or 2 that can be driven under normal conditions all seasons of the year by an ordinary car. There are 33.09 miles of Class 3 roads in Sharon, including Downer Road, Fay Brook Road, Quimby Mountain Road, and Moore Road.

Class 2 Roads	Length (miles)
Beaver Meadow Road	3.61
Broad Brook	1.74
Howe Hill	2.72
River Road	2.43
Vermont Route 132	4.02
TOTAL	**14.52**

Table 10: Class 2 Roads in Sharon in Miles
(Source: VTrans Town Highway Map)

Class 4 highways represent the lowest order of importance to the Town. Public use is limited and the town receives no financial aid from the State to maintain them. Class 4 town highways are considered "seasonal." They are not plowed by the Town and may not be passable at times during mud season. The only required maintenance on these roads concerns culverts and bridges. Many Class 4 roads have been incorporated into the natural landscape where very little development has occurred along the road. Often these roads are scenic travel corridors for hikers, horseback riders and bicyclists and provide limited access to hunting and conservation lands.

For Class 4 highways, according to the Town's Highway Policy, "grading, installation and/or replacement of culverts, ditch work, and addition of gravel will be accomplished to improve the stability of the roadway as funds, manpower, and other necessary work allow." Public utility services or other municipal infrastructure that typically accompany roads may be nearly nonexistent.

The State uses four classification formulas to distribute financial aid to towns for road repair and maintenance. Classifications are jointly determined by the VTrans and the Sharon Selectboard. Criteria used for the classifications include traffic volume, road condition, and function. State aid to the Town decreases on a per mile basis from Class 1 to Class 3. No state aid is available for Class 4 roads. Total aid, therefore, depends on the number of miles of road a town has in each class. In FY20, Sharon received $114,586 from the Vermont Agency of Transportation's Town Highway Grant Program.

River Road Bridge

Carlton Clark Memorial Bridge over the White River is significant as a representative example of bridges built following the 1927 flood. It represents an impressive engineering effort and is now listed on the National Register. Based on a 1990 study conducted by CDL for the State of Vermont, a 60,000-pound weight limit was assigned to this bridge for its protection and preservation. It was repainted in 2008. The narrow turning radius onto Route 14 and the narrowness of the bridge itself, makes use of the bridge by large trucks a challenge. The impact of increased traffic on this bridge should be considered in evaluation of any new development, particularly at the Sharon Commerce Park. The impact on the White River must also be considered.

Stone Culverts

According to the 2015 Culvert Inventory, there are stone culverts that provide road drainage on White Brook Road, Downer Road, and Stationmasters Road. These structures are visually appealing and are historic assets that residents are interested in preserving.

Future Highway Construction Activities

Apart from education costs, public roads have been and will continue to be Sharon's largest town responsibility, requiring financial investments paid through municipal taxes. Transportation funding sources come from numerous combinations of the local tax base, state and federal gas tax receipts, state and federal allocations and registration fees. The most significant funding resource comes from the federal transportation bill and is distributed to towns by the Vermont Agency of Transportation. The federal and state government pays a percentage of project costs and the community pays the remainder. This funding applies only to Class 1-3 roads. Maintenance of Class 4 roads is either funded by the community or through the Grants-In-Aid program. The Two Rivers-Ottauquechee Regional Commission has compared programs throughout the region and recommends a program of early intervention for Class 1-3 roads, using preventative maintenance, because such a program has proven to be 75-85% less costly than larger reconstruction work after significant deterioration has occurred. Such a program should be a part of a town-adopted Transportation Capital Budget and Transportation Program.

Culverts and Drainage Systems – Properly sized culverts and well-maintained road and drainage systems can help limit damage from most severe weather events. Maintaining a reliable and up-to-date inventory of existing culverts and structures, coupled with a short- and long-range plan for replacement and upsizing, is essential. Replacing deficient culverts and bridges also helps protect water quality. Properly-scaled and designed structures can handle flood events, storm water runoff, promote fish passage, and minimize the discharge of road sediment. In 2015, Sharon hired TRORC to conduct a culvert inventory, a geolocated database, of all town-maintained culverts and bridges. This assessment lists all culverts and bridges in need of repair or replacement, erosion problem areas and lack of proper ditching. The town road crew addresses areas of need.

Road Paving – Given that there are approximately 15 miles of local paved roads in Sharon, resurfacing comprises a large share of its long-term highway expenses. The life of an asphalt road in rural areas ranges from 10 to 15 years depending on road base material, traffic, and drainage. Sharon would have to resurface an average of 1.25 miles per year in order to complete all 15 miles of its paved roads every 12 years.

Route 132 – Route 132 runs through Sharon for a distance of 4.02 miles and extends into Strafford and Thetford. It is part of the Town Highway system and it is not owned, maintained or controlled by the State of Vermont.

Vermont Route 132 is functionally classified by the Federal Highway Administration and the Vermont Agency of Transportation as a major collector road. Major collector roads are defined as key transportation links between state numbered highways, in this case Routes 14 and 5. Accordingly, Route 132 has significance in terms of the region's overall transportation network. It serves as a primary access route to Interstate 89 for residents of the Towns of Sharon, Strafford, and Thetford. In addition, it is used as a short-cut by some travelers heading north and south on I-89 and I-91. In July of 2017, a heavy rain event did significant damage to Route 132 in both Sharon, Strafford, and Thetford. The cost of the repairs was in the millions of dollars for taxpayers of these communities. The three communities are attempting to transfer responsibility for the maintenance of this road to the State of Vermont.

Town Highway Policies

As our Town's population increases, more commuters are using our rural roads. As roads are widened, driver speed typically increases. Actions to improve and increase carrying capacity typically include building new roads and improving existing roads (e.g., resurfacing and

widening). Depending on the extent of the improvements and the method of financing, such actions can be costly to the taxpayers of a Town. Roads serve more than just automobiles, they are multi-functional and include pedestrians, bicyclists, and horseback riders.

To avoid conflicts between the use of highways and future development, the Town should establish policies to evaluate and control how growth affects town roads. These include concentrating future development to areas where major roads already exist, limiting multiple access drives onto town roads, limiting large-scale development on Class 3 roads, supporting efforts to reduce reliance on the personal automobiles, and working cooperatively with VTrans and neighboring towns to improve regional land use and transportation planning.

Historically, Sharon has not expended tax dollars on improvements to Class 4 highways. These highways are usually in poor condition and could require expensive reconstruction of their surfaces, base, drainage and width to bring them to Class 3 standards.

At one time Sharon had more roads than it does currently. Several highways have been discontinued by the Sharon Selectboard and are no longer part of the Town system. These roads generally had little or no traffic. According to a Town survey, a majority of respondents desire that the Town retain Class 4 or Trail status of these routes for recreational purposes.

Access Management

The Vermont Agency of Transportation has regulatory authority for access to state roads (including Route 14). The Sharon Selectboard regulates access to all other roads in town.

The state law on access permits (19 V.S.A. Section 1111) provides that reasonable access in no case should be denied, safety being the test for reasonableness. In 1998, the law was amended, expanding the state and the town's ability to control access. In addition to the reasonable access test, the law now includes a criterion of compliance with local ordinances and regulations related to highways and land use. Permits for access must protect the public investment in roads and must maintain safety on existing highways. Access management decisions shall also consider whether the proposed access is compatible with Town, region, and state agency plans.

Access Management means more than merely obtaining a "curb cut" for access to a public road, Access Management is concerned with preserving the function of the highways, including safety, and with preventing congestion and hazardous situations. This type of access management strategy links transportation access with the overall land use patterns recommended in these Plans.

Access management planning by the Town and the State can prevent costly repairs to roads and bridges, promote desirable land use patterns, and improve the safety of all residents. Accident data show a direct relationship between curb cuts and accidents: the greater the number of access points onto a highway, the higher the number of accidents. Access management techniques can minimize curb cuts, improve sight distances, and reduce vehicular congestion and conflicts with bicycles and pedestrians.

Growth in Sharon is piecemeal with no particular area under pressure, but growth does result in increased traffic. Roads primarily affected are Route 132, Beaver Meadow Rd., and those between Sharon and South Royalton (Route 14 and the River Road), where trucks, commuters, bicyclists, joggers, pedestrians and tourists all compete for limited space. When traffic volume and speed increases and access points are numerous and closely spaced, accidents occur. Fay Brook Road currently experiences a higher number of vehicular accidents than other town roads.

Public Transportation and Bicycle/Pedestrian Transportation

Tri-Valley Transit (formerly Stagecoach) buses running between Sharon's Park and Ride lot and workplaces in the Upper Valley is an option for commuters. VTrans has developed plans to expand the Sharon Park and Ride capacity and add a bus stop shelter, although usage of the Sharon lot appears to have moderated with the recent construction of the I-89 Bethel/Royalton Exit 3 Park and Ride.

As is true throughout Vermont, many in Sharon are concerned by the limited transportation options available to Sharon's aging population. This segment of our populace needs access to major medical centers, such as Dartmouth Health, as well as commercial shopping centers for day-to-day needs. One transportation alternative for Sharon residents is the Tri-Valley Transit " Ticket to Ride" Program.

Ticket to Ride is open to community members 60 years of age or older and people with ADA recognized disabilities. Rides are available for: medical appointments, shopping, work or volunteering, and social events.

In the case of limited availability, TVT dispatchers will prioritize medical trips first, followed by food access then social trips.

"We like to walk and bicycle; we travel to Lebanon railroad trail for that. We do not risk to walk, run or bicycle on the side of the road in our home town because it is too dangerous. If we value visitors and support tourism, we need a better way to let them walk, run or bicycle around our town." – 2020 Community Survey

Residents should contact Tri-Valley Transit for details and for eligibility requirements.

Townspeople and tourists enjoy walking, jogging, bicycling, and horseback riding on town roads. Use in some areas is limited due to heavy vehicular traffic and a lack of adequate shoulders, a bicycle path, or bicycle lanes. Sharon appears on some published VT bicycle routes and therefore sees local cyclists and tourists. Improvements to Route 14 would enable more bicyclists to visit our Town safely. River Road is a popular route for joggers and cyclists, but like most commonly-traveled roads in Sharon (including Route 132), it would benefit from improvements that would increase pedestrian and bicycle safety.

A 2002 study was done on sidewalks in Sharon by Fit & Healthy Vermont. Three suggestions emerged from the study:

1. Add to the trails behind the Sharon Elementary school.
1. Add sidewalks under the Interstate.
2. Extend the trail to The Sharon Academy from River Road. There is interest among Sharon residents in connecting existing trails and old or "ancient" roads. The Upper Valley Trails Alliance is a group that can be consulted about trail building.

At the same time a study and cost analysis were developed by Dubois & King, Inc. to look at pedestrian and bicycle access in the Village. To completely outfit the Village with new sidewalks, curbing, and bicycle lanes was estimated to cost $610,000. Since this study was conducted over 18-years ago, it is likely this cost has doubled. It is possible to slowly phase these improvements if the Town decides to pursue them.

While the New England Central Railroad and Amtrak trains run through the Town, there are no railway stations in operation within Sharon and this is unlikely to change in the foreseeable future. Therefore, depending on travel routes and needs, local residents must travel to either

White River Junction, Randolph, Montpelier or Rutland to access Amtrak trains for destinations throughout the Northeast and beyond.

Goals, Policies, and Implementation Actions for Transportation

Goal I: Maintain a transportation system that is safe, energy efficient and meets the needs of Sharon residents while enhancing the rural, environmental, historic, and scenic values.

Policy A: Encourage the use of public transportation.

Implementation Action 1.A: The Town should work with the Vermont Law School on partnering in carpools and vanpools.

Implementation Action 2.A: The Town should expand the Sharon Health Initiative and Dial-A-Ride programs to include helping residents travel to doctor's appointments and shopping in other Upper Valley towns.

Policy B: Encourage the installation of publicly available electric vehicle charging stations in the Village Area and at workplaces to support usage.

Policy C: Maintain the Town's list of highways, bridges, and related facilities to ensure their continued maintenance.

Implementation Action 1.C: Based on the completed stone culvert inventory, a capital plan should be created to properly maintain these historic structures.

Policy D: Analyze major capital transportation projects against all reasonable alternatives that include environmental, energy, social, and investments costs in the equation.

Implementation Action 1.D: Inventory and prioritize roads, bicycle ways, walkways, and other transportation infrastructure with town equipment, facilities, and buildings and incorporate these into a Capital Budget and Program.

Policy E: Continue to preserve Class 4 roads and Legal Trails for recreational use.

Implementation Action 1.E: The Selectboard should consider compiling a list of Legal Trails and Class 4 roads.

Implementation Action 2.E: The Selectboard should develop and adopt a Class 4 road and Legal Trail recreational use policy to determine appropriate uses.

Goal II: Ensure that future development does not unnecessarily or unreasonably endanger the public investment in town and regional transportation systems or facilities, including highways, bicycle ways, trails, and rail.

Policy F: Before the Town considers adopting a new road or upgrading an existing road, it is the property owner's financial responsibility to improve and/or build the road to town specifications.

Policy G: For any new development or road construction, pedestrian access needs shall be considered.

Goal III: Ensure a transportation system that does not conflict with the Land Use policies of this Plan.

Policy H: Transportation routes and highways should reflect design and location principles that complement the land use and settlement patterns recommended in this Plan.

> **Implementation Action 1.H:** The Sharon Planning Commission should evaluate Sharon's Traffic Ordinance and Subdivision Regulations for consistency with the goals and policies of this Plan.
>
> **Implementation Action 2.H:** The Town shall continue to work cooperatively with the Two Rivers-Ottauquechee Regional Commission and with VTrans to coordinate future transportation and land use planning.
>
> **Implementation Action 3.H:** The Selectboard should continue to implement the Municipal Roads General Permit (MRGP).

Policy I: When maintaining or improving back roads, the scenic and rural character of the road should be considered and preserved.

> **Implementation Action 1.I:** The town should create a vision and policy for the maintenance of Class 3 and 4 roads that preserves rural character and accommodates multiple low-impact uses. This policy should address the visual effects of stormwater management and value the preservation of tree-lined roads.

Policy J: Strip development (sprawl), which occurs in a linear path along a roadway, restricting visual and physical access to interior lands and views, is an unacceptable land use pattern in the town of Sharon.

Policy K: Development projects in Sharon are only acceptable if the size and scale does not interfere with the function, safety, and efficiency of town and state highways, or with the Town's ability to maintain the highway in every season.

Policy L: Future development is encouraged to locate close to existing roads that are adequately scaled to serve their use. If new roadways are needed to access these developments, developers are required to pay in full for all infrastructure improvements.

Policy M: Transportation plans shall be directly related to the nature and intensity of planned land uses. To ensure optimum access management, land use patterns shall support these concepts:

- Traditional village land uses shall be focused in the Village Area and adjacent areas; these uses include town facilities such as Town Office, Library, and school, as well as retail sales and services, banking, and professional services. Compact settlements reduce the need for curb cuts and also reduce the dependence on automobiles.
- Commercial development or sprawl with individual curb cuts for each use shall be avoided to minimize traffic congestion and conflicts. Planning shall focus on concentrating development in designated areas; major developments shall provide for internal and interconnected access roads, limiting access points to primary routes;
- Master planning for development of large tracts of land (10 or more acres) shall be required, prior to subdivision approval, to demonstrate minimum use of curb cut access through a system of internal roads as described above; and
- Transportation improvements must be planned and designed to be compatible with the goals and policies stated in the Town Plan. Highway designs must

provide flexibility to respond to community concerns and historic and scenic impact, as well as road widths and geometrics.

Policy N: Control curb cuts to ensure the proper function, safety, and performance of town highways. Considerations in evaluating developments shall include the following:

- minimize the number of curb cuts per parcel or per linear feet of roadway;
- minimize direct access onto a primary road if a reasonable alternative access may be provided by a secondary road or shared driveway;
- provide for safe distances between curb cuts and primary road intersections to ensure the efficiency and safety of travel; and
- consolidate or restructure existing curb cuts or access roads to improve or maintain efficiency, safety, and function of the roadway.

Policy O: The design of access roads and related facilities shall provide for proper alignment of new or relocated driveways along a roadway. Where multiple-site development is planned, access management decisions shall:

- require shared access and parking when feasible;
- require connecting roads between parcels;
- encourage use of public parking areas, or shared parking spaces, to reduce the total amount of parking space required;
- require pedestrian sidewalks, or reserve land for future sidewalks, along roads in concentrated areas, or between buildings and parking areas if needed for pedestrian safety; and
- provide for pedestrian crosswalks and bicycle crossings at regular intervals.

Policy P: The Town should make provisions for transit stops or facilities at appropriate intervals. Designs for traffic turning off a roadway shall take into account the traffic volume, available capacity, character and performance objective of the road, and the need to accommodate varying modes of traffic, including bicycle and pedestrian. Design objectives shall maintain or improve traffic flow, safety, and capacity, without compromising the historic, scenic, or cultural characteristics of the route and the area. Design principles to be employed shall:

- direct turning traffic on main routes to intersections with secondary roads, where possible, to minimize congestion and safety problems; and
- within the Village Area, promote “traffic calming” techniques including: reducing speed limits; narrowing the traveled roadway by moving the fog line toward the center of the road; adding on-street parking; installing sidewalks, curbstones, streetlamps and tree plantings; and using limited building setbacks.

Chapter 4: Utilities, Facilities, and Education

Introduction: This chapter contains an inventory of current town-owned buildings and properties, as well as an explanation of future capital improvements, an explanation of current emergency services, the need for emergency management planning, and the current state of Sharon's education system. Expanded costs for buildings and properties needing improvement can be found in the excerpted Capital Improvement Plan in Appendix A.

Town Owned Buildings and Land

Section Goals

I. Provide town facilities that meet the needs of residents in a cost-effective manner.
II. Improve water supply, capacity and quality for town-owned buildings in the Village.
III. Plan for the long-range maintenance of town buildings.
IV. Increase public access to Sharon's waterways on town-owned property.

Sharon Town Office

The Sharon Town Office is located in the Village on Route 132. Formerly the Masonic Hall, the building was purchased by the Town in 1977 and renovated for town use. The Masons retain a lease for use of the second floor. The main floor of the building holds the offices of the Town Clerk, Treasurer, Finance Manager, Listers, and Selectboard Assistant. There is one meeting room that is shared by the Sharon Selectboard, Planning Commission and Conservation Commission. The building is in good condition with adequate equipment and facilities. However, meeting space is limited, and town meetings are conducted at the Sharon Elementary School.

In order for the Town Office to serve as the Emergency Operations Center the Town procured an emergency back-up generator. A building inspection of all town-owned buildings was conducted in 2018. Other than some aging of the exterior of the building and some appliances, the Sharon Town Offices are in good shape. Work for the Sharon Town Offices for the next three years includes rehabilitating the building's siding and trim ($5,000-$10,000) and painting the exterior wooden surfaces ($7,500). These projects are high priority. Funding is anticipated from the town's General Fund.

Old School House

Next to the Town Office is the Old School House, which is presently leased to The Sharon Academy, an independent secondary school. The building served as Sharon's elementary school until 1988, when a modern building was constructed on land behind the Town Office. The Old School House has had a new water treatment system installed. Three pipelines distribute water to the elementary school, the Town Office, and the Sharon Congregational Church. A 2018 inspection of the building found the Old School House to be 'typically built and maintained, and in good condition for its age and style. Work for the Old School House for the next three years includes rehabilitating the building's siding and trim ($5,000-$10,000) and painting the exterior wooden surfaces ($7,500). These projects are high priority.. Projects planned for the next 3 to 5 years include removing and replacing a fuel oil tank ($10,000-$20,000) and repairing the driveway and parking lot surfaces ($5,000-$10,000). These projects are medium priority. Funding will come from a proprietary fund known as the Old School House Fund.

Old Town Hall (Sharon Historical Society)

The Old Town Hall, located on the Green next to the Congregational Church, is a circa 1830 brick building that is used by the Sharon Historical Society for displays and meetings. The building lacks environmental controls. If these systems were installed, it would stabilize the Historical Society's collections and provide additional meeting space for the town. The 2018 inspection of the building surmised that it is in good condition for its age and style. However, the existing handicap access ramp has caused water damage to the building's adjacent wooden beam. Work for the Old Town Hall/Sharon Historical Society Museum includes replacing rotting beams and floor joists ($24,518) and replacing the south exterior asphalt ramp ($34,640), both of which are high priority projects. A $17,320 matching grant from the Vermont Arts Council has been awarded to cover half of the estimated cost of the ramp. Funding for the remainder of the ramp work and the cost of the beams and joists is undetermined at time of writing.

Sharon Fire Department

Fire equipment and vehicles are housed in a three-bay fire station located on Route 14 one mile west of the Village. The building was reconstructed following significant flood damage during Tropical Storm Irene in 2011. Fundraising and insurance helped fund rebuilding efforts, and upgrades to most of the department's equipment and gear. The Fire Department continues to maintain its equipment and estimates it will require $95,000 in the next 3-5 years to repave its driveway. This project is of medium priority. They will bring that expense to the Selectboard for approval and it is anticipated to be funded through the General Fund.

Baxter Memorial Library

The Baxter Memorial Library, built in 1928 and owned by the Town, offers excellent lending, reading and community enrichment programs for Sharon residents. Its operation is supported by donations, fundraising events, and town appropriations. Oversight of library activities is by a Board of Trustees elected at Town Meeting. The Library is open to the public and has high-speed internet access 24/7. In 2022, its furnace was replaced with an energy efficient heat pump. A 2018 building inspection found that the library is in good condition for its age. Major work planned for the Baxter Library includes the design and construction of a drainage project. Its design is high priority and is planned to begin within three years. Construction is of medium priority and is slated to begin within three to five years. The Drainage Project's design and construction is estimated to cost between $17,000 and $22,000. The town plans to use $15,000 in ARPA funding for this project, with the remainder coming from the town's General Fund.

Town-Owned Property

In addition to the buildings named in this section, the following is a list of town-owned land:

- Town Common
- Town Forest (80 acres, also known as the Minister's Lot)
- Town Garage
- Maverick Lloyd Green Space (1.1 acres)
- Former Green's Trailer Park (Irene Buyout - 2015)
- Broad Brook Access Property (River Road – 2016)
- Stationmasters Rd. Parcel (1.2 acres at the end of Clark Memorial Bridge)
- Ashley Community Forest (owned jointly with Strafford - 2021)
- Town maintained abandoned burial grounds

Capital Improvement Plan for Town Owned Buildings

A Capital Improvement Plan (CIP) was created for all town owned buildings in 2018 based on inspections carried out by Seiple Home Inspections, Inc. The CIP focused on improvements for the Old Town Hall, Town Office, Old School House, Baxter Library, and Town Garage buildings. The CIP tables are organized in three parts. The first includes recommendations for improvements and maintenance at each building within the next three years; the second includes the same within a three-to-five-year time frame; and the third includes the same within a five-to-ten-year time frame. Timeframe correlates to priority, with projects further out having lower priority. Unless otherwise noted, funding will come from the town's General Fund.

Town Garage and Highway Equipment

Sharon's single most expensive capital asset is its system of roads, bridges, and culverts. Sharon's road crew does an admirable job of maintaining and plowing the town's extensive network of roads, and maintaining bridges and culverts. Their efficiency and dedication are especially appreciated during the winter months. (Additional information about Sharon's transportation infrastructure is provided in Chapter 3, Transportation.)

The Town Garage is located on a small parcel of land approximately one mile west of the Village on Route 14. There are three buildings on the site. The main building, constructed in 1974, is a four-bay heated garage housing equipment and serving as a maintenance facility. In 2012, two aging underground diesel storage tanks were removed and replaced by a new above-ground storage tank. An unheated pole shed, constructed in 1991, provides additional storage for equipment, and a covered salt shed was constructed in 2014.

A 2018 building inspection of the garage found that it is in fair condition for its age and style, however the Town requires additional space for storage and servicing of Town vehicles, and the facilities, overall, need energy efficiency improvements. Work for the Town Garage in the next three years includes a feasibility study ($40,000-$50,000) to determine whether to replace the structure or renovate it to meet current and future needs. If remodeling the garage is determined to be the best course of action $40,000-$50,000 will be required. Both projects are high-priority and funding may come from the town's ARPA money and the General Fund.

In three to five years, the town anticipates needing to replace the garage's metal panel roof ($10,000-$20,000) and repair the driveway and parking surfaces ($5,000-$10,000). These projects are medium priority and are anticipated to be funded through the General Fund.

The Town maintains an Equipment Fund for all major equipment acquisitions. Based on current equipment needs, the Sharon Selectboard draws from the Fund to acquire or upgrade equipment. One benefit of the Fund is that it assists in stabilizing tax expenditures for the highway department as equipment replacement is not financed entirely from current revenues.

Solid Waste Management

The Town is a member of the Greater Upper Valley Solid Waste Management District, which was created in 1990 to plan for and manage, in an environmentally sound manner, the solid waste generated by its member communities. Presently, eleven municipalities are included in the District, which maintains a solid waste and recycling facility on Route 5 in Hartford.

The District's primary role is to:

1. prepare a comprehensive waste management plan on behalf of its member towns;
2. locate, design, and operate a regional lined landfill;
3. conduct recycling and special waste management programs; and
4. disseminate information on waste management to the public.

Going forward, Sharon will have to actively work with the District to ensure that the Town is meeting statutory goals set forth in Vermont's new Universal Recycling Law (Act 148). This new law pertains to the management of food scraps and food residuals, including the conventional recycling of items such as paper products, metal cans, plastics, and glass items.

Sharon residents now also have access to the Lebanon Solid Waste and Recycling Facility.

Water Supply and Wastewater Treatment Facilities

The Town of Sharon does not own or operate a public water supply or wastewater disposal systems. All residential and non-residential uses are dependent on individual on-site water supply and disposal facilities. Economic development and growth of the Town would benefit from the construction of water and/or sewer facilities to serve the Village. The Town might investigate grant funding opportunities available (in the form of a Municipal Planning Grant, for instance) that would help fund a village septic project.

Goals, Policies, and Implementation Actions for Town-Owned Facilities and Land

Goal I: Provide town facilities that meet the needs of residents in a cost-effective manner.

> **Policy A**: Growth and development must not exceed the capacities of local facilities and services.
>
> > **Implementation Action 1.A**: Monitor public safety, waste disposal, and recycling programs and provide input on necessary improvements.

Goal II: Improve water supply, capacity and quality for town-owned buildings in the Village.

> **Policy B**: Follow the guidance of the Capital Improvements Plan (CIP) to make water supply improvements to town-owned buildings.
>
> > **Implementation Action 1.B**: Explore grant funding to analyze existing water and wastewater (septic) systems in the Village Area.

Goal III: Plan for the long-range maintenance of town buildings.

> **Policy C**: Improve the energy efficiency of all town buildings when improvements are being made.
>
> > **Implementation Action 1.C**: Implement recommendations made by the energy audit and CIP regarding energy efficiency improvements in town buildings.

Goal IV: Increase public access to Sharon's waterways on town-owned property.

> **Policy D**: All town-owned recreation properties are open to the public.
>
> > **Implementation Action 1.D:** Work with non-profit agencies and the Agency of Natural Resources to purchase or share the land containing the state VTrans garage on Route 14 to provide additional public access to the White River.

Health Care Facilities

Section Goal

I. Provide high quality medical care to all Sharon residents, with special attention given to seniors enabling them to 'age in place'.

Health care facilities are essential in the prevention, treatment, and management of illness, and in the preservation of mental and physical well-being through the services that they offer. Rural locations, such as Sharon, are served by small facilities that can assist residents with general health care needs, but they are not suited for more complex acute care services that require specialized services and equipment.

Gifford Medical Center operates a clinic that specializes in physical therapy located on Route 14, less than one mile west of Sharon's Village center. The nearest family health center is the Bethel Health Center. For more extensive care, Gifford Medical Center in Randolph is available, offering a wide range of services to serve most medical needs. For additional and more advanced medical care, the Dartmouth-Hitchcock Medical Center, Alice Peck Day Memorial Hospital in Lebanon, NH and the Veterans Administration Hospital in White River Jct. are also available to residents.

Gifford Medical Center developed an assisted living facility in nearby Randolph Center, called Morgan Orchards. There are also three assisted living facilities in Woodstock, and more in Hartford, Norwich, Lebanon and Hanover.

Goals, Policies, and Implementation Actions for Health Care Facilities

Goal I: Provide high quality medical care to all Sharon residents, with special attention given to seniors enabling them to 'age in place'.

Policy A: Support and encourage the development of regional health care facilities, assisted living, and counseling services to help residents obtain health care as close to home as possible.

Implementation Action 1.A: Participate in 4-Town decisions regarding new local senior living and health care facilities to encourage their development.

Policy B: Support the Sharon Health Initiative which provides services through the activities of a Community Health Care Coordinator to improve medical services for Sharon residents, especially our older residents, to facilitate their ability to stay in their homes.

Implementation Action 1.B: The Selectboard should continue to support Sharon's Health Care Coordinator who provides personal attention and assessment, as well as advocacy and referral within the health care system for community members.

Emergency Management and Services

Section Goals

I. Protect the safety of citizens of Sharon against crime and violations of law.
II. Support well-trained, equipped, and maintained fire and ambulance services.
III. Prepare for any potential emergency hazard.

Fire Protection Services

Fire protection services are provided by the Sharon Firemen's Association, an all-volunteer department that provides 24-hour coverage. The Association also has mutual aid agreements for back-up service with Royalton, Pomfret, Hartford, Strafford, and Norwich. While coverage is sufficient, there is always a need for additional volunteers to serve as firefighters, to help raise money, and to help care for the equipment. Because a majority of Sharon's firefighters work outside of the community, and because of State and Federal training requirements, it can be challenging to find volunteers. The need to respond to accidents on Interstate 89 presents extra ongoing responsibility. Nevertheless, the service provided by Sharon volunteer firefighters is exceptional.

The Association's operating budget in FY2021 was funded by an appropriation from the Town of Sharon ($50,100); the balance was raised from a variety of sources. To underwrite costs of new equipment, the Town of Sharon has established an Equipment Reserve Fund that is supplemented annually.

Police Protection Services

The Town of Sharon does not have a full-time police force. An elected Constable provides limited police security and traffic control services when needed. It is important that the Constable position be filled in order to provide adequate coverage within the community. The extensive training and expensive certification, as well as liability coverage, are becoming a concern for recruitment and retention of individuals willing to serve in this capacity.

In recent years, the Town has contracted with the Windsor County Sheriff's Department to enforce the Town's traffic control ordinance and assist with other policing services. All other police protection functions are performed by the Vermont State Police, Troop "E," located off Route 107 south of the Bethel/Royalton Town Line in Royalton.

Emergency Medical Services

Emergency medical services in Sharon are provided by three separate response organizations: Sharon FAST Squad, the South Royalton Rescue Squad, and the Hartford Ambulance Service. Every year, the town appropriates funding required for the utilization of these services.

Dartmouth-Hitchcock Advanced Response Team (DHART)

The Dartmouth-Hitchcock Advanced Response Team is based at Dartmouth Health in Lebanon, NH. DHART crews provide air medical transportation services to the medical communities of northern New England. In addition, DHART flight crews respond to public safety agency requests for medical evacuation of trauma patients from scenes of injury, and will transport to the closest Trauma Center. Operating 24 hours a day and seven days a week, DHART Crews transport adult, pediatric and neonatal patients to ANY appropriate medical facility in New England. DHART landings within Sharon are generally coordinated by the Sharon Fireman's Association. The ball field west of the elementary school is a designated DHART landing area.

Emergency Management Planning

The impact of expected, but unpredictable natural and human-caused events to the region can be reduced through proper emergency management. Emergency management is generally broken down into four areas: preparedness, response, recovery, and mitigation.

- Preparedness includes emergency personnel acquiring suitable equipment and conducting training exercises. Preparedness is also a responsibility of residents, business and government. Simple preparedness measures, like having disaster supplies on hand, installing smoke detectors and generators, having emergency fuel for generators and vehicles and knowing basic first aid can help to lessen the impact of a disaster. Preparing emergency plans is also a preparedness activity.
- Response is the initial emergency response to save life and property during and immediately after the disaster. It is initiated by local emergency crews and then followed up by outside forces if necessary. Response operations are greatly enhanced by proper preparedness. Most emergencies of any scale will require towns to work together, and often to work with state or federal agencies.
- Recovery is the more long-term process of putting life back to normal, and includes many state and federal agencies, especially the Federal Emergency Management Agency (FEMA) in large disasters. As events like Tropical Storm Irene showed, recovery can take a long time and is hindered when a disaster is severe or widespread.
- Mitigation means any sustained action that reduces or eliminates long-term risk to people and property from natural or human-caused hazards and their effects. Mitigation planning begins with an assessment of likely hazards, and then targets activities to reduce the effects of these hazards. Given that the largest threat in Vermont is fluvial erosion, good mitigation measures include proper road and drainage construction, as well as limiting development in flood prone areas.

Local Emergency Management Plan

Sharon, like most Vermont communities maintains a Local Emergency Management Plan (LEMP) which is annually adopted by the Selectboard. This plan contains contact information that is available to authorized users, but is not available to the public. The Selectboard should continue to keep the LEMP up-to-date and ensure that all parts of municipal government that are active during a hazard event are aware of it, including the Selectboard, Fire and Rescue, Road Crew, and Shelter coordinators.

The LEMP covers the procedures for Sharon's response to a disaster. In the event of a disaster, the Selectboard will formally declare a state of emergency if the Board feels it exceeds the Town's emergency management capacity. This declaration will be faxed to Vermont Emergency Management, and a local emergency operation center will be set up in the Sharon Fire Station and/or the Sharon Town Offices.

In the event that emergency shelter is needed, the Sharon Fire Station and the Sharon Elementary School have been certified by the Red Cross; Hartford High School can also be used since it is one of eight regional shelters in Vermont. Both the Sharon Fire Station and the elementary school are equipped with backup generators and are designated as warming shelters in the event of a disaster.

In order to avoid disasters as much as possible, the Local Emergency Planning Committee and the Regional Planning Commission have developed an all-hazards plan which addresses mitigation and education needs.

Local Hazard Mitigation Plan

Disaster mitigation covers actions taken to reduce the effects of a disaster. For Sharon, the primary hazard is flooding (often the result of severe weather patterns that include heavy rain, lightning, high winds, and hail), with a variety of other lesser hazards, including structure fires, extreme winter weather, and hazardous material spills. All hazards have been reviewed in the town's Mitigation Plan, a Federal Emergency Management Agency (FEMA) approved plan which has a five-year lifespan. There are many ways that the town can reduce damages, and since a disaster does not always result in state or federal assistance, the town should take sensible steps that can reduce disaster costs, damage to property and loss of life.

Sharon Incident Command Team

In response to the Covid-19 pandemic in the spring of 2020, Sharon's Selectboard and its emergency management team made the joint decision to activate the high-level, disaster-response system known as Incident Command (IC) for the town. The Sharon Fire Chief, the town's emergency management director, served as incident commander.

Information about the IC activation was quickly distributed to Sharon residents via the town website, postings in town, and in a postal mailing to everyone. The announcement defined Incident Command as "a standardized approach to the command, control, and coordination of emergency response, providing a common hierarchy within which responders from multiple agencies can be effective." The Sharon "agencies" involved in the response included the Sharon Food Shelf, the Selectboard, Sharon Elementary School, The Sharon Academy, the Sharon Health Initiative, plus key volunteers.

Incident Command is an integral part of the emergency preparedness protocols and training that the U.S. Department of Homeland Security developed after the 9/11 terrorist attacks. The federal government now requires all states to develop their own emergency preparedness plans, which must incorporate certain protocols, including the IC option. Vermont, like other states, mandates that every town has a local emergency operations plan (LEOP) in effect. Because Sharon has the railroad, I-89 and the river running through town, it has developed LEOP plans for each possible disaster event. Volunteers holding emergency management roles take IC courses offered by the state.

The Sharon Covid-19 Incident Command Team focused on people – determining who was in need and finding ways to meet that need to make sure that all town residents, including the elderly or those at risk in other ways, are taken care of.

Goals, Policies, and Implementation Actions for Emergency Management and Services

Goal I: Protect the safety of citizens of Sharon against crime and violations of law.

Policy A: The Town should continue contracting out its police services.

Implementation Action 1.A: To meet the needs of the town, the Selectboard should continue to compare the scope and cost effectiveness of police services offered by nearby jurisdictions.

Goal II: Support well-trained, equipped, and maintained fire and ambulance services.

Policy B: Support the South Royalton Rescue Squad, its efforts to decrease response times for emergency services in Sharon, and its expansion to better meet the needs of the surrounding community.

Policy C: Road and driveway access to proposed developments must meet town and road access standards.

Implementation Action 1.C: The Selectboard, in conjunction with the Sharon Planning Commission and first responders, should periodically review and revise road access standards as needed.

Policy D: Maintain the town's relationship with the South Royalton Rescue Squad and Hartford Ambulance Service for emergency response services. Continue appropriate funding for these and Sharon's First Response services.

Goal III: Sharon should prepare against any potential hazard.

Policy E: Maintain an up-to-date Local Emergency Management Plan (LEMP).

Implementation Action 1.E: The Selectboard should annually adopt and update the LEMP, and given recent events, pay special attention to rail safety.

Implementation Action 2.E: The Selectboard and Emergency Medical Dispatch (EMD) should document a clear plan for the use of an emergency shelter in the LEMP.

Implementation Action 3.E: Sharon's emergency management team should receive adequate training in the Incident Command System (ICS). This training is required to adopt the LEMP.

Policy F: Work with the Two Rivers-Ottauquechee Regional Commission to properly plan for hazardous events.

Implementation Action 1.F: The Town should work with TRORC to update and adopt the Hazard Mitigation Plan every five years.

Implementation Action 2.F: The Selectboard should assign a representative to attend the Local Emergency Planning Committee (LEPC#12) meetings.

Education

Section Goals

I. Provide safe and secure learning environments where high quality educational opportunities are provided to all students.
II. Adequate childcare facilities to meet the needs of the 4-Town Region.
III. A quality education to Sharon students at a reasonable cost to the Town's taxpayers.

Providing high quality education to Sharon's students has always been a community goal. A successful school system depends on appropriate facilities, good teachers and administrators, interested and involved parents, and meaningful and challenging educational programs for students. Schools have the added benefit of providing a focus for the community. They represent a place where residents regularly make contact as they celebrate the growth of their children. Maintaining a strong school is essential to the vitality of the community.

School Facilities

Sharon has one public school, Sharon Elementary, which houses grades Pre-K through 6. Sharon Elementary School, located in the Village, was built in 1988-89 in response to increasing student enrollment. Although the Sharon Elementary School is a now over 30 years old, it is well-maintained and has seen recent improvements to its heating system and roof.

The school has implemented a number of energy efficiency upgrades in response to a building-wide energy audit. Those include installing a 12kW solar system on the roof, a wood pellet boiler

for heating installed in 2014, and new roof insulation over the kitchen. Future improvements include replacing existing light fixtures with energy efficient models. The parking lot was repaved in 2021 with the access road still requiring upgrade. As of 2023, a committee has been formed to study the feasibility of an addition to the school. This addition would serve as a permanent replacement for the temporary classrooms housing the pre-K program.

Enrollment

There is no public school for grades 7-12 in Sharon. Students have the option to choose which school they will attend and the town pays tuition for the student. School choice is considered to be a benefit by many families.

School choices include The Sharon Academy or one of several other area schools, including White River Valley (formerly Royalton) and Hartford High Schools, and the Hartford Area Career & Technology Center. In the 2019-2020 school year, there were 120 tuitioned students. Average daily membership for school years 2007 to 2020 are shown in Table 11.

School Year	P/K-6	7-12
2019-2020	154	120
2018-2019	167	107
2017-2018	153	119
2016-2017	147	107
2015-2016	155	106
2014-2015	158	102
2013-2014	147	111
2012-2013	131	117
2011-2012	110	123
2010-2011	113	115
2009-2012	114	127
2008-2009	96	126
2007-2008	87	125

Table 12: Average Daily Membership, K-12

The Sharon School District is a standalone entity that was not consolidated through Act 46. The District annually appropriates funds for tuition payments and other secondary school costs. For FY14, approximately $1,416,253 was budgeted for this purpose, which represented approximately 38% of the total school budget. Given that these tuition rates, shown in Table 12 for the 2020-2021 school year, are fixed independently by other Districts, Sharon voters have no direct control over a large portion of the school budget. Other towns are able to exercise some control over the cost of tuition for secondary education by designating a specific school to receive their students.

School	2020-2021 Tuition
The Sharon Academy	$15,998
Hartford High School	$14,000
South Royalton High School	$17,137
Randolph Technical Career Center	$17,778
Hartford Area Career and Tech Center	$19,100

Table 11: Tuition Rates, FY 21 (Source: VT Dept. of Education)

Career and Technical Information

The Hartford Area Career and Technology Center (HACTC) in White River Junction serves students attending Hartford, Hanover, Lebanon, Mascoma, Windsor and Woodstock high schools, along with Thetford Academy, Sharon Academy and home-schooled students. Instruction is provided in 19 programs, information can be accessed on their website at http://www.hactc.com/programs.

Randolph Technical Career Center serves towns that send students to Randolph Union High School, Whitcomb Jr/Sr High School, Chelsea High School, Rochester High School, Williamstown Middle/High School, South Royalton High School, and Northfield Middle/High School. For information, visit http://www.orangesouthwest.org.

Adult Education

Sharon has a number of adult education opportunities including:

- **Seven Stars Arts Center** — Located in Sharon village, the Seven Stars Center is a non-profit corporation dedicated to the exploration of the diversified arts. The Center serves the Upper Valley Community by providing musical instruction and hosting performances.
    - **Vermont Law and Graduate School** — (VLS) was chartered in 1972 as a private, independent law school. The school is accredited by the American Bar Association and by the New England Association of Schools and Colleges and is a member of the Association of American Law Schools. The only law school in the state of Vermont, it awards the degrees Juris Doctor and Master of Studies in Law.
    - **Vermont Technical College (VTC)** — Vermont Technical College is located in Randolph Center. VTC is part of the Vermont State College system and offers full and part time educational opportunities that range from computer technology, to agriculture, to health services. Attendees may choose a two-year program that leads to an Associate's Degree, a four-year program that leads to a Bachelor's Degree, or the college's one-year program that leads to a Practical Nursing certificate.
    - **Dartmouth College** — The Osher Institute for Lifelong Learning at Dartmouth was established by Dartmouth College as the Institute for Lifelong Education at Dartmouth (ILEAD) in November 1990 by 38 members of the Upper Valley intrigued with the "idea of continued learning." Their program is open to all and offers classes during the fall, winter and spring.
    - **Bethel University** — A pop-up community university created by the Bethel Revitalization Initiative (BRI). During the month of March each year, anyone can teach a course on any topic under the sun, and anyone can take courses for free.
    - **Cabin Fever University** — A non-profit adult education program based in Strafford, VT. At this institute of random learning, any topic is possible. Its mission is to give ordinary people an opportunity to share their knowledge and experience with others.
    - **Justin Morrill Homestead** — This National Historic Landmark in Strafford holds regular programs, events and exhibits on various topics.

Childcare

An inventory of registered childcare facilities reveals that Sharon has a very limited number of childcare providers. The State of Vermont has two classifications of regulated childcare:

- **Registered Family Child Care Home**: A childcare program approved only in the provider's residence, which is limited to a small number of children based on specific criteria.
- **Licensed Program**: A childcare program providing care to children in any approved location. The number and ages of children served are based on available approved space and staffing qualifications, as well as play and learning equipment. A Licensed program must be inspected by the Department of Labor and Industry's Fire Safety Inspectors and must obtain a Water and Wastewater Disposal Permit from the Agency of Environmental Conservation. A Licensed program is

Childcare Providers by Town (2020)	Registered	Licensed
Norwich	0	5
Pomfret	0	0
Royalton	1	3
Sharon	0	2
Strafford	0	2

Table 13: Childcare providers by type, by town 2020 (Source: VT Bright Futures)

considered to be in a public building under Vermont Law. Types of licensed programs include: early childhood programs, school-age care, family homes and non-recurring care programs.

Sharon has two licensed facilities located in the town. There are also several facilities in neighboring towns that can serve families, shown in Table 13. For afterschool care, the One Planet program is offered through the Sharon Elementary School. Over the years, the number of licensed and registered facilities have dropped in the region. New facilities are always needed. If a new childcare facility were to come to Sharon, an existing building in the village center could be an ideal location.

Goals, Policies, and Implementation Actions for Education

Goal I: Provide safe and secure learning environments where high quality educational opportunities are provided to all students.

Policy A: Provide sufficient and appropriate physical space to meet current and projected enrollments.

Implementation Action 1.A: The Selectboard should meet annually with the Sharon Elementary Schoolboard to determine if school building facilities are adequate.

Policy B: Educational opportunities required to meet the needs of current students and residents should be readily available.

Implementation Action 1.B: The Schoolboard should identify career, vocational, and technical education needs by working with employers and the staff of the secondary schools that Sharon students attend.

Goal II: Adequate childcare facilities to meet the needs of the 4-Town Region:

Policy C: Any new registered or licensed childcare facilities should be located in or near the Village.

Goal III: A quality education to Sharon students at a reasonable cost to the Town's taxpayers.

Policy D: Large scale development, likely to increase school enrollment, shall be required to pay an impact fee to defray the cost of expanded town services.

Policy E: Large scale developments shall be phased and carefully planned to avoid exceeding the Town's capacity to provide adequate educational services.

Implementation Action 1.E: The Planning Commission should revise current Subdivision bylaws to ensure development does not exceed the Town's capacity to provide services.

Chapter 5: Energy

Chapter Goals

I. Promote the responsible development of renewable energy resources and facilities in the Town of Sharon to meet the energy needs of the community.
II. Reduce energy costs and the community's reliance on fossil fuels that contribute to greenhouse gas emissions that contribute to climate change.
III. Encourage a continued pattern of development and land use that is energy efficient.
IV. Increase awareness and use of energy conservation and efficiency practices through educational outreach to the public.
V. Increase energy efficient residential and commercial buildings in Sharon to meet state goals.
VI. Bring municipal buildings to net zero energy use.
VII. Increase alternative public transportation opportunities throughout the community, including park-and-ride access, bus service, bike paths, and sidewalks.

Energy use and generation plays an important role in the environmental, economic, and social well-being of our community. The continued use of petroleum-based fuels is causing negative impacts on the environment and contributing to global climate change, emphasizing the need to plan for energy conservation and switching to renewable energy sources. The global impacts of climate change including the destruction of ecosystems, sea level rise, and the increased intensity of droughts and severe storms, are already being observed. In Vermont, climate change is altering the composition of our forests, affecting the tourism economy, increasing the spread of invasive species and pests, and resulting in more damaging storms, floods and other severe weather events. Every effort needs to be made both locally and globally to limit future damage and adapt to a changing reality.

While the Planning Commission recognizes that energy supply and demand are directed largely by economic forces at the state, federal, and international levels, how Sharon plans for future growth can have an impact on how much energy is used in this community. For example, the siting and design of buildings and the selection of heating systems can influence the efficient use and conservation of energy, while a dispersed and unplanned pattern of land use can waste both land and energy resources.

While utility-scale solar and wind projects are multiplying in Vermont, most of the associated Renewable Energy Credits (RECs) are being sold to out-of-state utilities. Vermont (and Sharon) are hosting projects, therefore, that do not technically contribute to Vermont's in-state power generation, but are claimed by other states as their renewable energy sources. It is incumbent upon Vermont to retain its RECs in future years to ensure that genuine progress is being made toward low-carbon energy production in-state.

The State of Vermont strongly supports reducing its reliance on fossil fuels and securing energy independence by improving the energy efficiency of residential, business, and government buildings, and utilizing in-state renewable energy resources. The 2016 Vermont Comprehensive Energy Plan (CEP) describes the major factors of energy use by addressing the state's energy

future for electricity, thermal energy, transportation and land use. Through this process, the CEP set a long-term statewide goal of obtaining 90% of Vermont's energy needs from renewable sources and eliminating our reliance on oil. Expanding upon the statutory goal of 25% renewable by 2025 (10 V.S.A. § 580(a)), the CEP established the following set of 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.
- Three end-use sector goals for 2025: 10% renewable transportation, 30% renewable buildings, and 67% renewable electric power.

Projected Climate Trends in Vermont:

Warming Temperatures: Vermont's temperatures are projected to rise by another 2 to 3.6 °F by 2050.

Increasing Precipitation: Largest increases in precipitation will be in mountainous regions, and much of the precipitation will fall as snow in winter, then shift to rain in the next 50 years.

Weather Extremes: High nighttime temperatures, high temperature extremes and high-energy lighting storms will increase.

Jet Stream effects: Blocking of the jet stream from melting arctic ice will lead to prolonged periods of intense rainfall, drought, or intense cold.

Source: Vermont Climate Assessment.org

"Energy" as used in this Plan and the CEP is not the same as electricity. Categorizing energy use is commonly broken down into four sectors: commercial (running machinery, heating and lighting), residential (mainly heating and lighting), industrial (process energy such as smelting or concrete production), and transportation (mainly gasoline and diesel). The breakdown by end-use sector in Vermont is shown in Table 14.

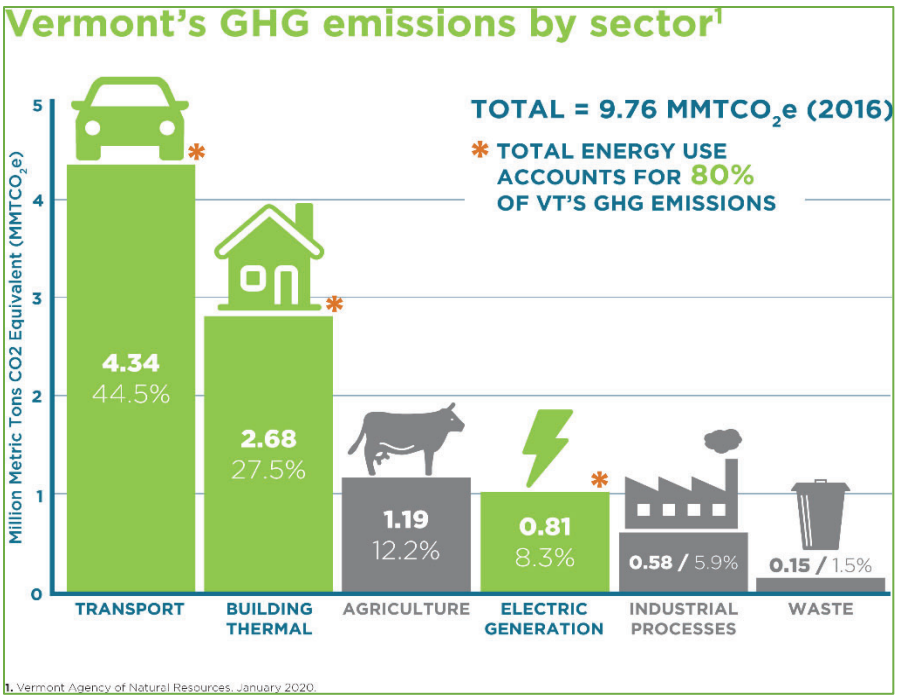


Table 14: Vermont's GHG Emissions by Sector

As Sharon continues to plan for the future, it is important that the town understands its current energy use and is able to set targets in order to reach the town, and ultimately the Vermont state, energy goals. Sharon must plan for how it will reach the energy targets described in this chapter as well as provide a guide to renewable energy development in town.

Electricity Demand

This section provides background data on electricity use and renewable energy generation in Sharon and provides electrical efficiency and renewable generation targets.

86% of respondents to the 2020 Community Survey were in favor of developing an Enhanced Energy Plan for the Town of Sharon.

As shown in Table 15, the electric residential energy demand in Sharon has declined slightly since 2014, while the commercial and industrial demand has increased. The Town of Sharon can meet its local energy demand through conservation, lowering energy demand, and then by working to meet the remaining need with local, renewable energy resources. Residents can improve grid reliability and/or achieve grid autonomy by utilizing energy storage technologies, such as Tesla's Powerwall or Pika Energy's Island battery systems.

Historical Annual Electricity Use (kWh)						
Sector	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Commercial & Industrial	1,878,000	1,990,338	1,957,536	2,086,013	2,808,489	1,745,004
Residential	4,916,204	4,678,223	4,551,504	4,592,520	4,787,941	4,465,980
Total	**6,794,204**	**6,668,561**	**6,509.041**	**6,678,533**	**7,596,429**	**6,210,984**
# of Residential Premises	669	673	676	**672**	**679**	**663**
Average Residential Usage	7,349	6,951	6,733	**6,834**	**7,051**	**6,736**

Table 15: Electricity use statistics from 2014-2019 (Source: Efficiency Vermont)

According to Table 16, Sharon's electricity use per household is in the top third of towns in the TRORC region. Based purely on consumption (i.e., considering no net metering adjustments), the cost of the average monthly electric bill in Sharon is $110 in 2019.

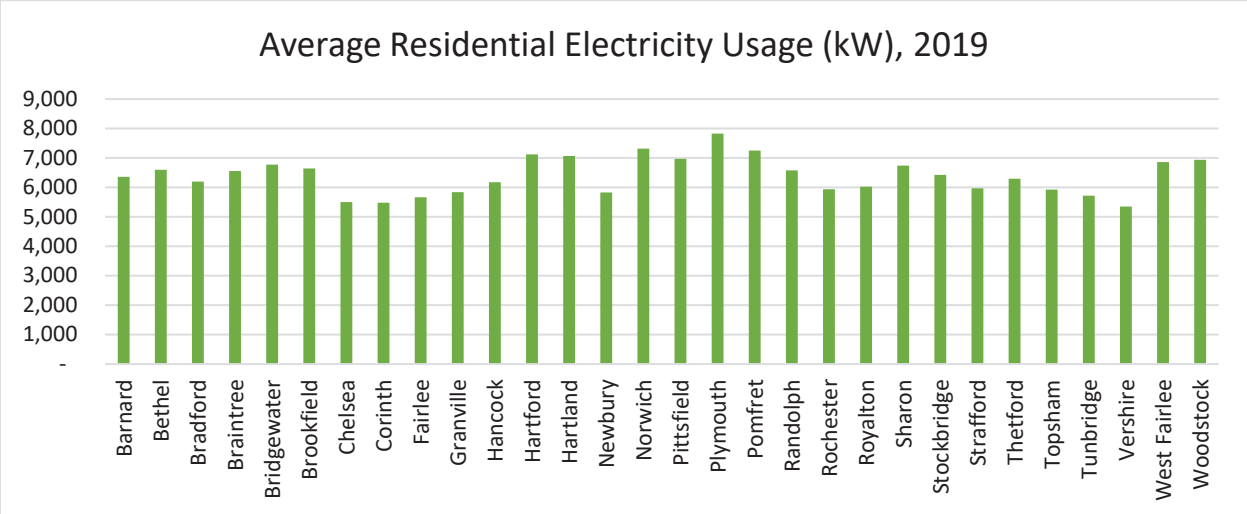


Table 16: Average residential electricity use. Note that Sharon has one of the higher average annual residential uses of electricity, at just over 7,000 kWh (583 kWh per month). (Source: Green Mountain Power)

Heating Demand

Sharon residents rely on a variety of heating sources, most prominently wood, fuel oil, and propane. According to the Vermont Department of Labor (VDL), the 22 commercial establishments in Sharon use an average of 0.75 billion BTUs (750 MBTUs) for heating each season, reaching almost one quarter of the heating demand in Sharon. Table 17 lists the estimated fuel consumption by fuel, including the percent of heating load each provides.

Fuel Source	Households (ACS 2015-2019)	Total Heating Load (Billion BTU)	Percent of Households
Natural Gas	2	0.2	0.3%
Propane	217	27.7	36.2%
Electricity	13	1.6	2.2%
Fuel Oil	211	2639	35.2%
Coal	3	0.3	0.5%
Wood	132	16.8	22%
Solar	4	0.5	0.7%
Other	7	0.8	1.2%
No Fuel	10	1.2	1.7%
Total Residential	**599**	***76.4***	**100%**

Table 17: Current Residential Heating Energy Use in Sharon (Source: ACS 5-year estimates. Commercial establishment data available from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (DPS) to estimate energy use among current commercial establishments in Sharon.)

Note: Sharon likely does not have any households using natural gas as a heating fuel, suggesting the two households indicating that fuel in the table are errors.

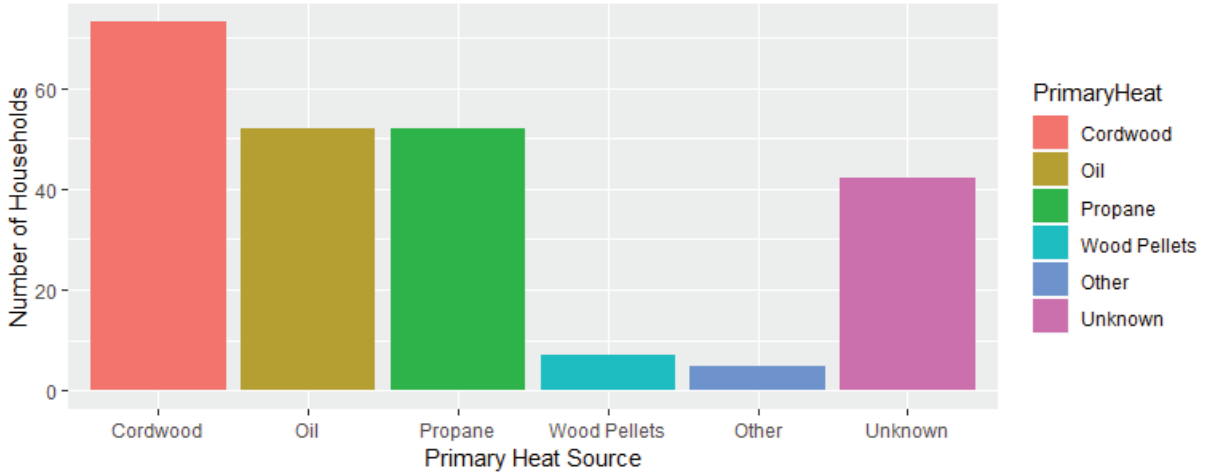


Table 18: Distribution of heat sources among 231 households in Sharon in 2018. "Unknown" represents respondents whose primary heating source could not be resolved from their survey response.

Results from the 2018 Sharon Energy Survey (SES)[4] differ somewhat from Table 17, above. The survey showed an equal percentage of households use propane and fuel oil for their primary heat source (28% each) and almost 40% of households use cordwood as their primary heat source (see Table 18). The SES found that woodstove use was higher and propane use was lower than estimated by the ACS. The ACS data assumes that each household uses a single fuel; the SES found that only 1/3 of homes utilized a single fuel source. Most households reported actively operating two heat sources in the winter.

Transportation Demand

It is important that communities recognize the clear connection between land use patterns, transportation, and energy use. The traditional Vermont landscape is defined by densely populated villages and downtowns, surrounded by open countryside. Concentrated development patterns that utilize public transit services, bike lanes, sidewalks, and walking paths can lower energy demands and make it easier to meet energy reduction targets. Embracing smart growth that directs development into existing village centers reduces energy use and provides cost savings while creating vibrant communities and preserving natural resources.

The rural nature of our region leads to long commutes for work, shopping and services. Long commutes impact the number of vehicle miles traveled (VMT) and corresponds to the amount of gasoline and diesel fuels consumed. The transportation sector is responsible for 36% of the total energy consumed in Vermont, comprised mostly of gasoline (76%) and diesel (20%).

Transportation Data	Municipal Data
Total # of Vehicles (ACS 2020, 5-year)	1,090
Average Miles per Vehicle (VTrans 2021)	11,772
Total Miles Traveled	12,831,480
Realized MPG (VTrans Transportation Energy Profile 2021)	19.3
Total Gallons Use per Year	664,844
Transportation BTUs (Billion)	82
Transportation BTUs (Million) Per Capita (VTrans 2021)	74.2
Average Cost per Gallon of Gasoline (eia.gov, 2022) - New England average for 2022	4.04
Gasoline Cost per Year	$2,688,130

Table 19: Current transportation energy use and energy costs in Sharon, 2019 & 2021. Data collected represents the most recent data available. The VTrans statistics are from the 2021 Vermont Energy Profile, although the data in most cases is from 2019 (Source: American Community Survey (ACS) and Vermont Agency of Transportation (VTrans))

Transportation usage statistics in Sharon are shown above in Table 19. Residents in town spend almost $2 million dollars on gasoline per year. Even if this is spent at gas stations in Sharon, almost all of that money spent on transportation fuel leaves the town and state (and potentially the country). Can we produce vehicle miles locally?

Renewable Energy

Power that is generated from renewable sources at (or near) the point of consumption can provide maximum reliability, achieve sustainability, and lead to energy independence. Most locations in Vermont are capable of generating solar energy through photovoltaic (PV) panels or solar thermal systems. Capturing the wind to generate energy is another form of renewable

[4] SES results here: (Town website link with new Town website). Currently here: https://tinyurl.com/ybk5vngn

energy. Efficiently burning biomass, while not without its atmospheric effects, is also considered renewable. Burning fuel oil or gas (i.e., natural gas or propane) depletes a non-renewable source and is thus not a renewable source of energy.

Solar Electric

To be effective, solar photovoltaic (PV) cells need to be properly sited relative to the sun, i.e., facing south with a clear view of the sky.

Decreasing equipment costs have made solar electricity generation systems more prevalent. Improvements in panel efficiency have also allowed progressively more generation per unit area of panel.

Systems that are net-metered[5] are overseen by the Public Utility Commission (PUC) and are exempt from local permitting. In Vermont, customers in the same utility service territory are allowed to form 'groups' to share in the output of a net-metering system. [6] Sharon has at least 56 net-metered photovoltaic sites, shown in Table 20, below. Additionally, it is estimated that the Town of Sharon has an additional 144 residences with the potential for rooftop solar capacity of 0.67 MW, and six commercial locations with the potential for rooftop solar capacity of 0.11 MW.

	Number of installations	Installed capacity (MW)
Ground-mounted PV	13	3.65
Ground-mounted PV (with tracker)	5	0.027
Roof-mounted PV	38	0.24
Total	**56**	**3.91**

Table 20: Existing solar PV installation in Sharon as of April 2021 (Source: VT Community Energy Dashboard)

The largest source of renewable energy generation in Sharon is the 2.2MW SunGen facility that went online in 2012 and is located in the Sharon Commerce Park. There are also three 500 kW commercial systems in Sharon – two facilities off Broad Brook Road and one at the intersection of Route 132 and Beaver Meadow Road.

Solar arrays are more desirable renewable energy generators than wind towers in Sharon since solar facilities do not need to be located on ridgelines and may be less visually prominent. In addition, solar facilities can be located in areas near existing infrastructure, requiring fewer access roads, reducing adverse impacts on lands and mitigating the spread of invasive species.

[5] "Net-metering is the process of measuring the difference between the electricity supplied to a customer by their utility and the electricity fed back to the utility by a customer's electric generation system (such as solar panels) during the customer's billing period. In Vermont, customers in the same utility service territory are allowed to form "groups" to share in the output of a net-metering system." (https://puc.vermont.gov/electric/net-metering)

[6] https://puc.vermont.gov/electric/net-meteringThe Vermont Energy Atlas

In 2019, it takes roughly 7 acres of solar collectors to provide one megawatt of electricity capacity. [7]

Community net-metering group solar projects provide residents who do not have suitable infrastructure or space to host their own power generation an opportunity to directly support and benefit from renewable energy infrastructure. Both solar PV installers and community groups host community arrays, which are permitted in Vermont, provided that the customers and project are within GMP territory (for Sharon). Further, a microgrid can operate independently from the utility power grid, on the scale of a single home to a large group of loads.

Solar Thermal

Solar thermal systems typically heat water with sunlight.[8] The benefits to solar thermal (and passive heating, as discussed below) is that the energy gain is directed immediately to the consumer. The most common active solar thermal systems preheat water entering a water heater, significantly decreasing the amount of energy needed to heat the water to the desired temperature.

Additionally, good building and site design are essential to taking advantage of the sun's energy through passive methods. Passive heating and lighting consider the seasonal movement of the sun, prevailing winds, and existing conditions. Sharon has encouraged the use of passive solar in the 2008 Subdivision Regulation standard #22: "When site conditions allow, subdivisions shall be laid out to promote energy efficiency and conservation by affording buildings sufficient solar access and southern orientation." Temperature stabilization with thermal mass and deciduous shade trees can also decrease energy use and make dwellings more comfortable.

Wind Generation

Similar to solar, wind energy is an intermittent resource that fluctuates in response to environmental conditions. Wind can often generate power when solar is not generating, evening out the supply available to the grid. The amount of energy produced by a wind tower depends on location, height of the tower and proximity to other obstructions. Modern wind turbines have a 2 to 5 megawatt maximum capacity range. Sharon does not have commercial generatingcapacity due to constrained topography. Small-scale residential wind energy generation, however, is possible in Sharon. Acres potential wind development areas in Sharon are shown in Table 21, below.

Sharon may wish to establish development standards with which to review future wind generation proposals. Such standards could ensure that that the environment and landscape would be properly protected against any adverse impacts. In general, developers should make every effort to minimize damage to important natural areas as identified in the Land Use chapter of this Town Plan. Additionally, wind facilities should be located as close to existing roads as possible to avoid the fragmentation of wildlife habitat, agricultural soils, and forestlands, and to reduce the spread of invasive species.

[7] The range is provided by the following sources: 7 acres / MW is from the 2016 VT Comprehensive Energy Plan

[8] Some water heating systems use a 50/50 water/glycol mixture so that the fluid does not freeze. Alternatively, solar thermal systems are designed to drain-back to the tank via gravity; the water is only pumped through the exposed solar collectors when the thermostat indicates it is warm enough.

Potential Wind Development Areas in Sharon (Acres)							
	Class 1 (10-11 mph)	Class 2 (12-13 mph)	Class 3 (13-14 mph)	Class 4 (15-16 mph)	Class 5 (16-17 mph)	Class 6 (17-18 mph)	Class 7 (19-25 mph)
Residential (30-meter)	8213	169	0	0	0	0	0
Small Commercial (50-meter)	0	1062	161	0	0	0	0
Large Commercial (70-meter)	0	0	0	1	0	0	0

Table 21: Potential Wind Development in Sharon in Acres (Source: Vermont Energy Atlas 2012)

Hydropower

There are no hydropower facilities located in Sharon. Advances in hydropower technology are making it increasingly viable for small-scale residential use. Micro-hydropower (~5 kW capacity or more) has the potential to generate enough electricity to power a home, provided that the essential ingredients – water and vertical drop – are available. Hydro can be an excellent complement to a solar system because water flow is often greater during the late winter season when solar is less effective. Micro-hydro is also attractive because it often "relies on run-of-the-river" piping and does not require a dam.[9]

Biomass

The term 'biomass' refers to biologically-based feedstocks (that is, algae, food or vegetable wastes, grass, wood, methane, and much more). Biomass can be converted into an energy source used to fuel vehicles (e.g., biodiesel), heat homes, or even generate electricity. Many Sharon homes use biomass for primary or supplemental heating.

The Sharon Energy Survey (2018) found that residents using cordwood as a primary heat source used 3.5 cords per season (converted to cordwood providing 100% of heating demand in the household, Sharon households were estimated to use an average of 4.3 cords of wood per season). Households using cordwood as a supplemental heat source used 1.25 cords on average.

According to the 2016 Comprehensive Energy Plan (CEP), Vermonters using wood for primary heating consumed about 4.8 cords in 2014-15, while those using wood as a supplementary source used 2.1 cords.[10] In that same year, Vermont households burned about 126,000 tons of wood pellets, with primary-heat-source consumers burning 4.4 tons and supplementary-heat-source consumers burning 3.3 tons for the season. A slight reduction in the number of cords of wood burned from 2007-08 data could be a reflection of Vermonters installing more efficient wood heating systems.

A recent increase in the use of wood pellets illustrates a growing demand for wood resources as heating fuel. The Sharon Elementary School installed a biomass pellet heating system, shown in Figure 3, in in 2014 to replace a failing oil boiler. This was a great opportunity to educate our kids about renewable energy as well as get them interested in the science behind it. One

[9] https://www.energy.gov/energysaver/buying-and-making-electricity/microhydropower-systems
[10] https://outside.vermont.gov/sov/webservices/Shared%20Documents/2016CEP_Final.pdf

organization that brings renewable energy workshops to the classroom is The Vermont Energy Education Program (https://veep.org/). According to the 2018 Sharon Energy Survey, almost 4% of Sharon households used wood pellets as a primary heating fuel.

Woody biomass can provide heat from a local and renewable resource. Improving the efficiency of the process (from forest to stove) is possible on several levels:

- The community level (e.g., Town woodlot, fuel assistance programs),
- The forest level (e.g., low-impact logging techniques, selective thinning), and/or
- A personal level (e.g., simpler storage systems, increased woodstove efficiency).

Figure 3: Sharon Elementary School wood pellet hopper (photo credit Sharon Elementary)

Using a woodstove that meets the EPA's 2020 woodstove efficiency standards should reduce fine particulate emissions by over HALF for the same amount of heat output. Based on the results of Sharon Energy Survey, about 1/3 of households using cordwood as a primary heat source utilized a pre-1988 non-EPA certified stove in 2018. About ¼ (or fewer) of woodstoves used as the primary heat source in residences met the 2020 emission standards (2.0 g/hr.).

Alternative Fuels for Transportation

The Vermont Climate Action Commission, charged by Gov. Phil Scott in 2017 to "develop a strategy to reduce greenhouse gas emissions and combat climate change," noted that:

> *Transportation is the largest contributor to Vermont's greenhouse gas emissions of all sectors (43.3 percent). Electrification of the transportation sector, whether personal vehicles or transit and school buses, will help reduce greenhouse gas emissions, increase the percentage of renewably powered transportation options, and keep more of the dollars spent on transportation fuels within the state. Vermont state policy has focused on expanding the use of renewable sources in electric generation and currently has one of the cleanest grids in the country. Powering the transportation sector with clean, renewable energy increases the benefits from electrification.*

Using renewable energy for transportation needs decreases fossil fuel consumption considerably while maintaining personal mobility. Further, producing one's own "fuel" for transportation is a novel proposal that benefits all parties. Electric vehicles and biodiesel are two common renewable transportation methods. Several variations of electric vehicles (EVs) exist:

- A hybrid electric vehicle (HEV) contains batteries that assist the engine, providing higher fuel efficiency. HEVs cannot operate solely on battery power. HEVs could be thought of as battery-assist vehicles.
- A plug-in hybrid electric vehicle (PHEV) provides battery-powered driving with an engine that seamlessly operates during longer drives when the battery is exhausted. According to the U.S. Department of Energy (DOE), the typical range of PHEV battery range is 15 to 60+ miles in 2021.

- An all-electric battery electric vehicle (BEV) is propelled by an electric motor powered by a battery. According to the DOE, the range of BEVs was between 58 and 335 miles in 2018, with a median of a 125-mile range.
- A fuel cell electric vehicle ("FCEV") uses hydrogen as the source of electricity for the electric motor. In general, EVs have the advantage over FCEVs in that there is little distributed infrastructure that produces, distributes, or stores hydrogen.
- All PHEVs and BEVs, which are often referred to collectively as plug-in electric vehicles (PEVs), can be plugged into typical (120 V) wall outlets to trickle charge the battery (Level 1 - overnight charge). PEVs can be charged quicker with special connectors and larger circuits (Level 2 or DC Fast Charging). Fortunately, many electrified vehicles can recover energy by harvesting some energy inherent in the braking force of the vehicle; hybrids can charge off of the engine.

To meet Sharon's combined electrical efficiency and renewable generation targets, residents will need to convert to more efficient technologies such as cold climate heat pumps, advanced wood heating, and electric vehicles.

According to the SES, Sharon residents were generally less than enthusiastic about adopting electric vehicles in 2018. Five percent of households owned an electrified vehicle and less than 15% felt that owning and operating an EV was an "energy priority."

The use of biofuels, particularly biodiesel, is becoming an increasingly popular option for municipalities attempting to cut costs and reduce the environmental impacts associated with vehicle emissions. According to the Vermont BioFuels Association, biodiesel is a clean burning alternative fuel, produced from domestic, renewable resources such as soybeans, sunflowers, canola, waste cooking oil, or animal fats. Biodiesel contains no petroleum, but it can be blended at any level with petroleum diesel to create a blend which can be used in colder weather. Biodiesel can be used in diesel engines or oil-fired boilers or furnaces with little or no modifications.

Figure 4: There are several sources that can provide information on electric vehicles including https://greenercars.org and www.driveelectricvt.com

The Comprehensive Energy Plan relies upon a large increase in the production of biodiesel to meet expected energy demands for heavy vehicle transport. Growing biomass to use in biofuels may be a viable way to encourage farming in Sharon; however, balance should be sought between growing for energy demands and for human and animal consumption.

Bicycles are a preferred method of personal transportation. Bicycles use human power to provide a simple, practical, and healthy means of transportation in the temperate parts of the year. Visibility, helmets, and awareness are the most important safety aspects of riding bicycles on public roads. Electric bicycles provide additional opportunities for commuters to nearly eliminate their vehicle miles when conditions permit. Motor vehicles are encouraged to share the road.

Energy Scarcity

There are no scarcities of energy foreseen in the eight-year life of this plan. Our electrical providers have plenty of power supply resources either under contract or available to purchase at this time. Total energy demand is likely to shrink modestly in the near term as Vermont's population is not expected to grow much and efficiency is constantly improving. There should be ample amounts of heating and transportation fuels for the life of this plan, but we must encourage a shift away from fossil fuels to meet our goals. Wood is a plentiful local source of heating fuel, and many more cords could be sustainably harvested than are being cut now. Plenty of sun and wind are available if we decide to use them.

That is not to say that plentiful energy will be cheap. Fossil fuels have varied widely in price over the last several years, and the overall trend is for dwindling supplies. Also, whether it is carbon pricing or other methods, fossil fuels will have to increase in cost to disincentivize their use. The cost of energy is an issue for many families, but will be less of an issue for everyone if targets for insulating buildings, switching to EVs, using heat pumps, and advanced wood heat systems are met. An EV has lower maintenance costs, because they have no engine or exhaust system, and the cost of electricity to power a car costs about $1.50 per gallon (in today's dollars), much less than current gasoline prices.

For many, the cost barriers are not the daily or monthly energy costs but implementing these changes to the buildings and vehicles we have now. There are rebates and programs available that are income-based, and even for those that do not qualify over time these investments will pay off However, they require getting financing or having considerable savings on hand.

Energy Targets

From the baseline information, interim milestone targets were set for Sharon toward the achievement of 90% renewable energy of total energy needs by 2050. The target years of 2025, 2035, and 2050 were identified as 2016 Vermont Comprehensive Energy Plan milestones. Most of the information in this section was developed using the Long Range Energy Alternatives Planning (LEAP) model from the Vermont Energy Investment Corporation (VEIC). Other sources of information are noted, as applicable.

Efficiency, Fuel Switching, and Adoption of Renewables

Table 22 identifies the electric efficiency improvement targets needed for Sharon by 2050. This plan encourages residents to conserve energy and switch to more efficient electrical systems. Note the decrease in the first target year, after which LEAP modeling concedes that electricity use may increase, with efficiency trends outpacing electrification trends and heating loads beginning to switch back to electric, for heat pumps for example. Table 22: 2050 targets for weatherizing structures, fuel switching, and energy demand to be met by renewable sources3 lists the 2050 targets for weatherizing structures, fuel switching, and energy demand to be met by renewable sources. Weatherization provides increased efficiency, conservation, and comfort. The target requires that all residential homes be weatherized by 2050, yet less than 20% of commercial buildings need to do so.

Table 23 also lists targets for adopting new technologies in the coming years, including efficient wood heat, cold-climate heat pumps, and electric vehicles. To reach local, regional and statewide renewable energy goals, residents will need to shift away from petroleum-powered vehicles to electric, biofuels, human, or hydrogen powered machines. Using renewable fuels for heating is projected to increase in the near term, while switching to a renewably powered transportation fleet will take more time to implement.

Renewable Energy Generation

Renewable energy generation sources include wind, solar, hydroelectric, and woody biomass. Through information from the Vermont Department of Public Service (DPS), as of June 2019 there are an estimated 53 sites in Sharon that are producing 4,666 megawatt (MW) hours of renewable energy annually. This equates to about 61% of the annual energy consumption in town in 2018. Despite this, the annual target is about double existing annual consumption because overall electricity use is expected to increase with cold-climate heat pump taking over much of the heating load from fossil fuels. As more renewable energy generation is produced in Sharon to meet the 2050 targets, Green Mountain Power (GMP) will need to accelerate the pace of system-wide updates, such as line and transformer upgrades.

Electricity Efficiency Targets	2025	2035	2050
Increase Efficiency and Conservation	-0.6%	5.7%	9.9%

Table 22: Energy Efficiency Targets

	2025	2035	2050	Information Source
Structures Weatherized (percent of existing housing stock)				
- **Residential**	33%	67%	100%	LEAP, ACS. DPS method
- **Commercial**	6%	9%	18%	VT DOL
Fuel Switching Targets (units)				
- **New Efficient Wood Heat Systems**	105	155	205	EAN (17% by 2025)
- **New Heat Pumps (residential and commercial)**	64	169	356	LEAP, ACS
- **Electric Vehicles**	101	715	1487	LEAP, ACS (Worksheet 2)
Energy demand met by renewable energy (percent)				
- **Electricity**	25%	40%	90%	-
- **Heating demand**	50%	62%	93%	LEAP
- **Transportation sector**	10%	23%	90%	LEAP

Table 23: 2050 targets for weatherizing structures, fuel switching, and energy demand to be met by renewable sources

Energy Source	Existing		Potential		Energy Source
	MW	MWh	MW	MWh	
Solar	3.91	4,666	0.70	610	Rooftop
			357	437,825	Ground-mounted
Wind	0.00	0	606	1,856,463	Wind
Hydro	0.00	0	0	39	Hydro
Biomass & Methane	0.00	0	0	0	Biomass & Methane
Other	0.00	0	?	0	Other
Total -	3.91	4,666	963	2,295,236	
Renewable Generation Target (2050 Goal)			3.1 – 4.6	8,433 - 10,307	Any of the above

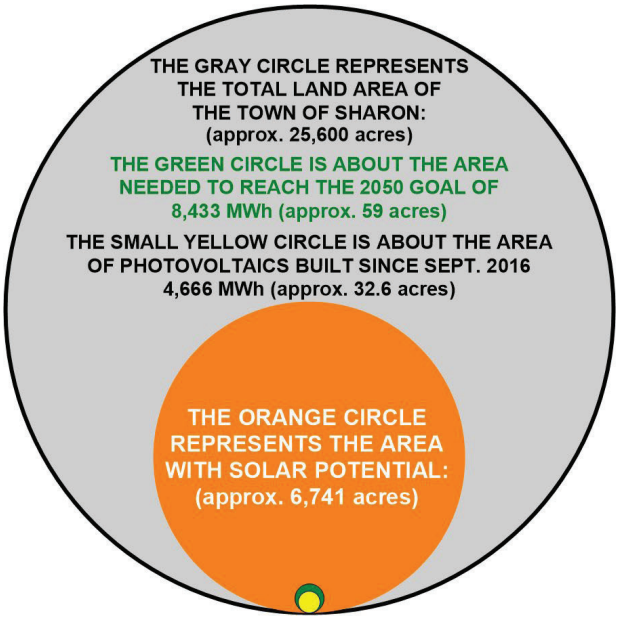
Table 24: Potential energy generation potential for solar, wind and hydro in Sharon

Table 24 identifies the potential generation for solar, wind and hydro in Sharon; the renewable energy generation potential in Sharon is 2,295,236 MWh or 963 MW. Sharon's target for renewable energy generation in 2050 is between 8,433 and 10,307 MWh, which corresponds to a deficiency of 4,704 MWh of installed renewable energy generation. The target translates to an additional 3.15 to 4.7 MW of new capacity, requiring about 42 acres of land.[11]

The Two Rivers-Ottauquechee (TRO) Region currently produces 235,182 MWh of renewable electric energy generation as of June 2020. Based on the regional share of the overall state population and the current renewable energy generation, the regional target is between 314,376 and 384,238 MWh. This highlights a need for 79,194 to 149,056 MWh of additional generation in the region.

Development and Siting of Renewable Energy Resources

Energy generation in Vermont is subject to a number of different requirements, most of which are limited to state level permitting by the Public Utility Commission (PUC). However, there are two ways Sharon can make its voice heard in the process – through Section 248 Permitting and through this Town Plan.



[11] Calculation based on data provided by the Department of Public Service and information developed by TRORC.

Protection of Scenic Ridges and Hillsides

Wind and solar energy generation facilities are strongly discouraged from being sited directly on or near a ridgeline or hilltop. Facilities are encouraged to be located at an elevation lower than the ridgeline so that they will be folded within the hillsides and disguised by the terrain. Should an applicant propose a facility directly on or near a ridgeline or hilltop, it shall have the burden to demonstrate by clear evidence that a less intrusive means of providing a similar or better service is not available by either different facilities, or a different location.

The Selectboard, in consultation with the applicant and others, shall determine the likely visual impact of any proposed energy generation facility and may require balloon tests, photographs, simulations, and any other necessary, helpful and relevant information, as well as an evaluation of other types of equipment that may provide similar benefit in a less intrusive manner.

Based on the information presented, the Selectboard may identify an alternative location for the facility to be considered by the applicant, may request a redesign in order to minimize the visual impact on the scenic character and beauty of the area, may add further conditions, and may approve or deny the application. In determining whether or not a facility would have an undue adverse visual impact and when to deny or set conditions in the permit, the Selectboard shall consider:

1. The period of time during which it would be viewed by persons traveling on public highways;
2. The frequency with which persons traveling on public highways will view the facility;
3. The degree to which it will be screened by existing vegetation, the topography of the land, and existing structures;
4. Background features that will either obscure it or make it more conspicuous;
5. Its distance from key vantage points and the proportion of it that will be visible above the horizon or tree line;
6. The number of members of the traveling public or residents of town that will be affected by the alteration of the scenic character and beauty of the area;
7. The sensitivity or unique value of the particular view affected by it in terms of federal, state and/or local significance;
8. Significant disruption of a viewshed that provides context to a historic or scenic resource;
9. Alternative less intrusive locations or equipment, that may be available to the applicant; and
10. Any community standards, including the Town and Regional Plans.

Section 248 Permitting

Distributed electrical power generation facilities, such as hydropower dams, fossil fuel plants, and wind power or solar systems owned by utilities, are subject to review and approval by the Vermont Public Utility Commission (PUC) (30 VSA §248). Under this law, prior to the construction of a generation facility, the PUC must issue a Certificate of Public Good. A Section 248 review addresses environmental, economic, and social impacts associated with a particular project, in a process similar to Act 250 review. In making its determination, the PUC must give due consideration to the recommendations of towns and regional planning commissions and their respective plans. If these plans have been written to a higher standard, they are afforded “substantial deference”. Polices in Certified Plans cannot be ambiguous or optional, and they cannot be written to prohibit energy generation facilities. The Sharon Town Plan addresses land use and therefore provides guidance to town officials, regulators, and utilities.

For all commercial energy generation facilities, the following policies shall be considered:

1. **Preferred Locations**: The Town supports the placement of new generation and transmission facilities in the following areas: existing structures, parking lot canopies, rooftops, brownfields, and the disturbed portion of a gravel pit or quarry[12].
    - To maintain the rural character of Sharon, a dispersed (low-density) nature to meeting our renewable energy goals is encouraged.
    - Sites that are already a compact mix of structures and uses are preferred locations for commercial or group net-metering solar arrays, rather than a solar array becoming the only use of an existing agricultural field or clearing a forest tract to make room for a large commercial solar array.
    - Along Route 132, generation facilities of up to 500kW are permitted.
    - There shall be no more than one generation facility of 250kW to 500kW per mile within 200 feet of Route 132.
    - Facilities of 500kW generating capacity or less are preferred.
    - In the Sharon Village Area, generation facilities are limited to existing rooftops and/or a ground mounted systems that are no larger than 10 kW and 500 sq feet, designed to meet the energy needs for an individual lot so as to preserve as much of the historic character as possible.
    - Unless it can be located solely on building rooftops, no system within the Sharon Village Area shall be designed to be part of a group net-metering arrangement.

2. **Prohibited Locations**: Because of flood risk or for their distinctive natural, historic or scenic value, energy generation facilities shall be excluded from the following areas:
    - FEMA Floodways and River Corridors
    - Class 1 Wetlands
    - All renewable energy development shall follow the protection strategies of Sharon's scenic ridges and hillsides as laid out in this Plan.
    - Additional areas identified in the Land Use Chapter of this Town Plan.
    - Generation facilities shall utilize existing roads, no new roads are permitted for renewable energy generation facilities.

3. **Constraint Areas**: All new generation, transmission, and distribution facilities shall be sited and designed to avoid, or if no other reasonable alternative exists, to otherwise minimize and mitigate, adverse impacts to the following:
    a. Historic districts and lots immediately adjacent to them, landmarks, sites and structures listed, or eligible for listing, on state or national historic registers
    b. State or federally designated scenic byways, and municipally designated scenic roads and viewsheds
    c. Special flood hazard areas identified by National Flood Insurance Program maps (except as required for hydro facilities)
    d. Public and private drinking water supplies, including mapped source protection areas
    e. Primary agricultural soils mapped by the U.S. Natural Resources Conservation Service
    f. Agricultural Soils (VT Agriculturally Important Soil Units)
    g. Protected Lands (Updated 07/26/2016 – State Fee Lands and Private Conservation Lands)
    h. Deer Wintering Areas (as Identified by ANR)

[12] Part 5.103 of Vermont's Net-Metering Systems Rule 5.100

i. Act 250 Agricultural Soil Mitigation areas (as Identified by ANR)
j. Vermont Conservation Design Highest Priority Forest Block Datasets (as Identified by ANR)
k. Priority Forest and Connectivity Blocks – Connectivity, Interior and Physical Land Division (as Identified by ANR)
l. Hydric Soils (as Identified by ANR)
m. River Corridor Areas as identified by the Vermont Department of Environmental Conservation
n. Class 2 Wetlands as indicated on Vermont State Wetlands Inventory maps or identified through site analysis
o. Vernal Pools (as Identified by ANR or through site analysis)
p. State-significant Natural Communities and Rare, Threatened, and Endangered Species

4. By joint letter of the Planning Commission and Selectboard, a site may be designated as preferred if a potential renewable energy generation project is subject to any of the constraints above but is mitigated by other factors.

Energy Potential Maps and New Facilities

The attached Energy Potential maps indicate where raw energy generation potential exists for solar, wind and hydro. The maps illustrate areas where renewable energy resources are present, but does not identify where renewable energy generation must be sited. Sites with raw solar potential are generally flat to gently sloping and face east, south or west, regardless of forest cover. Easy access to 3-phase power lines is beneficial. Sites with raw wind potential are generally on high ridgelines.

As of the date of adoption of this Town Plan, Sharon has substantial installed photovoltaic generation within its borders. The Town has a commitment to reach its renewable energy generation targets set by the State of VT. For new commercial-scale PV facilities, the Town will favor projects whose RECs (renewable energy credits) are owned in-state and therefore contribute to Vermont's efforts to boost its own clean-energy production. When RECs are sold to out-of-state entities, it is non-Vermont utilities that claim credit for the renewable power, regardless of where the generating facility is physically sited.

The Town of Sharon has not stipulated what properties are preferred sites for new commercial-scale renewables. Proposed new projects will be considered on a case-by-case basis. As stated above, the Town will favor locations that do not impinge on sensitive natural areas or scenic/historic sites. Any new vegetative screening negotiated as part of a project must be maintained and watered for a period sufficient for the plantings to become established and thrive. Plantings that wither and die within a short period of their installation will be considered a failure to meet the terms of the screening agreement. Developers will be required to create a decommissioning fund for removal of photovoltaic infrastructure at the end of its productive life, and for restoration of the land it sat on. Multiple large PV projects on adjacent sites are discouraged for their aggregate visual effect. Future projects should be dispersed so no single travel corridor in town or former farm is dominated by the presence of panels. Sharon has many sites that are viable for solar generation. In fact, some of the town's larger installations are on properties not singled out in the Energy Potential Map as having special solar access.

Efficiency and Conservation through Action

Decreasing Energy Use by Changing Behavior

Savings are possible through energy efficiency improvements. According to Efficiency Vermont, Sharon electric customers saved 123,725 kWh (kilowatt hours) in 2016 through measures such as hot water efficiencies, light bulb swaps, and appliance and space heating replacements. Gains in efficiency can be made through improved appliance standards, building energy codes, consumer purchasing decisions, and publicly funded programs. Further, raising awareness of energy saving behaviors can reduce energy demand and can help residents and businesses save money. Examples include:

- Turning off lights when you leave a room.
- Using a programmable thermostat.
- Using a clothesline to dry clothes.
- Using cold water when doing laundry.
- Using a smart power strip.
- Unplugging appliances when not in use.
- Combining errands to make fewer car trips.

Decreasing Energy Use by Implementing Energy Efficiency

Along with conserving energy, energy efficiency helps by ensuring that we use less energy to provide the same level and quality of service. Examples include:

> It is "now generally cheaper to save fuel than to burn it, global warming, acid rain, and urban smog can be reduced not at a cost but at a profit"
>
> - Amory Lovins, 1990

- Conduct an energy audit to identify the most cost-effective ways to save energy.
- Implement the air-sealing and insulation recommendations of the energy audit, insulating attics, walls and basements with high R-value material.
- Install high efficiency windows.
- Install energy efficient, Energy Star-rated appliances such refrigerators, freezers, and front-loading washing machines.
- Use LED light bulbs (Free at the Sharon Food Shelf).
- Use solar or heat pump water heaters.
- Site buildings to make use of existing wind blocks and natural cooling patterns derived from the landscape's topography.
- Site buildings with maximum southern exposure to capture passive solar energy.

Battery Storage Facilities

A battery storage power station is a type of energy storage that uses a group of batteries to store electrical energy. Battery storage is the fastest responding source of power on grids and is used to stabilize grids. At full-rated power, battery storage power stations are generally designed to sustain output for between one and several hours. In the United States, battery storage facilities are in high demand. Battery storage capacity at the end of 2020 reached 1,756 MW in the U.S,

the most in the world[13]. Large scale battery storage facilities are unlikely to be adopted in the region, but smaller scale facilities are feasible. These facilities can assist during peak-power needs, power outages, heatwaves, and other times when energy demand outstrips supply[14].

Establishing Energy Independence

Generators are commonly used during power outages. But solar PV/inverter/battery energy systems can generate and store electricity independently, allowing households to perpetually use electricity without fossil fuels.

Several homes and camps in Town provide comfortable and affordable shelter without being connected to the grid. No accurate count of energy independent dwellings is available, but for heating and cooking, a wood stove requires no power to operate, only a responsible human to manually operate and monitor.

Weatherization

To **weatherize** is to improve (or build to high standards) the thermal envelope of a building. This could be as simple as installing draft stoppers along leaky door and window seams or as involved as new insulation and vapor barriers. Typically, a combination of insulating and sealing air gaps is recommended. A blower door test is the best way to get a quantitative picture of how your home holds heat and moves fresh air. Ideally, weatherization includes a multi-layered assessment of how a structure functions as a system to support the indoor living environment. Such an effort is bound to improve a home's habitability in all seasons: healthier homes equal healthier people.

Sharon's Energy Commission purchased a Thermal Imaging Camera (FLIR) that can be checked out from Baxter Memorial Library so residents can easily identify areas of heat loss in their homes requiring weatherization.

Variability in heating costs can pose financial hardships for residents. To help limited income residents with the costs of weatherization upgrades and heating costs, programs through Efficiency Vermont and Capstone Community Action agencies provide assistance. There are several websites that can help homeowners make cost effective weatherization upgrades, including Efficiency Vermont (www.efficiencyvermont.com) and Smarter House (https://smarterhouse.org).

Weatherization Financing

HEAT SAVER LOAN

http://heatsaverloan.vermont.gov/

NeighborWorks® OF WESTERN VERMONT
*We are all things **home**.*

https://www.nwwvt.org/energy-loan/

VSECU VGreen Energy Savings Loans

https://www.vsecu.com/financial/clean-energy-loans/about

Based on responses to the 2018 Sharon Energy Survey, 33% of homes have been weatherized in Sharon. Among those who have not weatherized their home, weatherization was THE energy

[13] https://www.eia.gov/analysis/studies/electricity/batterystorage/
[14] https://e360.yale.edu/features/in-boost-for-renewables-grid-scale-battery-storage-is-on-the-rise

priority for 70% of households. The results indicated that over 80% of homes built prior to 1960 had not been weatherized and about 50% of homes built since 1960 have been weatherized. Residents living in older homes were more likely to prioritize weatherization over residents living in newer homes. Homes that had been weatherized generally burned less wood per bedroom. For homes that had not been weatherized, newer woodstoves burned less than other buildings of the similar age but cordwood use varied wildly among stove type. Newer homes generally burned less wood per bedroom. Thus, modernizing heating appliances and construction techniques decreases the overall heating demand in a home.

Residential Building Codes

New residential development in the State of Vermont is required to comply with Vermont Residential Building Energy Code (RBES). Contractors are bound to adhere to these codes, although there is no enforcement mechanism. Contractors must self-certify and submit paperwork of compliance with the Town Clerk. If a homeowner discovers codes have not been met, they can report the contractor. Commercial development is subject to similar code regulations. Some examples of the types of development the RBES applies to include:

- Detached one- and two-family dwellings.
- Multi-family and other residential buildings three stories or fewer in height.
- Additions, alterations, renovations and repairs.
- Factory-built modular homes (not including mobile homes)

In order to comply with the RBES, a home, as built, must meet all Basic Requirements and the Performance Requirements for one of several possible compliance methods. If the home meets the technical requirement of the Residential Energy Code, a Vermont Residential Building Energy Standards Certificate must be completed, filed with the Town Clerk of the community and posted in the home. Because there is no enforcement of the filing requirement at the state level, the community may want to consider innovative ways to encourage filing. If a home required by law to meet the Residential Energy Code does not comply, a homeowner may seek damages in court from the builder. The RBES addresses heating and cooling systems as well.

Making Changes and Implementing Solutions at the Municipal Level

Through policy making, municipalities can set a clear example for townspeople and encourage sustainable behavior that will ultimately result in both energy and financial savings.

Municipalities can implement policies that lower energy use by town staff and encourage greater energy efficiency. An Energy Efficient Purchasing Policy could require energy efficiency to be considered when purchasing or planning for town investments including new vehicles. Purchasing Energy Star-rated equipment is a well-documented way to increase energy efficiency. Devices carrying the Energy Star logo, including printers, computer products, and kitchen appliances generally use 20% to 30% less energy than required by federal standards.

Towns can also implement policies that are designed to reduce wasteful energy practices. For example, the Town of Sharon could create a policy requiring that town vehicles (such as dump trucks and other road maintenance equipment) not idle for more than a set period of time. Idling is an expensive waste of fuel, and a policy such as this could lead to substantial energy savings.

Auditing Municipally Owned Buildings

Many towns in Vermont own buildings that are old and inefficient in many respects. For instance, older buildings often have insufficient insulation, wasteful heating and cooling systems, and out-of-date lighting. These kinds of infrastructure problems result in higher energy use with the resulting cost passed on to taxpayers.

Sharon has conducted energy audits on town buildings in order to determine what improvements are necessary and which projects would have the highest cost-benefit ratio in terms of energy and financial savings. In 2010, the Sharon Selectboard used information from an energy audit and funding from the 2009 American Recovery and Reinvestment Act to install a more efficient heating system and energy saving windows in the Town Offices.

Capital Budget Planning

Given the potential expense of energy efficiency improvements, it is essential to wisely budget town funding to cover these costs. State statute enables communities to create a Capital Budget and Program for the purposes of long-range capital planning and investing. A capital budget outlines the capital projects that are to be undertaken over a five-year period. It includes estimated costs and a proposed method for financing those costs. Also outlined in the Program is an indication of priority of need and the order in which these investments will be made. Any Capital Budget and Program must be consistent with the Town Plan and shall include an analysis of what effect capital investments might have on the operating costs of the community.

When planning for major facilities investments, such as roof replacements, foundation repairs, etc., it is important to also consider making energy efficiency improvements at the same time. The cost to replace or renovate a community facility may only be slightly higher if energy efficiency improvements are made concurrently, rather than on their own.

Subdivision Regulations and Energy

Sharon's Subdivision Regulations include a standard stating "22. When site conditions allow, subdivisions shall be laid out to promote energy efficiency and conservation by affording buildings sufficient solar access and southern orientation." Subdivision regulations can also require screening that reduces the effects of prevailing winds, thus conserving heat.

In addition, Sharon can develop a capital budget plan to focus on village projects such as sidewalks or water and sewer lines. Such projects would help concentrate and fortify development in the village center.

Sharon Energy Committee

In January 2006, Sharon established an Energy Committee (EC) to act as an advisory board to the town and its residents on energy issues. The Sharon EC is an independent group of

volunteers that provides information, resources, and support on energy efficiency and cost-effective energy use.

The EC works to encourage home weatherization and it participated in both the 2013 "Vermont Home Energy Challenge" and the 2017 "Weatherize Upper Valley" events sponsored by Vital Communities. The EC has also distributed energy efficient lightbulbs at community events, coordinated the conversion of the town's streetlights to more efficient LED lighting, and maintains an information shelf at the town's Baxter Library. The EC helped secure a matching grant for a 12 kW solar system on the Sharon Elementary School and helped weatherize the attic in the Baxter Library. The EC has sponsored button-up workshops and a weatherization campaign, energy-related discussion groups, and helps to provide a free community breakfast on Town Meeting Day. The 2018 Sharon Energy Survey, executed by the EC, provided data for this Town Plan and directed EC focus toward resident priorities. The EC actively seeks new members and welcomes ideas and suggestions to reduce the community's energy use.

Intermunicipal Regional Energy Coordinator

In 2020, six communities came together to put forward funds to hire an Intermunicipal Regional Energy Coordinator (IREC). Hosted by the Two Rivers-Ottauquechee Regional Commission this individual's sole purpose is to work with the Towns of Sharon, Woodstock, Barnard, Thetford, Fairlee, and Strafford to actively meet statewide energy goals. The IREC has created a greenhouse gas emissions profile to see what sectors of each town could save money and decrease fossil fuel use, and proposed hiring a contractor to conduct an energy audit on municipal buildings to determine where savings can be made. The IREC is also working with these towns to apply for grant funding and incentives to weatherize and upgrade energy systems in municipal buildings.

Goals, Policies, and Implementation Actions

Goal I: Promote the responsible development of renewable energy resources and facilities in the Town of Sharon to meet the energy needs of the community.

> **Policy A:** Participate in the Public Utility Commission's Section 248 Certificate of Public Good application process to ensure that local energy, resource conservation, and development objectives are identified and considered in future utility development.
>
> > **Implementation Action 1.A**: The Town should consider municipal or community renewable energy generation and battery storage systems to serve town facilities, with funding by third-party financing, municipal funds, bonds, grants and/or government incentives.
>
> **Policy B**: Energy developers must make all possible efforts to minimize damage to important natural areas as identified in the Land Use section of this Plan.
>
> **Policy C:** Sharon will continue to work towards meeting the 2050 energy goals.
>
> > **Implementation Action 1.C**: The Town should participate in programs such as the Vermont Climate Pledge Coalition to commit to meeting Vermont's energy and climate goals.
> >
> > **Implementation Action 2.C**: Implement the recommendations of the Energy Audit that was performed on all town-owned buildings.

Goal II: Reduce energy costs and the community's reliance on fossil fuels that contribute to greenhouse gas emissions and therefore to climate change.

Policy D: New municipal purchases should be energy efficient. This includes purchasing electric or more efficient vehicles to replace the town fleet.

Implementation Action 1.D: The Town should install electric vehicle charging stations on municipally owned property.

Policy E: Construction of new fossil-fuel infrastructure is strongly discouraged, to limit additional community investment in energy sources responsible for climate change.

Policy F: Reduce commuting, and support energy efficient home occupations and small-scale home business.

Goal III: To encourage a continued pattern of development and land use that is energy efficient.

Policy G: Locate new energy generation facilities as close to existing roads as possible to avoid the inherent increase in town required services. Road development is not the responsibility of the town.

Policy H: Where land development or subdivisions are proposed, design plans shall reflect sound energy use minimization principles, such as solar and slope orientation and protective wind barriers. An example would be the cluster housing concept, which encourages energy conservation and efficiency.

Policy I: Site major public investments, such as schools, public recreational areas, and municipal facilities, as well as commercial or residential developments, within or in close proximity to the village center to utilize existing road and reduce commuting time and travel distances.

Goal IV: Increase awareness and use of energy conservation and efficiency practices through educational outreach to the public.

Policy J: Promote statewide programs designed to make energy efficiency improvements affordable and therefore more likely to be implemented.

Implementation Action 1.J: Town officials should support the Sharon Energy Committee's efforts to increase public awareness of energy conservation practices and weatherization programs.

Implementation Action 2.J: The Town should support bringing renewable energy workshops into the classroom by working with organizations such as Vermont Energy Education Program (http://veep.org).

Implementation Action 3.J: The Town should support programs such as Vital Communities' Weatherize Upper Valley to help the Energy Committee provide outreach and education to residents regarding ways to conserve energy and increase the use of heat pumps and advanced wood heat, stoves, and furnaces.

Goal V: Increase energy efficient residential and commercial buildings in Sharon to meet state goals.

Policy K: Promote energy efficient design residential and commercial buildings for all new construction.

Implementation Action 1.K: The Town should consider requiring a reimbursable fee to ensure that contractors properly file their Residential Building Energy Standard Certificates.

Goal VI: Bring municipal buildings to net zero energy use.

Policy L: The Town will work towards more energy efficient measures in municipal buildings.

Implementation Action 1.L: The Town, with help from the Energy Committee, should adopt municipal procurement and purchasing policies, such as a Green Procurement Policy, that encourage the use of energy efficient and Energy Star rated products.

Implementation Action 2.L: The Planning Commission should develop a Solar Ready Ordinance and an EV Ready Ordinance.

Implementation Action 3.L: The Selectboard should authorize the Energy Committee to track municipal energy use and costs and develop an energy budget with periodic energy audits to manage Town energy consumption.

Implementation Action 4.L: The town should incorporate energy efficiency and weatherization projects (developed from the energy audit) into the municipal Capital Budget and Program.

Implementation Action 5.L: The Town should continue to develop facility maintenance, efficiency measures, and operations policies to maximize energy efficiency while maintaining comfort levels for employees and visitors.

Goal VII: Increase alternative public transportation opportunities throughout the community, including park-and-ride access, bus service, bike paths, and sidewalks.

Policy M: It is the policy of the Town to promote energy efficient travel by encouraging walking, biking, carpooling, the increased use of public transportation, electric vehicles, telecommuting and home businesses.

Implementation Action 1.M: The Town should pursue sidewalk, recreation paths, bicycle lanes, and other Complete Streets projects in the Village Center to reduce local transportation energy use and promote healthy lifestyles.

Goal VIII: New renewable energy generation facility siting will be deferential to the character of the area.

Policy N: Support the development and use of renewable energy resources including, but not limited to solar, biomass, micro-hydro and biofuels – at an appropriate scale; that enhances energy system capacity and security; promotes cleaner and more affordable energy technologies; increases the locally available energy options; and avoids undue adverse impacts of energy development on the local community and the environment.

Policy O: Site all proposed commercial energy facilities to avoid negative impacts on the agricultural land and rural character of Sharon.

Policy P: Encourage energy generation, transmission, and distribution facilities or service areas only when they adhere to the land use patterns set forth in this Town Plan.

Chapter 6: Housing

A major function of local planning is to meet two community housing objectives – first, to provide safe and affordable housing for present and future residents; and second, to encourage suitable density and to guide distribution of housing throughout a town. Growth in housing affects a town's capacity to provide services. Sharon's housing growth between 2000 and 2020, and 2010 and 2020 is shown in Table 25. Since property taxes paid on residences do not cover the full costs of providing services to year-round residents, residential development must be done thoughtfully. This section discusses the amount, type, location, and affordability of existing housing and the needs for future housing. Other sections of this Plan also include information on housing. The data presented in this section was extracted from two sources - U.S. Census and the American Community Survey. Data collected from these sources does not always match exactly due to variations in record-keeping and classifications; however, they are considered relevant and reliable data sets for analysis.

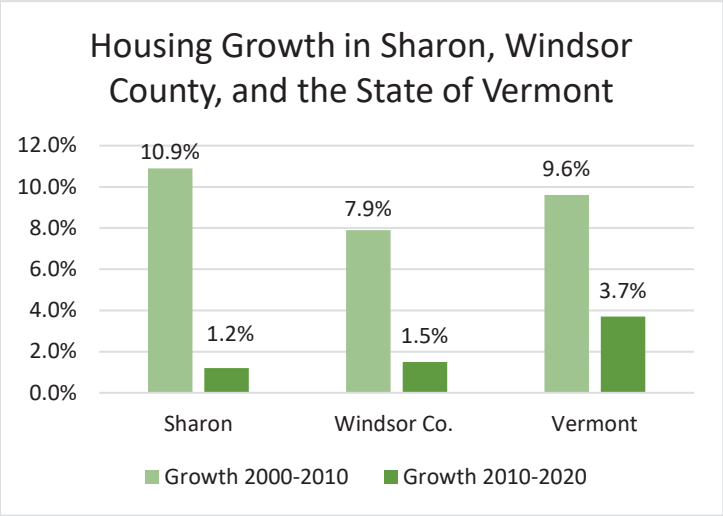
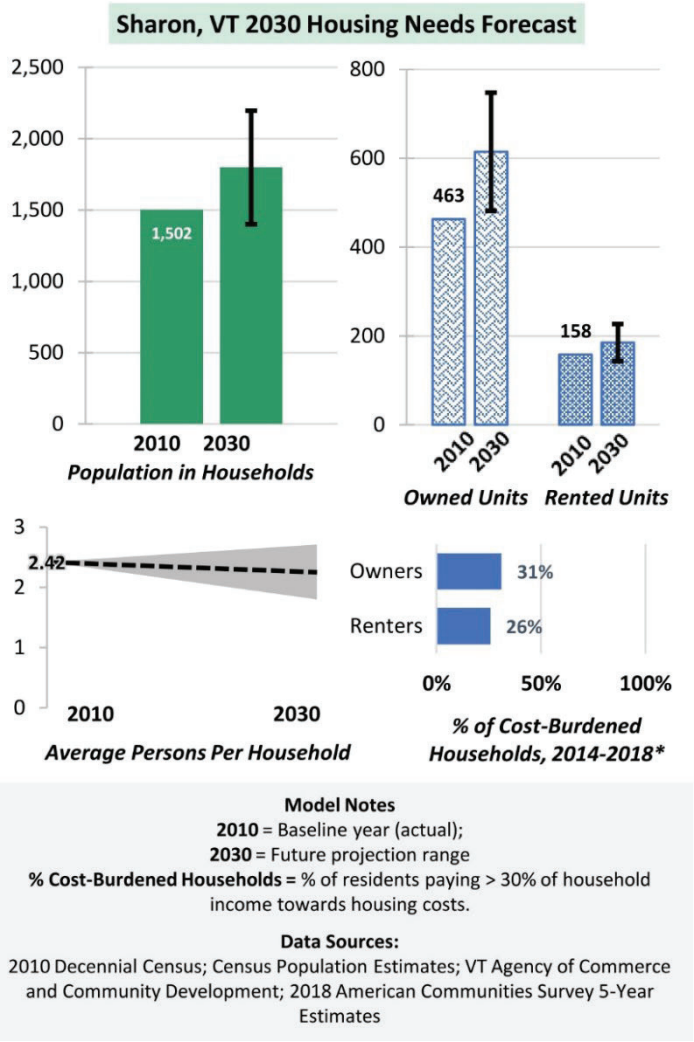


Table 25: Housing Growth 2000-2020 (Source: US Census)



Model Notes

2010 = Baseline year (actual);
2030 = Future projection range
% Cost-Burdened Households = % of residents paying > 30% of household income towards housing costs.

Data Sources:

2010 Decennial Census; Census Population Estimates; VT Agency of Commerce and Community Development; 2018 American Communities Survey 5-Year Estimates

Keys to the Valley – TRORC's Regional Housing Analysis

According to TRO's 2019 Regional Plan and the Keys to the Valley project the region's housing market is so tight that high prices and reduced options discourage first-time buyers and young families from settling here, and area businesses often claim that a lack of housing impedes their growth.

It is estimated that Windsor County needs to construct about 4,247 units by 2030 (both rental and owner) just to meet the demand from new families and to replace its older housing stock. In Sharon alone, 90 units are needed to

meet projected demands. It is also estimated that the Region needs several hundred units of senior housing and thousands of low- and moderate-income units for its existing residents.

A vibrant second home market and the increasing use of them as short-term rentals[15] adds more pressure, driving vacancy rates virtually to zero. As a result, future population growth in our region will be tied more closely to the availability of affordable housing than to the location of employment.

Number of Housing Units

In 2000 there were 663 housing units in Sharon; by 2020, there were 744, an increase of 12.2%, compared to 9.5% in Windsor County and 13.4% statewide.

Types of Housing Units & Ownership Characteristics

The U.S. Census definition of a "housing unit" includes conventional houses, apartments, mobile homes, and rooms for occupancy. Shown in Figure 4, the 2020 American Community Survey 5-Year Estimate indicates that four-fifths of Sharon's housing stock is comprised of single-family residences (80%). The second largest percentage of housing unit type, multi-family homes, (8.6%) is less than the percentage found in Windsor County (11.5%). Comparing Sharon's housing stock to Windsor County's reveals that they consist of about the same percentage of two-family homes (4.6% compared with 3.8%) and mobile homes (6.7% compared with 7.4%).

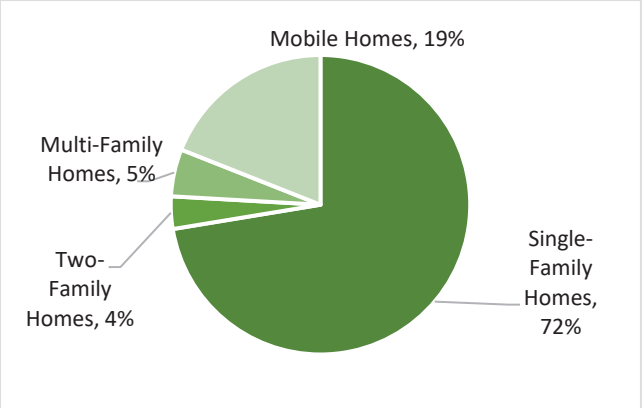


Figure 4: Number of Occupied Housing Units in 2020 (Source: 2020 ACS 5-year estimates)

Over the past decade, ownership of Sharon's housing stock has remained stable. The percentage of owner-occupied housing in Sharon showed a slight (3%) decrease between 2010 and 2020. The percentage of renter-occupied properties stands at 22%. Of the total number of homes in Sharon, approximately 15% were vacant. Most of these vacant units are for seasonal or recreational use, and, when they are excluded from the total supply of vacant units, the actual vacancy rate is 3.4%. Vacancy rates below 5% are considered to be "functionally zero;" (the available units are usually

2020 Housing Occupancy, Sharon & Surrounding Area			
	Owner-occupied	*Renter-occupied*	*Vacant*
Barnard	50%	11%	39%
Hartford	56%	23%	21%
Norwich	71%	24%	5%
Pomfret	58%	7%	35%
Royalton	54%	27%	20%
Sharon	61%	22%	17%
Strafford	66%	10%	24%
Thetford	75%	12%	13%
Tunbridge	58%	19%	23%
Windsor County	53%	17%	30%

Table 26: Housing Occupancy, Sharon and Surrounding Areas (Source: 2020 ACS 5-year estimates)

[15] Short-term rental: A building providing not more than 1 unit of temporary lodging (under affiliated ownership) for the transient, traveling, or vacationing public for a period of fewer than 30 consecutive days and for more than 14 days per calendar year.

uninhabited for reasons like sub-standard conditions). For all intents and purposes, there were few or no vacant housing units available in 2010. Occupancy characteristics for Sharon and surrounding areas are shown in Table 26, above.

Household Characteristics

Sharon, unlike many communities in Vermont, has not experienced a trend towards a smaller household size. According to 2020 American Community Survey 5-year Estimates, household size has risen to 2.49 persons per household, up from 2.45 in 2000 and below the historic peak of 2.62 in 1900. Though Sharon's household size is remaining comparatively steady, it nonetheless faces problems similar to those of the rest of Vermont. The general trend of decreasing household size in Vermont, coupled with the steady increase in population size, results in an increased demand for housing and exacerbation of the overall vacancy rate. Additionally, shrinking household size also affects the type of unit demanded and the services those households may require. Several special population/ household groups, such as the elderly or single heads of household, may have particular needs, such as increased personal care, or the need for childcare.

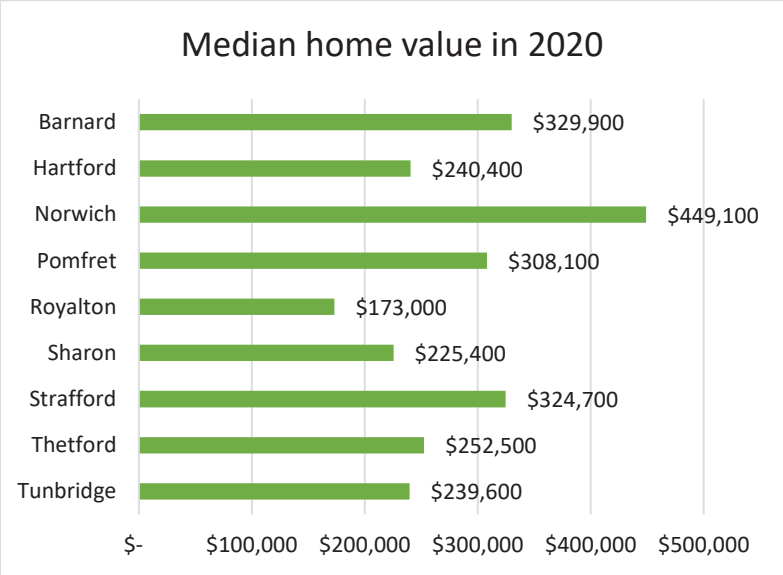


Table 27: Median Home Value in 2020 for Sharon and Surrounding Areas (Source: 2020 ACS 5-Year Estimates)

Housing Market Characteristics

According to the 2020 American Community Survey, the median value of an owner-occupied residential unit in Sharon was $225,400. According to Table 27, Sharon has the second lowest median home value in Windsor County when compared to other communities.

Information on rents from the 2020 American Community Survey indicated that the median gross rent in Sharon was $989; in 2010 the median gross rent was $983 per month, which means that there has been a minimal increase in gross rental rates in the span of one decade. In comparison with neighboring areas, shown in Table 28, Sharon's median gross rent is above the county average, but the third lowest overall. Rental prices are, in part, driven by the close proximity to the interstate, jobs in the Upper Valley and Vermont Law School.

2020 Median Gross Rent	
Barnard	$1,114
Hartford	$1,052
Norwich	$903
Pomfret	$1,883
Royalton	$1,056
Sharon	$989
Strafford	$1,031
Thetford	$1,245
Tunbridge	$829
Windsor County	$944

Table 28: Median Gross Rent in 2020 for Sharon and Surrounding Areas (Source: 2020 ACS 5-Year Estimates)

Affordable Housing

Affordable housing is defined as the amount a household earning the county's median income could afford if no more than 30% of its income were spent on housing costs. For homeowners, housing costs include payments for principal and interest on a mortgage, taxes, etc. For renters, housing costs include rent and utilities. This Town Plan recognizes the need for housing that is affordable at all socio-economic levels. The Town has far more households with low- to moderate-income than it has housing with low- to moderate-prices. According to the 2020 American Community Survey estimates, 18.6% of Sharon's homeowners are paying 30% or more on owner's costs, and one-third of renters (33.3%) are paying 30% or more on housing costs.

"Affordable housing that is somewhat dense, simple and beautiful." – 2020 Community Survey

There are no subsidized housing developments in Sharon, and there are also no nursing or residential care facilities listed within the town. Creating affordable housing near the village center would improve the long-term vitality of the Town by creating housing growth for not only the skilled workforce but also young families, the elderly, and the disabled.

The large number (80%) of single-family homes in Sharon does present an opportunity for more affordable housing units to be built. Accessory dwelling units (ADUs), or more commonly known as in-law apartments, are a form of affordable rental housing for current and prospective Sharon residents. ADUs are allowed to be built throughout the town, and this could help reduce the housing shortage in Sharon and in the immediate region. However, to boost the housing stock, regulations would have to be imposed to make sure these ADUs were used for permanent rentals and not simply as short-term rentals.

Multi-family homes, as stated previously, are the second largest housing type (9%) in Sharon. These homes, along with mobile homes (7%), can be affordable housing options. Yet, multi-family housing tends to be in short supply and, while the cost of the manufactured home could be affordable, finding land on which to place the home can be a barrier for residents.

Elderly Housing

Chapter 2 discussed Sharon's trend toward an aging population. "Baby Boomers," people born between 1946 and 1964, are retiring, and the oldest ones will be 84 in 2030. This shift in demographics will put added pressure on an already tight housing market. Expanding healthcare costs may leave seniors with even less money to spend on housing.

As the elderly become less comfortable with the tasks involved in managing their own home, they often turn to some sort of elder housing. If health is an issue and some form of constant care is required, seniors will need to enter a nursing home or a residential care facility. There are no options for elderly care in Sharon and very few affordable options in the surrounding area. Elderly Sharon residents in need of full-time care are forced to move away from the community that they have lived in for a long time. This is a statewide problem, not just a local issue.

A growing trend is that baby boomers are aging in place, meaning they are living out their retirement years in the home where they lived during their working career. This tightens the housing market further as homes are not being sold to accommodate younger generations who want to move here. For those who are unable to drive, the lack of easily accessible and frequently-operating public transportation services in Sharon is another issue for those who wish to age in place.

Goals, Policies, and Implementation Actions for Housing

Goal I: Sharon residents should have access to safe and affordable housing for all income levels.

Policy A: Keep housing affordable by planning for appropriately sized lots, accessory apartments, and clustered developments.

Implementation Action 1.A: The Planning Commission should inform Sharon homeowners of their right to develop an accessory dwelling unit (ADU) on their owner-occupied property with a single-family residence pursuant to 24 VSA §4412(E) for long-term rather than short-term rental.

Implementation Action 2.A: Work with Habitat for Humanity and other non-profit housing organizations and/or land trusts to develop perpetually affordable housing.

Implementation Action 3.A: The Sharon Planning Commission should keep its subdivision regulations up to date.

Policy B: Support safe, affordable, energy-efficient homes through the promotion of innovative construction methods and materials.

Implementation Action 1.B: Encourage stakeholder participation in housing workshops to better understand methods to reduce the cost of building new energy efficient housing.

Implementation Action 2.B: The Energy Committee should continue to give existing and new homeowners information from Efficiency Vermont on energy efficiency rebates.

Policy C: Give priority to the preservation and improvement (e.g., energy efficiency) of existing affordable housing and to discourage the conversion of such housing to other uses unless there is a clear public benefit.

Goal II: New and rehabilitated housing development shall not exceed the town's ability to provide public services.

Policy D: Housing for special needs populations, such as the elderly and disabled, shall be located in close proximity to the village center.

Implementation Action 1.D: Participate in the study that is helping to identify areas in the 4-town region most suitable for new residential and special needs housing.

Policy E: Direct the location of future housing to complement existing or planned employment patterns, town services, travel times, and energy requirements.

Implementation Action 1.E: Revise Sharon's subdivision regulations to direct future housing development and consider other ordinances that further the goals of this Plan.

Implementation Action 2.E: Encourage the preservation of historic structures in ways that appropriately serve the need for affordable housing.

Chapter 7: Economic Development

Chapter Goals

I. Increase the number of professional services, agricultural, and forest-related businesses in Sharon.
II. Increase the development of small-scale, high-density enterprises in Sharon Village.
III. Ensure fiber-optic technology is available for every resident.
IV. A strong and diverse regional economy provides satisfying employment opportunities for residents while maintaining environmental standards and the rural character of Sharon.
V. An economy that contributes positively to the town's and region's vitality.

Introduction: Population, employment, income, and housing trends are factors that are inter-related when planning for the future. This chapter outlines general employment characteristics of Sharon residents and how employment opportunities in the Upper Valley could impact housing and population growth in Sharon.

Employment Patterns

Sharon is a bedroom community in that a vast majority of its labor force is employed outside of the Town, primarily in the Upper Valley.

As you can see in Table 29, Sharon's labor force decreased dramatically from 2009 to 2015, but has remained relatively stable since 2016. The unemployment rate in the region is currently at 1.8%. According to the 2018 American Community Survey 5-Year Estimates in Table 30, approximately 30% of those employed in Sharon work in the educational and health care industries; followed by retail trade (17%); and professional, scientific management and administrative (11%). Historically, most Sharon residents worked in the agricultural and forest industries, though this has since diminished to 2%.

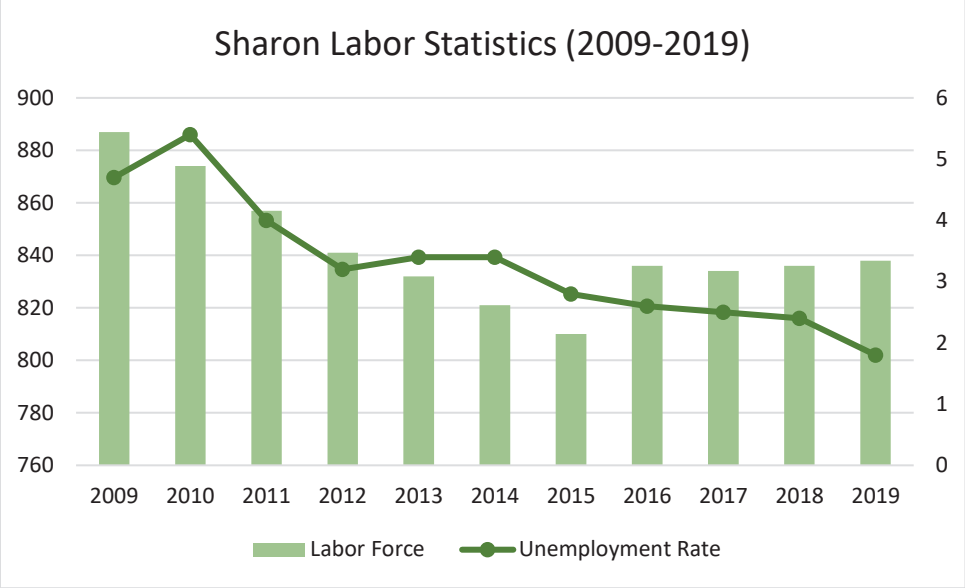


Table 29: Sharon's Labor Force and Unemployment Rate (Source: ACS 2018 5-Year Estimates)

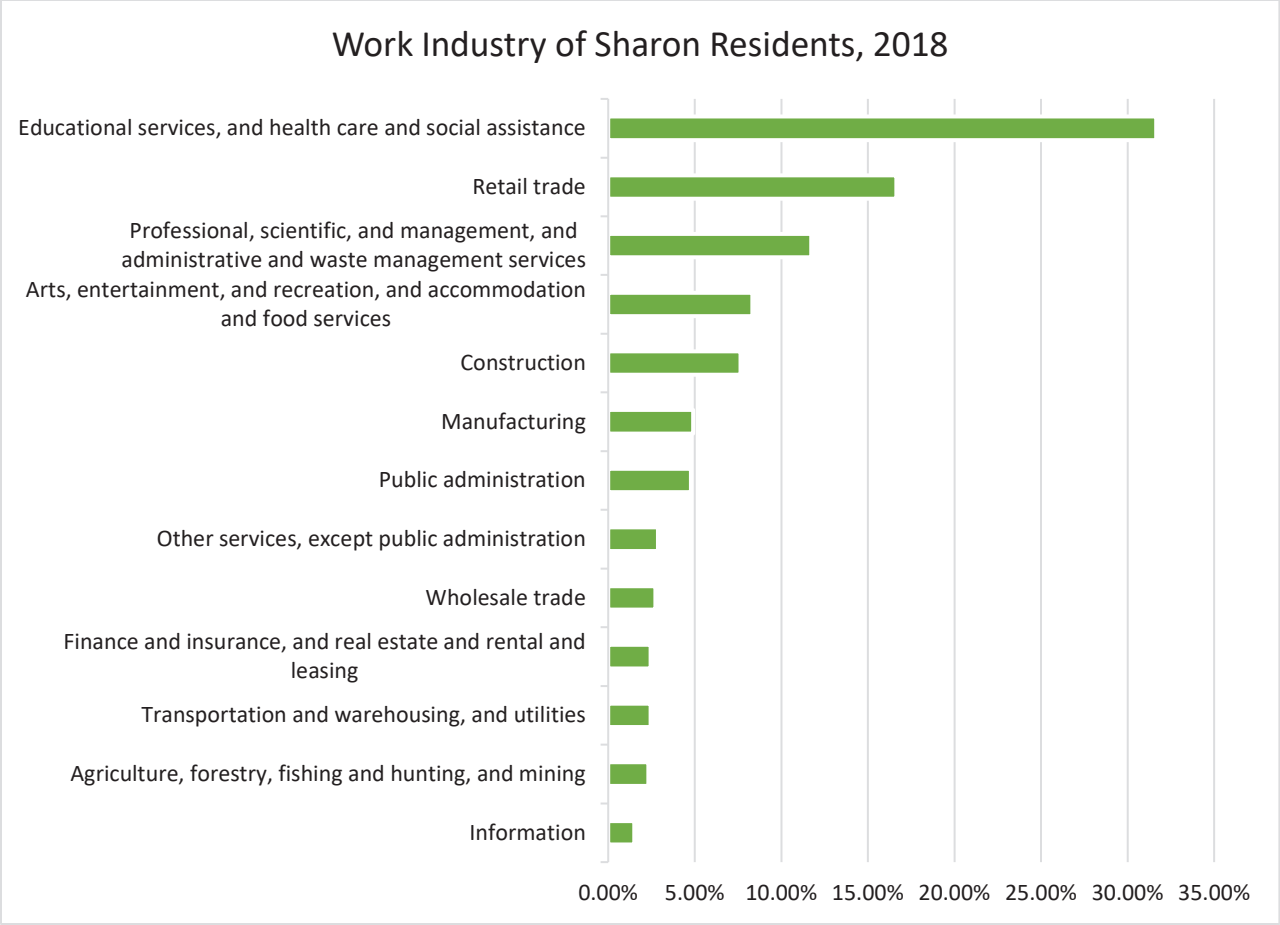
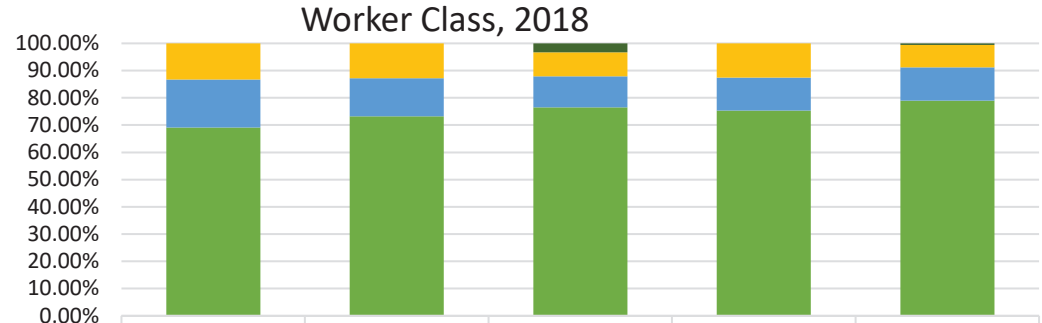


Table 30: Work Industry of Sharon Residents, 2018 (Source: ACS 2018 5-Year Estimates)

Employment Sector

As is indicated in Table 31, the private employment sector is the largest employer for Sharon residents and the region. Sharon has a slightly larger percentage of residents who are self-employed than does the region as a whole.



	Sharon	Tunbridge	Royalton	Strafford	Windsor County
Unpaid family workers	0.00%	0.00%	3.32%	0.00%	0.56%
Self-employed	13.23%	12.74%	8.78%	12.58%	8.23%
Government	17.60%	14.00%	11.40%	12.08%	12.21%
Private	69.17%	73.27%	76.50%	75.34%	79.01%

Table 31: Worker Class of Sharon Residents (Source: ACS 2018 5-Year Estimates)

Locations of Economic Activity

Sharon's proximity to I-89 and VT Route 14 allows its residents easy access to employment centers outside of the community. Sharon has few employers in town, so many residents commute to Hartford, Hanover, Lebanon, Barre and Montpelier.

Sharon's geography makes it difficult to locate new commercial or light industrial companies. Most of VT Route 14 is in the floodplain and river corridor of the White River, and VT Route 132 has very steep slopes that would make it unsuitable for heavy truck traffic. Ideally, small local businesses should be located in Sharon Village. Currently, Sharon Village has no municipal water/wastewater system, and that may discourage businesses. However, Sharon does have some industry outside of the village area. The 41.5-acre Sharon Commerce Park, created in 1975 (formerly known as the Industrial Park), is located off River Road. Approximately ten commercial companies are presently located in the Park. Because of the impact of heavy truck travel on River Road and following a truck/train collision at its access road, the town passed an amendment to the Town Plan in 2000 that limits future use of the Park to commercial or light industrial companies that are not heavily truck-dependent. In 2012, a commercial solar generating facility was built in Commerce Park.

Commuting to Work

According to the 2018 American Community Survey 5-Year Estimates shown in Table 32, the percentage of people driving to work alone was slightly higher in Sharon (80%) than in Windsor County as a whole (78%) or the State (76%). Sharon workers average travel time to work is 24 minutes, which is close to the average for Windsor County and the State (23 minutes).

Working Families and Childcare

Childcare is an integral piece of Vermont's economic infrastructure and should be prioritized in a similar fashion as public education, transportation and housing. It is important to ensure that high quality, convenient childcare is available within the town and region for working families with children. State data indicates that the most critical demands for childcare infrastructure are the shortages in infant/toddler care, school age care, care for children with special needs, and care during non-traditional hours.

Current childcare programs in Sharon fulfill some of the need for after-school and pre-school day care, but there remains a strong need for full-day (7 a.m. to 6 p.m.), year-round childcare programs. New childcare programs to meet this need should be located in the village area to provide a convenient drop off and pick up for commuting parents.

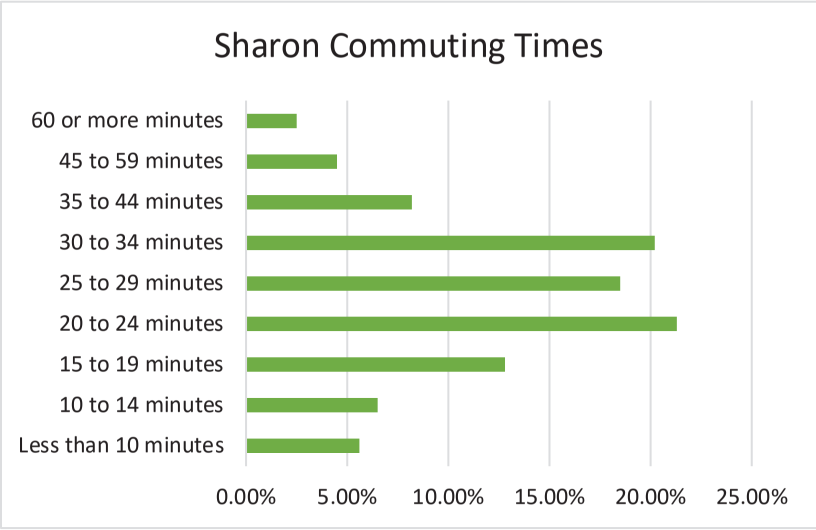


Table 32: Sharon Commuting Times (Source: ACS 2018 5-Year Estimates)

According to the Vermont Department for Children and Families, the overall capacity in regulated childcare can meet only 50% - 60% of the estimated need in Vermont. Eighty percent of Vermont women with children under the age of six years are working outside of the home. Presently

in Sharon, childcare services are provided by the One Planet Afterschool Program, a licensed program with room for 20 children, and Sharon Elementary Preschool, a one-day/two-hour program serving 20 children aged four and five. Given that a majority of Sharon's residents work outside of Sharon, it is likely that many residents with children seek childcare services in other communities.

Home Business

A home business is defined as any activity carried on within a dwelling by a resident of that dwelling for the purpose of earning income. Home businesses use a minor portion of a dwelling unit for an occupation that is customary in residential areas and that does not have an undue adverse impact upon the character of the residential area in which the dwelling is located.

A home business must meet all of the following criteria:

1) The home business shall be conducted by residents of the dwelling with hours of work consistent and compatible with residential neighborhoods and no more than four (4) non-resident employees on-site at any time.
2) The home business shall be conducted within the principal dwelling, an attached garage, or an accessory structure on the same lot, shall occupy less than 50% of the total square footage of the dwelling, and is secondary to the residential use of the property;
3) Outdoor storage, displays or equipment associated with a home business, other than those that are customarily associated with a residential use, are prohibited.
4) No traffic shall be generated in substantially greater volumes than would normally be expected from a residential use (a maximum of 10 vehicle trips per day). Deliveries are limited, as much as possible, to smaller carriers.
5) Off-street parking for residents of the dwelling, employees and customers shall be provided. No commercial vehicles other than those associated with the business shall be parked on the premises.
6) Adequate provisions shall be made for water, wastewater and the disposal of solid waste, in accordance with applicable state regulations.
7) One (1) sign shall be allowed, unlit and less than 12 square feet in area.
8) Retail sales or services on-site are limited to the sale of goods or services produced on the premises, and related products, by appointment only.

A home child-care facility is defined as one which "provides care on a regular basis in the caregiver's own residence for not more than 10 children at any one time. Of this number, up to six children may be provided care on a full-time basis and the remainder on a part-time basis" (33 V.S.A. § 3511). Such a facility is considered to be a home business.

Businesses that add value to agricultural products, such as small-scale food processing and farm stands that primarily add value to products grown or raised on-site or from other local producers, and that are incorporated into an existing farm complex or residential site at a scale which fits well in a rural residential setting are considered home businesses. Such businesses may conduct on-site retail sales without requiring appointments.

A resident with a home office or studio located entirely within their principal dwelling, attached garage or accessory structure, with no signs, public access or outdoor storage or displays is allowed.

Home Business Policies

The basic premise of home businesses is that they should essentially be invisible, and its presence must not negatively impact the surrounding neighborhood.

1) Residents are free to conduct businesses in their homes provided that the nature of the occupation is customary or appropriate in rural residential areas, that it does not detract from the rural character of the area, and that it does not cause a materially increased burden on the town to provide services such as road maintenance and fire protection.
2) The cleaning of hazardous waste containers, storage of hazardous wastes, junk cars, or the creation of a junkyards are not considered acceptable as home businesses.
3) A home business will be considered commercial when it no longer meets the above criteria. Such change of use will be subject to an Act 250 hearing. Expanding home businesses are encouraged to relocate into the Village Area, Small Enterprise Area, or Sharon Commerce Park.
4) A bed and breakfast is an acceptable home business, as long as the owner lives on the premises more than six (6) months each year. Breakfast may be served. The establishment shall not be used on a regular basis in any manner that alters the rural residential nature of the surrounding area or imposes significant additional service burdens on the Town.
5) Owners of short-term rental units must restrict noise and other activities not compatible with residential neighborhoods.
6) Home businesses that generate excessive noise, glare, odor, or the storage of hazardous materials are prohibited.

Future Economic Development

To encourage continued economic growth, small communities like Sharon must take advantage of local resources, such as their location, physical setting, and citizens. Sharon is fortunate to have ready access to the interstate highway system. In order to encourage further growth, the community must determine how to leverage the town's assets. Sharon benefits from having high-speed fiber optic internet access via ECFiber, allowing entrepreneurs to manage their businesses and employees to telecommute from their homes in Sharon while enjoying rural life with their families.

Sharon strives to have its local economy grow at a pace that benefits the community, without straining municipal services. To encourage new growth and to improve the vitality of the Village Center Area, Sharon has been part of the Vermont Downtown Program's Village Center Designation. Businesses within the Area identified by the Vermont Downtown Program as a Village Center are eligible for various tax credits, and the town is given priority for specific state and federal grant programs (see sidebar). Village Center Designation will support statewide goals by encouraging sustainable economic development through incentives to redevelop historic buildings and by concentrating commercial activity to minimize impact on agricultural land and sensitive natural areas.

While there may be some opportunities for infill development within the Village Center Area, its geography makes continued growth a challenge. The Village is "sandwiched" between Interstate 89, the White River and its Flood Hazard Area, and steep hillsides which limit areas for expanded growth. Buried water lines and designated replacement septic sites also limit potential infill in the Village Area.

To encourage additional commercial development that will not negatively impact the Village Center Area, the town has created the Small-Enterprise Area north of the Village. This Small-Enterprise Area has a mix of uses (including non-retail commercial development) and is compact enough to avoid strip development or urban sprawl. This area is identified in the Land Use chapter of this Plan.

State Village Center Designation Benefits

Because of its participation in the Vermont Village Designation Program, Sharon's Village has the following benefits available:

- 10% Historic Tax Credits - Available as an add-on to approved Federal Historic Tax Credit projects. Eligible costs include interior and exterior improvements, code compliance, plumbing and electrical upgrades.
- 25% Facade Improvement Tax Credits - Eligible facade work up to $25,000.
- 50% Code Improvement Tax Credits - Available for up to $50,000 each for elevators and sprinkler systems and $12,000 for lifts. Eligible code work includes ADA modifications, electrical or plumbing up to $25,000.
- Priority Consideration for HUD, CDBG and Municipal Planning Grants
- Priority Consideration by State Building and General Services (BGS)
- Priority site consideration by the State Building and General Services (BGS) when leasing or constructing buildings.
- Neighborhood Development Area (NDA) Eligibility

Future economic development in Sharon can have a significant impact on the community and region. Coordinated land use and economic development policies between the community and regional development organizations are encouraged. Measures to accommodate equitable growth and mitigate negative impacts must be coordinated. Economic development cannot be driven by municipal government alone. Only through consensus can the town form a coordinated economic development effort. This is, of course, where the citizens of Sharon have the most to offer. Key figures in the community, including small business owners and representatives of town government can join forces with active citizens to help create a vision for the economic future of Sharon and the 4-Town Region. Because economic development takes time, all who participate in the process must be committed to a common vision of what the town wants to be. In order to begin the process of economic development planning, citizens will have to determine the town's assets. Likewise, they will need to identify what the key needs in town are and whether or not they can be realistically offered locally. Using this information, the town should develop a mission statement to guide those involved toward the ultimate goal of encouraging economic development in keeping with the rural character in Sharon and the future vision for the town.

"I would love for there to be a robust town center more akin to South Royalton's. I realize that is challenging because of the Interstate, but if you don't have children in the school then there is no place to randomly bump into your neighbors." – 2020 Community Survey

A 2012 study by the Urban Land Institute indicated that on a national level, businesses are making their location decisions based substantially on sense of place. Likewise, young adults have indicated that their primary motivation for moving to Vermont is the lifestyle associated with the working landscape. A small community's best method of encouraging new business is to recognize, protect and support its notable assets. It is Sharon's rural, natural, and historic resources that are its greatest assets and as such they should be prudently managed.

Goals, Policies, and Implementation Actions for Economic Development

Goal I: Increase in the number of professional services, agricultural, and forest-related businesses.

Policy A: Work with area businesses and economic development commissions to bring appropriately-sized businesses and remote workers to Sharon.

Implementation Action 1.A: Partner with regional economic development groups to encourage and promote businesses.

Goal II: Build a strong, diverse regional economy that provides satisfying and rewarding employment opportunities for residents while maintaining environmental standards and the rural character of Sharon.

Policy B: Cooperate with neighboring towns, regional planning commissions, and economic development groups, to plan for and maintain a balance between the type and number of jobs created and natural population growth in the region.

Implementation Action 1.B: Continue to participate in the *Our Four Town Future* forums with Strafford, Tunbridge, and Royalton.

Implementation Action 2.B: Work with the 4-Town region to create a sound economic development plan to help guide growth and improve the local economy.

Implementation Action 3.B: Develop a mission statement to guide economic development in the 4-Town region.

Policy C: Encourage and support the creation of additional childcare facilities that meet the diverse work requirements of its working population.

Implementation Action 1.C: Consider conducting a study in the 4-town region on childcare needs to identify prospective facilities.

Implementation Action 2.C: Identify prospective infill opportunities in Sharon Village for a new childcare facility.

Goal III: Increase the development of small-scale, high-density enterprises in Sharon Village.

Policy D: Encourage new business development in locations where services such as roads, fire protection, power, and high-speed internet access are available or planned.

Implementation Action 1.D: Explore the development of a revolving loan fund to help encourage small-scale economic development in the Town of Sharon.

Policy E: Strip development is not an appropriate pattern of land use in Sharon.

Implementation Action 1.E: The Sharon Planning Commission should investigate regulatory efforts to prevent strip development in town.

Goal IV: Ensure fiber-optic technology is available to every resident.

Policy F: Continue to support ECFiber's efforts to ensure every Sharon resident has access to fiber-optic internet.

Implementation Action 1.F: Continue to send a town representative to ECFiber board meetings.

Goal V: Build an economy that contributes positively to the town and region's vitality.

Policy G: Support the development of local enterprises that create markets for locally produced goods and services.

Implementation Action 1.G: Support the Sharon Farmers' Market, Farm-to-Table, and other opportunities for the region's residents to display and sell their products or wares.

Implementation Action 2.G: Encourage home-based businesses and telecommuting.

Policy H: Carefully review commercial developments to ensure that they do not put an undue burden on the town's ability to provide services.

Implementation Action 1.H: The Planning Commission will work with the Selectboard and any other committees/organizations to review commercial development proposals.

Policy I: Maintain the town's participation in the Vermont State Designated Village Program for Sharon Village.

Implementation Action 1.I: The Selectboard will work with the Two Rivers-Ottauquechee Regional Commission to renew the State Designated Village before it expires in July 2023.

Implementation Action 2.I: Distribute information periodically on the many tax credits to business owners in the Sharon Village Area.

Chapter 8: Resources

Introduction: This chapter encompasses Sharon's resources that are natural, scenic, historical archeological and recreational, including agricultural and forestry.

Natural Resources

The rural landscape is of great importance to the Sharon community, both for its scenic value and its utility. Sharon residents value accessible, working lands that are hospitable to both recreation and outdoor work. It is essential to the community that this landscape be protected because it is one of the primary reasons people choose to live in Sharon. Town policies should maintain the quality of the landscape for future generations and protect the natural environment, while allowing the land to be worked in a fashion compatible with these goals.

Overall Goal for Natural Resources

Goal: Protect the Town against loss of rural character, environmental quality and scenic beauty that could result from land use changes along waterways, ridgelines, and wildlife corridors.

The White River

The White River is the longest free-flowing river in Vermont and its main stem is the longest undammed tributary of the Connecticut River. The White River is of economic and ecologic importance to the region and provides opportunities for fishing, swimming, boating, tubing, hunting and birding.

While the White River is known for its trout fishing and scenic beauty, the watershed faces many challenges. Local communities are increasingly concerned about issues like flood damage, riverbank erosion, water quality problems including water temperature, wildlife and habitat loss, sedimentation, the decline of native fisheries and limited public access. In 2009, a geomorphic assessment was conducted on the White River and four of its major tributaries in town to map the River Corridor and to develop a series of recommendations on management of erosion hazards and river habitat improvements. This data was folded into the Sharon River Corridor Management Plan (RCMP) which identified a number of locations where stream channel instability exists. The Plan identified three ways to address these problems:

- **Active Restoration**: Removal of constraints to channel stability or aquatic organism passage. This includes culvert replacement or retrofitting and reshaping the stream-channel and/or floodplain.
- **Passive Restoration**: Allow the river to recover using its own inputs and energy. This focuses on long-term corridor protection through conservation and the planting of shrubs or trees that will strengthen existing channel buffers.
- **Conservation**: Protection of high-quality river reaches that provide outstanding recreation or ecosystem services through permanently protecting land from development.

The RCMP recognizes that the White River and its tributaries in Sharon have great diversity in form, function, and condition. Historical floods, defunct dams and various types of human land use in the river corridor have all left a lasting imprint on the morphology and stability of the main stem and tributary channels. In order to understand how to sustainably manage these channels over the long-term, a historical perspective of the causes of current day conditions is very important.

The characteristics of the White River's main stem are still adjusting in width, depth, and form to the following historical impacts:

- Aggradation of sediment in the valley due to settlement and deforestation that occurred during the 1700s and 1800s
- 1927 failure of the Sharon Dam and other in-channel structures used during log drives
- The unparalleled erosive forces of 1927 flood and impacts from Tropical Storm Irene in 2011

Recognizing this, the RCMP recommends the following watershed-scale and site-specific management actions:

- Implementation of the River Corridor (see below) for the entire Town of Sharon (main stem and tributaries)
- Protection of specific areas of river corridor along the main stem that are more prone to lateral adjustments. (See the River Corridor Management Plan report for details)
- Buffer plantings along areas of the main stem to stabilize stream banks and provide shading and cover for fishes.

Areas subject to fluvial erosion hazards can experience changes that range from gradual stream bank erosion to catastrophic channel enlargement, bank failure, and a change in the stream's course. Fluvial erosion hazards are due to naturally occurring stream channel adjustments. Through the River Corridor Plan, areas were identified and mapped in accordance with accepted state fluvial geomorphic assessment protocols on Broad Brook, Elmer's Brook, Quation Brook, and Fay Brook.

The White River and its tributaries have a high degree of natural variability in form due to natural changes in slope and valley formation. The presence of natural bedrock outcrops along these channels limits severe erosion in many areas that might otherwise occur due to the following historical impacts:

- Road encroachment on the corridor and channel straightening in areas with high agricultural land use;
- Removal of native woody vegetation along the banks and buffers;
- Undersized culverts and bridges that severely constrict channel forming flows and interrupt the transport of wood and sediment down the channel network.

The RCMP recommends the following management actions:

- Replace or retrofit culverts and bridges that are currently incompatible with geomorphic stability and/or disrupt aquatic organism passage
- Buffer plantings where agricultural land use and severe channel migration has degraded aquatic habitat in the corridor
- Easement and conservation of areas that have excellent aquatic habitat

The 2018 White River Tactical Basin Plan (Basin 9), written by the Vermont Agency of Natural Resources Watershed Management Division, provides an assessment of watershed health and defines on-going and future strategies to address high-priority surface water stressors and opportunities for protecting high quality waters. The main stem of the White River from Hartford to Bethel including Sharon, has the highest priority in the Basin 9 Plan and is a candidate to be designated as an Outstanding Resource Water. The White River Basin encompasses 710 square miles in Vermont, draining portions of Addison, Orange, Rutland, Washington, and Windsor Counties.

The Basin Plan states that the main stem of the White River is facing four major stressors that are affecting its water quality:

- Encroachment of unpermitted stream alterations, non-buffered agricultural fields, and development within river corridors, floodplains, wetlands, and lake shores
- Stream channel erosion due to undersized crossing structures, lack of riparian vegetation for bank stabilization, and unmitigated increases in stormwater flow and volume,
- Land erosion due to unmanaged stormwater runoff from roads, developed lands, and agricultural lands, and
- Pathogens from sources that likely stem from bacterial communities in soils, waste runoff from domesticated animals and livestock, and out-of-date and failed septic systems.

Action items and strategies to protect the main stem of the White River include:

- promote better floodplain and river corridor protection to increase flood resilience and allow for river equilibrium
- work with VTrans and the town to encourage protection and restoration efforts
- assess wetlands impacted by flooding
- monitor river health data for signs of improvement
- continue to monitor swimming areas to protect public health
- encourage recreational and educational connections with the public.

The northeast corner of Sharon is part of the Ompompanoosuc River watershed and is addressed in the 2020 Basin 14 Tactical Basin Plan. A map of basin boundaries is shown in Figure 5. The strategy for improving the West Branch of the Ompompanoosuc in Sharon is to work with the town on stormwater projects, and to provide technical road and bridge building assistance to forestland owners, foresters and loggers to reduce the amount of sediment in the river.

White River Recreation

Interest in and use of the White River and its tributaries as an outdoor recreational resource has been increasing. Due to an awareness of health hazards associated with pollutants, clean-up programs conducted by the state and federal governments and environmental groups have changed the nature of the river from a dumping ground into a recreational resource. The White River now provides excellent opportunities for water related sports. In spite of the general trend for increased use of the White River, Sharon residents and visitors are in danger of losing recreational and visual access to the river. Primary causes for this include subdivision of riverfront property, posting of riverfront land, closing of access points due to fear of liability and occasional abuse of existing public accesses. Because of these conflicts and others, river corridor planning must be careful to address and develop equitable programs to balance the needs of the private landowner with those of the public.

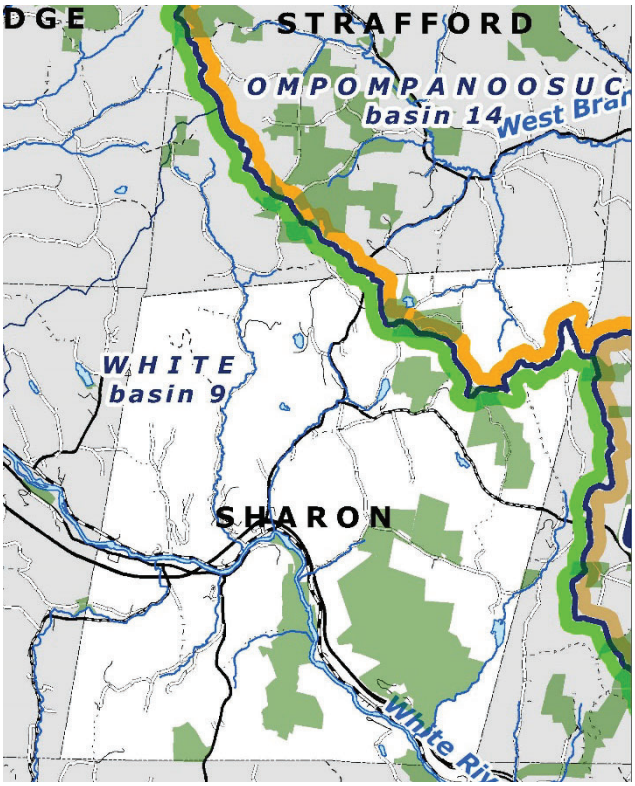


Figure 5: Map of Basin Boundaries in Sharon

Given historic and present trends to locate major land uses in river valleys, there is an increasing risk of conflict between river recreational opportunities and land development activities. The agricultural industry is facing difficult times, placing additional development pressures along the river. Depending upon the nature and magnitude of these changes, a loss of rural character, environmental quality and scenic beauty could be the result. Sharon residents have clearly expressed a desire to protect their river resources.

Riparian Buffers

Riparian buffers are the trees, shrubs, or vegetative grasses growing along the banks of rivers and streams that are a transition zone between water and land and stabilize banks. Maintaining stable, well-vegetated shorelines decreases erosion; improves habitat for fish, other aquatic life forms, and wildlife species, and helps to protect residents from flood hazards. Buffers are complex ecosystems that provide wildlife habitat, filter polluted runoff, and improve the stream communities they shelter. The many benefits of riparian buffers include maintaining shade along streams to ensure cooler water temperatures for fish, and slowing runoff which permits the buffer to filter out and break down sediments, nutrients, pathogens, and toxins before they reach surface waters.

The Town of Sharon is concerned about loss of property and destabilization of banks due to increased soil erosion, increased runoff of pollutants, higher water temperatures, loss of fish or wildlife habitats, and loss of recreational opportunities.

Goals, Policies, and Implementation Actions for the White River

Goal I: Preserve, restore, and manage Sharon's river and streamsides.

Policy A: Implement the recommendations of the Sharon River Corridor Management Plan and the Basin 9 and 14 Tactical Basin Plans to balance the needs of private landowners with those of the public.

Implementation Action 1.A: The Town should consider building a Conservation Fund to purchase parcels of land along the White River that are unique assets for preservation or at risk of flooding.

Implementation Action 2.A: The Town should consider the corridor conservation, erosion hazard, and habitat restoration projects recommended by the River Corridor Management Plan and implement them where appropriate.

Policy B: Hydropower development on the White River is inconsistent with this plan.

Policy C: Maintain vegetated buffers adjacent to the White River and its major tributaries.

Implementation Action 1.C: The Town should adopt a Riparian Buffer bylaw.

Policy D: Manage human access points to the White River and its tributaries to prevent soil erosion, loss of vegetative cover, and unnecessary disruption of riparian habitats. Public access paths shall not be excessively wide and steps shall be constructed if access is steep.

Implementation Action 1.D: The Town should create safer public access areas on the White River for canoes and kayaks.

Implementation Action 2.D: The Town should take action to safely eliminate poison ivy and other toxic plants between the White River and Route 14 to improve public access.

Implementation Action 3.D: The Town should purchase, trade land, or accept a donation of the VTrans storage facility along the White River to afford better public access to the river.

Groundwater and Surface Water

Sharon's water resources include aquifers (groundwater) and surface waters. The White River has economic benefits for residents and businesses in Sharon and supports wildlife. With no municipal water systems in town, groundwater quality and availability are very important. In addition to the White River and its tributaries, Sharon contains six lakes and ponds, three of which are over 10 acres in size. These bodies of water provide economic benefits for residents and businesses in Sharon and support wildlife.

The Vermont Agency of Natural Resources, in cooperation with federal and other state agencies, has evaluated aquifer recharge areas serving systems involving 10 or more connections or 25 or more people. These recharge areas are important to protect. Land development is a potential threat to water quality and aquifer recharge areas and shall not be located in these areas. There are no publicly available groundwater resources maps for Sharon, but there are maps and data available for Windsor County with reported gallons per minute (gpm) for groundwater wells. There are also statewide maps that show these resources.

In recent years, underground fuel storage tanks have been identified as major threats to water quality. Studies conducted by the U.S. Environmental Protection Agency have shown that the average fuel tank is likely to leak within 15 years of installation. To lessen the risk of contamination, the Vermont Agency of Natural Resources has regulations to monitor underground tanks with a capacity of 1,100 gallons or more. Tanks in excess of this capacity must be registered with the Town. In addition, replacement of underground tanks is subject to rigid state and federal standards.

Goals, Policies, and Implementation Actions for Groundwater and Surface Water

Goal I: Maintain and enhance the quality and quantity of ground and surface water resources.

Policy A: Discourage the cutting of trees and other vegetation on banks of rivers and streams.

Policy B: Discourage clearing dead or undercut trees from stream sides or stream channels, unless they present a hazard. Removal of tree snags has potential adverse impact on habitats.

Policy C: Re-vegetate stream banks, including rip-rapped areas, with native shrubs, trees, and grasses to stabilize banks.

Policy D: Discourage new shoreline rip-rapped areas, except in extreme circumstances.

Policy E: protect vegetation by minimizing damage to streamside soils, restricting livestock access to streams and exclude dumping, filling, and operation of machinery in the riparian corridor.

Implementation Action 1.E: The Town should notify owners of properties located in the flood hazard area about the availability of FEMA's National Flood Insurance Program to protect property subject to flooding.

Implementation Action 2.E: The Town should develop planning principles for the maintenance and enhancement of streamside resources consistent with this Plan.

Policy F: limit encroachments on the riparian corridor by limiting and by careful siting and proper setback of roads, paved paths, parking lots, buildings and structures where streamside vegetation exists or has reasonable potential for restoration and maintenance. The construction of new bridge crossings shall be discouraged unless no feasible alternative for access exists.

Policy G: protect headwaters and the ecosystems they sustain from degradation by ensuring these areas be principally maintained for forestry and recreational uses.

Goal II: Allow multiple and balanced uses of ground and surface water while maintaining or improving quality and quantity.

Policy H: Aquifers and surface waters shall not be significantly depleted. Water withdrawals by one group of users shall not interfere with the reasonable use of aquifers and surface water by others, and existing users shall not be adversely affected.

Implementation Action 1.H: The Town should create and adopt a groundwater resources protection overlay zone.

Implementation Action 2.H: The Town shall carefully review and monitor land use activities that potentially threaten groundwater quality to prevent degradation of the resource.

Goal III: Consider the impact and effects on ground and surface water resources related to proposed or existing uses of land.

Policy I: Construction of buildings within stream buffer areas is prohibited.

Policy J: The following principles shall be observed for any new development adjacent to riparian buffers:

- provide for sufficient on-site pervious surface cover so that runoff onto adjacent buffers is minimized;
- limit lot size and density levels of development so that the riparian buffer is not adversely impacted;
    - cluster development in such a manner as to concentrate any new construction away from the riparian buffer and on land with less conservation value;
    - provide for open space and non-commercial recreational use; and
    - prohibit uses with a high potential for pollution in buffers. Those uses may include gas stations, bulk fuel storage facilities, hazardous materials handling facilities, and other commercial development.

Wetlands

Wetlands are ecologically fragile areas and are considered part of the interface between land and water. How these lands are managed has a direct bearing on the quality and quantity of water resources.

The Vermont Water Resources Board estimates that wetlands comprise less than five percent of the surface area of Vermont. In addition to being Vermont's most productive ecosystem, wetlands serve a wide variety of functions beneficial to the health, safety and welfare of the general public, including the following:

- retaining storm water run-off, reducing flood peaks and thereby reducing flooding;
- improving surface water quality through storage of organic materials, chemical decomposition and filtration of sediments and other matter from surface water;
- providing spawning, feeding and general habitat for fish;
- providing a wide diversity of habitat for wildlife and protection of rare, threatened or endangered species of plants and animals; and
- contributing to open space character and the overall beauty of the rural landscape.

In 1986, Vermont adopted legislation for the protection and management of wetlands (10 V.S.A., Chapter 37). Determination of whether a wetland merits protection is based on an evaluation of the extent to which it serves the general functions outlined above. Wetlands rules established three classes of wetlands, categories that determine the necessary level of protection. Class 1 and Class 2 wetlands are significant wetlands and are regulated. Class 1 wetlands are wetlands designated by the Vermont Water Resources Board as exceptional or irreplaceable. Class 2 wetlands are significant and are sometimes contiguous to Class 1 wetlands. Class 3 wetlands are not regulated by the Vermont Wetland Rules, but can be protected by other regulations or laws.

Under the Rules, if land development can be expected to impact a Class 1 or 2 wetland, such activity cannot commence unless the Vermont Agency of Natural Resources first grants a Conditional Use Determination (CUD). A CUD will be granted when it is determined that the proposed use will not have an undue adverse impact on the function of the wetland. In many cases, such approvals are granted with conditions to mitigate impact.

For Sharon, the most significant wetlands have been mapped and are included as part of the National Wetlands Inventory (NWI) prepared by the U.S. Fish and Wildlife Service. These wetlands have been delineated on USGS topographic maps, and by reference are made a part of this Plan. There is a total of 267 acres of mapped wetlands in Sharon. Although not mandated by law, towns are responsible for undertaking studies and making recommendations on wetlands protection and identification. It is important to note that future investigations of wetlands within Sharon may result in additional areas being determined as significant or important for conservation.

Goals, Policies and Implementation Actions for Wetlands

Goal I: Identify, protect and minimize the loss of significant wetlands to preserve their values and functions.

Goal II: Identify and encourage land use development practices that prevent or mitigate adverse impacts on significant wetlands.

> **Policy A:** Developments adjacent to wetlands shall be planned so as not to disturb wetland areas or their function. Mitigating measures to protect the function of a wetland are acceptable.
>
> > **Implementation Action 1.A:** The Town should conduct a wetland study and make recommendations on wetlands protection and identification.

Flora, Fauna, and Natural Communities

In Sharon, there are a broad range of natural communities that exist in the older forests, early successional forests, open fields and valley floors. The breadth and diversity of wildlife and plant communities indicate a healthy, thriving ecosystem. This area of Vermont stands out because of the number of vernal pools. Yet, natural communities are typically affected by the surrounding environment. Plants respond to soil structure and chemistry, hydrology, and climate. Development can have a negative impact on plant communities, which in turn will harm the overall ecosystem in the area affected. Good management practices, such as requiring developers to locate their projects in least sensitive areas, maintain buffer areas and protect against silt runoff from excavation, are a few of the ways that the health of these natural communities can be maintained.

Sharon's fields, forests, wetlands and streams provide habitat for a diversity of flora and fauna. Although nearly all undeveloped land in the town provides habitat, some critical habitat areas should remain intact. These areas include wetlands, vernal pools, and deer-wintering areas and ecotone (the edge transition zone between two cover types, such as field and forest), and lands that support significant natural communities and rare, threatened and endangered species. Large tracts of forest land, floodplains, and cliffs are also natural habitat for wildlife. Review of development or logging in or adjacent to these areas should consider its impact on wildlife.

Wintering areas are an important habitat requirement for deer during the critical months when snow depth and cold climate threaten their survival. Typically, these areas consist of mature softwood stands at low elevations or along stream beds, which provide cover and limit snow depths. Southerly facing slopes are also beneficial due to good sun exposure and may be used even in areas of limited softwood cover. More specific factors, such as the percent of canopy closure, species of softwoods, and stand age also figure into the quality of the wintering area. The wintering areas shown on Map 5 should be protected from significant development, deforestation and other uses that threaten the ability of this habitat to support deer. Sharon has approximately 2562 acres (9% of Sharon's total acreage) of mapped deer wintering yards.

Invasive non-native species are a growing problem throughout Vermont. Invasive plants are defined as those exotic species that typically spread from disturbed areas into natural communities, but many of these species are also impacting yards, agricultural fields, and working forests. The spread of invasives is negatively impacting the rural character of the Town; reducing native plant populations and consequently affecting wildlife populations; creating economic impacts by dominating other plants in agricultural fields and inhibiting reproduction of trees in sugarbush areas and other forests; destroying the scenic quality of roadsides; reducing property values; and potentially posing health risks. At the present time, the greatest threats are posed by wild chervil (fields, roadsides, and recently logged areas), Japanese knotweed (streams, rivers, roadsides, and yards), the Emerald Ash Borer (ash trees), and Japanese barberry (forests), but there are increasing threats throughout the region from garlic mustard, giant hogweed, wild parsnip and other invasives.

Some of these invasives, especially wild chervil and knotweed, have proliferated to such an extent that eradication from many sites is impossible, but there are still portions of the Town that have not been infested. Diligence is necessary from Town residents and employees to prevent the further spread of these species, and the introduction of new species that could pose more serious threats. For example, giant hogweed has been identified in Central Vermont. This federally listed noxious weed produces a sap that, in combination with moisture and sunlight, can cause severe skin and eye irritation, painful blistering, permanent scarring, and blindness. The Emerald Ash Borer (EAB) is a relatively new invasive species in Vermont, although it has been in the Midwest for several decades. At the time of this writing, EAB has not been identified

in Sharon. Yet, EAB has been identified in neighboring Hartland, Hartford, and Corinth so it is only a matter of time before it is discovered in Sharon.

One of the more common ways in which invasive species spread to new locations is when seeds or root segments are transported on vehicles, especially construction and logging machinery, mowers, etc. Best management practices have been identified for reducing the accidental spread of invasives, including avoiding using fill from invaded sites, washing equipment before leaving infected sites, stabilization of disturbed sites, intentional timing of mowing, etc.

Goals, Policies, and Implementation Actions for Flora, Fauna, and Natural Communities

Goal I: Maintain and improve the natural diversity of flora and fauna found in Sharon.

Goal II: Maintain and improve the natural diversity, populations, and migratory routes of wildlife.

> **Policy A:** Discourage development in contiguous forest blocks and habitat connectors to protect wildlife.

Goal III: Reduce the impact of invasive species on agriculture and native ecosystems.

> **Policy B:** Control new occurrences of invasive species to prevent further infestation.
>
> > **Implementation Action 1.B:** Town employees and contractors should become familiar with the best management practices to prevent the accidental spread of invasives.
> >
> > **Implementation Action 2.B**: The Town should develop an action plan to deal with the Emerald Ash Borer and educate landowners.
> >
> > **Implementation Action 3.B:** The Town should work with the Conservation Commission to develop educational material for property owners to help reduce new invasive plant infestations (e.g., sources of imported seeds, such as fill, hay bales, ornamental plantings, mowing machines, bikes tires, etc.). This information could also serve as guidance for new development projects.
> >
> > **Implementation Action 4.B:** The Town should time roadside mowing to minimize the spread of invasive species.
> >
> > **Implementation Action 5.B:** The Town should conduct an inventory of invasive species that can be used as baseline data to assess the future spread.

Habitat Protection

Sharon is home to large tracts of conserved and/or undeveloped forest land known as "Forest Blocks" by state biologists and regional planners. The Quimby Mountain area extending north into Downer Forest and conserved lands south of the White River are labeled Highest-Priority Forest Blocks owing to the diversity of wildlife they support. The large scale of these forest blocks, relatively unbroken by development and roads, allow wildlife who require significant acreage in their ranges, as well as numerous other species, to thrive. Most Upper Valley towns do not have habitat comparable to Sharon's. Although these towns may appear to be generously forested, roads and development have carved up land to the degree that a limited number of native wildlife species are supported. Therefore, maintaining the integrity of Sharon's forest blocks has positive benefits not only for the town, but for state and regional biodiversity as well.

A "Connectivity Block" is the state's term for a forest block, contiguous with others, that allows the movement of wildlife from one part of the state to another while avoiding more developed

areas. The southwest quadrant of Sharon is identified by the state as a "highest priority" connectivity block. This corner of town, coupled with Sharon's forest blocks to the east and northeast, constitutes a bridge for wildlife moving between the upper Connecticut River valley and the Green Mountains. Wildlife taking this route can avoid developed lands in southern Windsor County and northwest of Sharon. Connectivity blocks allow young animals to disperse and allow wildlife to migrate in response to existing development or climate pressures. They also allow species to repopulate areas where diversity has been lost. The preservation of Connectivity Blocks, like the protection of Forest Blocks, is key to the health of Sharon's wildlife populations and the biodiversity of the region as a whole.

Forest blocks and habitat connectivity maps for Sharon can be found on the internet through the ANR Atlas or BioFinder.

"Forest Fragmentation" is the breaking of large, contiguous, forested areas into smaller pieces of forest, usually with the creation of openings for roads or structures. For natural communities and wildlife habitat, the dividing of large intact forest lands into smaller and smaller areas creates barriers that limit species' movement and interrupt ecological processes. Forest fragmentation affects water quality, fish and wildlife populations, and the biological health and diversity of the forest itself. When many small habitat losses occur over time, the combined effect may be as dramatic as one large loss. Forest fragmentation can disrupt animal travel corridors, increase flooding, promote the invasion of exotic vegetation, expose forest interiors to edge effects, particularly predators not normally within forest interiors or dispersal of invasive plant seeds by birds, and create conflicts between people and wildlife. Habitat loss reduces the number of many wildlife species and can totally eliminate others.

The 2018 Vermont Conservation Design: Maintaining and Enhancing an Ecologically Functional Design written by Vermont Fish & Wildlife and Agency of Natural Resources states that forest blocks are the foundation for intact and connected natural systems. While forest blocks are only part of this plan, informed land management, local planning, and land conservation decisions throughout Vermont will help private landowners, municipalities, state agencies, and conservation organizations work together for a vibrant and ecologically healthy Vermont.

Forest blocks are the foundation for intact and connected natural systems.

Since the 1980s, Vermont has experienced fragmentation, which is the result of larger tracts of land being divided into smaller ownerships or land holdings. The more individuals that own smaller parcels of forest, the more likely that the land will ultimately be developed with infrastructure (such as roads and utilities) and buildings. The 2015 Vermont Forest Fragmentation Report identifies the following causes for this trend:

- Escalating land prices;
- Increased property taxes;
- Conveyance of land from aging landowners; and
- People moving from urban areas, which has increased dramatically during Covid

While the state of Vermont is 75% forested at this time, forest fragmentation is a challenge facing much of the state. The insertion of permanent infrastructure in forest lands, even in a piecemeal fashion, degrades the health of our forests. Roads in particular can affect wildlife movement and mortality, foster the spread of invasive species, introduce sedimentation to

streams, and generally degrade the forest environment along their routes.[16] For these reasons, the construction of new roads in Sharon's Forest Blocks is strongly discouraged.

At some point, a species will not use seemingly adequate habitat due to encroaching development. While certain strategies may mitigate the impact on habitat, planners and developers should keep in mind that almost every development will affect the ecological balance. It should be noted, however, that high density or intensive land uses are more likely to have a negative impact on the quality of wildlife habitats, unless it is a strategy to concentrate the impact in one area to keep a much larger area in its natural state.

The Vermont Non-Game and Natural Heritage Program has identified several sites in Sharon that are habitats for rare, threatened or endangered species. Large tracts of forest land, riverines, floodplains, and cliffs are habitats for many high quality, so called "significant" natural communities. Developments that trigger the Act 250 process are reviewed for conflicts with these sites.

The Sharon Conservation Commission is a participant in the Linking Lands Alliance (LLA). The LLA is a grassroots organization, in partnership with the Vermont Fish and Wildlife Department that is mapping and planning wildlife habitat connectivity in an 11-town region. Habitat blocks have been mapped for the Town of Sharon and are shown on Map 6, attached to this Plan.

The fact that Sharon has these large blocks of undeveloped land is significant. Few towns in the region have this resource. Forest land like this allows larger mammals to thrive and reproduce because they can easily move across the landscape.

Contiguous forests support sustainable working lands, contribute to our natural and cultural heritage, and maintain options and choices for future generations in Sharon. To this end, we will work to inform landowners of these values and offer assistance for any actions they may take that are in keeping with Sharon's conservation interests.

Sharon recognizes the value of working lands to the regional forest products economy and to the town's and region's ability to conserve and provide stewardship for its natural heritage of fish, wildlife, plants, and ecological systems. Active forestry, the harvesting of trees according to best management practices, is beneficial to wildlife habitat and helps maintain the connections between working landscape and wildlife habitat.

Conserved Land in Sharon

As mentioned in other sections of this Town Plan, Sharon sits within a major forest block-based wildlife corridor between the Green Mountains, the forested parts of the Upper Valley, and on to the White Mountains. Much of the conserved land in Sharon already provides permanent protection for major parts of that corridor. Interestingly, conserved land in Sharon represents the collective efforts over time of nearly all of the major entities that work to conserve land in Vermont.

The largest "block" of conserved forest land in Sharon is located just south of the village, and is really two separate forested areas that are almost contiguous except for being split, west to east, by the White River, Route 14, a narrow strip of houses along Route 14 and then Interstate 89. Much of the river frontage and the land west of the White River is owned by Vermont Fish & Wildlife as the 624-acre White River Wildlife Management Area and by The Nature Conservancy as the 654-acre White River Ledges Natural Area, which includes some acreage in Pomfret. This

[16] 2015 Vermont Forest Fragmentation Report, Vermont Department of Forests, Parks and Recreation, Agency of Natural Recourses, April 2015

entire area creates a stunning view of steep topography and intact forest as one travels north on I-89. In aggregate, the parcels include five miles of river frontage, very diverse habitat for a wide variety of animals and includes over two dozen rare plant species, including a globally rare natural community known as a calcareous riverside seep. Immediately to the east of I-89 is a 3500-acre block of privately owned working forests, called the Quimby Mountain Project, conserved largely by conservation easements held by the Vermont Land Trust, but also by the Upper Valley Land Trust on 218 acres of the block. The Town of Sharon owned Minister's Lot is also part of this large block of conserved forest. Not counting the town owned Minister's Lot, the first parcel conserved to assemble this almost 5000 acres of critical habit for wildlife movement across the landscape of Sharon was acquired in 1961 by Vermont Fish & Wildlife Department, and the most recently conserved is The Nature Conservancy's acquisition of the Schindler parcel in 2017, both on the western side of the White River.

Less than a mile from the conserved land centered on the White River a large piece of the southwest corner of Sharon is conserved by another conservation easement held by the Vermont Land Trust. That easement on private land protects 564 acres of the Maverick Farm, a large sugar bush. Less than a mile north of the Quimby Mountain easements is the southern half of the 705-acre Downer State Forest owned by the Vermont Department of Forest, Parks and Recreation and a nearby private parcel of almost 240 acres called My Walden that is conserved by a conservation easement held by the Upper Valley Land Trust. This parcel has many trails, a great view, and is open to the public for walking.

The most recent conserved land in Sharon is the 150 acres of the 256-acre Ashley Community Forest that sits in both Sharon and Strafford. It was transferred to the towns in 2022 by a local nonprofit Alliance for Vermont Communities, and is also protected by a conservation easement held by the Vermont Land Trust. The Ashley Community Forest will be jointly managed by the two towns through a committee with members appointed from each town. Public trails are being developed.

Goals, Policies and Implementation Actions for Habitat Protection

Goal I: Protect the habitat value of large blocks of contiguous forest and wildlife corridors.

> **Policy A:** Restrict development in a manner to preserve contiguous areas of important wildlife habitat. Avoid fragmentation of wildlife habitat and increase its functional connectedness across the landscape. Support on-site and off-site mitigation measures.
>
> > **Implementation Action 1.A**: The Town should continue to participate in the Linking Lands Alliance and implement wildlife habitat recommendations.

Goal II: To maintain or enhance the natural diversity and population of wildlife, including natural predators in proper balance.

> **Policy B:** Protect deer wintering areas, vernal pools, and other critical habitats from developments and other uses that adversely impact the resources.
>
> > **Implementation Action 1.B:** The Town should conduct additional field inventories to locate unmapped significant natural communities in Sharon.
>
> **Policy C:** Sharon supports all efforts, pursuant to the state of Vermont's Endangered Species Statute or through other mechanisms, to conserve or otherwise protect rare, threatened and endangered species and the habitats necessary for their continued survival.

Goal III: Maintain or increase populations of rare, threatened, and endangered species, and improve the natural diversity, population, and migratory routes of fish and wildlife.

Policy D: Enable long-term protection of major habitats through conservation easements, land purchases, leases and other incentives.

Policy E: Development or logging in or adjacent to forested areas should consider impact on wildlife and potential sediment runoff into streams during the planning process.

Policy F: Protect conserved wildlife corridors from encroaching development and incompatible activities, such as road expansion or the development of new roads.

Policy G: Wildlife corridors shall be given high priority in considering lands for town acquisition or other long-term conservation efforts by land trusts.

Policy H: Culvert replacements should maintain stream connectivity to protect fish populations and riparian habitat.

Mineral Resources

The availability of gravel, sand, granite stone, crushed rock, and other materials is essential for the development industry as well as state and local highways. In spite of this, public and private interests are sometimes in conflict over utilization of the resource. It is in the interest of the Sharon business owners and residents to enable use of these resources when such uses do not significantly inhibit or conflict with other existing or planned land uses, or conflict with other stated goals in this Plan.

Issues incidental to mineral extraction include erosion, creation of excessive dust and noise, increased truck traffic through residential neighborhoods, surface and groundwater contamination, degradation of the site or wildlife habitat, loss of scenic character in the immediate area, and undue deterioration on state and town roads. Mineral extraction facilities that locate in Sharon must be properly managed and have an effective recovery plan.

Goals, Policies and Implementation Actions for Mineral Resources

Goal I: Support the extraction and processing of mineral resources only where such activities are appropriately sited, managed, and where the public interest is clearly benefited.

Policy A: Consider pollution, noise and vehicle traffic as part of the decision-making process when reviewing proposed mineral extraction projects.

Policy B: Existing and proposed mineral extraction and processing facilities shall be planned, constructed, and managed to:

- Not adversely impact existing or planned uses within the vicinity of the project site
- Not significantly interfere with the function and safety of existing road systems serving the project site
- Minimize any adverse effects on water quality, fish and wildlife habitats, viewsheds and adjacent land uses
- Reclaim and re-vegetate sites following extraction
- Minimize noise impacts on adjacent uses including residential areas
- Maintain the rural character of the Town

Implementation Action 1.B: The Town should adopt regulations governing the extraction of earth resources.

Land Protection Strategies

Methods of protecting lands are varied. In general, there are two ways to encourage the preservation of culturally and naturally significant areas: voluntary and regulatory. Voluntary methods allow landowners to:

- Preserve land by placing restrictions on its use, through such tools as conservation easements or mutual covenants.
- Transfer land to a conservation organization (such as the Vermont Land Trust, Upper Valley Land Trust, The Nature Conservancy, or the Vermont River Conservancy) through donation.
- Sell or donate land with conditions attached, like deed restrictions or conditional transfers.

Sharon could become an active participant in land conservation through the creation of a Conservation Fund. Generally funded by taxes on a yearly basis, the Conservation Commission could use this fund to purchase land outright, or to assist a land conservation organization with the purchase of a conservation easement. It is safe to assume that there will never be sufficient funding for land protection strategies to acquire conservation easements or ownership of all unprotected areas of value.

Regulatory methods use zoning and/or subdivision rules to regulate the location, density and design of development within selected areas to minimize harmful impacts while allowing for a reasonable level of development. Regulatory methods include:

- **Overlay Districts —** The creation of map overlay districts is the most common method of regulating specific areas for the purpose of protecting wildlife and other natural resources. Overlay districts can be used to exclude development on or to impose resource protection or conservation standards within overlay areas. These districts can be used to protect many types of resources.
- **Resource Protection Districts** - Protect wildlife resources and open space areas for resource-based uses such as farming, forestry, recreation from incompatible development.
- **Large Lot Zoning** - Large lot zoning refers to the designation of a very large minimum lot size within certain zoning districts to accommodate resource-based uses, such as farming or forestry, or to require a pattern of very scattered, low-density development to limit, for example, impervious surfaces and protect surface and groundwater quality.
- **Fixed Area & Sliding Scale** - Fixed area and sliding scale zoning are two zoning techniques (typically applied in association with subdivision regulations) that are used to differentiate allowed densities of development from district lot size requirements.
- **Conservation (Open Space) Subdivision Design** - Conservation or open space subdivision design is a process wherein subdivisions are intentionally designed to protect rural character and open space.

Each of these methods has its own set of benefits and pitfalls and all of them should be thoroughly evaluated before they are implemented. However, there are many examples of successful regulatory land protection strategies in Vermont. The key to success is to ensure that the community as a whole supports the regulations. At present, Sharon has subdivision regulations and a Flood Hazard Bylaw but no conventional zoning.

Goals, Policies, and Implementation Actions for Land Use Strategies

Goal I: Ensure the viability of working lands associated with a sustainable forest products economy due to their significant contribution to the economy and our natural heritage.

Policy A: The town shall support all reasonable and feasible opportunities to conserve lands that are greater than 25 acres in size, particularly those that support connections between other conserved land, and meet any of the following criteria:

- the land is enrolled in the Vermont Current Use program;
- the land is owned by persons willing to protect it through the sale or donation of its development rights;
- the land is being managed for carbon storage;
- the land is being managed in accordance with a forest management plan that has been reviewed and approved by a professional forester, wildlife biologist, or other appropriate and related professional; or
- land is owned by persons willing to consider other non-regulatory mechanisms that promote sustainable forest management or seek to otherwise conserve the lands.

Policy B: Encourage landowners to enroll in the Vermont Current Use program or to adopt the management practices used through this program.

Goal II: Ensure that animals and plants are able to move freely between conserved lands and lands under long-term stewardship, contiguous forest and wildlife habitat, and other important habitats, land features and natural communities.

Policy C: Encourage clustered or peripheral development where high value agricultural and forested land is identified, to protect such resources and prevent fragmentation and sprawling settlement patterns.

Scenic Resources

Sharon features a variety of scenic landscapes, ranging from the built environment of the village to historic farmsteads and remote ridgelines.

"Preserve the beauty of Sharon with its desirable & scenic lands."

"This town is a hidden treasure of Vermont."

Quotes from the 2020 Community Survey

In Sharon, areas of scenic significance that could be adversely affected by development include the following:

- Howe Hill Road from the Pomfret town line to River Road including Billings Hill;
- Steele Road "cirque" meadow and ridgeline that is visible as you approach Exit 2 on the northbound side of I-89;
- Raymond Farm lands along Route 132;
- Cowslip Lane off of Route 132;
- The Historic Day District at the intersection of Beaver Meadow Road and Route 132;
- The CCC Pond in Downer State Forest;
- Star Mountain Road amphitheater;
- Lake Mitchell land;
- Protected land on Chapel Hill Road;
- Brookside Farm on White Brook Road;
- The CasCadNak/Billings property at the end of White Brook Road;
- The White River Corridor through the Town; and
- The eastern slope of the WMA and other conserved land south of the Village and the White River.

While these are critical areas to protect, many of them are privately owned and not necessarily open to the public for access.

Overall Goal, Policies, and Implementation Action for Scenic Resources

Goal I: Plan for the controlled and orderly growth of the town by supporting a pattern that maintains Sharon's rural character and areas of scenic significance.

Policy A: Encourage a pattern of development that complements the traditional settlement pattern clearly recognized and existing in the town.

Implementation Action 1.A: The Town should employ a process for evaluating the impact of development on scenic resources and recommend design guidelines for those involved in the preparation and review of design proposals.

Policy B: Strip development is prohibited. This type of commercial development in rural or outlying areas blurs the transition between villages and countryside, and has a negative impact on rural character.

Policy C: Locate structures or buildings away from ridgelines, built lower on the hillsides, and hidden within wooded areas when possible.

Policy D: New buildings shall be compatible with traditional pattern, scale, size, and form. Buildings or structures shall be sited in less visible areas, and not block distant views. Clustering of buildings or structures is encouraged to leave open vistas and to maintain agricultural uses on the site.

Policy E: The use of common access drives to properties is encouraged for reasons of safety, as per the Town's Subdivision Regulations and the Highway Ordinance.

Policy F: Utilities shall be located away from productive agricultural land and floodplains, in a manner designed to minimize visual impact.

Policy G: Structures, buildings, and other site developments shall be planned so that form, grouping, and other features are compatible with existing patterns of the area or site to reduce the apparent scale of the project.

Policy H: Design planners are encouraged to favor smaller lots with ample landscaping or screening from off-site views over larger parking areas, and to locate any project on the less scenic areas of the site. Prominent grade changes that contrast with surrounding contours shall be avoided.

Policy I: Minimize contrast when proposed buildings or utilities are within or adjacent to historic sites or areas recognized by the State of Vermont and/or the Town of Sharon. Project planners must design buildings and structures compatible with the scale, grouping, and exterior texture of nearby structures, and must respect the existing pattern.

Policy J: Proposed development design plans must reflect the traditional settlement pattern and characteristics of the area. Projects shall be designed to be in scale with the surroundings and not extend or enlarge unacceptable patterns of development (e.g., strip development). Design solutions shall minimize visual intrusion on the most scenic attributes of the site. They shall respect the natural contours of the land, use landscaping which harmonizes with existing vegetation to create project buffers and screening, and to

encourage pedestrian access and internal circulation.

Policy K: Given the visual impact of electric generation, transmission lines, and distribution facilities, proposed design plans shall evaluate a project's visual impact and

- avoid locating rights-of-way which divide land uses, and work toward location of corridors along edges of land uses (i.e., agricultural land/forests);
- align corridors and power transmission lines with due consideration of topography, along the edges of valleys rather than in the center, in the prevailing direction or pattern of topographic features, and avoid placement along ridgelines and in floodplains;
- in forested areas, place power transmission lines to minimize removal of vegetation or disruption of views; and
- commercial scale power generation shall not be sited on or adjacent to any historic district identified in this Town Plan.

Ridgeline Protection

Glaciation left long narrow chains of adjacent ridgelines in Sharon. These ridgelines are cherished vistas and backdrops to life in the town. Among them are Baxter Mountain, Quimby Mountain, Tyler Mountain, Billings Hill, Boyds Hill, Howe Hill, and the Steele Road hilltop as seen from I-89.

Goal and Policies for Ridgeline Protection

Goal I: Restrict ridgeline development; that would threaten or harm the shallow soils of ridgeline ecology and the critical biodiversity which it supports, that would have an adverse impact on the scenic character of Sharon, and that would diminish the scenic or ecological value of ridgelines.

Policy A: Ridgeline forest management shall provide for the sustainable, ongoing management of forest resources, shall protect aesthetic resources and wildlife habitats, and shall preserve the appearance of an unbroken forested canopy when viewed from town roads.

Policy B: Development shall be directed away from the fragile environments of ridgelines and associated steep slopes.

Aesthetics and Outdoor Lighting

This section of the Town Plan is intended to provide clear policy statements for evaluation of lighting installations planned for both public and private property. Our historic village and other areas planned for concentrated mixed use will be best served by lighting designs that do not add to night time sky glow.

Necessary light levels vary according to use. Using the minimal amount of light necessary decreases sky glow and avoids cumulative escalation of light levels. Sky glow, or reflected light from surfaces, is visible in the night sky over Sharon Village and is a form of "light pollution". Sky glow affects our ability to see stars and other aspects of the nighttime landscape. Techniques to reduce the amount of illumination shining into the sky, and the overall amount of illumination, can reduce sky glow.

Goal, Policies, and Implementation Actions for Aesthetics and Outdoor Lighting

Goal I: Preserve the nighttime ambiance and aesthetic qualities of the village and rural areas by reducing sky glow. Design outdoor lighting systems that conserve energy and minimize life cycle costs.

Policy A: Proposed lighting design and installation shall be appropriate for the use of the site, and be compatible with the existing character of the neighborhood. Lighting installations shall not be excessive, shall be designed to minimize glare and sky glow through the use of cut-off fixtures, and shall not shine directly onto adjacent properties.

Policy B: Large projects shall follow lighting design guidelines set forth in the most current version of the *Outdoor Lighting Manual for Vermont Municipalities*. Design plans which exceed Illuminating Engineering Society of North America (IESNA) or the Manual recommendations shall be evaluated for conformity with this Plan, particularly as they may relate to their effect on the character of the area and sky glow.

Policy C: Excessively high lighting levels in rural or very low-density residential areas are inappropriate.

Policy D: Illuminated signs over 32 square feet per face are disruptive to Sharon's historic Village and to rural areas. Illuminated signs that are excessively bright, cause glare and illuminate surrounding areas, are inappropriate.

Policy E: Lighting that flashes or moves or exceeds 10 feet in total height is inappropriate.

Policy F: Project designers shall consider the impact of sky glow, and shall design illumination which minimizes light pollution without unduly compromising safety, security, or utility. Methods that will help reduce sky glow include:

- directing luminaries downward, toward the ground;
- prohibiting light from being emitted above 90 degrees from vertical;
- reduce illumination levels;
- turn lights off after hours;
- use of motion detectors to switch on lights only when necessary.

Implementation Action 1.F: The Planning Commission should develop guidelines for lighting fixtures in the village.

Planning for Telecommunications Facilities

At present, transmission towers are the dominant telecommunications facilities in Sharon. The Town has a Telecommunications Bylaw that sets out standards and requirements for the operation, siting, design, appearance, construction, monitoring, modification, and removal of telecommunication facilities and towers. The Bylaw requires sharing of existing communications facilities, towers and sites, where possible and appropriate. It includes design and siting standards to minimize the adverse visual effects of towers and related facilities, and encourages the location of towers and antennas away from visually sensitive areas, prominent scenic areas, historic areas, and the White River. Proposals for new or co-located telecommunication equipment on existing towers are received by the Planning Commission.

Goal and Policy for Planning for Telecommunications Facilities

Goal I: Facilitate the provision of telecommunication services to the residences and businesses while preserving the rural character and appearance of Sharon. Ensure that telecommunications equipment does not unduly harm the scenic, historic, environmental and natural resources of Sharon (including its fragile ridgeline habitats).

> **Policy A:** The Town of Sharon shall adhere to the telecommunications policies stated in the Town's Telecommunications Bylaw.

Historical & Archeological Resources

Sharon has a wealth of historic resources; buildings, bridges/culverts, districts and landscapes which have survived until today and which serve as a visual record of the Town's history.

The definition of rural character includes not only undeveloped land, but also buildings arranged in the landscape in traditional settlement patterns. Conservation and preservation of buildings and landscapes contribute to maintaining the present rural character of the Town.

Sharon Village, with its stores, homes, public buildings and lands, acts as a focal point for the community. The Village remains the place where residents may shop, attend meetings, church, or school, or tend to business at the Town Office.

The landscape of the Town and the White River valley is an economic as well as an aesthetic asset. Tourists come to the Upper Valley, attracted to our scenery and the quality and values of rural life. Tourism is a major industry in Vermont and has particular impact on those towns, like Sharon, that are located near the main transportation routes. Sharon is also a bedroom community, with many of its residents working in nearby centers of employment. The challenge for Sharon is to maintain those parts of the town that have historical value, and which help give the town its character, while planning for development that may arise owing to Sharon's location.

Sharon Historical Society

The Sharon Historical Society is a non-profit tax-exempt organization established in 1991. The Society's primary purpose is to collect and preserve items of historical merit, descriptive of the history of Sharon. Trustees have been active in collecting artifacts and other items valuable to the community.

The Society is housed in the former Sharon Town Hall and is open to the public. Current programs include lectures by historians and reminiscences of some of the town's older residents.

The Society is doing an excellent job of recording the history of the Town. The building itself has issues with brick deterioration and moisture control. Improvements to the structure and its access will help ensure the preservation of the Historical Society's collection.

Historic Properties

The Vermont Division for Historic Preservation surveyed Sharon's historic properties in the early 1970s. The *Vermont Historic Sites and Structures Survey* lists two districts, two bridges, and seven properties in Sharon which are exemplary for their historic, architectural, or engineering significance, and are on the Vermont Register of Historic Places. The Survey and State Register are used by the Division in its legally mandated reviews of projects requiring Act 250 permits and those involving state or federal funds, licenses, or permits, and in assisting towns and individuals in historic site planning.

The Division predicts that another two hundred sites or structures in Sharon are possibly eligible for nomination to the State and National Registers of Historic Places, but to date these have not been surveyed. In addition to honoring their properties, homeowners who list on the National Register may be protected from adverse impact from projects which are federally funded, licensed, or permitted.

Sharon's two historic districts are the Village Historic District, with twelve buildings, and the Day Farms Historic District, with three buildings. The town has Historic District maps developed by the State in 1973 with a description of the individual buildings in both Districts.

Historic Districts

The **Sharon Village Historic District** is centered around the Village common at the junction of Routes 132 and 14. Much of the District's historic fabric remains from the nineteenth century. It is still defined by significant public and private buildings which illustrate the role of the Village as the historic center of the Town's early religious, civic, and commercial life. Five of the buildings within the Historic District are of crucial architectural and/or historic significance to the District's integrity.

Two early nineteenth century Greek Revival buildings with projecting columned porticos, the Sharon Trading Post and the private home known as "The Columns", architecturally reinforce each other and visually provide an entrance "portal" to the Sharon Village of monumental architectural scale.

At the north end of the Village Common sits the Congregational Church with its spired bell tower. The church is a focal point of the Common in particular and the Historic District in general. The architectural design of the church also features a projecting portico with Doric columns.

Next to the church is the Old Town Hall (now the Historical Society), a brick Greek Revival building. The pairing of the Congregational Church and the Town Hall at the head of the Village Common reflects the central roles of religion and town government in the early life of the town. The architectural juxtaposition of the two buildings is unusual.

Immediately to the east of the Village Common is the Donahue House, the oldest house in the Village and one of the oldest houses in town. Built in 1788, the house was intended by the Congregational society and proprietors of the town to be a meeting house. It was later rebuilt by Joel Marsh, son of Isaac Marsh one of the town's original settlers, as a dwelling. The house is Sharon's best-preserved example of a 2-1/2 story, center chimney wood framed house of the era.

The northern boundary of the Village Historic District is a line parallel to and 500 feet north of the centerline of VT Route 14. The eastern boundary is a line parallel to and 500 feet east of the centerline of VT Route 132. The southern boundary is a line contiguous with the far bank of the White River. The western boundary is a line parallel to and approximately 500 feet west of the centerline of VT Route 132.

The **Day Farms Historic District** centers around the intersection of Route 132 and Beaver Meadow Road and includes District Schoolhouse #3. The Day Farms Historic District's open agricultural setting is typical of rural Vermont 19th century farm communities. centered around a district schoolhouse.

The northern boundary is a line parallel to and 500 feet north of the centerline of VT Route 132 and Beaver Meadow Road. The eastern boundary is a line parallel to and 300 feet east of the centerline of VT Route 132 and Carpenter Road. The southern boundary is a line parallel to and

200 feet south of the centerline of VT Route 132 and Beaver Meadow Road. The western boundary is a line parallel to and 800 feet west of the centerline of VT Route 132 and Carpenter Road.

Individual Historic Properties and Structures

The following historic properties and structures have been surveyed by the Vermont Division for Historic Preservation. The map includes reference number and common name for the structure.

Village Historic District

1. The Columns – built circa 1815 is an outstanding example of a 2-1/2 story, wood frame, Greek Revival style house with a front gable elevation and a three column, temple portico in the Greek Doric order.
2. The Sharon Trading Post – built circa 1845 is an outstanding example of a 2-1/2 story, wood frame, Greek Revival style store with a front gable elevation and a four column, temple portico in the Greek Doric order.
3. House – circa 1840, a 2-1/2 story, wood frame, Greek Revival style house with a front gable elevation
4. Lighthouse (formerly the Parsonage – circa 1840, a 1-1/2 story, wood frame, Greek Revival style house with a front gable elevation.
5. Town Offices (and Masonic Lodge) –two-story, wood frame building with a projecting entrance pavilion and hip roof.
6. Old School House – a one story, wood frame building with an above-grade cellar story, a projecting entrance pavilion and a truncated hip roof.
7. Congregational Church – built in 1837 it is an outstanding example of a Greek Revival style church with a projecting portico in the Greek Doric order. Tiered, boxed, octagonal bell tower with an octagonal spire.
8. Sharon Historical Society (formerly the Town Hall) – circa 1830 and excellent example of a 1-1/2 story, brick, Greek Revival style town hall.
9. Donahue House – built in 1788, a 2-1/2 story, wood frame, Georgian style, center chimney house with a gable roof and center chimney.
10. House – circa 1840, a 1-1/2 story, wood frame, Greek Revival style “Classic Cottage”.
11. Vincent House – circa 1840, a 1-1/2 story, wood frame, Greek Revival style “Classic Cottage”. Horizontal entablature with partial returns supported by pilasters on the corners of the house. Entablature supported by pilasters framing a recessed entrance with transom lights and sidelights on the front elevation.
12. Wood Shop – circa 1900, a 2-1/2 story, wood frame building with a front gable elevation. The building has been previously used as a post office, an IOOF Hall and an antique store.

Day Historic District

1. Maurice Day House – circa 1840, an excellent example of a “Gothicized” 1-1/2 story, wood frame, Greek Revival style “Classic Cottage”
2. Sunnybrook Farm (formerly Harold Day house) – circa 1810, a 1-1/2 story, wood frame, Cape Cod style house. The property was a trout farm for 50 years.
3. Day District Schoolhouse #3 - built in 1890 is now a residence.

State Register of Historic Places

The following houses and structures are outside of the Historic Districts, but have been listed in the State Register of Historic Places.

1. Reuben Spalding House – Stage Road – Built by Deacon Reuben Spalding who was one of the original settlers of Sharon arriving in 1769.
2. Cowslip Hill Farm aka Judson Parker House on VT Route 132- an outstanding example of a 1-½ story, wood frame, center chimney "Cape Cod" house with equally significant interior architectural woodwork. It includes the original blacksmith shop.
3. Lake Mitchell Trout Club - Mitchell Pond - an outstanding example of vernacular shingle style architecture. The shingle style was popular in the wealthier resort communities of the eastern United States, but was not common in Vermont.
4. Drown House - Route 14, Sharon village - an outstanding example of a 1-½ story, wood frame, Greek Revival style "classic cottage".
5. Dr. Edward K. Baxter Memorial Library, Route 14, Sharon village – chartered in 1928 this brick building was built in the Federal Revival style with a large wooden door with sidelights, fan lights, and a columned entryway topped with an arched lintel.
6. Seven Stars Arts Center - Route 14, Sharon village – with its Gothic arched entrance and window it is an excellent example of a Gothicized Greek revival church, erected by the Baptists circa 1875, it was later used as a Grange Hall.
7. Richard Moran House - Route 14, Sharon village - an unusual example of a 1-½ story, wood frame house with a five-bay center entrance, and a front gable elevation which is of an earlier date, probably erected between 1800 and 1830.
8. Henry Lewis House - Route 14, east end of Sharon village - an excellent example of a 2-½ story brick Federal style house with an unusual front gable elevation.
9. Mildred Northrup House - Route 14, east end of Sharon village - an excellent example of a 1-½ story brick Federal style house with a front gable elevation.

National Register

1. *Carlton Clark Memorial Bridge* over the White River is significant as a representative example of bridges built following the 1927 flood. It represents an engineering feat, and is now listed on the National Register.
2. *Vietnam War Memorial, Welcome Center and Rest Station* on Interstate 89 Northbound was dedicated in 2005 and includes a "living machine" wastewater treatment facility.

Historic Easements and Covenants – In some cases, preservation of historic buildings or structures may be accomplished through easements or certain rights to a property, which are granted to an entity established for the purpose of ensuring their maintenance. The Vermont Division for Historic Preservation, the Preservation Trust of Vermont, and similar organizations may grant easements for preservation purposes. An easement is an agreement made strictly between the property owner and the easement holder. Covenants may also be used to maintain historic and architectural values of properties or sites. Covenants are similar to easements but are strictly contractual obligations which grant no legal ownership in the property.

Revolving Loans and Grants – Preservation organizations, including the Preservation Trust of Vermont, offer funds at low rates to qualified owners for the restoration or improvement of historic resources. The loans are repaid to a fund which is then made available for other properties. Several charitable foundations and trusts also offer loans to property owners or historic preservation organizations. Information on these programs may be obtained from the Vermont Division for Historic Preservation.

Scenic Highways – Vermont's country roads constitute an important statewide scenic resource. In 1977 the Vermont Legislature enacted a bill "to preserve through planning the scenic quality of Vermont's rural landscape", with the goal of combining aesthetic and functional concerns.

Through this law, town and state officials are granted authority to designate scenic roads in order to protect their character, which often derives from historic structures as well as stone walls, forests, mountains, pastures, rivers, and other natural features bordering the road. Designation of scenic roads enables a town to preserve the rural environs of its historic structures. A scenic road designation also stimulates pride in, and respect for, the existing landscape. There are currently no designated scenic roads in Sharon.

Goals, Policies, and Implementation Actions for Historical and Archeological Resources

Goal I: The preservation and improvement of historic buildings and sites to preserve Sharon's historic character and to enhance economic development.

Policy A: Future development within or adjacent to historic buildings or sites shall be permitted only when the design of the project fits the context and does not detract from the character of the immediate area.

Implementation Action 1.A: The Planning Commission should develop design guidelines for the review and preparation of development proposals as a means of ensuring the conservation of historic and cultural resources.

Policy B: Discourage the destruction or removal of recognized or documented historic buildings, structures, or sites.

Policy C: Support the restoration and adaptive use of historic buildings or sites when such projects do not diminish the distinguishing qualities of those buildings or sites;

Implementation Action 1.C: The condition of the Old Town Hall should be evaluated and funding sought for improvements, including energy efficient environmental controls.

Policy D: Improvements to roads of historic value should be undertaken with due consideration for the special rural landscape qualities inherent to the roadway and roadway fringe. Sharon's extensive network of roads is an integral scenic element in the countryside. These roads, particularly Class 3 town roads, are characterized by narrow gravel roadways bordered by varied natural features.

Implementation Action 1.D: Application for Scenic Roads designation, including historic stone culverts and bridges, should be considered for certain rural roadways.

Implementation Action 2.D: The Selectboard should adopt a road policy to protect the historic character (to include trees and width of road) of Class 3 town roads.

Policy E: Archeological resources should be recognized and supported as important links to the prehistoric and historic record of the town and accepted as key components of our heritage.

Implementation Action 1.E: Historic resources of the Town of Sharon should be further inventoried, analyzed, and mapped and the resource inventory should include known archeological sites.

Implementation Action 2.E: The town should seek grant funding to protect town owned historic buildings.

Policy F: Preserve outstanding historic areas and discourage development which has an adverse impact on locally recognized historic resources. Development shall be designed to be compatible with the traditional patterns, scale, size, bulk, density, and form of

existing buildings, structures, or sites.

Implementation Action 1.F: Preservation of historic and archeological resources through easements or covenants is encouraged.

Policy G: Public improvements such as bridge replacement or rehabilitation, street widening, roadway reconstruction, signage, utility distribution systems, and outdoor lighting shall be designed to avoid unnecessary degradation of historic buildings or sites. Such public investments shall be planned in consultation with local and state officials, including the Vermont Division for Historic Preservation, to ensure consistency with their planning objectives and programs.

Goal II: Support education and outreach to further the preservation of historic and archeological resources.

Policy H: The Sharon Historical Society shall continue to document the historic and archeological resources of the town.

Implementation Action 1.H: Encourage local townspeople and school children to write a history of the Town of Sharon.

Recreational Resources

Sharon residents' value a rural lifestyle and have expressed a desire to maintain our environment for future generations to enjoy and use. Community recreation plays an important role in the health of the community, both in terms of physical health as well as social and emotional health. The 2000 and 2020 Sharon Community Surveys identified recreational opportunities as major components of individual and community life. Survey responses identified the need for future planning to assure recreational opportunities for Sharon's citizens and visitors. This section of the Plan inventories current recreational facilities and programs available to Sharon citizens and addresses prospective needs.

"[I would like to see the] development of recreational trails; we go up to Randolph, VT to mountain bike on the trails that Randolph Area Sports Alliance has developed there. They are absolutely awesome and I think something like that would greatly increase the quality of life & desirability of living in Sharon. I know that the trail builders that built Gile Mtn Trail live in Sharon, and I know many property owners that would allow use of their land for recreation trails!! We also have High Horses Therapeutic Riding Center, which would greatly benefit from trails." – 2020 Community Survey

Programs and Activities

Sharon Recreation Program – Since the late 1970s, Sharon residents have benefited from a community organized and managed recreation program. Directed by the Sharon Recreation Committee, this program historically provides a variety of recreational opportunities for all age groups. The Sharon Recreation Program is financed by taxes, dues, and fees. Recreation Committee members are appointed by and responsible to the Sharon Selectboard.

Since the Sharon Elementary School does not provide a sports program, the Sharon Recreation Program is closely coordinated with the school. The success of the Program is largely due to broad community involvement and a vast network of volunteers working to provide the community with recreational benefits. Activities for children include Little League baseball, soccer, softball, and basketball. Since 2012, an outdoor skating rink has been maintained in the

winter months by the Sharon Skating Rink Committee. Nearly all programs are conducted on land owned by the Town adjacent to the Sharon Elementary School.

White River - The White River provides a variety of recreational experiences which include fishing, swimming, canoeing, kayaking and tubing, as well as birdwatching and photography. The river is popular with residents and also attracts tourists. The state has designated it as an exceptional fishing and recreational resource. (See White River Basin Plan, Agency of Natural Resources, Vermont, 2019).

Sharon and this section of the river are featured in a number of guidebooks, including *Vermont Recreation Handbook*, *Touring Vermont's Scenic Roads*, *Canoe Camping Vermont and New Hampshire*, *25 Bicycle Tours in Vermont*, and *Travel Vermont*.

Sharon Old Home Day - Sharon is proud of having the oldest continuous Old Home Day in Vermont, with over a century of continuous celebration. Old Home Day provides an opportunity for residents and friends of Sharon to join together to promote the spirit of the community and its people. This traditional event includes a parade, Firemen's chicken barbecue, and other activities for the public's enjoyment. Support for the program is provided by numerous volunteers, the Sharon Fire Department, private donations, and Town appropriations.

Sharon Snowmobile Club - Formed in 1990/91, the Club was created for the purposes of promoting safe and responsible snowmobiling for its members. Snowmobiling in the Upper Valley is an active recreational pursuit that benefits local business owners. Primary issues facing snowmobilers are loss of use of private land for trails, landowners' liability concerns, and discontinuance of Class 4 town highways used currently as trails. The Sharon Snowmobile Club encourages cross-country skiers to use its trails as well.

Sharon Horseshoe League - The League has existed since approximately 1980. League players come from Sharon and neighboring towns, including Royalton, Tunbridge, and Barnard. Horseshoe pits are located on the Town Common adjacent to the Sharon Park & Ride lot and the Congregational Church. This seasonal recreation program is self-sustaining and there are no immediate needs or issues outstanding.

Public Lands – The Vermont Agency of Natural Resources owns 1,328 acres of land in Sharon: the 705-acre Charles Downer State Forest, and the 623-acre White River Wildlife Management Area, and the Ashley Community Forest. (See the Natural Resources Chapter)

A Civilian Conservation Corps (CCC) camp was established in the Downer State Forest in 1933 and was operated through 1935 during which the Corps improved the forest. In 1945 a 4-H Camp was organized and leased the buildings of the old CCC camp. The 4-H camp is still actively operated as a very popular summer camp. A gravel State Forest highway, approximately 5.5 miles long, connects the two sections of Downer State Forest and provides opportunities for horseback riding and mountain biking during the summer and cross-country skiing, snowshoeing and snowmobiling during the winter. The Forest also supports public hiking, fishing, and hunting. In the 2020 Community Survey, the Downer State Forest was listed as one of the high priority areas that needs to be preserved for recreational aspects by residents.

In 2017 The Nature Conservancy purchased 468 acres along the White River in Sharon. This newly conserved land lies between the 624-acre White River Wildlife Management Area to the north, owned by Vermont Fish & Wildlife, and the 185-acre White River Ledges Natural Area to the south, which was purchased by The Nature Conservancy in 1998, creating a 1277-acre tract along a five-mile stretch of the river. The Nature Conservancy parcels are open to the public for hiking, fishing, birdwatching, snowshoeing, and hunting.

The 256-acre Ashley Community Forest advances town goals to promote forest protection, preserve rural character, and expand recreational opportunities, including hiking, cross country skiing and hunting. The Ashley property straddles the towns of Strafford and Sharon.

The Broad Brook / White River Access property includes the 10.1 acre "Rikert" parcel and provides public access to 244 feet of frontage on Broad Brook and 1668 feet of frontage on the White River. The property, located on River Road at its intersection with Broad Brook Road, provides public access for fishing, swimming, canoeing and kayaking.

The Vermont Agency of Transportation owns and manages a small parcel of land with access to the White River on Route 14 north of the Village. Efforts between the Sharon Conservation Commission and the Agency to improve access to the river are on-going.

No change in management practices or uses to the above properties are planned at this time.

Trails and Greenways –Although figures on trail use are not available, the State's 2019-2023 Comprehensive Outdoor Recreation Plan presents many indicators of the increasing demand for trails-based recreation. The reasons for the increasing demand include the increase in Vermont's population, greater income of our population, the State's exceptional environmental quality, public ownership of land, tourism, and increased participation in outdoor recreation in general.

Given the likely increase in demand for hiking experiences, increased use of existing trails and paths can be expected. Given other emerging land uses, some of which could conflict with hikers and other trail users, there is an obvious need for users and landowners to work together to minimize conflict and identify opportunities. The continued use of some trails is threatened by land subdivision, changes in ownership, fear of liability suits and vandalism. This problem is likely to increase over time. To secure the best interests for all parties, private enterprise, trail organizations, state and federal agencies and the Town need to assume a role and responsibility to mitigate these problems.

Local roads are heavily used by runners and bicyclists. Commercial bicycle touring companies and others promote Sharon's scenic roads as good places to tour. Recreational use of roads can become dangerous due to increased vehicular traffic and inadequate shoulders along most roads. Transportation planning and development by the Vermont Agency of Transportation is now being coordinated with the Town and the Regional Commission to reflect the growing demand for bikeways.

Goals, Policies, and Implementation Actions for Recreational Resources

Goal I: Recreational opportunities are available to Sharon's citizens and visitors of all ages to encourage residents and visitors to be physically active and socially engaged.

> **Policy A**: Support efforts between landowners, recreational organizations, and trail users to foster a stronger relationship for the protection and maintenance of trails and other recreational activities.
>
> > **Implementation Action 1.A**: Encourage landowners to not post private property to allow others to recreate on private property when such use does not burden the owner.
>
> **Policy B**: Maintain the town's diverse community recreation program that provides such a wide range of recreational experiences and physical challenges for all age groups.

Implementation Action 1.B: The Rec Committee and Conservation Commission should inventory current and plan for future recreational facilities and programs.

Implementation Action 2.B: A town-wide trail and recreation map of Sharon should be created to better educate the public on current public trails and recreational facilities.

Policy C: Maintain recreational access to the White River.

Implementation Action 1.C: Prohibit development within 150 feet of the top of the White River bank, consistent with the Town's 2009 Stream Geomorphic Assessment.

Implementation Action 2.C: Encourage partnerships between landowners, non-profit organizations, and local and state governments to protect river access, to acquire buffer strips (riparian zones), and to encourage river conservation easements on important segments

Implementation Action 3.C: Support the state's water quality anti-degradation policy

Implementation Action 4.C: Develop appropriate land use at the town level and foster the protection and management of the White River, its tributaries and adjacent lands

Implementation Action 5.C: Promote better public understanding and involvement with rivers as scenic and recreational assets through improved public education.

Implementation Action 6.C: The Town should work with non-profit organizations, such as the Vermont River Conservancy and the White River Partnership, to acquire land along the White River for recreational access to the River.

Policy D: Protect and enhance recreational opportunities and the natural beauty and scenic characteristics of Sharon.

Implementation Action 1.D: The Conservation Commission should encourage and participate in the conservation of key natural resources, scenic areas, and historic structures.

Implementation Action 2.D: The Planning Commission should ensure that major developments or subdivisions are sited and designed to preserve their recreational resource value.

Implementation Action 3.D: The Planning Commission, through the subdivision review process for major developments, should evaluate and set aside land or facilities for parks, public access or trails. (See 24 V.S.A., Section 4417)

Implementation Action 4.D*:* The Selectboard shall preserve Class 4 roads for current or future recreational or trail purposes and not discontinue them.

Implementation Action 5.D: The Selectboard should adopt the land conservation recommendations made by the Linking Lands Alliance to create

greenways with neighboring towns so that wildlife will have contiguous undeveloped land for habitat.

Agricultural & Forestry Resources

Agriculture and forestry define the landscape of Vermont and in the past were major industries in the region. Changes in these industries have led to instability. The nature of Vermont agriculture and forestry is evolving and the pressures for change come from both inside and outside the state. These changes pose difficult challenges, not just for landowners, but for all who desire a rural lifestyle and working landscape. And yet, opportunities for new and innovative farm and forestry businesses are on the rise. How we maintain the working landscape and support the agriculture and forest businesses will have a long-term impact on our natural environment and our local economy.

Farm and Forest Land Issues

Land and Taxation

An economic restructuring or a shift away from agriculture to the service and tourism industries has placed economic pressure on farm owners. The higher cost of owning land and lower commodity prices make it difficult to rationalize conventional farming. Owners of forestland may be faced with a tax bill on land that exceeds its economic value for timber production. This, coupled with a need for house lots or development land has prompted many landowners to place their properties on the market.

Current Use Taxation

For farmland and forestland conservation to be successful, the pressures posed by the market value approach to taxation must be solved for both the landowner and municipality. One means to address this issue has been the Vermont Current Use Program administered by the State, which sets valuations on farm and forest land based on their productivity values rather than their development values. In 2020, there are 14,665 acres of land in Sharon enrolled in the Current Use Program. This accounts for nearly 64% of all lands in Sharon. The State of Vermont owns 1,333.5 acres, with another 500 acres consisting of the I-89 corridor. Additionally, the Town of Sharon owns 100-acres in Current Use and the Sharon Academy owns 94-acres.

The 2020 Use Values are $382 an acre for agricultural land, $151 an acre for forest land and conservation land, and $113 an acre for forest land and conservation land greater than one mile from a Class 1, 2, or 3 Road.

Agricultural Trends

The United States Census of Agriculture conducts an analysis of all farms and ranches in the country every five years, with the most recently completed in 2017. The 2015 Sharon Town Plan last illustrated the differences between the 2002 and 2007 agricultural census reports. This comparison showed that farming in Vermont is slowly shifting away from the larger scale farms that developed during a trend toward consolidation. Between 2002 and 2007, the number of farms in Vermont increased by 6%. The average size of farms decreased from 189 acres to 177 acres in the five years between agricultural censuses. This reduction in average size is most likely attributed to the fact that 37% of Vermont's farms in 2007 were considered "small-scale" (less than 50 acres) farms that sell under $2,500 in agricultural products per year.

A similar comparison was done between the 2012 and 2017 Census of Agriculture reports. The number of Vermont farms between these two census reports decreased by 7.2% from 7,338 farms in 2012 to 6,808 farms in 2017. The average size of Vermont farms increased from 171 acres in 2012 to 175 acres in 2017. About 41% of farms in 2017 are considered small scale, a small increase from 39% of farms being small scale in 2012. In 2017, the market value of agricultural products sold statewide was approximately $781 million, an increase from $776 million in 2012. This data shows that the total number of farms is decreasing in Vermont, but that average farm acreage, revenue, and the number of small-scale farms are holding steady.

For census purposes, a farm is defined as "a place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year."

Maple syrup is one of Vermont's most significant agricultural exports. The state is the nation's top producer of maple syrup. Over the past decade, maple syrup production has increased steadily as more taps and better technology (like vacuum taps and reverse osmosis machines) increase annual yields. In 2019, maple production was up seven percent compared to 2018 with over two million gallons produced. Yet the price of maple syrup between 2018 and 2019 was down nine percent at just over $129 million as the value of production.

Over the past couple of decades, a growing movement in sustainable agriculture—involving increased local food production and consumption, value-added processing, and diversified farms—has taken off. In 2009, the State of Vermont passed legislation that created the Farm to Plate Investment program, part of which included the creation of the Farm to Plate Strategic Plan. This program was reauthorized by the Vermont State Legislature in 2019. The Farm to Plate Strategic Plan analyzes a series of product, market and issues that highlight the current conditions, bottlenecks and gaps, opportunities, and recommendations for a wide range of topics related to agriculture and food.

The distinctive nature of the working landscape gives Vermont its beauty. Farms provide locally-produced food, open space for wildlife habitat, scenic views and a connection to the land and its historical use that is hard to find elsewhere. Farms also help our towns avoid sprawl and maintain small town and village settlement patterns. Given present-day challenges to farming, to continue to receive the benefits farming has to offer a community should encourage agricultural activity and enterprises.

Forestry Trends

Vermont's forest product industry generates an annual economic output of $1.4 billion and supports over 10,000 jobs in forestry, including logging, processing, specialty woodworking, construction, and wood heating. Forest-based recreation adds an additional $1.9 billion and 10,000 jobs to Vermont's economy. Markets for high grade wood are healthy but cannot singularly sustain Vermont's forest products industry. Without healthy markets for low grade wood, Vermont is likely to see continued decline in the industry's in-state infrastructure such as logging operations, sawmills and kilns, as well as the local jobs they sustained.

Three primary trends have affected the region's forestland and its productivity. First, forests and farms may be subdivided into small lots which threaten the economic viability of forestry. The trend of land moving out of forest use to other uses will continue along with population growth, particularly in those areas where access and development conditions are suitable.

Funding of the Current Use Program has been identified by the Northern Forest Lands Council as a vital incentive to landowners to not over-harvest forests or opt for liquidation cutting of tracts. Taxes can contribute to a low rate of return on timber sales, prompting some conversion

to non-forest uses. Second, markets for timber and wood have experienced a glut of some products affecting prices, at least in the short term. While the numbers of mills in the region have declined, there has been a move to new markets, one being an export demand for hardwood logs and another being a demand for firewood, pulpwood and other specialty types. For a state mostly known for hardwood, the demand for pulp and firewood has led to better managed forests because it is generally the lower grades or poorer cuts that are being used.

Forest products continue to supply a significant share of the region's manufacturing sector, although the way statistics are kept makes this difficult to quantify. Overall, according to the Vermont Department of Employment and Training, jobs in the lumber and wood products industries have increased statewide. In looking at the Vermont forest products industry, it is worth noting that it, like agriculture, has virtually no impact in setting national trends as it is a relatively small producer.

A major long-term issue for the Vermont forest products industry is how to keep it from drifting further into the position of selling wood as a raw material without benefiting from the higher paying jobs associated with producing value-added wood products.

Sustaining the Agriculture and Forestry Industries

Planning policy and implementation efforts should be directed at sustaining agriculture and forestry pursuits and not just conservation of the resource. This is not only because it is the best way to keep the land open, but also because agriculture and forestry are meaningful industries in the Town and region.

Just as there are a variety of interests, there are a variety of tools than can be used to conserve these resources. Some are directed primarily at sustaining agriculture, others forestry, some are regulatory in nature, others are compensatory, and others voluntary. It is in the public interest to encourage conservation groups, landowners, local officials, and policymakers to utilize these tools.

Conservation Easements

Conservation easements are a common method used to ensure that the working landscape gets preserved. The Vermont Land Trust (VLT), Vermont's largest non-profit conservation organization, has conserved more than 1,950 parcels of land in agricultural and forestry use throughout the state, totaling 590,000+ acres, or 11% of the State. The majority of this land is for forestry use. The Upper Valley Land Trust is a local organization that has been conserving land in the immediate Sharon region. In their 2019 Annual Report, 1,608 acres over four properties were acquired, and conservation easements were established on 756 acres over eight properties in the Upper Valley.

Other key players in the State are the Nature Conservancy and the Vermont River Conservancy. The Nature Conservancy is a global organization dedicated to protecting ecologically important lands and waters for nature and people since its inception 60 years ago. In Vermont, the Nature Conservancy has protected more than 300,000 acres of land, over 1,200 miles of shoreline and manage and maintain 58 natural areas. The Vermont River Conservancy (VRC) is a statewide organization that has been protecting public recreational areas 1995. In total, VRC has conserved hundreds of acres across the state, including the Broad Brook Access point in Sharon.

Most land purchased with the intent of applying a conservation easement is funded, at least in part, by some form of grant from either state or private sources. As of 2020, the State of Vermont reports that there are 9,442 acres (36% of Sharon) of publicly and privately conserved

land in Sharon. The use of conservation easements has both pros and cons for municipalities, they include:

Pros

- Easements are flexible; they can be written to achieve the specific goals of the town involved.
- They are perpetual, and restrictions put on the conserved lands will remain in force even when the property is sold to a new party.
- They conserve scenic beauty and environmentally sensitive areas.
- Eased property remains on the tax rolls.

Cons

- Establishing an easement involves up-front costs, such as legal counsel, biological analysis, etc.
- There are long-term expenses involved with monitoring the restrictions within the easement on land use.

The Sharon Planning Commission acknowledges that conservation easements are one potential solution to preserving the working landscape and historic properties.

Farming, Forestry, and the Economy

In addition to preserving Sharon's working landscape and maintaining the community's aesthetic beauty, farming and forestry can have an economic impact. Vermont is within easy reach of millions of people in the urban areas of Boston, New York City, and Montreal. Additionally, Vermonters are increasingly seeking locally-sourced, sustainably-produced farm and forest products. Fuel prices and droughts have led to an increased interest in food and energy security. Vermont is a national leader in innovative education programs based on local food, agriculture, and healthy eating. It is also widely recognized for its strong network of land trusts and other nonprofits that are models for conserving farm and forest lands. Most recently with the onset of COVID-19, this interest in local food has only increased. Sharon and many other towns have seen an increase in the number of purchased Community Supported Agriculture (CSA) shares at local farms and markets. Residents who did not purchase a CSA have opted to buy more local foods and goods during the pandemic.

The Sharon Elementary School was one of the first to implement a Farm-to-Table lunch program for its students. Most of the food prepared for meals at the school are sourced locally within the immediate Region or from elsewhere in Vermont. The school also has a small student run garden that provides vegetables for school meals.

There is in Vermont a growing mix of emerging entrepreneurs and long-term land-based businesses that are evolving to stay competitive. They are producing maple syrup, biofuels, artisan cheese, specialty wood products, produce, breads, meats, vegetables, and other value-added agricultural and forest products. It is in the best interest of Sharon to encourage the continued development of these industries and to foster local interest in these products. While the Sharon Farmer's Market is no longer running, local residents and farmers often go to the Royalton Farmer's Markets to purchase and sell products.

Goals, Policies, and Implementation Actions for Agriculture and Forestry

Goal I: Encourage the conservation, wise use, protection, and management of the town's agricultural and forestry resources, to maintain Sharon's environmental integrity and to protect its unique and fragile natural features.

Policy A: Where contiguous areas of high-value farming or forestry exist, or have significant potential to exist, fragmentation of these areas into uses other than those related to agriculture or forestry is discouraged.

Policy B: Where high-value agricultural and forested land is identified, clustered or peripheral development is encouraged to protect such resources and prevent fragmentation and sprawling settlement patterns.

Implementation Action 1.B: The Sharon Planning Commission should revise its subdivision bylaw to encourage only clustered development in forest blocks and habitat connectors and on agricultural land.

Policy C: Contiguous forest and significant agricultural areas should remain largely intact.

Goal II: Encourage the economic growth of agricultural and forest operations at a scale that is appropriate for Sharon.

Policy D: Farmers, loggers, and foresters should use Accepted Management Practices (AMP) and are encouraged to implement Best Management Practices (BMP) in their operations and to minimize point and non-point source pollution.

Policy E: Sharon residents should continue to support local farmers markets and CSAs.

Policy F: Encourage the continued development of on-site, agricultural and forestry value-added-products based businesses, as well as encouraging farmer's markets, CSA drop-off points and other community events that allow residents easy access to such products.

Policy G: On-site value-added forest-based businesses that do not meet the definition of home-based businesses in this Town Plan, such as firewood processing or milling of lumber at a timber harvest's log landing, shall be limited to products produced on-site and temporary in nature.

Policy H: Preserve recreational and scenic access by ensuring that at the completion of logging projects all roads and trails are restored to their previous condition.

Implementation Action 1.H: The Selectboard should develop a policy to protect and preserve Class 4 roads and Legal Trails.

Chapter 9: Health & Wellness

Chapter Goals

I. *Promote the health and wellness of residents in Sharon.*

The health and safety of Sharon residents is of the utmost importance. Sharon's vision for health, wellness and safety is that all citizens in the community have access to high quality, affordable, physical and mental health services through local providers; that employers and individuals support healthy lifestyles and environments; that the well-being of children is a central focus; that prevention, personal wellness and reduction of pain are strong areas of focus from birth to death; that domestic violence and substance misuse are unacceptable in our families and community; that the elderly and disabled citizens have adequate health and wellness support to remain in their homes and remain integrated in their community; and that all residents have access to prompt and effective services in the event of an emergency.

The Town of Sharon seeks to elevate the vitality of its citizens by including a comprehensive element dedicated to health and wellness in its Town Plan. While speaking to health in the Town Plan is not required in state planning statute, this chapter will ensure that public health and wellness remains a top Town priority. TRORC was the first regional planning commission in Vermont to include a chapter in the Regional Plan on health in an effort to bring health related issues into planning. Many other elements of this Town Plan also have an impact on health, including preservation of green space; clean water; sidewalks that encourage walking; and design of new development to promote human interaction, reduce the use of vehicles, and support local and healthy food.

Health Care Facilities

Health care facilities are essential in the prevention, treatment, and management of illness, and in the preservation of mental and physical well-being through the services that they offer. Rural locations such as Sharon are served by small facilities that can assist residents with general health care needs but are not suited for more complex acute care services that require specialized services and equipment. Sharon is home to Sharon Family Health and is within reasonable driving distance of the South Royalton Health Center, the Bethel Health Center, Gifford Medical Center, Dartmouth Hitchcock Medical Center, VA Medical Center and Alice Peck Day Hospital.

Sharon Health Initiative

The mission of the Sharon Health Initiative is to provide personal attention and assessment, as well as advocacy and referral within the health care system to all Sharon residents, particularly for older residents. This mission is achieved through the actions of a Community Health Care Coordinator (CHCC). This part-time position is funded by a grant from the Upper Valley Community Nursing project and through individual donations. For individuals wanting to use this service, there is no charge. Residents can access information about the Sharon Health Initiative at https://sharonvt.net/sharon-health-initiative/.

Healthy Food Access

Food access is not simply a health issue but also a community development and equity issue. For this reason, access to healthy, affordable, and culturally appropriate food is a key component not only in a healthy, sustainable local food system, but also in a healthy, sustainable community. Stores, farm stands and farmers markets, community meals, and food shelves in Sharon and nearby towns are all opportunities to create access to healthy foods.

Healthy Homes

Housing is the best-known predictor of health. Lead exposure can lead to significant abnormalities in cognitive development; asbestos and radon exposure can increase the chance of developing lung cancer; uncontrolled moisture, mold, pests, and other triggers cause or exacerbate asthma and other respiratory dysfunction; inadequate heat can lead to use of inappropriate heating sources potentially resulting in fires or carbon monoxide poisoning; and poorly maintained stairwells and other structures can cause injuries. The risk of falls for older adults is another healthy home concern, particularly when these adults are living in old housing stock that may have uneven floors, narrow stairs, or other potentially hazardous features. Sharon residents can make their homes healthier by accessing services provided by organizations such as Capstone for fuel assistance, or the State of Vermont, Economic Services, for Fuel Assistance, Essential Person (live-in care), and Reach Up (households with children) programs.

Environmental Quality

Safe air, land, and water are fundamental to a healthy community environment. An environment free of hazards, such as secondhand smoke, carbon monoxide, allergens, lead, and toxic chemicals, helps prevent disease and other health problems. Implementing and enforcing environmental standards and regulations, monitoring pollution levels and human exposures, building environments that support healthy lifestyles, and considering the risks of pollution in decision-making can improve health and quality of life.

Issues of particular concern to Sharon are:

- Housing Stock — Like most of Vermont, its housing stock and infrastructure are old and more likely to contain lead or other hazards.
- Brownfields — There are some potential sites in Sharon needing remediation.
- Water Quality — Due to Sharon's placement in the watershed, pollutants from upstream can affect water quality in the White River.

Substance Misuse Prevention

Building a positive town culture that promotes healthy behaviors also significantly reduces risky behaviors such as substance misuse. Town policies are an important mechanism for creating healthy culture since citizens, especially youth, get "messages" from what they see in their communities, thereby influencing their choices.

Active Living & Active Transportation

As the built environment has become increasingly car-centric, levels of physical activity have correspondingly declined. Reduced physical activity has resulted in population weight gains. To counter these trends, it is necessary to make communities more conducive to physical activity once again, particularly walking and cycling. Bicycles are used both for transportation and

recreation. Bicycle transportation is used for work or conducting errands. Recreational users include local residents who see the health benefits of the sport and visitors who come to Vermont to experience the outstanding scenery. Walking is an important part of community life and, like bicycling, actively contributes to the vitality of our roads, reduces our dependence on the automobile, and provides a healthy recreational opportunity.

Social Inclusion & Sense of Community

Social inclusion represents a vision for a "society for all" in which every individual has rights, responsibilities and an active role to play. Creating spaces for people of all ages and with varying degrees of abilities is imperative to helping create healthy communities. Sharon is a place where a wide variety of traditions, values, and spiritual practices are honored. Residents are able to seek inner peace, meaning, purpose, connectedness, wisdom, and guidance in our own ways. Faith- and values-based communities actively seek to understand and support one another.

Sharon residents in the 2020 Community Survey identified the following events and aspects of Sharon that they value the most:

- Baxter Library Book Sale;
- Recreation in the White River and Downer State Forest;
- Sprouty Race;
- Sharon Health Initiative;
- Seven Stars Art Center;
- Old Home Day;
- Sharon's Religious Institutions;
- Town Meeting; and
- Green-up Day

Planning for Health

A Health Impact Assessment (HIA) is a systematic process that uses an array of data sources and input from stakeholders to determine the potential effects of a project on the health of a population. HIAs provide recommendations on monitoring and managing those effects. HIAs are conducted before decisions are made, so that there is an opportunity to design or implement projects that maximize positive health outcomes. Vermont Department of Health Offices of Local Health may be able to assist Towns with HIAs.

Town Health Officers are given authority by the Vermont statutes to investigate and mitigate any potential or existing public health hazard in his/her town. The health officer investigates upon receipt of information regarding a condition that may be a public health hazard and enforces the rules and permits issued by the Vermont Department of Health. The Town Health Officer may be contacted through the Town Offices.

Goal, Policies and Implementation Actions

Goal I: Promote the health and wellness of residents in Sharon.

Policy A: Increase access to healthy foods.

Implementation Action 1.A: Explore barriers to and increase options for food access in Sharon, such as re-establishing the farmer's market.

Implementation Action 2.A: Support organizations like the Sharon Food Shelf and explore additional opportunities and locations for similar services.

Policy B: Maintain sufficient, safe, and healthy affordable housing.

Implementation Action 1.B: Work with local housing authorities to create a variety of housing types and ownership models.

Policy C: Minimize the risks to human health and the environment posed by hazardous sites.

Implementation Action 1.C: Consider conducting Health Impact Assessments for proposed projects when appropriate.

Policy D: Promote active transportation through walking and biking.

Implementation Action 1.D: Gradually make the major roads in Sharon more walking and biking friendly.

Policy E: Improve parks, recreation facilities, and open spaces for accessibility and community mingling.

Implementation Action 1.E: Promote the use of park and recreation facilities and expand walking and biking opportunities.

Implementation Action 2.E: Consider accessibility when developing public spaces and recreational opportunities.

Policy F: Reduce concentrated exposure to alcohol, drugs, and tobacco and nicotine products.

Implementation Action 1.F: With the help of the community nurse and other organizations, raise awareness of the nature and seriousness of substance abuse and driving under the influence.

Implementation Action 2.F: Encourage smoke-free environments.

Policy G: Support the wellbeing and safety of children and families

Chapter 10: Implementing the Plan

Title 24, Chapter 117, §4382(7) requires a Town Plan to contain a "recommended program for the implementation of the objectives of the development plan".

Implementation can be approached in multiple ways some regulatory and some non-regulatory, they include (but are not limited to) the following:

Regulatory	Non-Regulatory
Zoning & Subdivision Bylaws	Design a Capital Budget & Program
Strengthening Town Plan language to clearly influence Act 250 proceedings (use of direct language, such as "shall")	Advisory Committees (i.e., Conservation Commissions or Energy Committees)
Official Maps	Education/Outreach on important issues
Access Permits - Town Highways Only (Selectboard)	Purchase or acceptance of development rights
Flood Regulations & National Flood Insurance Program	Follow-up on recommendations for action in Plan

Responsibility for Implementation

In order to ensure that the policies of this Plan are implemented, it is essential to identify which municipal panel, organization or citizen is most suited to act on them. Throughout this Plan, the Planning Commission has identified recommendations for actions and indicated who should be responsible for them. Generally, responsibility for implementation of the Plan falls to either the Planning Commission (in the case of implementing changes to land use regulations) or the Selectboard (in the case of implementing municipal policy). However, advisory committees as well as other community organizations could also have responsibilities for implementation.

In addition to assigning responsibility, the Planning Commission should also keep track of progress made toward implementing the goals, policies and implementation actions of this Plan. This information will be useful to identify areas where additional effort needs to be applied to achieve implementation. It can also be used to describe how successful the community has been at implementation in the next iteration of this Plan, and to guide future policy.

In order to track the progress of implementation, the Planning Commission has included a chart that identifies each implementation action, the responsible party, priority, timeline, and cost.

Responsible Party Acronyms

SPC	Sharon Planning Commission
TRORC	Two Rivers-Ottauquechee Regional Commission
ANR	VT Agency of Natural Resources
VTrans	VT Agency of Transportation
CC	Sharon Conservation Commission
SB	Sharon Selectboard
EC	Sharon Energy Committee
WRP	White River Partnership
VRC	Vermont River Conservancy
RF	Sharon Road Foreman
FD	Sharon Fire Department
4 Towns	4-Town Coalition
ARC	American Red Cross
SHS	Sharon Historical Society
HO	Health Officer

Priority key: Low (not really important), Medium (somewhat important), High (very important)

Timeline key: ASAP (right now), Short-term (1-3 years), Mid-term (4-8 years), long-term (over 8 years), ongoing (always occurring)

Cost key: low (less than 10k), moderate (10-100k), high (more than 100k)

	Action	Responsible Party	Priority	Timeline	Cost
Chapter 2: Land Use					
Forest Conservation					
1	Educate landowners about the many benefits of conserving their lands	SPC CC	Medium	Ongoing	Low
2	Encourage sustainable forest management through enrollment in Vermont's Current Use program (Agricultural and managed Forest Land Use Value Program)	SPC CC	Medium	Ongoing	Low
3	Discourage subdivisions of less than 27 acres in the Forest Conservation Area to maintain landowner eligibility for Current Use enrollment (2-acre house site plus 25 acres of forest)	SPC CC	Medium	Ongoing	Low
4	Establish a land acquisition fund to promote conservation easements	SPC CC	Medium	Ongoing	Medium

	Action	Responsible Party	Priority	Timeline	Cost
5	Establish an impact fee program that would require major developers to pay a fee toward protection or restoration of town-owned land, forest, and recreation areas.	SPC CC TRORC SB	Medium	Ongoing	Low
	Flood Resilience				
1.A	Existing homes and businesses that are at serious risk of flood damage should be identified and prioritized for mitigation actions such as elevation, relocation, purchase, or demolition.	SPC, ANR, WRP, VRC	High	Ongoing	High
1.C	The Town should work with VTrans and TRORC on advocating for and improving the flood capabilities of State or Town-owned transportation infrastructure.	SB, TRORC, VTrans	Medium	Ongoing	Medium
2.C	The Selectboard should continue to uphold road and bridge standards recognizing the 100-year storm impact and flood levels caused by increased intensity of storms as a result of climate changes.	SB, TRORC, VTrans	Medium	Short-term	Low
3.C	The Town should maintain and update the town bridge and culvert inventory, and the road erosion inventory, as town infrastructure is replaced and improved.	SB, Road Foreman, TRORC	Medium	Ongoing	Medium
1.D	The town should identify and purchase a suitable piece of land for the future relocation of the Fire Station and Emergency Services. This property should be accessible to I-89 and not be vulnerable to flooding.	SB, Fire Department	Medium	Long-term	High

	Action	Responsible Party	Priority	Timeline	Cost
1.E	Sharon should work with ANR, WRP, TRORC, and landowners to lessen flood risks by restoring natural channel functions through berm or dam removals, intentional lowering of streambanks, riparian buffer plantings, and river corridor easements.	SB, SPC, ANR, TRORC, WRP	Medium	Long-term	Low
1.G	The Planning Commission should work with ANR and TRORC to strengthen the Town's Flood Hazard Bylaw in order to mitigate risks from inundation, erosion, and flash flooding.	PC, ANR, TRORC, WRP	High	Short-term	Low
2.G	The Town should continue to develop flood mitigation plans, emergency preparedness procedures, and recovery procedures.	SB, TRORC	Medium	Ongoing	Low
3.G	Post-event recovery and reconstruction within the river area should be managed according to the Vermont River Program's best practices in order to avoid negative impacts downstream.	SB, SPC, ANR, TRORC, WRP	Medium	Ongoing	High
Chapter 3: Transportation					
1.A	The Town should work with Vermont Law School on partnering in carpools and vanpools.	EC, SB	Low	Mid-term	Low
2.A	The Town should expand the Sharon Health Initiative and Dial-A-Ride programs to include helping residents travel to doctor's appointments and shopping in other Upper Valley Towns.	TRORC, EC, SB	High	Short-term	Moderate

	Action	Responsible Party	Priority	Timeline	Cost
1.C	Based on the completed stone culvert inventory, a capital plan should be created to properly maintain these historic structures.	SB	High	ASAP	Moderate
1.D	Inventory and prioritize roads, bicycle ways, walkways, and other transportation infrastructure with town equipment, facilities, and buildings and incorporate these into a Capital Budget and Program.	SB	High	ASAP	High
1.E	The Selectboard should develop and adopt a Class 4 road and Legal Trail recreational use policy to determine appropriate uses.	SB	High	Short-term	Low
2.E	The Selectboard should develop and adopt a Class 4 road and Legal Trail recreational use policy to determine appropriate uses.	SB	High	Short-term	Low
1.H	The Sharon Planning Commission should evaluate Sharon's Traffic Ordinance and Subdivision Regulations for consistency with the goals and policies of this Plan.	SPC, SB	High	Mid-term	Low
2.H	The Town shall continue to work cooperatively with the Two-Rivers Ottauquechee Regional Commission and with VTrans to coordinate future transportation and land use planning.	SPC, TRORC, VTrans	Medium	Mid-term	Low

	Action	Responsible Party	Priority	Timeline	Cost
3.H	The Selectboard should continue to implement the Municipal Roads General Permit (MRGP).	SB	High	Short-term	Low
1.I	The town should create a vision and policy for the maintenance of Class 3 and 4 roads that preserves rural character and accommodates multiple low-impact uses. This policy should address the visual effects of stormwater management and value the preservation of tree-lined roads.	SPC, TRORC, ANR, SB	Medium	Mid-term	Low
Chapter 4: Utilities, Facilities, and Education					
Town Owned Facilities and Land					
1.A	Monitor outsourced public safety, waste disposal, and recycling programs and provide input on necessary improvements.	SB	Low	Ongoing	Low
1.B	Explore grant funding to analyze existing private water and wastewater (septic) systems in the Village Area.	SB	Medium	Short-term	Medium
1.C	Implement recommendations made by the energy audit and CIP regarding energy efficiency improvements in town buildings.	SB	Medium	Short-term	Medium
1.D	Work with non-profit agencies and the Agency of Natural Resources to purchase or share the land containing the state VTrans garage on Route 14 to provide additional public access to the White River.	SB, CC, ANR	Low	Short-term	Low-medium
Health Care Facilities					

	Action	Responsible Party	Priority	Timeline	Cost
1.A	Participate in 4-Town decisions regarding new local senior living and health care facilities to encourage their development.	SB, TRORC, 4 towns	Medium	Short-term	Low
1.B	The Selectboard should continue to support Sharon's Health Care Coordinator who provides personal attention and assessment, as well as advocacy and referral within the health care system for community members.	SB	Medium	Ongoing	Low
Emergency Management and Services					
1.A	To meet the needs of the town, the Selectboard should continue to compare the scope and cost effectiveness of police services offered by nearby jurisdictions.	SB	High	Ongoing	Low
1.C	The Selectboard, in conjunction with the Sharon Planning Commission and first responders, should periodically review and revise road access standards as needed.	SB, SPC	Low	Short-term	Low
1.E	The Selectboard should annually adopt and update the LEMP, and given recent events, pay special attention to rail safety.	SB	Low	Annually	Low
2.E	The Selectboard and Emergency Management Director (EMD) should document a clear plan for the use of an emergency shelter in the LEMP.	SB, EMD, American Red Cross	Low	Short-term	Low
3.E	Sharon's emergency management team should receive adequate training in the incident Command System (ICS). This training is required to adopt the LEMP.	SB	Medium	Short-term	Low

	Action	Responsible Party	Priority	Timeline	Cost
1.F	The Town should update and adopt the Hazard Mitigation Plan every five years.	SB	Medium	Short-term	Low
2.F	The Selectboard should assign a representative to attend the State Emergency Planning Committee (LEPC#12) meetings.	SB	Medium	Ongoing	Low
Education					
1.A	The Selectboard should meet annually with the Sharon Elementary Schoolboard to determine if school building needs are adequate.	SB, School Board	Medium	Ongoing	Low
1.B	The Schoolboard should identify career, vocational, and technical education needs by working with employers and the staff of the secondary schools that Sharon students attend.	Schoolboard	Medium	Mid-term	Low
1.E	The Planning Commission should revise current Subdivision bylaws to ensure development does not exceed the Town's capacity to provide services.	SPC, TRORC	Medium	Short-term	Low
Chapter 5: Energy					
1.A	The Town should consider municipal or community renewable energy generation and battery storage systems to serve town facilities, with funding by third-party financing, municipal funds, bonds, grants, and/or government incentives.	SB	Low	Short-term	Low

	Action	Responsible Party	Priority	Timeline	Cost
1.C	The Town should participate in programs such as the Vermont Climate Pledge Coalition to commit to meeting Vermont's energy and climate goals.	SB, SPC	Medium	Short-term	Low
2.C	Implement the recommendations of the Energy Audit that was performed on all town-owned buildings.	SB, REC	Medium	Medium	Medium
1.D	The Town should install electric vehicle charging stations on municipally owned property.	SB	Medium - High	Short-term	Medium
1.J	Town officials should support the Sharon Energy Committee's efforts to increase public awareness of energy conservation practices and weatherization programs.	SB, EC	Medium	Short-medium	Low
2.J	The Town should support bringing renewable energy workshops into the classroom by working with organizations such as Vermont Energy Education Program (http://veep.org).	EC, School Board	Low	Short-term	Low
3.J	The Town should support programs such as Vital Communities' Weatherize Upper Valley to help the Energy Committee provide outreach and education to residents regarding ways to conserve energy and increase the use of heat pumps and advanced wood heat, stoves, and furnaces.	EC	High	ASAP	Low
1.K	The Town should consider requiring a reimbursable fee to ensure that contractors properly file their Residential Building Energy Standard Certificates.	REC, EC, SB	Medium	Short-term	Low

	Action	Responsible Party	Priority	Timeline	Cost
1.L	The Town, with help from the Energy Committee, should adopt municipal procurement and purchasing policies, such as a Green Procurement Policy, that encourage the use of energy efficient and Energy Star rated products.	REC, EC, SB	Medium	Short-term	Low
2.L	The Planning Commission should develop a Solar Ready Ordinance and an EV Ready Ordinance.	REC, PC, SB, TRORC	Medium	Mid-term	Moderate
3.L	The Selectboard should authorize the Energy Committee to track municipal energy use and costs and develop an energy budget with periodic energy audits to manage Town energy consumption.	EC, SB, REC	High	Short-term	Moderate
4.L	The Town should incorporate energy efficiency and weatherization projects (developed from the energy audit) into the municipal Capital Budget and Program.	EC, SB	Medium	Ongoing	High
5.L	The Town should continue to develop facility maintenance, efficiency measures, and operations policies to maximize energy efficiency while maintaining comfort levels for employees and visitors.	REC, EC, SB	High	Short-term	Moderate
1.M	The Town should pursue sidewalk, recreation paths, bicycle lanes, and other Complete Streets projects in the Village Center to reduce local transportation energy use and promote healthy lifestyles.	SB	Medium	Long-term	High

	Action	Responsible Party	Priority	Timeline	Cost
Chapter 6: Housing					
1.A	The Planning Commission should inform Sharon homeowners of their right to develop an accessory dwelling unit (ADU) on their owner-occupied property with a single-family residence pursuant to 24 V.S.A §4412(E) for long term rather than short-term rental.	SPC	Medium	Short-term	Low
2.A	Work with Habitat for Humanity and other non-profit housing organizations and/or land trusts to develop perpetually affordable housing.	SB	Medium	Ongoing	Moderate
3.A	The Sharon Planning Commission should keep its subdivision regulations up to date.	SPC	High	Short-term	Low
1.B	Encourage stakeholder participation in housing workshops to better understand methods to reduce the cost of building new energy efficient housing.	PC, SB	Medium	Ongoing	Low
2.B	The Energy Committee should continue to give existing and new homeowners information from Efficiency Vermont on energy efficiency rebates.	EC	Medium	Ongoing	Low
1.D	Participate in the study that is helping to identify areas in the 4-town region most suitable for new residential and special needs housing.	SPC, SB	High	Short-term	Low
1.E	Revise Sharon's subdivision regulations to direct future housing development and consider other ordinances that further the goals of this Plan.	SPC	Medium	Mid-term	Low

	Action	Responsible Party	Priority	Timeline	Cost
2.E	Encourage the preservation of historic structures in ways that appropriately serve the need for affordable housing.	SPC, SHS	Medium	Long-term	Low
Chapter 7: Economic Development					
1.A	Partner with regional economic development groups to encourage and promote businesses.	SB	Medium	Medium	Low
1.B	Continue to participate in the Our Four Town Future forums with Strafford, Tunbridge, and Royalton.	SB, CC, SPC	High	Ongoing	Low
2.B	Work with the 4-Town region to create a sound economic development plan to help guide growth and improve the local economy.	SPC, SB, TRORC	High	Short-term	Low
3.B	Develop a mission statement to guide economic development in the 4-Town region.	SPC, SB, TRORC	Medium	Medium	Low
1.C	Consider conducting a study in the 4-town region on childcare needs to identify prospective facilities.	SPC	High	Short-term	Low
2.C	Identify prospective infill opportunities in Sharon Village for a new childcare facility.	SPC	High	ASAP	Low
1.D	Explore the development of a revolving loan fund to help encourage small-scale economic development in the Town of Sharon.	SB	Low	Long-term	Low
1.E	The Sharon Planning Commission should investigate regulatory efforts to prevent strip development in town.	PC, TRORC, VTrans	High	ASAP	Low
1.F	Continue sending a representative of Sharon to ECFiber board meetings.	SB	High	Ongoing	Low

	Action	Responsible Party	Priority	Timeline	Cost
1.G	Support the Sharon Farmers' Market, Farm-to-Table, and other opportunities for the region's residents to display and sell their products or wares.	SB	High	Ongoing	Low
2.G	Encourage home-based businesses and telecommuting.	SPC	High	Short-term	Low
1.H	The Planning Commission will work with the Selectboard and any other committees/ organizations to review commercial development proposals.	SPC, SB, TRORC	High	Ongoing	Low
1.I	The Selectboard will work with the Two Rivers-Ottauquechee Regional Commission to renew the State Designated Village before it expires in July 2023.	SB, TRORC	High	Short-term	Low
2.I	Distribute information periodically on the many tax credits to business owners in the State Designated Village Area.	TRORC	High	Ongoing	Low
Chapter 8: Resources					
Natural Resources					
The White River					
1.A	The Town should consider building a Conservation Fund to purchase parcels of land along the White River that are unique assets for preservation or at risk of flooding.	SB, CC, ANR	Low	Ongoing	Medium - High
2.A	The Town should consider the corridor conservation, erosion hazard, and habitat restoration projects recommended by the River Corridor Management Plan and implement them where appropriate.	SB, SPC, ANR, TRORC, WRP	Medium	Long-term	Low

	Action	Responsible Party	Priority	Timeline	Cost
1.C	The Town should adopt a Riparian Buffer bylaw.	SB, SPC, ANR, WRP	Low	Mid-term	Low
1.D	The Town should create safer public access areas on the White River for canoes and kayaks.	SB, ANR, WRP	High	Short-term	Medium
2.D	The Town should take action to safely eliminate poison ivy and other toxic plants between the White River and Route 14 to improve public access.	SB, ANR, WRP	High	Short-term	Low
3.D	The Town should purchase, trade land, or accept a donation of the VTrans storage facility along the White River to afford better public access to the river.	SB, VTrans	Low	Long-term	Low
Groundwater and Surface Water					
1.E	The Town should notify owners of properties located in the flood hazard area about the availability of FEMA's National Flood Insurance Program to protect property subject to flooding.	SB, SPC	High	Short-term	Low
2.E	The Town should develop planning principles for the maintenance and enhancement of streamside resources consistent with this Plan.	SB, TRORC, PC	Medium	Medium	Medium
1.H	The Town should create and adopt a groundwater resources protection overlay zone.	SB, SPC, ANR, TRORC	High	Short-term	Low
2.H	The Town shall carefully review and monitor land use activities which potentially threaten groundwater quality to prevent degradation of the resource.	SB, SPC	High	Ongoing	Low
Wetlands					
1.A	The Town should conduct a wetland study and make recommendations on wetlands protection and identification.	SB, SPC, CC, ANR, TRORC, WRP	High	Short-term	Low

	Action	Responsible Party	Priority	Timeline	Cost
Flora, Fauna, and Natural Communities					
1.B	Town employees and contractors should become familiar with the best management practices to prevent the accidental spread of invasives.	SB, ANR, VTrans	High	Ongoing	Low
2.B	The Town should develop an action plan to deal with the Emerald Ash Borer and educate landowners.	SB, ANR	High	Short-term	Low
3.B	The Town should work with the CC to develop educational material to help reduce new invasive plant infestations (e.g., sources of imported seeds), which would also serve as guidance for new development projects.	SB, SPC, CC, ANR	High	Short-term	Low
4.B	The Town should time roadside mowing to minimize the spread of invasive species.	SB	High	Ongoing	Low
5.B	The Town should conduct an inventory of invasive plants that can be used as baseline data to assess the future spread.	SB, CC	Medium	Ongoing	Low
Habitat Protection					
1.A	The Town should continue to participate in the Linking Lands Alliance and implement wildlife habitat recommendations.	SB, SPC, CC, ANR	Medium	Ongoing	Low
1.B	The Town should conduct additional field inventories to locate unmapped significant natural communities in Sharon.	SB, SPC, CC, ANR	Medium	Mid-term	Low
Mineral Resources					
1.B	The Town should adopt regulations governing the extraction of earth resources.	SB, SPC, CC, ANR	Low	Mid-term	Low

Scenic Resources					
1.A	The Town should employ a process for evaluating the impact of any development on scenic resources and recommend design guidelines for those involved in the preparation and review of design proposals.	SB, SPC, TRORC	Medium	Mid-term	Low
Aesthetics and Outdoor Lighting					
1.F	The Planning Commission should develop guidelines for lighting fixtures in the village.	SPC, EC	Low	Mid-term	Low
Historical & Archeological Resources					
1.A	The Planning Commission should develop guidelines for the review and preparation of development proposals as a means of ensuring the conservation of historic and cultural resources.	SPC, SHS	Medium	Ongoing	Low
1.C	The condition of the Old Town Hall should be evaluated and funding sought for improvements, including energy efficient environmental controls.	SPC SB SHS	Medium	Ongoing	Low
1.D	Application for Scenic Roads designation, including historic stone culverts and bridges, should be considered for certain rural roadways.	SPC CC SHS VTrans	Medium	Ongoing	Low
2.D	The Selectboard should adopt a road policy to protect the historic character (to include trees and width of road) of Class 3 town roads.	SB SPC SHS	Medium	Ongoing	Low

1.E	Historic resources of the Town of Sharon should be further inventoried, analyzed, and mapped and the resource inventory should include known archeological sites.	SPC SHS VTrans	Medium	Ongoing	Medium
2.E	The town should seek funding to protect town owned historic buildings.	SB SHS	Medium	Ongoing	Low
1.F	Preservation of historic and archeological resources through easements or covenants is encouraged.	SPC SHS VTrans	Medium	Ongoing	Low
1.H	Encourage local townspeople or school children to write a history of the Town of Sharon.	SPC CC SHS SB S-elem	Medium	Ongoing	Low
Recreational Resources					
1.A	Encourage landowners not to post private property to allow others to recreate on private property when such use does not burden the owner.	SPC, SB	Medium	Ongoing	Low
1.B	The Rec Committee and Conservation Commission should inventory current and plan for future recreational facilities and programs.	RC, CC, SB	Medium	Long	Medium - High
2.B	A town-wide trail and recreation map of Sharon should be created to better educate the public on current public trails and recreational facilities.	CC, SB	Medium	Mid-term	Moderate
1.C	Prohibit development within 150 feet of the top of the White River bank, consistent with the Town's 2009 Stream Geomorphic Assessment.	SPC, SB	Medium	Mid-term	Low

2.C	Encourage partnerships between landowners, non-profit organizations, and local and state governments to protect river access, to acquire buffer strips (riparian zones), and to encourage river conservation easements on important segments.	WRP, CC	High	Ongoing	Moderate
3.C	Support the state's water quality anti-degradation policy.	CC, WRP, SB	High	Ongoing	Low
4.C	Develop appropriate land use at the town level and foster the protection and management of the White River, its tributaries and adjacent lands.	SPC, SB, CC, WRP	High	Ongoing	Low
5.C	Promote better public understanding and involvement with rivers as scenic and recreational assets through improved public education.	WRP, CC	Medium	Ongoing	Low
6.C	The Town should work with non-profit organizations, such as the Vermont River Conservancy and the White River Partnership, to acquire land along the White River for recreational access to the River.	WRP, SB, VRC, ANR	Medium	Mid-term	High
1.D	The Conservation Commission should encourage and participate in the conservation of key natural resources, scenic areas, and historic structures.	CC	High	Ongoing	Low
2.D	The Planning Commission should ensure that major developments or subdivisions are sited and designed to preserve their recreational resource value.	SPC	Medium	Ongoing	Low

3.D	The Planning Commission, through the subdivision review process, should evaluate and set aside land or facilities for parks, public access or trails. (See 24 V.S.A., Section 4417)	SPC	High	Ongoing	Low
4.D	The Selectboard should consider preserving Class 4 roads for current or future recreational or trail purposes and not discontinue them	SB	High	ASAP	Low
5.D	The Selectboard should adopt the land conservation recommendations made by the Linking Lands Alliance to create greenways with neighboring towns so that wildlife will have contiguous undeveloped land for habitat.	SB	Medium	Mid-term	Moderate
Agricultural & Forestry Resources					
1.B	The Sharon Planning Commission should revise its subdivision bylaw to encourage only clustered development in forest blocks and habitat connectors and on agricultural land.	SPC, SB	Medium	Short-term	Low
1.H	The Selectboard should develop a policy to protect and preserve Class 4 roads and Legal Trails.	SB, SPC	High	Short	Low
Chapter 9: Health & Wellness					
1.A	Explore barriers to and increase options for food in Sharon, such as re-establishing the farmer's market.	SB, SPC, ANR	Medium	Short	Low
2.A	Support organizations like the Sharon Food Shelf and explore additional opportunities and locations for similar services.	TRORC	Medium	Short	Low

1.B	Work with local housing authorities to create a variety of housing types and ownership models.	SB, RC	Medium	Ongoing	Moderate
1.C	Consider conducting Health Impact Assessments for proposed projects when appropriate.	Health Officer	Medium	Short	Low
1.E	Promote the use of park and recreation facilities and expand walking and biking opportunities.	SB, PC, CC, RC	Medium	Ongoing	Low
2.E	Consider accessibility when developing public spaces and recreational opportunities.	SB, SPC, CC	Medium	Ongoing	Low
1.F	With the help of the community nurse and other organizations, raise awareness of the nature and seriousness of substance abuse and driving under the influence.	CHCC	Medium	Ongoing	Low
2.F	Encourage smoke-free environments.	SB	Medium	Ongoing	Low

Appendix

Appendix A

A Capital Improvement Plan (CIP) was created for all town owned buildings in 2018 based on inspections carried out by Seiple Home Inspections, Inc. The CIP focused on improvements for the Historical Society, Town Office, Old School House, Baxter Library, and Town Garage buildings. Note that most of the necessary improvements and estimates were created in 2018 and need to be updated by the Selectboard. This excerpt from the CIP has been edited to reflect any new estimates obtained and has been formatted to fit the Town Plan document.

Priority is indicated by time order, with projects slated to begin within the next 3 years having high priority, projects occurring in the next 3 to 5 years having medium priority, and projects planned for 5 to 10 years having low priority.

Unless otherwise noted, project funding will come from the Town of Sharon General Fund.

Baxter Library	**< 3 YEARS**	**3 - 5 YEARS**	**5 - 10 YEARS**
Replace the furnace	Completed 2022 with high-efficiency heat pump		
Repaint interior where worn/damaged	500 - 1,000		
Attend to minor electrical clean-up, repair basement and interior (loose wires, connections)		100 - 500	
Repair/replacement of older steel supply and cast-iron drain piping, visible at the basement		1,000 - 2,000	
Drainage Project Design	7,000		
Drainage Project Construction*		10,000 -15,000	
Repair windows throughout			2,000 - 4,000
Total "Estimates"	7,500 - 8,500	11,100 - 17,500	2,000 - 4,000
*** Note:** Projected $15,000 ARPA funding for the drainage project has not been formalized.			

Old Town Hall/Sharon Historical Society Museum	**< 3 YEARS**	**3 - 5 YEARS**	**5 - 10 YEARS**
Replace rotted main beams and floor joists at gable ends**	24,518		
Replace south exterior asphalt ramp structure***	34,640		
Regrade north end of building to improve drainage	1,000 - 2,000		
Apply vapor barrier to crawl space dirt floor	500 - 1,000		
Insulate attic		1,000 - 2,000	
Trim exterior vegetation as necessary		250 - 500	

Old Town Hall/Sharon Historical Society Museum	< 3 YEARS	3 - 5 YEARS	5 - 10 YEARS
Paint exterior wooden windows and trim	3,000		
Re-point exterior stone and brick sidewall		1,000 - 2,000	
Install chimney cap		250 - 500	
Repair windows throughout			2,000 - 4,000
Replace/stabilize loose plaster at interior walls as-needed			1,000 - 2,000
Total "Estimates"	63,658 - 65,158	2,500 - 5,000	3,000 - 6,000
** Actual 2022 estimate			
*** The Town of Sharon received a matching grant from the Vermont Arts Council to replace the existing ramp with an ADA-compliant design, the Town is responsible for half this estimate.			

Old School House	< 3 YEARS	3 - 5 YEARS	5 - 10 YEARS
Remove/repair rotting exterior siding/trim surfaces, including some substrate (framing/sheathing)	5,000 - 10,000		
Remove aging fuel oil storage tank and replace with above ground tank		10,000 - 20,000	
Repair of heaving/settling exterior paved asphalt drive and parking lot surfaces		5,000 - 10,000	
Repair/replace older cast iron drain piping, visible at basement		1,000 - 2,000	
Repair first level half bathroom toilet		250 - 500	
Paint Exterior wooden surfaces throughout	7,500		
Total "Estimates"	12,500 - 17,500	16,250 - 32,500	0

Town Offices	< 3 YEARS	3 - 5 YEARS	5 - 10 YEARS
Remove/repair rotting exterior siding/trim surfaces, including some substrate (framing/sheathing)	5,000 - 10,000		
Repair air conditioning system	Not applicable - Mason's expense		
Trim exterior vegetation as-needed	250 - 500		
Unclog 1st floor sink drain	250 - 500		
Paint Rusting metal roof panels at front east wall		500 - 1,000	

Town Offices	< 3 YEARS	3 - 5 YEARS	5 - 10 YEARS
Repair chimney exterior brick & mortar & install cap		1,000 - 2,000	
Repair/Replace older cast iron drain piping visible at basement		1,000 - 2,000	
Minor window repair (broken)		500 - 1,000	
Paint exterior wooden surfaces throughout	7,500		
Total "Estimates"	13,000 - 18,500	3,000 - 6,000	0

Town Garage	< 3 YEARS	3 - 5 YEARS	5 - 10 YEARS
Feasibility Study – Replace / Renovate	40,000 - 50,000		
Highway Garage Remodel Stage 1 Architect Design	40,000 - 50,000		
Repair the well pressure tank, with anticipation that this appliance may need replacement	1,000 - 2,000		
Replace water heater	1,000 - 2,000		
Replace furnace	3,000 - 5,000		
Bring loft railing up to code	1,000 - 2,000		
Remove/repair damaged exterior metal sidewall and trim surfaces as necessary throughout		2,000 - 4,000	
Replace the metal panel roof covering throughout		10,000 - 20,000	
Repair of heaving/settling of exterior dirt driveway/parking area surfaces		5,000 - 10,000	
Improve access to furnace utility closet		2,000 - 4,000	
Replace underground fuel oil lines		1,000 - 2,000	
Repair/reinforce storage shed buildings as-needed			4,000 - 8,000
Total "Estimates"	86,000 - 111,000	20,000 - 40,000	4,000 - 8,000

Currently there is a $100,000 projected allocation from ARPA funding to offset these Town Highway Garage costs. This has not been formalized in a motion at this time. The Board will be evaluating the costs of renovation versus replacement of the Garage.

Appendix B

This appendix contains the Municipal Energy Data and Maps for the Town of Sharon, VT.

Two Rivers-Ottauquechee
REGIONAL COMMISSION

April 28, 2017

Peter Anderson
Planning Commission Chair
Town of Sharon
P.O. Box 250
Sharon, VT 05065

RE: Municipal Summary Worksheet - Energy

Mr. Anderson:

TRORC is pleased to have prepared and enclose a copy of the Municipal Summary Worksheet and maps for your town, which summarizes the type of data that is required to be in an "Enhanced Energy Plan" under the energy planning law passed last year and known as "Act 174". As you are aware, writing an "Enhanced Energy Plan" and seeking a determination of energy compliance is optional for communities. If your town chooses to write one and meets the municipal standards set by the Department of Public Service, the town plan receives substantial deference in renewable energy generation Certificate of Public Good process. The data in the attached document provides analyses and targets derived from regional analyses and targets. Municipalities ***may*** choose to rely on these "municipalized" analyses and targets to meet the standards in this section.

Municipalities which elect to use the analysis and targets provided by the TRORC will be presumed to have met the Analysis and Targets standards. Alternatively, municipalities may develop their own custom analyses and targets or supplement the analyses and targets provided by the RPCs with specific local data; if this option is chosen, the analysis and targets must include all of the same components and meet the standards required of regions, as described in the standard checklist. Some of the numbers such as current electricity use by town will need to be updated when TRORC receives new data. The Summary worksheet, maps, and the excel worksheet that feeds the data into the summary sheet will be emailed out and can also be found on the TRORC website under your respective town page site. If you have any questions about the attached document or energy planning for your community please don't hesitate to contact us.

Sincerely,

Christopher Damiani
Planner

cc: Peter G. Gregory, Executive Director, Dee Gish Town Energy Committee Chair, File

128 King Farm Rd.
Woodstock, VT 05091
802-457-3188
trorc.org
William B. Emmons, III, Chair
Peter G. Gregory, AICP, Executive Director

Municipal Template - Energy Data

The following is an explanation of the information displayed in the Municipal Template for Sharon.

The intent of the Municipal Template is to provide the municipality with data that can be used to ensure compliance with the requirements of Act 174 and "Enhanced Energy Planning" (24 V.S.A. 4352). The spreadsheet contains data that estimates current energy use and provides targets for future energy use across all sectors (transportation, heating, and electricity). It also sets a target for renewable energy generation within the municipality.

This data is meant to be a starting point for the municipality to begin planning its energy future and to talk about the changes that may need to occur within the municipality to ensure that local, regional and state energy goals are met. This includes the goal that 90% of all energy demand be met by renewable sources by 2050.

Figure 1 - Data Sources

American Community Survey (ACS)

Vermont Department of Labor (DOL)

Vermont Department of Public Service (DPS)

Energy Information Administration (EIA)

Efficiency Vermont (EVT)

Long-range Energy Alternatives Planning (LEAP)

Vermont Energy Investment Corporation (VEIC)

Vermont Agency of Transportation (VTRANS)

Estimates of current energy use consist primarily of data available from the American Community Survey (ACS), the Vermont Agency of Transportation (VTrans), the Vermont Department of Labor (DOL), and the Vermont Department of Public Service (DPS). Targets for future energy use are reliant upon the Long-range Energy Alternatives Planning (LEAP) analysis for the region completed the Vermont Energy Investment Corporation (VEIC). Targets for future energy generation have come from the regional planning commission and DPS. Targets for both future energy use and energy generation have been generally developed using a "top down" method of disaggregating regional data to the municipal level. This should be kept in mind when reviewing the template. It is certainly possible to develop "bottom up" data. For those municipalities interested in that approach, please see the Department of Public Service's Analysis and Targets Guidance.

There are some shortcomings and limitations associated the data used in the Municipal Template. For instance, assumptions used to create the LEAP analysis are slightly different than assumptions used to calculate current municipal energy use. Regardless, the targets established here show the direction in which change needs to occur to meet local, regional and state energy goals. It is important to remember that the targets established by LEAP represents only on way to achieve energy goals. There may several other similar pathways that a municipality may choose to take in order to meet the 90x50 goal.

Below is a worksheet by worksheet explanation of the Municipal Template spreadsheet:

1. Municipal Summary

The Municipal Summary worksheet summarizes all data that is required to be in the Municipal Plan if the plan is to meet the "determination" standards established by the Vermont Department of Public Service.

1A. Current Municipal Transportation Energy Use

Transportation Data	Municipal Data
Total # of Vehicles (ACS 2011-2015)	1,089
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	12,366,684
Realized MPG (VTrans)	18.6
Total Gallons Use per Year	664,875
Transportation BTUs (Billion)	80
Average Cost per Gallon of Gasoline (RPC)	2
Gasoline Cost per Year	1,535,862

This table uses data from the American Community Survey (ACS) and Vermont Agency of Transportation (VTrans) to calculate current transportation energy use and energy costs.

1B. Current Municipal Residential Heating Energy Use

Fuel Source	Municipal Households (ACS 2011-2015)	Municipal % of Households	Municipal Square Footage Heated	Municipal BTU (in Billions)
Natural Gas	13	2.1%	1,416,480,000	1
Propane	199	31.5%	19,484,700,000	19
Electricity	16	2.5%	1,233,600,000	1
Fuel Oil	176	27.8%	18,380,460,000	18
Coal	0	0.0%	0	0
Wood	210	33.2%	21,830,220,000	22
Solar	0	0.0%	0	0
Other	6	0.9%	653,760,000	1
No Fuel	12	1.9%	925,200,000	1
Total	**632**	**100.0%**	**63,924,420,000**	**64**

This table displays data from the ACS that estimates current municipal residential heating energy use.

1C. Current Municipal Commercial Energy Use

	Commercial Establishments in Municipality (VT DOL)	Estimated Thermal Energy BTUs per Commercial Establishment (in Billions) (VDPS)	Estimated Thermal Energy BTUs by Commercial Establishments in Municipality (in Billions)
Municipal Commercial Energy Use	22	0.725	16

The table uses data available from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (DPS) to estimate current municipal commercial establishment energy use in the municipality.

1D. Current Electricity Use *

Use Sector	Current Electricity Use
Residential (kWh)	4,713,599
Commercial and Industrial (kWh)	3,623,503
Total (kWh)	8,337,102

*This table displays current electricity use within the municipality with data from the ACS, DPS, and VT DOL. More accurate data will be available soon from Efficiency Vermont (EVT).

1E. Residential Thermal Efficiency Targets

	2025	2035	2050
Residential - Increased Efficiency and Conservation (% of municipal households to be weatherized)	33%	67%	100%

This table displays targets for thermal efficiency for residential structures based on a methodology developed by DPS using data available from the regional Long-range Energy Alternatives Planning (LEAP) analysis and ACS. The data in this table represents the percentage of municipal households that will need to be weatherized in the target years.

1F. Commercial Thermal Efficiency Targets

	2025	2035	2050
Commercial - Increased Efficiency and Conservation (% of commercial establishments to be weatherized)	6%	9%	18%

This table shows the same information as Table 1E, but sets a target for commercial thermal efficiency. Information from the VT DOL is required to complete this target.

1G. Thermal Fuel Switching Targets (Residential and Commercial) - Wood Systems

	2025	2035	2050
New Efficient Wood Heat Systems (in units)	0	0	0

This target was calculated using data from LEAP and ACS. This table provides a target for new wood heating systems for residential and commercial structures in the municipality for each target year. Due to the LEAP model forecasting a large decrease in wood use resulting in a negative number of targets we have put zero in for this section. Towns are encouraged to use efficient wood heat.

1H. Thermal Fuel Switching Targets (Residential and Commercial) - Heat Pumps

	2025	2035	2050
New Heat Pumps (in units)	64	169	356

This table provides a target for new heat pump systems for residential and commercial structures in the municipality for each target year. This target was calculated using data from LEAP and ACS.

1I. Electricity Efficiency Targets

	2025	2035	2050
Increase Efficiency and Conservation	-0.6%	5.7%	9.9%

Data in this table displays a target for increased electricity efficiency and conservation during the target years. These targets were developed using regional LEAP analysis. Towns are encouraged to consider increased efficiency targets.

1J. Use of Renewables - Transportation

	2025	2035	2050
Renewable Energy Use - Transportation	9.6%	23.1%	90.3%

This data displays targets for the percentage of transportation energy use coming from renewable sources during each target year. This data was developed using the LEAP analysis.

1K. Use of Renewables - Heating

	2025	2035	2050
Renewable Energy Use - Heating	49.6%	62.0%	92.8%

This data displays targets for the percentage of heating energy use coming from renewable sources during each target year. This data was developed using information from the LEAP analysis.

1L. Use of Renewables - Electricity

	2050
Renewable Energy Use - Electricity (MWh)	8,433- 10,307

This data displays the target for electricity generation coming from renewable sources within the municipality for 2050. This data was developed using information from the regional planning commission and DPS. This data is the same as the data in Table 1Q.

1M. Transportation Fuel Switching Target - Electric Vehicles

	2025	2035	2050
Electric Vehicles	101	715	1487

This tables displays a target for switching from fossil fuel based vehicles (gasoline and diesel) to electric vehicles. This target is calculated on Worksheet 2 by using LEAP and ACS data.

1N. Transportation Fuel Switching Target - Biodiesel Vehicles

	2025	2035	2050
Biodiesel Vehicles	177	334	563

This tables displays a target for switching from fossil fuel based vehicles to biodiesel-powered vehicles. This target is calculated on Worksheet 2. by using LEAP and ACS data.

1O. Existing Renewable Generation

Renewable Type	MW	MWh
Solar	2.29	2808
Wind	0.00	0
Hydro	0.00	0
Biomass	0.00	0
Other	0.00	0
Total Existing Generation	**2.29**	**2808**

Table 1O shows existing renewable generation in the municipality as of 2015, in MW and MWh, based on information available from the Vermont Department of Public Service.

1P. Renewable Generation Potential

Renewable Type	MW	MWh
Rooftop Solar	1	910
Ground-mounted Solar	357	437,825
Wind	606	1,856,463
Hydro	0	39
Biomass and Methane	0	0
Other	0	0
Total Renewable Generation Potential	**963**	**2,295,236**

Renewable generation potential is based on mapping completed by the regional planning commission that is based on the Municipal Determination Standards and associated guidance documents developed by DPS. The renewable generation potential is expressed in MW and MWh by the type of renewable resource (solar, commercial wind, hydro, etc.).

1Q. Renewable Generation Target

	2050
Total Renewable Generation Target (in MWh)	8,433- 10,307

Renewable generation target for municipalities was developed by the town's population percentage within the region.

1R. Sufficient Land

	Y/N
Renewable Sources	Y
Surplus of Generation	24396%

This table shows whether or not there is sufficient land in the municipality to meet the renewable generation targets based on the renewable generation potential in the municipality.