

TOPSHAM TOWN PLAN

Adopted August 21, 2023

Prepared by the Topsham Planning Commission

James Clark, Chair

Polly Stryker

Brooke Hayward-Miller

John Hood

With assistance from the
Two Rivers-Ottawa-Quebec Regional Commission

Topsham Town Plan Adopted 8/21/23

Dear Reader,

A few words on the intent of this document:

It is the intent of the Topsham Planning Commission that this town plan be used as a guide for the future of Topsham. It is our hope that the Topsham Town Plan will aid our local government in making decisions that affect our community and its facilities, equipment, and services.

It is NOT the intent of the Topsham Planning Commission that this town plan be used to impose regulations or controls on our residents, except for those that protect public health and safety.

While a town plan can be the basis of land use regulations such as zoning in a town, it is not our intent, nor is it perceived as the intent of the people of Topsham, to enact zoning or any such land use regulation at this time.

If, in the future, a majority of our citizens feel otherwise, such concepts may be considered with appropriate discussion and debate. But until such time, it is the position of this Planning Commission that this document only be a vision for the future of our town and that it be simply a guide for our local officials, not the rule of law.

Signed this 13th day of March, 2023

Topsham Planning Commission

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I. Introduction

A. Town History

The Town of Topsham got its name from Topsham, Maine. The original grant was given by King George III on August 17, 1763. The grant consisted of 23,040 acres (6 square miles). Later in 1803, the Town of Newbury was compelled by legislature to relinquish to Topsham a piece of land known as “Topsham Gore”. This was a tract: equal to 6105 acres and was one mile wide lying just to the east of the eastern edge of the Town. First voting in the town was held on the first day of November 1792. Topsham grew as Pioneers seeking new land after the Revolutionary War moved into Vermont. In 1791, there were 162 people. The population reached its peak of 1745 residents in 1840. After the Civil War, the opening of the west brought on a movement of people westward to better farming lands and opportunities. This affected most of Vermont and Topsham was not immune to the departures. The small farms, mills and blacksmith shops that made up much of the town were gradually phased out. Since its peak, the population of Topsham has been slowly rebounding; however, it has never made it back to the population that it once held.

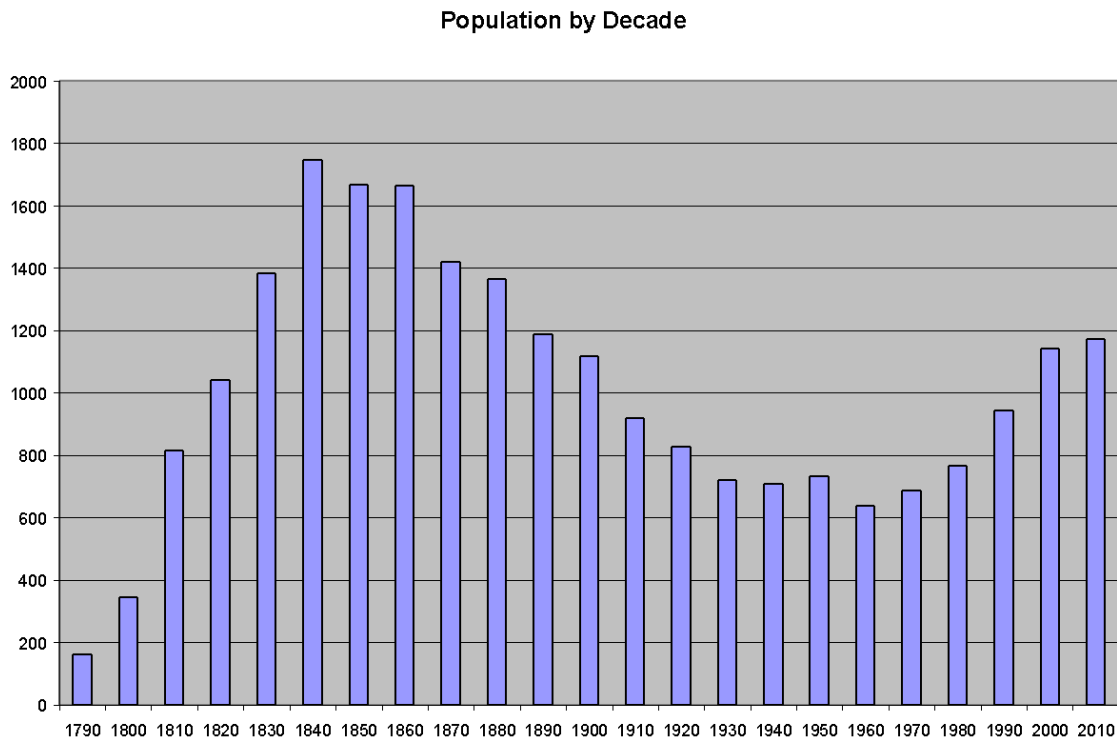


Figure 1: Topsham Population by Decade (Source – US Census)

From 1970-2000, Vermont had seen substantial increases in population. The state has been a location of choice for many newcomers. At the same time, there has been a natural increase of the population, resulting from more births than deaths. Altogether, Vermont's population grew from 414,000 in 1966, to 608,000 in 2000 then slowing somewhat to 625,741 in 2010. This increased population has put greater pressures on towns throughout Vermont.

B. The Need for Planning

At first glance, Topsham is a small, rural town that has remained relatively untouched by the changes that have occurred in surrounding towns. Topsham has not yet suffered from the stresses that a growing population can put on public utilities and services. However, Topsham is close to growth centers, such as Hanover and Barre. Our ease of access, and our favorable tax rate, makes the Town of Topsham prime consideration for growth, and as a result, our population is growing. In the decades between 1980-1990 and 1990-2000 Topsham experienced a 20% increase in population. Growth slowed substantially between 2000-2010 (2.7%). Despite the slowing in population growth throughout Vermont, continued population expansion can greatly affect the character of our town. Another influx of people such as that which occurred between 1980-2000 would require schools for their children, expanded and improved road systems and most certainly put a higher burden on our other town services.

Change stimulates the need for our community to examine its current condition and to evaluate its prospects for the future. Change can be beneficial, but to ascertain this, people must understand the problems and opportunities facing the community and identify goals for the future. Communities with little or no planning are more likely to experience problems of over development, high property taxes and increased demands for community services. We, like every town, have choices in the way we provide for orderly growth and in the way we balance our natural and built environments.

C. Purpose of this Plan

A well-grounded municipal plan, prepared by the town with the involvement of its citizens, is the foundation for ensuring appropriate development in the future. A municipal plan with a defined set of goals and policies can reduce conflicts that may otherwise arise in connection with development, especially in towns like Topsham that have no zoning bylaws. The primary purpose of this plan is to help our citizens direct the future growth of the town. The Plan includes a comprehensive analysis of Topsham's residents, jobs, economy, schools, roads, housing, natural resources, and land use. This analysis of current conditions in the context of goals for our community, leads to policies and recommendations that can help our community make wise choices and provide direction for the patterns of its future growth.

D. General Goals

1. Strive toward sensible development and orderly growth to maintain the rural characteristics of the town.
2. Maintain the continuance of agricultural activities in our town.
3. Maintain conservation and proper management of our natural resources.
4. Promote a healthful environment for our citizens and to insure adequate and clean waters and air.
5. Supply adequate community facilities within an expressed plan at a minimum cost, i.e., roads, fire protection and police protection.

6. Provide recreational opportunities for townspeople to enjoy their leisure time more fully.
7. Help provide adequate employment opportunities and affordable housing within the region.
8. Encourage citizen participation at all levels of the planning process.

E. Ongoing Planning

Planning for change is a continual process for the Town and will require the involvement of the Planning Commission and the public to ensure that the goals and policies of the Plan are integrated into the decisions affecting land use, taxation, and public investments in Topsham.

The Topsham Town Plan is not a permanent document on community desires or values. Its life is limited by statute to a maximum of eight years. The Planning Commission is responsible for the maintenance and amendment of the Plan. Within the next eight years following adoption of the Plan, the Planning Commission will need to evaluate the Plan in light of new conditions and needs. Re-adoption of an updated Plan will require notice to the townspeople and finally action by the Selectboard.

II. Population

A. Population Patterns

Population, when considered in terms of past, present, and future statistics, represents an important factor in the overall development of Topsham. Rapid and unanticipated population increases can create a demand for new and expanded municipal services and can strain the financial ability of a town to provide public services economically. This is especially true in instances where new residents are of public-school age and the public schools are at or near capacity. Through wise planning and programming for population change, the services and facilities that a growing population will demand can be delivered more efficiently and equitably.

Conversely, like much of VT, sustained decreases in the Town's population will increase the tax burden on the dwindling numbers of residents unless adjustments in provided services are realized. This is perhaps the most pressing issue the town must address. In addition, trends toward slow growth will exacerbate this problem as well.

Shown below are population statistics for the Town of Topsham taken from the U.S. Census Bureau. According to the US Census, Topsham's year 2010 population was 1174, compared to a population of 1142 in 2000, resulting in a 2000s growth rate of only 2.7%, mirroring the state's growth rate during the same time period.

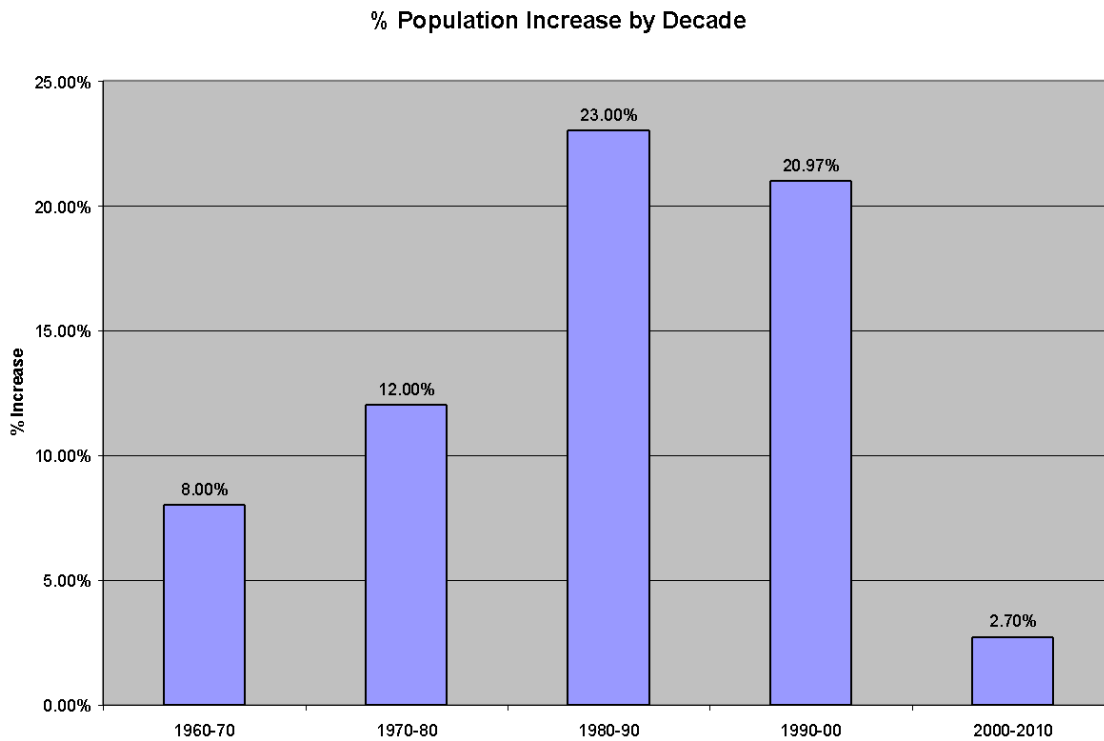


Figure 2: Percentage of Population Increase by Decade (Source -US Census)

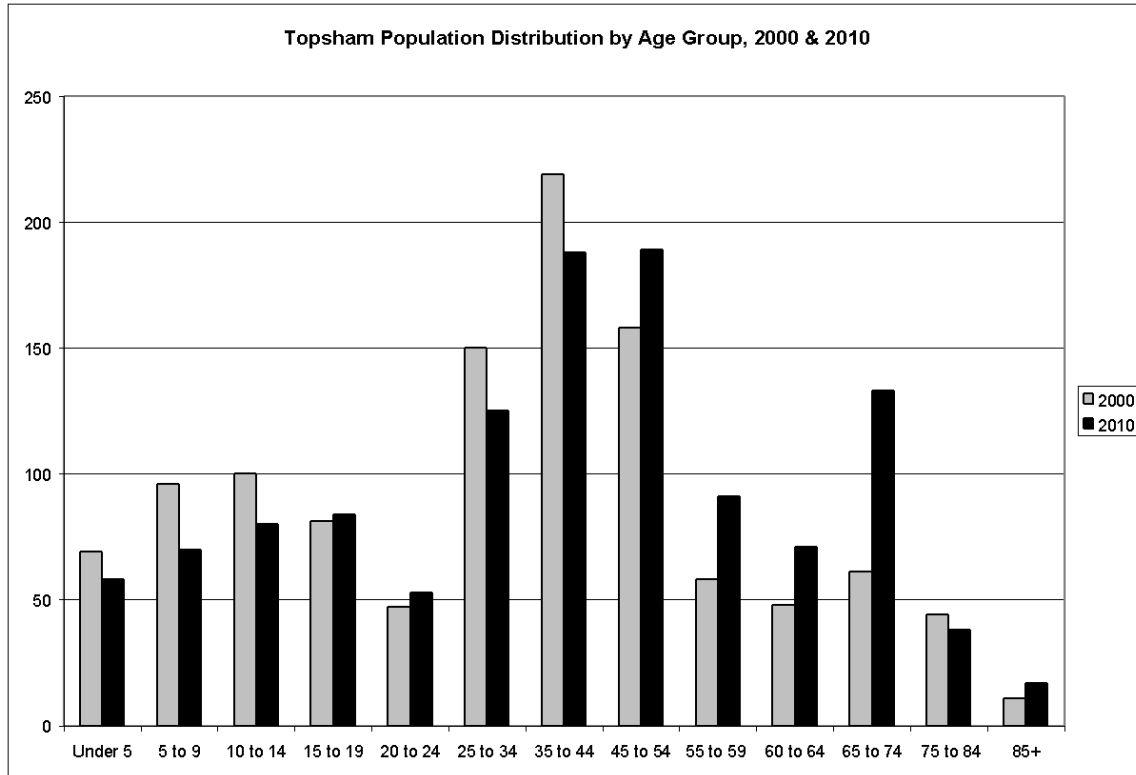


Figure 3: Topsham Population Distribution by Age Group, 2000-2010 (Source- US Census)

B. Age of Population

Between 2000 and 2010, population increases have occurred primarily in the 45-59-year-old range. This reflects the ongoing effect of the baby boomers, but also indicates that new residents may be within that age group. Overall, for Vermont, the number of residents 25-44 years of age dropped 16% as baby boomers continued to move into their 50’s and 60’s.

C. Income of Population

The Vermont Department of Taxes annually publishes Vermont Tax Statistics which includes a summary of personal income tax returns filed with the State. In 2017, 557 personal income tax returns were filed from residents in Topsham. One thousand and nine (1,009) exemptions were claimed. Total adjusted gross personal income reported for Topsham residents was \$25,372,092.

According to 2017 ACS estimates, the average household income for Topsham’s 432 Households is \$51,250. The \$75,000 to \$99,999 income group has the largest number of households (22.5%), followed by the \$35,000 to \$49,999 range (21.3% of households). Nineteen percent of Topsham households earn \$24,999 or less.

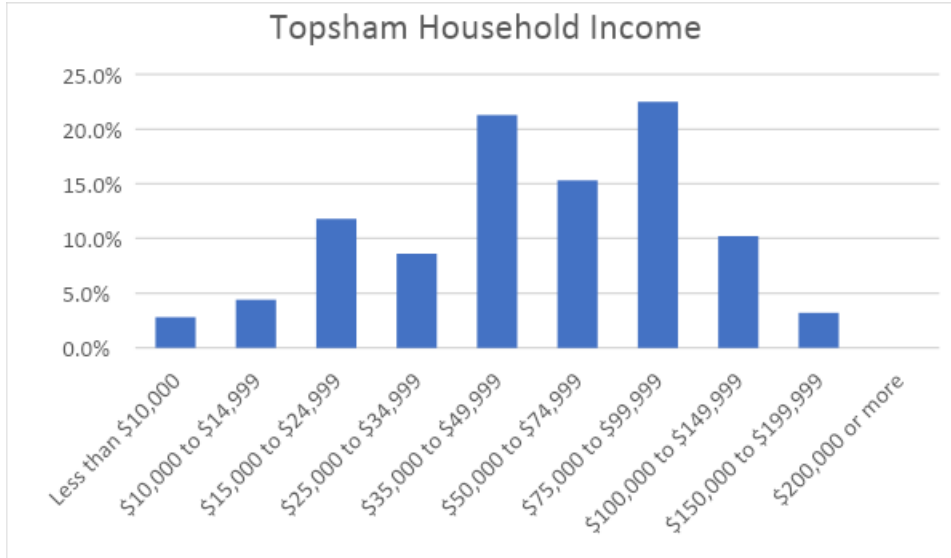


Figure 4: Topsham Household Income (Source- 2013-2017 American Community Survey 5-Year Estimates)

D. Health of Population

The health and wellness of Topsham residents is of the utmost importance. Topsham’s vision for health, wellness and safety is that all citizens in the community have access to high quality, affordable, physical and mental health care 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 freedom from pain are strong areas of focus from birth to death; that domestic violence and substance abuse 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 acknowledges that a public health element is currently optional for Town Plans and will address these issues when need arises.

III. Economic Base

Topsham’s historic economic base was centered around agriculture and textiles. Since the Civil War, the town has not been home to large industrial developments, but rather small home-based businesses. Presently, Residents have several home occupations including, but not limited to:

- Artisans
- Farmers
- Bed & Breakfast
- Truckers
- Furniture & Cabinet making
- Wood products
- Construction
- Publishing
- Sugar makers

Topsham does not serve as an economic hub for commercial and industrial activity. Residents go to the Towns of Bradford, Barre, or Wells River for banking, professional and related services. Many use East Corinth for minor medical services.

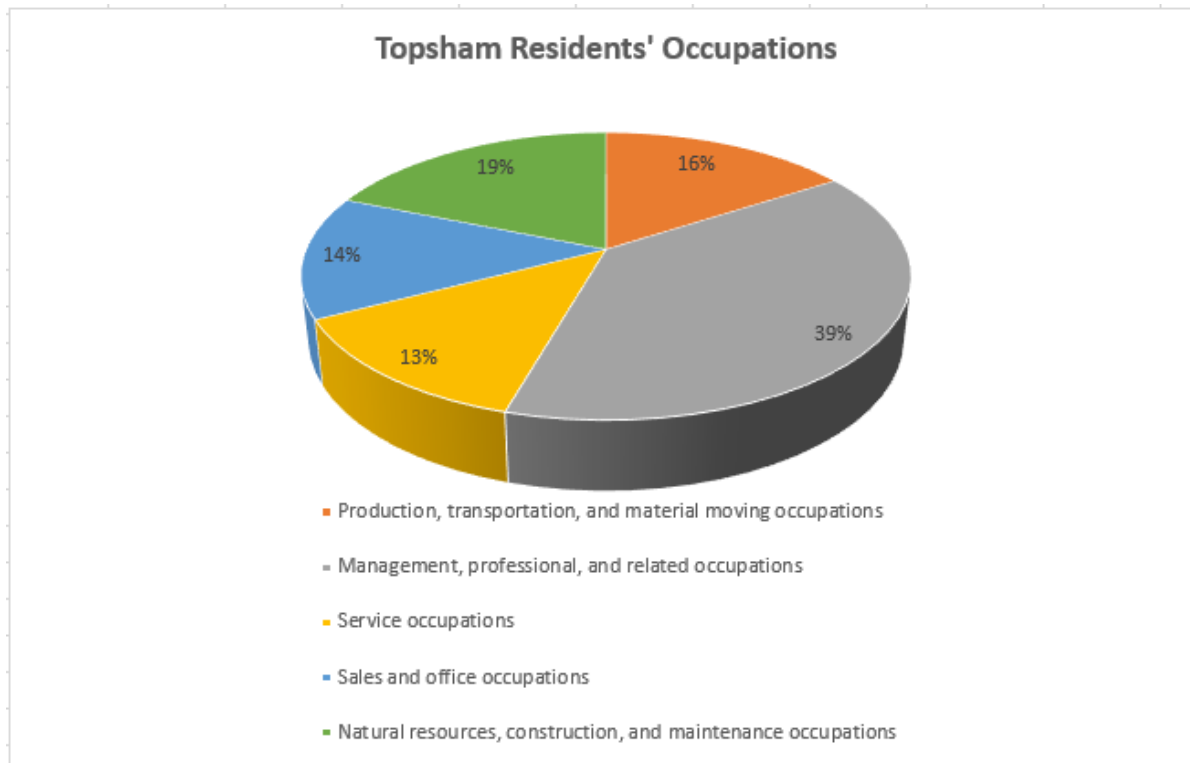


Figure 5: Occupations of Topsham Residents (Source – American Community Survey 2013-2017)

Figure 5 above illustrates the percentages of workers’ occupational categories, with management, professional, and related occupations representing the most workers (39%). Many of the occupations listed in Figure 5 are not based in town, requiring residents to commute. In general, residents drive east to Interstate 91 and commute to locations like Hanover and Lebanon, NH. Many residents work in Barre

and Montpelier. According to the American Community Survey (2013-2017), 95% of workers commute to work with a mean travel time of 34 minutes. An estimated 24 residents work from home.

Goals

1. Encourage the availability of locally based jobs while maintaining the rural character of Topsham.
2. A robust and diverse local economy that provides satisfying and rewarding employment opportunities for residents while maintaining the community's rural character.

Guiding Principles

1. 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.
2. Encourage development of local enterprises that create markets for locally produced goods and services, including locally grown food products.
3. The manufacture and marketing of value added agricultural and forest products is encouraged.
4. Encourage new business development in appropriate locations where services such as roads, fire protections and power supply are available or planned.
5. Encourage conversion of structures and older buildings to enable new and more economical uses of property and to avoid obsolescence.
6. Residents are encouraged to conduct an occupation in their homes provided that the nature of the occupation is legal, customary, or appropriate in rural residential areas.

IV. Housing

Introduction

A major function of local housing planning is to meet two community objectives - first, safe and affordable housing for its present and future population and second, suitable density and distribution of housing throughout the community. Growth in housing affects the Town's capacity to provide facilities and services to our town and the character of the area. Housing built without adequate planning for schools, roads, and other public services can overburden the ability of the taxpayers to pay for these services and can lower adjacent property values and negatively affect the rural character of the town.

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 are extracted from two sources - U.S. Census and Town Grand List Records (Form 411). Data collected from these sources do not match exactly due to variations in record-keeping and classifications. Notwithstanding, they are considered relevant and reliable data sets for analysis.

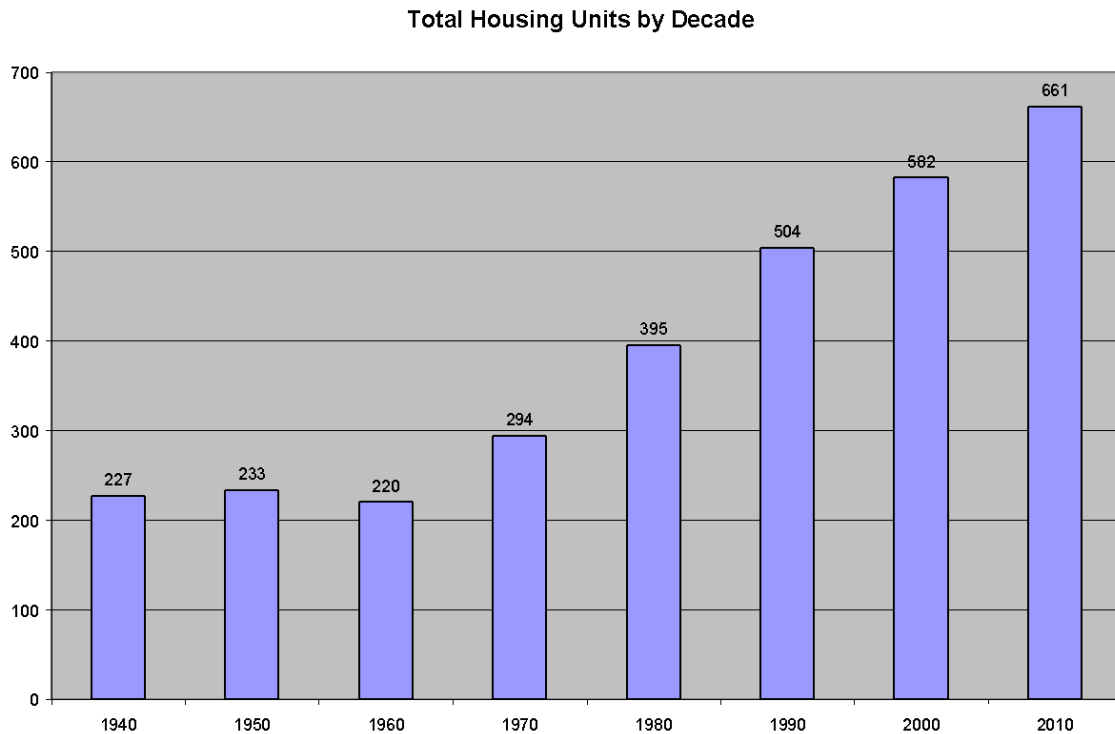


Figure 6: Total Housing Units 1940-2000 (Source – US Census 2010)

A. Number of Housing Units

There were 661 housing units in Topsham in 2010 according to the Census; in 2000 there were 582, yielding a growth rate of 13.5%. None of the housing stocks, (the State's, the Region's, or the Town's), grew at the rates experienced over the 1980s.

B. Type of Housing and Ownership Characteristics

The U.S. Census defines a “housing unit” to include: conventional houses, apartments, mobile homes, and rooms for occupancy. The 2010 Census reports that more than three-quarters of the housing units in Topsham were single-family residences (84%); the second largest percentage of housing units were mobile homes (14%).

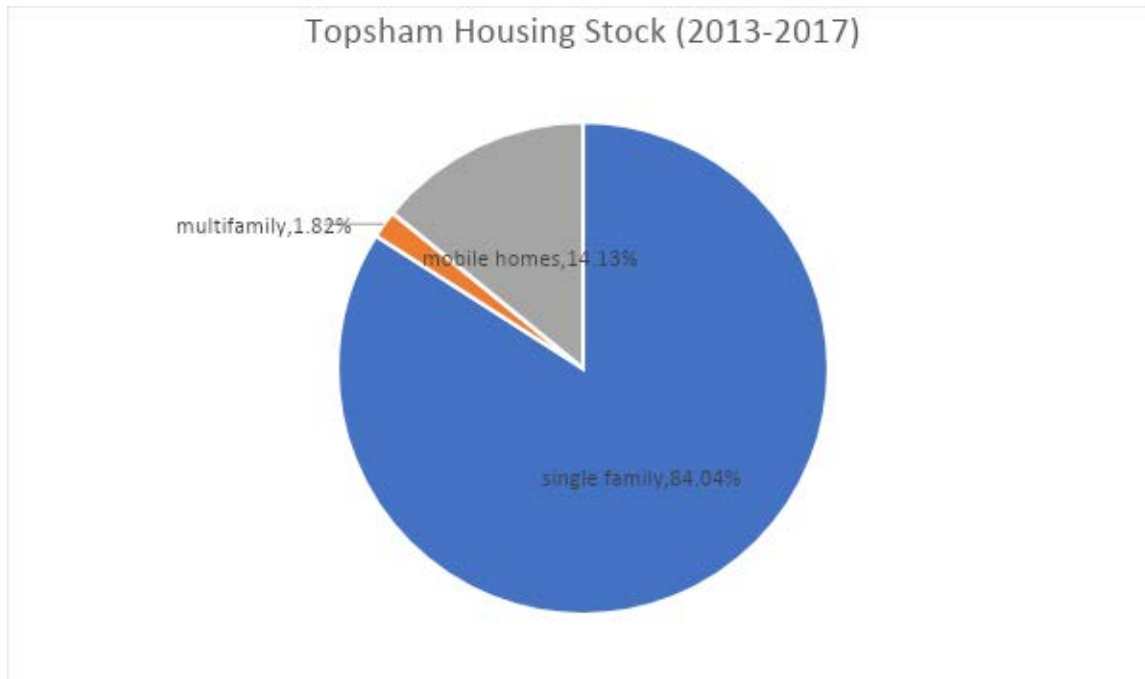


Figure 7: Types of Housing Units, Topsham, VT (Source- 2013-2017 ACS)

Of the housing units that were occupied in Topsham in 2010, 88% were owner-occupied and 11% were renter-occupied. Of the total number of homes in Topsham, approximately 27% were vacant, unoccupied. Most of these vacant units are for seasonal or recreational use (25%) and if you subtract those units from the total supply of vacant units, Topsham is left with a 2% vacancy rate. Vacancy rates below 5% are considered to be “functional zeros”; the units that are available are usually uninhabited for reasons like sub-standard conditions.

C. Household Characteristics

Topsham, like many communities in Vermont and the nation, has experienced a trend towards a smaller household size. This trend, coupled with the increase in population generally, results in an increased demand for housing and will also affect the number and type of unit demanded. Several special population/household groups, such as the elderly and female heads of household can be identified as having particular housing needs.

D. Affordable Housing

Affordable housing is defined as that which a household making 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.

According to the ACS (2015-2019), 36% of Topsham's homeowners pay at least 30% of their income toward home expenses. When asked what kind of affordable housing options Topsham residents would like to see in town, most wanted to see small apartment complexes of 4 units. Additionally, 57% of people who responded to the survey believe that the town should encourage and seek the development of independent and affordable senior housing.

Residents have noted a shortage of rental property within town. A lack of such property can decrease the inflow of younger families into town. Additionally, service industries that move into town may have difficulty hiring because of a lack of affordable rental housing.

E. Elderly Housing

Topsham lacks adequate options for elderly care and housing. Between 2000 and 2010, Topsham experienced a 118% increase in residents aged 65-74. Given the aging population, the need for such housing will only increase. The elderly often prefers to remain in their communities rather than having to relocate away from family and friends to ensure that their quality of life remains sound. But there are no assisted living facilities within Topsham, which means that many may be forced to leave the community if they cannot live on their own.

F. Childcare

Topsham has few options for childcare. Residents currently arrange for care with relatives or take their children to childcare facilities beyond the borders of Topsham. It has been acknowledged by residents that this is a major need for the Town.

The State of Vermont has two classifications of childcare that are regulated:

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

There are currently no childcare services in Topsham. It is important to note that there are in-home childcare providers that are not registered with the state. These are usually more affordable than licensed and registered facilities.

Goals

1. To provide the opportunity for Topsham residents to have access to safe and affordable housing.

2. To encourage the retention of existing housing and construction of new housing which meets the natural population growth.
3. To encourage the preservation of historic structures in ways that appropriately serve the need for housing.
4. To encourage the creation of additional rental properties throughout town, provided that they do not put an undue burden on Town services and facilities.
5. To encourage the development of affordable senior housing within the Town.
6. To encourage the creation of affordable childcare facilities within Topsham.

Guiding Principles

1. Ensure that the timing and rate of new housing construction or rehabilitation does not exceed the community's ability to provide adequate public facilities (e.g., schools and municipal services).
2. Keep housing affordable by planning for:
 - Appropriately sized lots;
 - Accessory apartments; and
 - Clustered developments.
3. Encourage the location of future housing to complement existing or planned employment patterns, travel times, and energy requirements.
4. Encourage the development of housing to meet the needs of a diversity of social and income groups, particularly for those citizens of low and moderate income, including the provision of manufactured housing and multi-family housing.
5. The location of housing, related amenities and land uses should be planned with due regard to the physical limitations of the site and location to current or planned public and private services such as roads and commercial/service centers.
6. New and rehabilitated housing should be safe, sanitary, and located conveniently to employment and commercial centers.
7. Encourage the building and use of accessory dwelling units to provide affordable housing or a situation of care and supervision to the disabled or elderly.
8. Integrate childcare issues into the planning process, including childcare financing, infrastructure, business assistance for childcare providers, and childcare work force development.

V. Utilities & Facilities

Topsham, like all communities has a wide range of public facilities and systems. These facilities require continued investment to ensure that they function well and meet the needs of the community.

A. Town Offices

The Town Clerk's office is located under the Town Hall on Harts Rd. in the middle of the East Topsham Village. It was added to the Town Hall in 1974 and is designed to provide office and record storage space. The office does contain a vault where records are kept.

The office is undersized and is not currently meeting the town's needs. Needs include:

- The installation of vault heat to properly protect documents
- Additional parking as well as handicap parking access
- Smoke detectors
- Additional work area for listers.

The most recent upgrades made to the Town Office included the installation of new lighting fixtures with emergency lighting and the installation of a handicap accessible toilet. At present, the office is open full time and the Selectboard and Planning Commission hold meetings there.

B. Library

Topsham does not have a library of its own. Residents are currently using the Blake Memorial Library in East Corinth. The library offers sufficient services to be meeting the needs of Topsham residents. In addition to books and reference materials, the Blake Memorial Library is well connected to the internet. The library has free Wi-Fi.

Topsham makes an annual allocation to help support the Library. This arrangement is meeting the Town's needs, therefore there are no plans to build a library in Topsham.

C. Town Hall

The Town Hall is a large, wooden structure located on Harts Road in the middle of Town. Anecdotal records indicate that it was built in the early 1800's. Town Hall was built 1806. It has the following needs:

- Needs smoke detectors.
- A septic system upgrade is needed.

In the past eight years the following improvements have been made:

- Improved handicap parking and accessibility.
- Improved lighting w/ emergency lighting.
- Newly refinished wood floors

The Town rents the hall for various events, such as weddings and parties, although rental is somewhat limited because the Listers office is in the hall. The building does not offer kitchen facilities. It should be noted that because the Town Clerk's office is located below the Town Hall, the conditions (such as a lack

of smoke detectors and septic issues) that negatively affect the Town Hall affect the Town Clerk's office as well.

D. Solid Waste Management

The Town belongs to the Northeast Kingdom Waste Management District (NEKWMD). Trash removal is currently being handled by Cassella Waste Management Systems, Inc. There is a transfer station located on the Topsham-Corinth Road & Lime Kiln Road. Solid waste is trucked from the transfer station to a landfill in Bethlehem, NH. Proposals have arisen to move the transfer station to the parcel purchased by the Town for the town garage.

The Vermont Materials Management Plan (MMP), formerly referred to as the State Solid Waste Plan, is the State's comprehensive statewide strategy for the management of waste and materials and became effective in June 2014. As mandated by Vermont law (10 V.S.A. § 6604), the plan must be renewed and published by the Agency of Natural Resources at least once every five years. The plan outlines specific deliverables designed to implement the plan's vision through measurable and practical measures. These deliverables must be met by the Agency of Natural Resources and local solid waste management entities over the course of the plan period.

E. Water Supply and Wastewater Treatment Facilities

The Town of Topsham does not own or operate any public water supply or wastewater disposal systems. All residences and non-residential uses are dependent on individual on-site water supply and disposal facilities.

The Town does not plan to engineer or construct either of these facilities in the next eight years.

F. Cemeteries

There are 2 cemeteries in Topsham with burial plots available. They are the Waits River Cemetery on VT RT 25 in West Topsham and the Welch Road Cemetery on Welch Road on the east side of Topsham.

The following is a list of ancient cemeteries, which are being well maintained:

- Currier Cemetery
- Roundtop Cemetery
- East Topsham Cemetery
- West Topsham Cemetery (New)
- Zion Hill Cemetery
- Fellows Cemetery
- Avery Cemetery
- Huckins Cemetery
- Mills Cemetery

G. Plating Factory Property

The Topsham Plating property is a former plating facility located along Powder Springs Road that was designated as a Superfund site due to ground contamination of heavy metals. The property is bordered to the north and west by residential homes, to the south by the Tri-Village Fire Station, and to the east by the Tabor Branch of the Waits River (Tabor Branch). The half-acre property was occupied by Topsham Plating, Inc. from 1977 to 1979 and eventually became the property of the town. In 2006, with assistance from the Two Rivers-Ottawaquechee Regional Commission, Topsham was loaned \$30,000 to dispose of hazardous materials and clean the abandoned site.

The site is presently unoccupied, but the community intends to utilize it as a storage area for their Town Garage (which has limited space). Power has been run to the property and an in-ground pumping station has been installed on the property to allow water access for testing. The annual tests so far have been negative for contaminants.

H. Town Upgrades and Improvements

In order of priority:

1. Town Office: Installation of vault heat to properly protect documents.
 - a. Approximate cost is \$5,000.
 - b. Funding from the General Fund.
2. Town Office: Installation of smoke detectors.
 - a. Approximate cost is \$1,500.
 - b. Funding from the General Fund.
3. Town Hall: Installation of smoke detectors.
 - a. Approximate cost is \$1,500.
 - b. Funding from the General Fund.
4. Town Hall: Septic system upgrade.
 - a. Approximate cost is \$20,000.
 - b. Funding from the General Fund.

VI. Emergency Services

A. Fire Protection Services

Fire protection services are provided by the Tri Village Fire Association. With 10 firefighters in each of the Topsham stations, this all- volunteer department provides twenty-four-hour coverage for the Town and surrounding areas. Neighboring communities' fire departments are called on in large fires requiring outside resources. The Fire Association is part of formal mutual aid agreements that cover 28 towns, going as far north as Stowe.

The East Topsham and West Topsham Fire departments are owned and operated by the Tri-Village Fire Association (which includes the Orange Volunteer Fire Department as well). It is a private organization and is not run by the Town. However, the Town provides a financial contribution to support the Association.

Fire Stations

East Topsham Station

The East Topsham Fire Station is located in the center of the East Topsham Village on Powder Spring Rd. The facility was built in 1976. It is a three-bay structure that serves as an operations center for 10 firefighters and the associated equipment and vehicles. It is in good condition and is meeting the needs of the Tri-Village Fire department. The Fire Association installed a new water supply in 2014, an essential improvement as it previously had no water access. The water is tested annually.

West Topsham Station

The West Topsham station is located on VT Route 25 in the village of West Topsham. The original facility was built in the 1950's. In the mid-70s it was replaced by the current three-bay building that serves 10 firefighters. Within the last year, an addition has been built that includes a kitchen, bathrooms, and meeting room. It is in good condition and is currently meeting the needs of the Tri-Village Fire Association.

Capabilities

Topsham's fire department is suited to working within the Town of Topsham. Firefighters complete training annually. There is especially a shortage of daytime firefighters.

In the event of a wildfire or HAZMAT spill, however, the Tri-Village Fire Department would be short-handed and under-equipped. Firemen should receive training in how to handle a forest fire or HAZMAT incident, and the proper personal protective equipment and tools for such an event should be purchased, through grant funds if possible.

Funding

The department is funded by the assessment of yearly dues paid by residents and a budget item from the Town. In 2019 the Town paid \$28,000. Capital investments for equipment, such as new vehicles, and any additional expenses are covered through fund-raising and grants.

B. Police Protection Services

The Town of Topsham does not maintain a police force. Any issues or incidents requiring Police action fall to the Vermont State Police. The Orange County Sheriff's department does offer coverage in the Topsham area but is not under contract with the town, and therefore does not handle enforcement here.

When surveyed in 2019, 48 respondents said that police services were adequate, while 27 said that they are not. Topsham's rural nature makes timely response to a police emergency difficult at best.

In the future, we will need to consider Police protection alternatives available to the town. As the population increases, it is likely that our need for greater protection will increase as well.

C. Emergency Medical Services

The Topsham-Corinth Fast Squad appears to no longer have adequate volunteers due to ever increasing state requirements for training. The Barre Town EMS squad responds to medical emergencies. The closest hospital is Central Vermont Hospital in Berlin. Medivac services are available by the DHART helicopter when necessary. There are numerous pre-planned DHART landing zones throughout Topsham. The town has appointed a Public Health Officer that is empowered, along with the Selectboard, to protect public health in town.

Goals

1. To provide residents with a safe and healthy place to live.
2. To enable the best opportunity to protect Town health and safety at the most equitable cost to the Town's taxpayers.

Guiding Principles

1. Town support for improvements or enhancements to emergency services should be planned as to not place an undue financial burden on the capacity of town to provide such services.

Recommendations

1. Firemen should receive training in how to handle a forest fire or HAZMAT incident, and the proper personal protective equipment and tools should be purchased.
2. The Town should consider Police protection alternatives.

VII. Education

The Waits River Valley School (WRVS) is located on Route 25 East of the Waits River Hamlet. The building was originally built in 1972. A major renovation, including the addition of a second floor and gym was undertaken in 1988, more than doubling the size of the facility. The school handles grades Pre-K through Grade 8.

The Total staff consists of 51 employees, 28 of which are full-time teachers.

Vermont State Public School Approval has been awarded to the school. The school is handicapped accessible.

A. Student Enrollment

Enrollments of the Waits River Valley School are reported annually to the Vermont Department of Education. Based upon annual student resident counts from the Department, average daily membership (ADM) of Topsham residents at the school for grades (K-8) in recent years has been as follows:

Average Daily Membership, Waits River Valley Students	
2018-19	220
2017-18	220
2016-17	223
2015-16	237
2014-15	222

For this five-year period, enrollment has been generally stable. Given current trends and a leveling off of the childbearing age group, student enrollments for the elementary age group are not likely to increase dramatically over the next five years.

Students in grades 9-12 are tuitioned to 9 different schools in the area surrounding Topsham on a per pupil basis.

B. School Building & Services

In 2008, The Waits River Valley School District commissioned facility condition report and financial analysis of the School by Black River Design, Architects. This study identified a number of necessary improvements to the Waits River Valley School Facility, many of which have since been addressed. Since that time, the following identified renovations and improvements have been completed:

- HVAC – The building’s HVAC system has been replaced to bring the air quality and circulation up to code and standards. This renovation included the installation of new duct work and air handling equipment.

- ADA Accessibility –Existing ADA accessible bathrooms are now accessible to students or public on the first floor.
- Lighting –Upgrading Lighting fixtures have been upgraded and existing spaces have been reconfigured to include access to outside walls or interior windows. The gym lighting has been upgraded.
- Energy Efficiency –The installation of a new roof allowed for insulation improvements which resulted in increased energy efficiency. Improved insulation and air sealing have increased the building’s energy efficiency as well. With these improvements, the Waits River Valley School is now an Energy Green Award School.
- Cafeteria – The building has a new cafeteria.

The building is in need of future improvements, including the following:

- Sprinkler System – The school lacks a sprinkler system for fire suppression. While the installation of a sprinkler system would represent a substantial project requiring significant investments, it is a high priority for preservation of life and property. Replacement of the sprinkler system could be approximately \$1,043,125.
- The building needs a new entrance configuration to allow more visibility at the door.
- With student enrollment numbers expected to increase, the school needs more space.

Additional priority issues included reconfiguring the school to be more useful to the students and the community as a whole. This has been addressed as the school is now an emergency shelter with a generator. In addition to prioritizing areas in need of substantial improvement, the school committee involved with this study considered the possibility of removing the 1989 addition and replacing it with a new stand-alone building.

The community will most likely have to bond for much of the funding needed to implement the recommendations contained in the report, while seeking grant opportunities wherever possible.

C. Vocational Training

The Waits River Valley School could increase its role as a community learning center in the future. The school, which is not at its maximum enrollment capacity, could be developed for after school and adult education, utilizing the building, its library, computer labs, and other resources, as a year-round resource for community members.

River Bend Career and Technical Center is located in Bradford and provides technical education programs for students from eight area high schools and for adults. River Bend's facility includes a state-of-the-art automotive garage, heavy equipment training sites and shop, a complete building trades workshop, and a commercial kitchen with its own restaurant. Additionally, there is a fully-outfitted cosmetology lab, a pre-school for training for human services students, Business Technology and Pre-Engineering Technology programs, an Environmental Studies program, and an Emergency Services program. This school serves as an example of what the WRVS could become.

Additional adult education resources include:

- **Central Vermont Adult Basic Education** maintains a satellite office in Bradford and offers individual and group literacy instruction, including GED preparation, at various other locations in the community.
- **Community College of Vermont** is perhaps the most accessible college-level instructional resource for the area; part of the VT State College system, CCV offers full and part-time enrollment in both 2- and 4-year programs, as well as a certificate program, with courses held at larger urban centers.

Goals

1. To provide a safe and secure learning environment where quality educational opportunities are provided to all students.
2. To enable the best opportunity to educate our students at the most equitable cost to the Town's taxpayers.
3. To provide access to education and vocational training opportunities for Topsham residents.

Guiding Principles

1. Land development that is likely to result in large numbers of school children should be phased or planned as to not place an undue financial burden on the capacity of town to provide educational services.
2. It is the intent of the town to provide sufficient and appropriate physical space to meet current and projected enrollments.

VIII. Transportation

Introduction

Topsham's transportation system is principally a system of town roads, with the automobile as the primary means of transport. Topsham has no airports or rail services in town. Local residents and tourists utilize town and state roads for walking, biking and horseback riding but use in some areas is limited due to a lack of adequate shoulders or bike lanes.

A. Town Roads

According to the Vermont Agency of Transportation, the Town of Topsham owns and maintains 84 miles of roads (Class 2, 3 & 4 Town Highways). The State of Vermont controls 6.4 miles of roads (VT Route 25) within the Town. Ninety-three percent (93%) of all highway mileage in Topsham is part of the local road system, which is more than most rural communities. In the 30 Town TRORC Region, Topsham ranks 13th highest in road mileage.

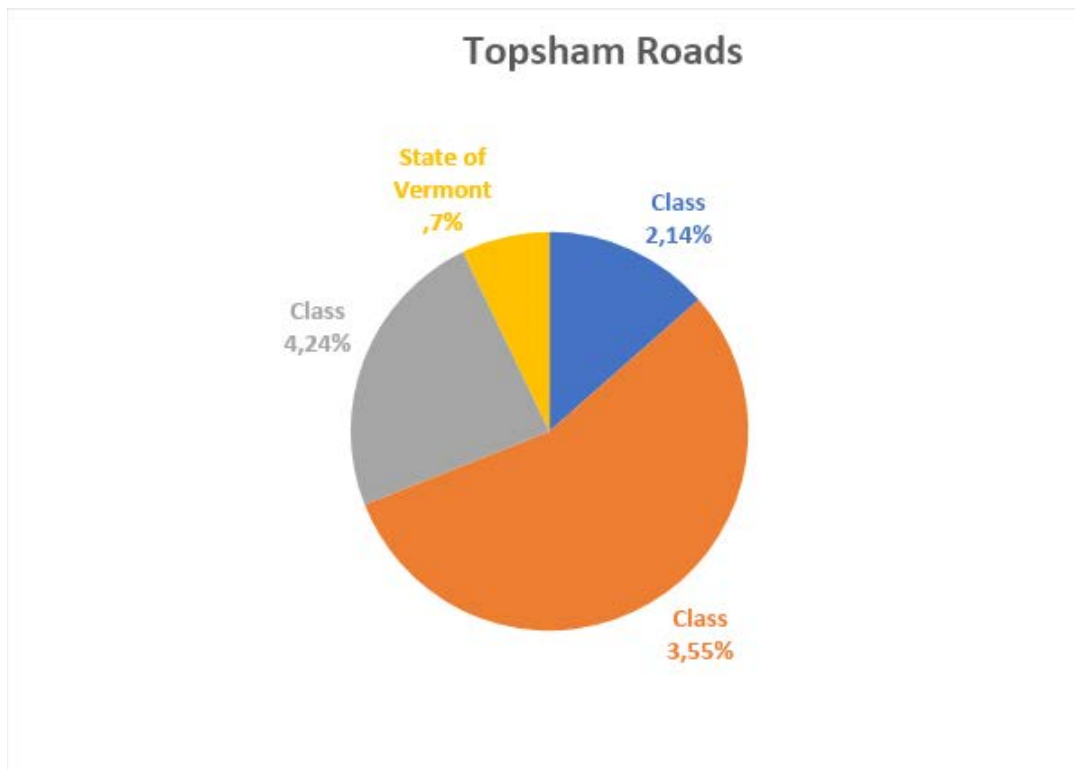


Figure 8: Source: Vermont Agency of Transportation

Approximately 23 miles of Topsham's roads have paved surfaces and 34 miles are gravel. Conditions for these local roads are good.

Changes in traffic volumes are dependent on a number of factors, but primarily by the type, size, and location of various land uses. Actions to improve and increase the carrying capacity of a road 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 and place an undue financial burden on the taxpayers of the town.

To avoid conflicts between the use of highways and future development, the town has established policies to evaluate and control how growth affects town roads. These include concentrating future development into areas where major roads already exist, limiting multiple access drives onto town roads, and working cooperatively with the Vermont Agency of Transportation (VTrans) and neighboring towns to improve regional land use and transportation planning.

The State uses four classification formulas to distribute financial aid to towns for road repair and maintenance. Classifications are jointly determined by the Vermont Agency of Transportation and the Selectboard. Criteria used for the classifications include traffic volumes, road conditions, 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 2018, Topsham received \$125,993.42 from the State for all roads.

B. Town Highway Classifications

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

Class 2 includes those major town highways selected as the most important highways in town. Class 2 roads serve the purpose of linking towns and high traffic areas such as village settlements and State Highways. Class 2 roads are generally paved. Topsham has 12 miles of Class 2 roads.

Class 3 includes all town roads not Class 1 or 2 that can be driven under normal conditions all seasons of the year by a standard car. In Topsham, Class 3 roads make up the majority of all town roads. Class 3 roads amount to a total of 50 miles.

Class 4 highways represent the lowest order of importance to the town. Public use is limited and as such the town receives no financial aid from the State. Approximately 21 miles of Class 4 roads exist in Topsham.

The town is not interested in expending tax dollars in improvements to Class 4 roads. These roads are usually in the poorest state and would require expensive reconstruction to their surfaces, base, drainage and width to bring them to Class 3 standards. Because of the great expense and relatively small public benefit accruing from Class 4 roads, current policy in Topsham is that few tax dollars be expended on Class 4 roads.

C. Transportation Facilities & Services

The town of Topsham's garage was built around 1900. It is a small building located on Schoolhouse Rd. The condition of the Town Garage would be considered poor. It is in generally ill repair and is not up to state and federal codes. Material storage, such as gravel and salt, is difficult because of the size of the lot the building is located on. In 2017 the Town purchased land for future construction of a new town garage.

The Town uses 3500-4000 yards of winter sand per year. 2500 yards of this sand is stockpiled at the garage site, directly on the side of the garage, which pushes against the building. The additional sand is stockpiled at the US Route 302 site.

D. Access Management

Regulatory authority for access management rests with the Vermont Agency of Transportation (VTrans) for state highways, which are 25 and 302 in Topsham, and with the Town Selectboard for town highways.

Historically, the law on access permits limited the scope of review (19 V.S.A. Section 1111). It provided that reasonable access in no case should be denied, safety being the test for reasonableness. In 1998, the law was amended, expanding the State's 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 reasonable levels of service and safety on existing highways. Access management decisions shall also consider whether or not the proposed access is compatible with the Town Plan and with regional and state agency plans.

Access management planning for major land uses or traffic generators means more than merely obtaining a "curb cut" for access to a public road, one driveway at a time. In a broader context, 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 the Plan.

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.

Currently, Topsham requires that anyone who intends to access a town road for any alteration or development in a town right-of-way must apply for a permit. The purpose of this ordinance is to ensure that the design of a new driveway will not cause damage to the town road or create a public hazard.

E. Public Transportation

The Town of Topsham does not provide any public transportation, but limited services are offered by Tri-Valley Transit. Tri-Valley Transit is a private, nonprofit corporation that provides transportation services to the elderly, persons with disabilities, and the general public across a 26-town area of northern Windsor and Orange Counties. Stagecoach provides fixed-route, demand response, and social service transportation. Stagecoach is also the area's Medicaid broker and arranges passenger trips to medical services using volunteer drivers, taxis, and Stagecoach routes.

Topsham has no air or rail facilities within town. The nearest railroads are the New England Central Railroad (NERC) line that goes through Randolph and the Washington County Railroad that provides heavy haul freight services along the Connecticut River. The closest airports are Post Mills in Thetford,

Rutland Regional Airport, Burlington International Airport, and the West Lebanon Municipal Airport in New Hampshire.

Topsham residents would benefit from the availability of public or shared transportation options such as coordinated ride shares or volunteer drivers.

F. Transportation and Land Use Patterns

Land use patterns are greatly responsible for the development of roads in Topsham. Any new developments that are proposed in Town should be encouraged to locate adjacent to existing roads. Commercial development that requires trucking and freight handling should only locate on roads which can effectively handle the size of vehicle needed. The Selectboard should only consider adding additional roads in Topsham if it serves the greater public good.

Refer to the annual town report for updated figures on road maintenance costs and highway budget.

Goals

1. To maintain a transportation system that is safe, efficient and complements the other goals and policies of this Plan.
2. To ensure that future development does not unnecessarily or unreasonably endanger the public investment in town and regional transportation systems or facilities, including highways, bikeways, trails and rail.
3. To support local, regional and statewide efforts to provide transportation systems that meet the needs of all population segments and not just those who use automobiles.
4. To minimize transportation energy consumption.
5. To provide pedestrians with safe areas to travel within the three villages.
6. To provide regular maintenance and upgrades to transportation equipment and facilities.

Guiding Principles

1. Prior to a final decision to proceed with a major capital transportation project, policy makers should first analyze the project against reasonable alternatives. In examining the alternatives, investigation should focus on the environmental, energy, social and investment costs and the extent to which each meets the goals and policies of this Plan.
2. It is in the public interest to maintain the town's current highways, bridges, and related facilities, as it is necessary to ensure the current level of service.
3. The town as written in V.S.A. Title 19 Section 310 does not maintain Class IV Highways, excepting bridges and culverts. Before the town would consider adopting a new road or upgrading an existing highway, the abutting property owners shall be responsible for the cost of improving and/or building the road to town specifications. Final decision regarding the nature of the improvement rests with the Selectboard.

4. Given the interest in and benefits from biking, hiking, snowmobiling, cross-country skiing, and similar outdoor recreational activities, the town should, as an alternative to complete discontinuance of a highway, give full consideration to preserving Class 4 roads for recreational use by downgrading their status to a legal trail and thus retaining the public's interest in them.
5. An integral scenic element of the rural countryside is the network of back roads comprising the town's highway system. These byways are both visually and economically important to the town. If improvements are needed to accommodate increased traffic, it is important to consider the relationship of the road to the surrounding features of the landscape.
6. Strip development is not encouraged as a land use pattern. Such development occurs in a linear path along a right-of-way which often restricts visual and physical access to interior lands.
7. It is the intent of the town to minimize curb cuts to ensure the proper function and performance of a town highway.
8. It is the intent of the town that the design of access roads and related facilities provide for proper alignment of new or relocated driveways along a roadway.
9. It is the intent of the town to encourage options for more public or shared transportation options.
10. Highways, air, rail, and other means of transportation should be mutually supportive, balanced and integrated.

IX. Current and Future Land Uses

This section of the Plan describes the types and patterns of Topsham's current land use and discusses how the people of Topsham would prefer to see land used in the future. As more and more people discover the pleasures of living in rural Vermont, Topsham's rural character will be threatened. Topsham's population has been steadily growing and that trend will most likely continue. This trend, coupled with population variability and a housing shortage in the Upper Valley, will potentially cause an increase in the population of Topsham. These changes underscore the need to identify and develop effective growth and land use development policies that will serve the long-term interests of our community and help Topsham remain a small rural Vermont town.

It is not the intent of this section of the Topsham Town Plan to lead to the creation of a zoning ordinance. The Town has not ascertained via resident survey or opinion polls the need for or desirability of a zoning ordinance. If the will of the town residents is determined at some later date, this document could be amended to reflect the results of these surveys or opinion polls.

The "rural character" of Topsham is reflected in its farms, small villages, open spaces and the diverse occupations held by the citizens of Topsham. Topsham is not averse to changes that might occur in town, but it is the hope that we can maintain the quiet, country lifestyle that has been the norm for decades. Efforts to maintain the rural character of Topsham should not keep residents from making a living, provided that their occupation does not create great change to or overburden the Town.

Strip development, large-scale commercial development and such endeavors that would dramatically increase traffic flow or use up valuable agricultural land with no regard for the natural appearance of Topsham are generally unwanted in Town. However, small industries, businesses and developments that can coexist within an area as rural and remote as Topsham, are not only welcome, but encouraged.

A. Overall Land Use Goals

As the Town looks at the use of our land in Topsham, a land use pattern that complements the existing settlement pattern of the three Topsham village areas (Waits River, East Topsham and West Topsham), surrounding low-density rural and agricultural areas, and large open spaces and forests needs to be considered. This type of land use pattern is considered to be attractive, desired, and understood by the residents of Topsham. This is the style and character of land use that the community-at-large wishes to promote in the future.

Goals:

1. To maintain an identity for Topsham as a distinct community.
2. To retain clear evidence of the community's history while giving consideration for future needs.
3. To respect the community's identity and share qualities of scale and form with existing development.
4. To be adaptable to change which inevitably must occur if the community is to be vital.

5. To not deprive a landowner from realizing a reasonable and customary return from his or her land.
6. To balance the rights of landowners against the overall vision for the town.

B. Current Land Use

The Town of Topsham is a small, rural town with a population of 1173. Because of the dominance of steep slopes throughout Topsham, most development has occurred on the valley floors, along VT Route 25 and Topsham Corinth Road.

Topsham has three Villages - Waits River, East Topsham and West Topsham. These Village Centers are the focal points of the community, where its residents can conduct their civic, economic, and social interaction. The mixed uses present in the Topsham villages provide for the pleasant experience of visiting with a neighbor at the stores, Post Offices, the Town Office, Town Halls, Churches and the School.

Due to topography, Topsham's working landscape (agriculture, etc.) is fairly limited. Most active farming takes place on the valley floors along Route 25, Powder Spring/Topsham Corinth Road.

C. Proposed Land Use

The Town Plan recognizes that not all land is equally suited for all types and intensities of development. It is the basic premise of this Plan that future land uses be sensitive to the physical limitations of a site and that in planning for the development of a parcel, more than market value of property be recognized. Accordingly, separate geographical areas have been defined in this section and the physical boundaries of each are defined (for planning purposes, only) on a proposed Land Use Map. For each area below, the purpose is stated and policies are offered in terms of the compatible types of development, intensity of use, and the conservation of natural resources.

Furthermore, while it is recognized that existing use of land and structures may not be entirely consistent with these proposals, it is the goal of this Plan that all future land development be in conformance with these policies.

D. Village Centers

Background and Purpose

Many towns in Vermont no longer have functional villages due to changes in highways, establishment of competing commercial centers or poorly conceived community planning. Our town cannot consider itself immune to these types of influences. It is a fundamental premise of the Plan to make every reasonable effort to ensure the continued use and enjoyment of the Village Centers as a dynamic community center, including seeking village center designation.

The purpose of areas designated as Village Center is to provide locations in the community that are central to the various sub-regions of the community that will act as civic and commercial centers. Land uses in these areas should be more densely populated than the more rural parts of the community. In accordance with state planning goals, residential development should favor multi-family housing when

possible. All new development within the Village Center areas should be consistent with existing development in terms of appearance and scale.

Waits River

The Village of Waits River is located along Route 25. It is the location of the Waits River School district, The New Hope Methodist Church and the Waits River General Store.

West Topsham

West Topsham is located on Route 25, near the western border of Topsham and Orange. This village offers residents' access to the West Topsham Community Hall, West Topsham store, West Topsham Community Church, West Topsham Post Office, and the Grange Hall. It is also the location of the West Topsham branch of the Tri-Village Fire Department.

East Topsham

East Topsham is located on the eastern side of Topsham. The Topsham Town Office is located here. Important buildings include the Town Hall, Town Garage, the United Presbyterian Church and the East Topsham branch of the Tri-Village Fire Department. There is currently no store in East Topsham.

Goals

1. It is a goal of the town to maintain a viable village center through good planning and development.

Guiding Principles

1. The density of development in this area should reflect existing settlement patterns, land capability, and the availability of utilities for expansion.
2. Shops and services, tourist businesses, lodging and public facilities, at a scale and design appropriate to the existing characteristics, are encouraged, though principal retail is prohibited outside of Topsham's villages.
3. Conversion of structures and older buildings of historic merit is encouraged to enable new and more economical uses of property and to avoid obsolescence.
4. Where new development is being planned, efforts should be directed to ensure that such development is reasonably complementary and compatible to the configuration of existing buildings and streetscape, and respects traditional scales, proportions, and shapes of the surrounding neighborhoods.
5. Major public investments, such as improvements to Route 25 and Powder Spring/Topsham-Corinth Rd., should be encouraged and endorsed only on finding that they will not unreasonably or unnecessarily jeopardize or endanger the character of the Village Center. Planners are encouraged, prior to the commencement of plans, to consult with the town and affected

property owners regarding these types of activities.

6. The Plan supports pedestrian enhancements that will promote safety, provided that they do not put an undue financial burden on the town.
7. The Town recognizes the inherent right of landowners; however, unoccupied or unused buildings and structures that create safety and/or health risks to nearby town residents should be addressed by the Town in partnership with state and federal entities. The intent of this joint effort is to work in a constructive and firm manner with property owners in an effort to facilitate the reduction of both health and safety risks.

E. Agricultural Valley Areas

Background and Purpose

Agriculture has long been part of the cultural heritage of Topsham. Although farming has declined in Topsham, like the rest of Vermont, it is still viewed as important to the residents of Topsham.

The steep topography of Topsham makes the valley floors along Route 25 and Powder Spring Rd. most ideal for agricultural uses. According to the Vermont Soil Conservation Service, this area is the primary location of soils that have been designated as “prime agricultural” soils.

The primary purpose of these areas should be to sustain agricultural use and protect the areas within these valleys from development within the floodplain. Land uses in these areas should be less densely populated than the Village Center areas. Residential development should attempt to avoid locating on prime agricultural soils if possible. All new development within the Agricultural Valley areas should be consistent with existing development in terms of appearance and scale.

Goals

1. It is a goal of the town to encourage value-added agriculture and forestry of all varieties throughout Topsham.
2. It is a goal of the town to support new agricultural developments provided that they continue to maintain the rural character of the town and do not put an undue burden on town resources.

Guiding Principles

1. Maintenance of a working landscape is the primary goal for the Valley Agricultural Area. Projects which adversely affect the rural setting and conflict with existing working landscape should not be located in this area.
2. Agricultural and residential uses are to be the primary and dominant land uses in the Valley Agricultural Area. Commercial or industrial projects in this area should be designed so as to not affect the rural character of the town and should not negatively impact the floodplain.
3. Principal retail establishments must be located only in the village areas: East Topsham, Waits River, and West Topsham.

F. Rural Residential Area

Background and Purpose

In this area, as in all locations in Topsham, future development will depend heavily on the availability of land to support on-site wastewater disposal systems and private water supply systems. Despite these technical limitations, as demand for new building sites increases, new technologies for innovative systems will emerge, making rural land once considered undevelopable desirable for residential subdivision.

Areas relatively free from site limitations (such as poor soils, steep slopes, high elevations, forest blocks and habitat connectors) are more often used for residential and agricultural uses. The less desirable areas have remained as or reverted back to forests. Land adjacent to town and state highways has been subjected to more active land use changes due to the relative ease of access. The more remote areas, being those distant from the town's primary services and main roads, have developed more slowly due to the relatively higher cost of development (e.g., power, telephone and driveways).

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. Special or unique resources, including critical wildlife habitats (e.g., deer wintering areas), historic sites, archeological sites and wetlands should be evaluated and planned for when developing projects in the Rural Residential Area.

The primary purpose of the Rural Residential area is to provide good locations for residential and small-scale commercial development in a rural setting. Land uses in these areas should be less densely populated than the Village Center areas. All types of low-density residential development are encouraged, including accessory dwellings, multifamily housing, and manufactured housing. All new development within the Rural Residential areas should be consistent with existing development in terms of appearance and scale.

Goal

1. To ensure that the development of housing does not adversely affect the rural character of our town.

Guiding Principles

1. Maintenance of a rural living environment is the primary goal for the Rural Residential Area. Projects which adversely affect the rural setting and conflict with existing rural land uses should not be located in this area.
2. Residential and agricultural uses are to be the primary and dominant land uses in the Rural Residential Area. Commercial or industrial projects are considered less desirable in this area.
3. The establishment and operation of small entrepreneurial enterprises are consistent with the general purpose of this area provided that their size, type, appearance, and setting do not significantly or unnecessarily detract from the overall rural character. These enterprises should not cause an undue burden on the ability of the town to provide services, such as highways and fire protection. As such, principal retail establishments must be located only in the village areas:

East Topsham, Waits River, and West Topsham.

4. Residents are free to conduct an occupation in their homes provided that the nature of the occupation is customary or appropriate in rural residential areas.
5. The use of planned residential development or the cluster development concept, where intensive settlement is balanced by compensating land for open space, is encouraged. It is a means of providing an environment more amenable to the land use goals of this Plan.

G. Transportation and Land Use Planning

Vermont planning law provides a mechanism to address the inherent problems posed by transportation in relation to land use. Public investment priorities for state and town roads can be managed to minimize land use impacts that are not in accord with policies set forth in this plan. The Town of Topsham is rural, with compact villages, whose residents value and cherish its small-town appeal. The Town has limited public transportation which is provided by Tri-Valley Transit.

Goals

1. Support land use policies and development projects which complement existing transportation investments.

Guiding Principles

1. Only projects of a size and scale which do not materially interfere with the function, safety, and efficiency of town and state highways should be permitted;
2. Increases in traffic should not create unreasonable congestion or unsafe conditions; developments which generate considerable round-trip truck or automobile travel should be limited.
3. Developments which would increase traffic through the villages merit special scrutiny.

H. Forest Fragmentation

Forest fragmentation is the breaking of large, contiguous forested areas into smaller pieces of forest. For natural communities and wildlife habitat, the continued dividing of land with naturally occurring vegetation and ecological processes into smaller and smaller areas creates barriers that limit species' movement and interrupt ecological processes. Since the 1980s, Vermont has experienced "parcelization," 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.

Forest fragmentation affects water quality and quantity, 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, and create conflicts between people and wildlife. Habitat loss reduces the number of many wildlife species and totally eliminates others.

To help mitigate the effects of human population growth and land consumption, many scientists and conservationists urge governments to establish protected corridors, which connect patches of important wildlife habitat. These corridors, if planned correctly, allow wildlife to move between habitats and allow individual animals to move between groups, helping to restore or maintain genetic diversity that is essential both to the long-term viability of populations and to the restoration of functional ecosystems. Important corridors have been mapped in Topsham.

As of 2019, Topsham has 124 parcels enrolled in Vermont's Use Value Appraisal Program (Current Use). Forest management plans required for enrollment of forest land in the Current Use Program are obliged to be updated every 10 years, and well-crafted management plans can play a large role in ensuring vital wildlife habitat and corridor connectivity.

There are several important forest blocks and habitat connector areas in Topsham that are priority locations for protection where development and fragmentation should be avoided to protect ecological function.

Forest Blocks:

- As shown on the Future Land Use Map

Goals

1. Encourage forestland continuity as shown on the Future Land Use Map.

Guiding Principles

1. Development other than isolated houses and camps shall be designed so as to preserve continuous areas of wildlife habitat. Large-scale fragmentation of wildlife habitat is discouraged. Effort shall be made to maintain connecting links between such areas.

X. Natural Resources

A. Wetlands

Background

Wetlands are ecologically fragile areas and how these lands are managed have a direct bearing on the quality and quantity of water resources.

The Vermont Water Resources Board estimates that wetlands comprise less than 5 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 habitat for a wide diversity of wildlife and rare, threatened or endangered plants; and
- Contributing to the 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 in the bulleted list above.

Under the Rules, if land development can be expected to impact a protected 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 impacts and to more readily serve the purposes of wetlands protection.

For Topsham, as well as the State, 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. Other smaller wetlands often do not show on these maps, so a field determination by a qualified biologist is needed for most activities that involve state permits.

In those towns that have zoning or subdivision regulations, final approvals cannot be granted for projects involving wetlands unless the Agency of Natural Resources first has had an opportunity to evaluate the effect of the project on the wetland (24 V.S.A., Section 4409). It is important to note that future investigations of wetlands within Topsham may result in additional areas being determined as significant or important for conservation.

Goals

1. To identify and encourage land use development practices that avoid or mitigate adverse impacts on significant wetlands.

Guiding Principles

1. Structural development or intensive land uses are discouraged from locating in significant wetlands or within buffer zones to significant wetlands.
2. Developments adjacent to wetlands should be planned so as not to result in undue disturbance to wetland areas or their function. Mitigating measures to protect the function of a wetland are an acceptable measure.

B. Flood Hazard Areas, Floodplains, Flood Resilience

Background

Floods are inevitable and uncontrollable natural events which occur sporadically and affect lands adjacent to watercourses. It is therefore in the public interest to plan for floods, and to implement land use strategies which will protect these areas and minimize the risks to public health, safety, and property.

Floodplains, lands adjacent to watercourses, are periodically inundated by heavy rains or during spring thaws. They are porous and can absorb considerable water before reaching flood stage. Floodplains make excellent agricultural land but are poorly suited for development, both because of their propensity for flooding and because of their proximity to watercourses, which creates the potential for pollution.

Vermont has experienced twenty-four statewide and regional floods since 1973, all of which were declared federal disasters, and economic losses were significant. Damage was not limited to designated floodplains, but often occurred along unstable river systems and steep streams. In some cases, recovery costs to the public sector alone amounted to several million dollars per flooding event. Public interest dictates that every reasonable attempt should be made to avoid or reduce exposure to flood damage.

Following the 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 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 an overall preparedness for a future event. For the purposes of this chapter, flood resilience will mean the ability of Topsham to effectively understand, plan for, resist, 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— inundation and 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, or rapid snow melt in conjunction with ice jams, occurs 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 the lowest channel in an area—upland streams, in small tributaries, and in ditches—and the water level rises quickly and moves further downstream. Flash flooding typically does not cover a large area, but the water moves at a very high velocity, and the flooding manifests quickly, making flash floods particularly dangerous. Due to the velocity of the water, a flash flood can move large boulders, trees, cars, or even houses.

The collecting of water in channels in steep areas also causes fluvial channel erosion, which 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, Topsham is vulnerable to flash flooding and fluvial erosion.

Causes of Flooding

Severe storms with particularly heavy precipitation can create flash flood conditions. However, over an extended period of time, severe storms may cause inundation flooding due to the cumulative effects of continuous rain, saturated soils, and a high-water table/high aquifer level.

Floodplains fill an important need, as flood waters and erosive energy must go somewhere. Development in the floodplain can lead to property damage and risks to health and safety. Development in one area of the floodplain can also cause increased risks to other areas by diverting flood flows or flood energy. Debris carried by the floodwater from one place to another also poses a danger. Flooding is worsened by land uses that create impervious surfaces that lead to faster runoff, and past stream modifications that have straightened or dredged channels, creating channel instability.

National Flood Insurance Program (NFIP)

Under the provisions of the National Flood Insurance Act (1968), the Federal Emergency Management Agency (FEMA) has conducted a series of evaluations and hydrologic engineering studies to determine the limits of flood hazard areas along streams, rivers, lakes, and ponds expected to be inundated during the 100-year base flood, meaning that the flood level has a 1% chance of being equaled or exceeded in any given year. The calculations do not take into account the impact of ice dams or debris, and may, therefore, actually underestimate the areas which are subject to flooding damage.

FEMA has prepared a Flood Hazard Boundary Map (FHBM) for the Town of Topsham, which includes flood hazard areas for the Waits River, major tributaries, streams, and ponds. This map is on file at the Town Office.

FEMA also administers the National Flood Insurance Program, which provides flood hazard insurance at subsidized rates for property owners in affected areas. In order to qualify for federal insurance, towns must adopt and retain a by-law to control land development within these areas. Minimum standards must be included and approved by FEMA. Coverage is only available to landowners if a town elects to participate in the program.

Flood Hazard Areas

There are two sets of official maps which can govern development in the floodplain 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 area maps. The FIRMs show the floodplain that FEMA has calculated which 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), and the "500-year flood" area. FIRMs are only prepared for larger streams and rivers. Topsham has areas of mapped flood risk by FEMA.

Recent studies have shown that a significant portion of flood damages in Vermont occur 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, and also creating landslide risk. 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 will show the area needed to address these erosion hazard areas, which may be inside of FEMA-mapped areas, or extend outside of this area. In these areas, the lateral movement of the river and the associated erosion is more of the threat than inundation by floodwaters. Elevation or floodproofing alone may not be protective of structures in these areas as erosion can undermine structure. Vermont ANR issued statewide river corridor maps in the latter part of 2019.

Flood Hazard Regulations

The Town of Topsham incorporates Flood Hazard regulations as part of its Flood Hazard Ordinance and is recognized as a participating community in the National Flood Insurance Program, which it has been enrolled in since September 18, 1985.

The Town of Topsham has a Flood Hazard Ordinance that was adopted on May 19, 2008. The Flood Hazard Ordinance applies to all lands in the Town of Topsham identified as areas of Special Flood Hazard in and on the most current flood insurance studies and maps published by the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), and National Flood Insurance Program (NFIP).

The town believes that it is a realistic goal to re-evaluate the present Flood Hazard Ordinance and to develop new provisions prohibiting construction of permanent buildings or structures within the flood hazard areas. By amending the Bylaw to reflect this general principle, flood losses will be reduced, the natural functions of the watercourses will be protected, and costly flood recovery programs will be minimized.

Promoting Flood Resilience

The following changes to the Flood Hazard Bylaw would help protect the citizens of Topsham from further damages from a severe flooding event:

1. Discourage all new development in the Special Flood Hazard Area, which is also called the 100-year floodplain, or the area that has a 1% chance of flooding every year.
2. The elevation of existing structures in the Special Flood Hazard Area should be elevated 2 feet above base flood elevation.
3. The prohibition on new development would not apply to small out-buildings or similar structures provided they are properly flood-proofed and meet the thresholds required by the National Flood Insurance Program for flood hazard regulation. The prohibition would not apply to renovations to existing structures unless the proposed renovations expand the footprint of the existing building or exceed the substantial improvement thresholds required by the National Flood Insurance Program for flood hazard regulation.
4. The best and most appropriate uses within the Flood Hazard Area along rivers and streams are those that are recreational and agricultural (using Required Agricultural Practices). Minimizing development within these areas will help protect both public and private investments as well as the natural and scenic quality of Topsham's waterways.

Revisions to Topsham's flood hazard bylaw will require input from the community regarding the level of regulation it believes is necessary to protect citizens and their buildings from severe flood hazard events. Provided that all parts of the flood hazard bylaw continue to meet the minimum requirements of the NFIP, communities have a broad range of flexibility in regulating the flood hazard area.

Culvert Maintenance

Topsham actively works to upgrade and replace undersized and damaged culverts.

Goals

1. Maintain and improve the quality of Topsham's surface and ground waters.
2. To enhance and maintain use of flood hazard areas as open space, greenways, recreation and/or agricultural land.

3. To ensure no net loss of flood storage capacity in an effort to minimize potential negative impacts. These impacts include the loss of life and property, disruption of commerce, and demand for extraordinary public services and expenditures that result from flood damage.
4. To allow Topsham to be resilient in the event of a severe flood.
5. To protect municipal infrastructure and buildings from the potential of flood damage.

Guiding Principles

1. Use sound planning practices to address flood risks so that Topsham's citizens, property, economy, and the quality of the town's rivers as natural and recreational resources are protected.
2. Encourage permitted land uses within Topsham's Flood Hazard Areas to non-structural outdoor recreational and agricultural uses due to the dangerous erosive risk in these areas.
3. Encourage commercial, industrial, and residential uses outside FEMA's designated flood zones
4. Where possible, the Town will seek over time to move or abandon roads that often experience serious flood damage.
5. Design culverts and bridges, at minimum, to meet VTrans Hydraulics Manual, ANR Stream Alteration Standards, VTrans Codes and Standards. Maintain culverts to ensure they are effective during severe weather events.
6. Do not build Topsham's emergency services, power substations, and municipal buildings in the Special Flood Hazard.
7. Encourage vegetated buffer strips in riparian zones bordering streams and rivers. Rock rip-rap and retaining walls should only be used to the minimum extent necessary and when bioengineering techniques may not be adequate to prevent significant loss of land or property.
8. Encourage landowners to maintain Topsham's upland forests and watersheds predominately in forest use to ensure high quality valley streams and to ensure that flood flows reduced.
9. All wetlands which provide flood storage functions should remain undeveloped. In the long term, restoration and enhancement of additional wetlands should be pursued in order to improve Topsham's flood resilience.
10. After flood events, 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.

11. New development in identified flood hazard and fluvial erosion areas should be avoided.
12. The protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion is encouraged.
13. Flood emergency preparedness and response planning is encouraged.

Recommendations

1. Revise Topsham's Flood regulations to encourage new development outside the 100-year floodplain (excluding small ancillary structures).
2. All substantial improvements to structures should be elevated 2 feet above base flood elevation (BFE).
3. Topsham should work with VTrans and the Regional Planning Commission on advocating for and improving the flood capabilities of state or town-owned transportation infrastructure.
4. Topsham should continue working to update hazard mitigation plans and emergency preparedness and recovery procedures.
5. The town should continue to maintain and update town bridge and culvert inventories. This information should be used to develop a schedule to replace undersized culverts.

C. Water Resources

Background

Topsham's water resources include aquifers (groundwater) and surface waters. Sustainable yields of quality water are necessary for the lives and livelihood of citizens of Topsham.

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 acknowledged and are recognized as important for protection. Land developments that are potential threats to water quality and significant aquifers are discouraged from locating in these areas.

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 from installation. To lessen the risk of contamination, the Vermont Agency of Natural Resources has promulgated rules 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 standards.

Goals

1. To maintain or enhance the quality and quantity of drinking quality groundwater resources.
2. To allow use of groundwater resources by new development in such a manner to protect the public right to adequate quality and quantity of the resource.
3. To consider surface water and groundwater impacts and effects related to proposed or existing uses of land.
4. To maintain or improve surface water quality and quantity.

Guiding Principles

1. Water withdrawal from underground sources should ensure that existing groundwater users are not adversely affected.
2. Aquifers and surface waters should not be significantly depleted, and water should be properly allocated between actual and potential uses.
3. Land use activities which potentially threaten groundwater quality should be carefully reviewed and monitored to prevent undue loss of quality to groundwater.
4. Maintenance or enhancement of water resources for recreation, fisheries, necessary wildlife habitats and quality aesthetics are high priorities. Water resource policy and practices should protect these uses.
5. The location, sizing and density of on-site sewage disposal facilities should be determined by the capacity of the soil, the natural limitations of the site, and underlying substrata conditions, such as depth to bedrock and seasonal high-water tables.
6. Preservation of the natural state of streams should be encouraged by:
 - Protection of adjacent wetlands and natural areas;
 - Protection of natural scenic qualities; and
 - Maintenance of existing stream bank and buffer vegetation including trees, together with wildlife habitat.
7. Water quality should be maintained and improved on according to the policies and actions set forth in the basin plans.

D. Wildlife Resources & Habitat

Background

Wildlife is one of the primary attractions to the area and provides many citizens of Topsham with direct and indirect livelihoods from sports, tourism and direct harvest of wildlife.

Wildlife management requires management of human activities around animals as much as management of animals around human activities. Managing for specific species is not as desirable as managing for the entire ecosystem supporting the species.

Nearly all open space provides habitat for game and non-game species. There are, however, some areas in Topsham which provide critical habitat that we encourage to remain intact without adversely impacting the landowner's use and enjoyment of their property. These areas include wetlands, deer wintering areas, bear mast stands, and edge (the transition zone between two cover types, such as field and forest). Development or logging in or adjacent to these areas should consider wildlife implications during the planning process.

Wintering areas are an important habitat requirement for deer during the critical winter months when snow depth and climate are limiting factors to 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 utilized even in areas of limited softwood cover. More specific factors, such as percent canopy closure, species of softwoods, and stand age, also figure into the quality of the wintering area.

2010 data released by the Vermont Department of Fish and Wildlife analyzed habitat blocks. This data considers a wide range of information and has determined what areas in Vermont are most desirable in terms of wildlife habitat. In Topsham's case, due to the low density of development throughout the community, much of the land is above average in terms of its value to wildlife.

Goals

1. To maintain or enhance the natural diversity and population of wildlife.
2. To restore stable populations of endangered or threatened wildlife in appropriate habitat areas.
3. To maintain or improve the natural diversity, population, and migratory routes of fish.
4. To allow sport hunting of ecologically sound intensities to provide continued success of the species.

Guiding Principles

1. Wildlife populations and natural diversity should be maintained or enhanced.
2. Long-term protection of major habitats through conservation easements, land purchases, leases and other incentives is encouraged.
3. It is the intent of the town to protect deer wintering areas from developments and other uses that adversely impact the resources.

E. Mineral Resources

Background

The use and management of Topsham's earth and mineral resources are matters of public good. Maintenance of sustainable quantities of gravel, sand, crushed rock, and other materials are essential for the development industry as well as state and local highways. Despite this, public and private interests are oftentimes in conflict over utilization of the resource. It is in the interest of the Topsham business owners and residents to enable utilization 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.

Goals

1. To enable appropriate utilization of mineral resources.
2. To encourage extraction and processing of the resource where such activities are appropriately managed, and the public interest is clearly benefited thereby.

Guiding Principles

1. Existing and proposed mineral extraction and processing facilities should be planned, constructed, and managed:
 - So as not to adversely impact existing or planned uses within the vicinity of the project site;
 - To not significantly interfere with the function and safety of existing road systems serving the project site; and
 - To minimize any adverse effects on water quality, fish and wildlife habitats, and adjacent land uses.
 - To reclaim and re-vegetate sites after their useful life.

Air Quality

Air quality is an important feature in our overall quality of life. Clean air contributes to our health and to clear skies and extended views. Topsham is heavily forested with limited development, but air quality can be affected from vehicle emissions, heating sources, backyard burning, and dust from construction projects.

Guiding Principles

1. Support state and federal programs directed at the reduction of air pollution and encourage enforcement of air-quality standards to prevent deterioration of the region's air quality.

F. Wildlife and Forest Resources

Forests

Healthy forests provide a significant number of benefits to our communities, including environmental benefits (such as clean water supply, clean air, mitigation against climate change, wildlife habitat, and biological diversity), and economic benefits (such as tourism, recreation, maple sugaring, and the wood products industry).

Trends in forest health have changed over the past decade. In the 2013 US Forest Service's National Forest Inventory and Analysis Program report, figures indicated that since 2007 there has been a continuing, though gradual, loss of about 75,000 acres of forestland in Vermont. Developed land in Vermont increased significantly between 1980-2010 (67%). The pattern of development growth has led to significant forest fragmentation throughout the state.

Wildlife

Wildlife is one of the popular attractions to the area and provides some citizens of Topsham with direct and indirect livelihoods from sports, tourism, or direct harvest of wildlife. Additionally, the interconnection of wildlife with their environment has an impact on the natural environment.

Wildlife management requires management of human activities around animals as much as management of animals around human activities. Managing for specific species is not as desirable as managing for the entire ecosystem supporting the species.

Topsham's fields, forests, wetlands, and streams are home to a diverse and healthy wildlife population that includes bear, bobcat, moose, deer, otter, geese, ducks, and mink, to name only a few. Nearly all open space provides habitat for game and non-game species. There are, however, some areas in Topsham which provide critical habitat that should remain intact. These areas include wetlands, deer wintering areas, bear mast stands, and edge (the transition zone between two cover types, such as field and forest). Development or logging in or adjacent to these areas should consider wildlife implications during the planning process.

Wintering areas are an important habitat requirement for deer during the critical winter months when snow depth and climate are limiting factors to 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 utilized even in areas of limited softwood cover. More specific factors, such as percent canopy closure, species of softwoods, and stand age, also figure into the quality of the wintering area.

Most important when considering development and its impact on wildlife is the concept of habitat fragmentation. Forests provide habitat to a diverse population of wildlife, which are negatively impacted when forested land is fragmented through development.

Goals

1. To maintain or enhance the natural diversity and population of wildlife.
2. To restore stable populations of endangered or threatened wildlife in appropriate habitat areas.
3. To maintain or improve the natural diversity, population, and migratory routes of wildlife.
4. To allow sport hunting of ecologically sound intensities to provide continued success of the species.
5. Encourage forestland continuity as shown on the Future land Use map.

Guiding Principles

1. Wildlife populations and natural diversity should be maintained or enhanced.
2. Long-term protection of major habitats through conservation easements, land purchases, leases and other incentives is encouraged.

3. It is the intent of the Town to protect deer wintering areas from developments and other uses that adversely impact the resources.
4. Development other than isolated houses and camps should be designed to preserve continuous areas of wildlife habitat. Large-scale fragmentation of wildlife habitat is discouraged. Effort shall be made to maintain connecting links between such areas.
5. Preference should-be given to development that utilizes existing roads and field lines.
6. New developments should take reasonable steps to avoid disruption or loss of major wildlife corridor crossings, as shown on the map linked here.
7. Subdivisions and other development on large lots should minimize impacts on forestry potential and habitat values of undeveloped areas by concentrating development at the forest edge near other development and roads; should use lot sizes and shapes so that most of the remaining land is in a large undeveloped tract.

Recommendations

1. Encourage owners of necessary habitat for threatened species (see Appendix B, Vermont Fish & Wildlife Department, for listing of current threatened and endangered species of plants and animals) to contact the State for assistance in developing a management plan for these sites.
2. The Town of Topsham expects foresters and loggers to use best management practices for forest and agriculture management.
3. Public investments should be planned to minimize development pressure on agricultural and forest land.

XI. Scenic, Historic, and Recreational Resources

A. Scenic Resources

Much of Topsham could be considered “scenic” by the average person. The challenge is that the concept of “scenic beauty” is highly subjective by its very nature. Topsham residents enjoy their community much as it has been for centuries, small and quiet with small but dense villages and open sparsely populated countryside. Residents wish to see the community remain as it is without mandating what their neighbor may and may not do with their land. They want Topsham residents to be able to make a living on their land as they see fit if that is their choice without interference from the Town unless there is an issue that affects the health and safety of the community.

It could be said that all of Topsham’s roads are scenic by their very nature (rural and sparsely developed). However, there is no intention to restrict development, provided that it is consistent or similar to the type and scale of development that already exists in the area. Residents only want to ensure that the community remains much as it is now, while allowing for appropriate growth that will not overburden community services.

Large Scale Commercial development, Cell Tower construction or Wind Farm development should take into consideration the character of the area in which they are proposing to develop and make all attempts to make these developments fit within the landscape and the community at large.

B. Recreational Resources

The well-being of a community relies on many things, one of which is an opportunity to participate in outdoor recreation. As the population grows, more and more city and suburban dwellers are purchasing second homes or are renting in rural locations to vacation. As the finite land base is being developed, more pressure is being placed on the remaining open areas to provide outdoor recreation opportunities.

Topsham has no town-owned recreational lands or facilities, instead residents hunt, fish and recreate in town as their neighbors are willing to allow on their private property. Residents also utilize the Groton State Forest and the Pine Mountain Wildlife Management Area (WMA). The Pine Mountain WMA is in the northeast corner of Topsham, sharing land with Groton, Ryegate and Newbury. The WMA is 2,274 acres in size and is owned by the State of Vermont and managed by the Vermont Fish & Wildlife Department.

The Vermont Association of Snow Travelers (VAST) has a network of trails that runs through much of Vermont including Topsham. The VAST trail network represents one of the primary areas of winter recreation in Topsham.

C. Historic Resources

The town has a number of privately owned historic structures, most of which are located within Topsham’s three villages. The Topsham Town Hall is the most significant town owned building.

Goals

1. The town of Topsham wishes to preserve the community’s scenic, historic, and recreational resources so that future generations may continue to enjoy their use.
2. The town seeks to maintain the scenic landscape for the recreational use of its residents and visitors.

Guiding Principles

1. Large scale commercial development (including wind, solar, and cell tower development) should consider the potential impact on the existing scenic character of the community and all efforts should be made to adapt proposed developments in such a fashion that they blend in well with existing development.
2. Growth should be planned so as not to significantly diminish the value and availability of outdoor recreational activities.
3. Public access to outdoor recreational opportunities should be protected wherever appropriate.

Recommendations

1. The Town should consider conducting an inventory of important scenic or recreational areas in the community.
2. The Town should consider assessing town owned historic properties to determine their viability for preservation and / or restoration.

XII. Energy

Background

Practical energy planning and implementation results in positive environmental and economic returns to the community and energy providers. Conservation of energy lessens the demand for expensive new sources. Utilities are able to postpone capital investments necessary to provide for additional capacity. This has benefits for residents, businesses, and ratepayers.

While it is recognized that energy supply and demand are directed largely by economic forces at the state, federal, and international levels, the manner in which the town plans for future growth can have an impact on energy. For example, a highly dispersed and unplanned pattern of land use can waste both land and energy resources. By planning the location of jobs, public services and housing in close proximity to growth centers, the consumption of fuel and need for additional roads can be reduced. The siting and design of buildings and the selection of energy systems can influence the efficiency and conservation of energy.

A. Vermont's Energy Future

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.

B. Local Energy Demands

Per capita energy consumption for residential and transportation purposes, the Northeast is about the same as the rest of the U.S. In Vermont, almost 80% of residential energy is dedicated to space heating and domestic hot water, while approximately 50% of the state's total energy usage goes toward transportation. Of the energy dedicated to transportation, over 50% is used to fuel private cars for residents (as opposed to being used for public transit, road maintenance, or another public purpose).

According to data collected by Efficiency Vermont in 2016, the Town of Topsham's residential electricity use is nearly the regional median when compared to other communities within the Two Rivers-Ottawaquechee Region.

C. Local Renewable Energy Resources

The Vermont Energy Atlas is an online tool that can be used by anyone to gather information on existing and potential renewable energy resources by counties, towns, or individual parcels in the state. The following data for the Town of Topsham was collected in 2017:

Solar: Most locations in Vermont can generate a small amount of solar energy through photovoltaic panels or solar thermal systems. At present, Topsham has 9 net-metered photovoltaic site and no thermal solar sites. Additionally, it is estimated that the Town of Topsham has 698 residences with the potential solar capacity of 1.6 MWh, and 10 public locations with the potential solar capacity of 985,119 kWh.

Wind Generation: There are multiple levels of potential wind energy generation, ranging from Class 1 (10-11 mph) to Class 7 (19-25 mph). Many towns in Vermont are unlikely to have commercial generating capacity due to topography; however, in Topsham there are several opportunities for residential, small-commercial and large-commercial wind energy generation facilities.

- Residential (100ft tower)
 - 10,555 acres of Class 1 (10-11 mph)
 - 1,385 acres of Class 2 (12-13 mph)
 - 19 acres of Class 3 (13-14 mph) wind

- Small Commercial (150ft tower)
 - 1,560 acres of Class 2 (12-13 mph)
 - 1,185 acres of Class 3 (13-14 mph)
 - 264 acres of Class 4 (15-16 mph)
 - 27 acres of Class 5 (16-17 mph)

- Large Commercial (230ft tower)
 - 47 acres of Class 3 (13-14 mph)
 - 808 acres of Class 4 (15-16 mph)
 - 185 acres of Class 5 (16-17 mph)
 - 27 acres of Class 6 (17-18 mph)

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 to fuel vehicles (e.g., biodiesel), heat homes, or even generate electricity. Topsham does not currently have any active woody biomass thermal sites.

Biofuels: Biofuels are commonly grouped into two categories: 'first generation,' which refers to corn-based ethanol and oilseed crop-based biodiesel, and 'second generation,' which refers to algae-based biodiesel and ethanol made from the cellulose in plants.

Growing biomass to use in biofuels may be a viable way to encourage farming in Topsham; however, balance should be sought between growing for energy demands and for human and animal consumption.

Hydropower: Topsham has no active hydropower generation sites. There is a privately owned earthen dam that has been identified as having the potential to generate 5Kw of power, but permitting new hydropower facilities is a challenge. While large hydro facilities are more commonplace in Vermont, advances in technology are making it increasingly viable for small-scale residential use. Micro hydropower 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 winter season when solar is less effective. At all times, the health and stability of the river ecosystem needs to be prioritized above the generation of energy.

D. Implementing Energy Policy at the Local Level

Although the Town of Topsham is unlikely to have an impact on energy consumption at the national level, it already has a local impact given its demand for and use of energy. Municipalities do have control over their energy impact on a local level.

Form an Energy Committee

The Selectboard can create an Energy Committee as an 'Advisory Commission' under 24 V.S.A. Chapter 117 § 4433(1)(A) by municipal vote, adoption of bylaws, or through the town's charter. The Selectboard has also appointed a Town Energy Coordinator. A Town Energy Coordinator is most often responsible for assessing the town's current energy usage and initiate efficiency upgrades in the future.

Energy committees are often responsible for organizing audits of municipal buildings, tracking energy usage and identifying areas where the town could save money by reducing energy use or increasing energy efficiency. Additionally, the energy committee can work with community members to educate the public about energy efficiency programs that will help them reduce costs through efficiency and conservation.

Reasons for creating an Energy Committee include:

- **Save Money** - by shrinking the energy costs associated with municipal and/or school buildings, streetlights, and vehicles. In a time of economic recession, it is critically important to utilize this cost-saving mechanism. While the up-front costs of installing efficiency measures can sometimes be expensive, other projects cost nothing at all, and the long-term benefit in savings is worth it. Energy committees can save by promoting energy efficiency improvements through outreach programs such as Button Up-Vermont, and by setting standards in appropriate planning documents, such as the Town Plan.

- **Develop a Town Energy Plan** - by coordinating the Energy Committee's work with the local Planning Commission. An Energy Committee can research and advise the Planning Commission about energy issues, freeing up members' time to work on other pressing matters. Remember that all towns

that choose to have a town plan should have an energy plan according to 24 V.S.A. Chapter 117 § 4382(a)(9).

E. Capital Budget Planning for Energy Cost Savings

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 planning and investing in long-range capital planning. Although most communities have some form of capital account where they save money, many do not have a true Capital Budget and Program. A capital budget outlines the capital projects that are to be undertaken in the coming fiscal years over a five-year period. It includes estimated costs and a proposed method of 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 routine 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 will only be slightly higher if energy efficiency improvements are done at the same time, rather than on their own.

At present, the town of Topsham does not have an adopted Capital Budget and Program to help guide investments in community infrastructure and equipment. The Planning Commission may make recommendations to the Selectboard with regard to what capital investments should be considered annually. Topsham should strongly consider creating a Capital Budget and Program.

F. Energy Policy

It is important that communities recognize the clear connection between land use patterns, transportation, and energy use. Most communities encourage the development of residences in rural areas, and these are in fact coveted locations to develop because of the aesthetics that make Vermont special. However, this rural development requires most of our population to drive to reach schools, work, and services.

Because transportation is such a substantial portion of local energy use, it is in the interest of the community to encourage any new developments that are proposed in Town should be encouraged to locate adjacent to existing roads. In particular, dense residential developments should be located within or adjacent to existing villages. Commercial development that requires trucking and freight handling should only locate on roads which can effectively handle the size of vehicle needed.

G. Energy Scarcities and Costs

There are no scarcities of energy foreseen in the 8-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 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 not an issue for some families, but is still an issue for many, and will be less of an issue for all if targets for better insulating buildings, switching to EVs, and using heat pumps and advanced wood heat systems are met. An EV has much less maintenance costs, as they have no engine or exhaust system, and the cost of electricity to power a car comes out to the equivalent of about \$1.50 per gallon (in today's value), 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 that use our energy. There are rebates and programs available that are income-based, and even for those that have too much income to qualify over time these investments will pay off, but they still require getting financing or having considerable savings on hand.

Goals

1. To encourage a pattern of settlement and land use that uses energy efficiently.
2. To promote the design and construction of buildings and structures that are energy efficient and postpone the need for costly sources of energy.
3. To encourage the commercial and non-commercial development of local renewable energy sources for electricity, heat, and transportation, and to reduce dependence on fossil fuels.
4. To increase public awareness and use of energy conservation practices through educational efforts.

Guiding Principles

1. Major public investments, such as schools, public recreational areas, and municipal facilities should be situated within or in close proximity to the villages of Topsham;
2. The rehabilitation or the development of new buildings and equipment should use proven design principles and practices with the lowest life cycle costs;
 - a. Where land development or subdivisions are proposed, design plans should work towards the goal of locating structures and buildings on the site which reflect sound energy conservation principles, such as solar and slope orientation and protective wind barriers. Use of the cluster planning concept, where buildings are concentrated in one area of a site with a complementing offset of open space, is an approach that encourages energy conservation and efficiency; and
 - b. Visual effects of electrical generation, transmission, and distribution facilities should be minimized whenever feasible.

3. Where generation, transmission, and distribution facilities or service areas are proposed, such facilities or areas should be encouraged only when they complement the recommended land use patterns set forth in this plan.
4. To reduce the demand for commuter transportation facilities and energy, the development of broadband services, energy efficient home occupations and small-scale home business is encouraged.
5. To promote energy efficient commuting, the community supports state and regional transportation programs serving Topsham.
6. To include energy efficiency and conservation measures as part of a capital budget and program for future investments in municipal facilities.
7. To reduce transportation energy demand and single occupancy vehicle use.
8. To encourage the development of solar infrastructure in Topsham.
9. To discourage the development of biomass energy infrastructure in Topsham.
10. To discourage the development of commercial wind farms on the ridgeline.

Recommendations

1. The Selectboard should consider creating a Capital Budget and Program that considers energy efficiency and conservation measures as part of the long-term municipal facilities improvements.
2. The Energy Committee should identify ways to save the municipality money through reduced energy use and conservation.
3. The Town should increase public awareness and use of energy efficiency and conservation practices, financial incentives, and generation and storage methods through educational efforts.
4. The Town should consider renewable energy sources when building or renovating public facilities.
5. The Planning Commission should identify areas in Town that are appropriate as “preferred sites” for energy production.
6. Topsham should include energy efficiency and use of renewable energy when planning for capital investments.

7. Municipal officials should participate in the Public Utilities Commission review of new and expanded generation and transmission facilities in Topsham to ensure that local energy, resource conservation, and development objectives are identified and considered in future utility development.

XIII. Relationship to Other Plans

Topsham is bounded by four towns. The four principal adjacent towns are Groton, Newbury, Corinth and Orange.

Topsham shares numerous activities and services with surrounding towns, including school services, rescue squad and fire protection. The town is also a member of the Two Rivers-Ottawaquechee Regional Commission (TRORC), which serves Newbury and Corinth as well.

TRORC's regional plan covers 30 towns including Topsham. Since the preparation of the Topsham Town Plan was done with the assistance of the Regional Commission, no conflicts between the two have arisen. In fact, the two plans have similar policy statements regarding the need for development that does not overburden services. In addition, no specific development goals in this plan conflict with any regional goals.

The neighboring plans have been read in the context of the proposed Topsham Town Plan. Once again, no conflicts exist in either general philosophy or specific development proposals along town borders.

Recommendations:

1. To continue to communicate and cooperate with neighboring towns.
2. To continue participation in the Two Rivers-Ottawaquechee Regional Commission.
3. To exchange planning information and development data with neighboring communities.

XIV. Implementation

A. Putting the Plan into Action

The character of Topsham, its people, and landscape has been created over the years through the individual and collective decisions of its citizens and public officials. The efficiency, attractiveness, and well-being of the community is determined, in part, by the ability of the town to plan for its needs and to find a mechanism to put planning goals into action.

Previous elements of this Plan have been centered on existing conditions, probable trends and policy development which, when combined, represent a vision for the kind of town Topsham desires for the future. One thing is certain - the community will change. The opportunity is that citizens and town officials together can direct this change consistent with their desires, using a variety of mechanisms.

The following sections describe the tools and techniques that could be used to implement the Topsham Town Plan.

B. Adoption of the Plan

Adoption of the Topsham Town Plan by the Selectboard, in accordance with the procedures outlined in the Vermont Planning and Development Act (24 V.S.A., Chapter 117), is the first step in putting this Plan into action. Through its adoption, the town accepts the principles and policies as set forth in this Plan as in the public interest and as a guide for the future growth and development decision affecting Topsham.

C. Ongoing Planning

Planning for change is a continual process for the town and will require the involvement of the Planning Commission and the public to ensure that the goals and policies of the Plan are integrated into the decisions affecting land use, taxation, and public investments in Topsham.

The Topsham Town Plan is not a permanent document on community desires or values. Its life is limited to eight years by statute (24 V.S.A., Section 4387). The Planning Commission is responsible for the maintenance and amendment of the plan. Within the next eight years following adoption of the plan, the Planning Commission will need to evaluate the plan in light of new conditions and needs. Re-adoption of an updated plan will require notice to the townspeople and finally action by the Selectboard.

At any time, following adoption of the plan, the Selectboard may request the Regional Commission to approve the Plan or amendments to a plan. Before approving a plan, the Regional Commission shall find that the plan meets four basic tests [24 V.S.A., Section 4350(b)].

Approval of the plan provides an improved legal standing for the town to influence and integrate its planning policies with State agency planning affecting land use.

D. Implementation Tools

Vermont law enables the town to implement the adopted Topsham Town Plan through a variety of ways. Regulation of land use and development through rules adopted by the voters is one possible

method. Because these regulations are susceptible to legal challenge and must clearly benefit the public, discretion must be used. Well-recognized and utilized means include zoning bylaws and subdivision regulations. Examples of potential implementation tools include:

Zoning Bylaws - Zoning bylaws are a commonly used method for guiding development at the local level. Zoning may regulate:

- Uses of land
- The placement of buildings on lots
- The relationship of buildings to open space, and
- The provision of parking, signs, landscaping and open space

Zoning generally involves partitioning the town into districts or zones that have a different set of uses, densities, and other standards for development. Zoning districts must be reasonably consistent with the Town Plan. As an alternative to conventional methods, the town may opt to implement a set of measurable performance standards for specific uses as opposed to dividing the Town into districts. This technique, referred to as "performance zoning", is designed to be more flexible and to recognize the specific conditions of each site proposed for development.

Given that zoning bylaws are oftentimes controversial and difficult to administer, the town should give due consideration to this implementation technique prior to taking the time necessary to develop a proposal for the Topsham voters.

Subdivision Regulations - The town does not currently have subdivision regulations. These regulations, if adopted, would be administered by the Planning Commission. Regulations govern the division of parcels of land and the creation of roads and other public improvements. Furthermore, subdivision regulations can ensure that land development reflects land capability, that critical open spaces and resources are protected from poor design or layout.

Flood Hazard Bylaws - Under Vermont law (24 V.S.A., Section 4412), the Town of Topsham may regulate the use of land in a defined flood hazard area adjacent to streams and ponds. These bylaws can be established to ensure that design and construction activities within the limits of the 100 Year Flood Plain are designed so as to minimize potential for flood damage and to maintain use of agricultural land in flood-prone areas. As noted in the Natural Resources section of this Plan, property owners are eligible for federal flood insurance on buildings and structures at relatively low federally subsidized premium rates. However, such insurance cannot be obtained for properties in Topsham unless the Town has in effect a Flood Hazard Bylaw. A Flood Hazard Bylaw was adopted in July 1991 by the Selectboard, and most recently updated and readopted in 2008. This bylaw should be reviewed to make sure that it adequately protects the floodplain from unwise development.

Sewage Ordinance - In addition to zoning, subdivision, and flood hazard bylaws, the Town may, through its Selectboard, adopt an ordinance to regulate the design and installation of on-site sewage systems. Under this ordinance, prior to the installation or replacement of a system, the landowner would first need a permit from the Topsham Board of Health (Select Board and Town Health Officer). However, this ordinance may be redundant as the state will regulate all new septic installations.

Highway Ordinances - The town has in effect a Highway Ordinance setting forth the standards and conditions for the maintenance, improvement, discontinuance, laying out and acceptance of Town highways. In addition, the ordinance includes provisions related to the reclassification of town highways (Classes 2, 3 and 4).

Lastly, the town does have, through its Selectboard, the ability to regulate private access to municipal roads through the issuance of "curb cut" permits to landowners. "Curb cuts" are places where a private driveway or road connects to a town highway. In granting a cut onto town roads, the Selectboard can give consideration to safety issues such as adequacy of sight distance and proximity to intersections as well as conformance with this plan.

Capital Budget – A capital budget and program is a financing approach that benefits the town greatly in the selection, prioritization and costing of capital projects. Under the capital budget, a project is selected (i.e., bridge refurbishment), a funding source determined (i.e., general taxes, and general obligation bond) and priority year given for each activity (i.e., construction in 2025). Collectively these capital projects make clear when public facilities will be placed to accommodate projected growth. When used in conjunction with the Town Plan and local bylaws, it can be a powerful mechanism for limiting the rate of growth in accordance with the fiscal capacity of taxpayers and other funding sources.

In addition, it is noted that under Vermont's Act 250 law, in granting a Land Use Permit for a major development or subdivision, the District Environmental Commission must first find that the project is in conformance with the town's capital budget. [See 10 V.S.A., Section 6086(a)(10).] Accordingly, this mechanism gives the town an indirect method of implementing its policies and priorities as set forth in the plan.

While both the town and school district have an informal system of capital programming, it is recommended that a Capital Budget Committee be established to work with the Select Board and School Directors in the development of a list of capital needs and expenditures and to formally present a Capital Budget and Program for adoption.

Vermont Community Development Program - Since the mid-1970's, the Vermont Community Development Program (VCDP) has made grant funds available to towns for community projects. Historically, the major focus of the program has been on housing rehabilitation and affordable housing projects benefiting low and moderate-income families.

The town should investigate the Vermont Community Development Program and its potential to assist the community in addressing its housing needs. The Regional Commission and the Vermont Agency of Commerce and Community Development are resources available to assist. (PH: 802-828-3217).

Act 250 - Since 1970, Vermont has had in place a statewide review system for major developments and subdivisions of land. Exactly what constitutes a "development" or "subdivision" is subject to a rather large and involved set of definitions. However, generally, commercial, and industrial projects on more than one acre of land; construction of 10 or more units of housing; subdivision of land

into 6 or more lots; construction of a telecommunication tower over 20 feet in height; and development over 2,500 feet in elevation qualifies.

Prior to these activities being commenced, a permit must first be granted by the District Environmental Commission. In determining whether or not to grant a permit, the Commission shall evaluate the project in relation to ten specific review criteria.

These criteria relate to the environmental, economic, and social impacts of the proposed project on the community and region. Parties to Act 250 proceedings include the town, through the Planning Commission and Selectboard, the State, and the Regional Commission. One criterion that needs to be addressed is whether the project is in conformance with the Topsham Town Plan. If a project were determined not to be in conformance with the plan, the District Environmental Commission would have a basis to deny a permit. As such, Act 250 reviews can take into consideration protection of those types of resources considered important to the well-being of the community. Accordingly, it is in the interest of the town to evaluate Act 250 projects affecting Topsham and to offer testimony, as appropriate.

Coordination of Private Actions - Citizens and private enterprise have a vested interest in the well-being of the town. The actions of the private sector being the construction of homes and businesses, land conservation, and the use of land for recreation and agriculture should relate positively to the goals and policies as set forth in this Plan.

It is in the interest of the town, through the Planning Commission and Selectboard, to develop a cooperative relationship with private investment activities that may have a significant impact on the community values and policies set forth in the plan. By working together in a cooperative venture early in the process of planning for a project, an adversarial relationship can be avoided.

Contacts that should be maintained include:

- Green Mountain Economic Development Corporation
- Vermont Land Trust and Upper Valley Land Trust
- Twin Pines Housing Trust
- Owners of significant properties of high resource or development value, and
- Major employers in Topsham

Conservation Activities - Conservation programs are an effective means of securing protection of valuable farm and forestland or significant natural resources. Techniques available involve voluntary direct work between non-profit conservation organizations and affected landowners such as donation of conservation easements, bargain-sales of land, and limited development schemes.

The land trust movement has grown immensely during the past twenty years, particularly in Vermont. Land trusts offer viable means of bringing together the needs of property owners with the community interests. The Vermont Land Trust and the Nature Conservancy are particularly well-recognized organizations. Several organizations are also involved in water quality protection. It is the intent of this plan to implement its policies through coordination and the involvement of these organizations and others dedicated to public purposes.

E. Guidelines for Growth

The following guidelines are intended to help town officials, residents and developers work together to plan and design developments consistent with the goals and policies of this plan. These guidelines are suggested ways to implement the plan. They are not mandatory and are not intended to be strictly adhered to in every case. They are offered to give landowners and officials a common, but flexible framework for preparing plans and making decisions.

Siting New Development - New development should be sited to:

1. Be compatible with the historic settlement pattern;
2. Maintain functional integrity of deer wintering areas;
3. Be cost efficient for municipal services; and
4. Conserve the agricultural potential of primary agricultural soils by:
 - a. Keeping primary agricultural soils available for agricultural production unless the only economically viable use of the land would be from incompatible uses;
 - b. And utilizing creative planning and design to minimize the reduction of agricultural potential.

Designing New Development - Landowners should design and phase new development, particularly large residential development to:

1. Avoid overloading public facilities and services;
2. Protect and promote the harmonious balance between buildings and useful, well-defined open space, and a human-scaled character of structures and settlements;
3. Be compatible with desired habitat conditions, public outdoor recreation;
4. Take advantage of opportunities to enhance and/or restore habitats by establishing native vegetative diversity or provide other wildlife benefits;
5. Mitigate the effects of proposed actions on identified archeological sites;
6. Be compatible with the qualities that make historic areas, structures or sites significant;
7. Protect the community trail system from activities which would unduly compromise desired trail experiences and uses; and
8. Incorporate the following visual elements:
 - a. Unobtrusive heights of buildings;
 - b. Vegetative screening;
 - c. Preservation of native vegetation;
 - d. Unobtrusive location of utilities; and
 - e. Minimal alterations to topography.

Public Facilities and Services - Major new developments should pay a proportionate fair share of the increased cost of providing public facilities or services to the development.

Roads - New roads, private or public, should be designed and constructed to:

- Minimize impacts to large woodlands and wildlife corridors (if roads and trails are desired, locate them along the outer edge of the areas and limit trail use to low-impact activities compatible with the habitat objectives);
- Meet town road standards; and
- Minimize impacts on desired habitat conditions, water quality and other ecological functions.

Landowners requesting upgrades of Class 4 roads to Class 3 should pay the costs of the necessary improvements. (19 V.S.A., Section 711).

New private development roads should remain the responsibility of the residents.

If stream crossings are necessary for new development, efforts should be made to minimize their impacts on aquatic life.

Water and Sewer Systems - Prospective developers should demonstrate the ability to provide an adequate supply of potable water for their developments without impairing the quality or quantity of existing water supplies.

Developers should protect the quality and yield of groundwater by limiting land use activities within recharge areas.

Vegetation Management - Timber harvesting should be consistent with the Vermont Forest, Parks and Recreation's Acceptable Management Practices.

Deer wintering areas should be managed according to the Vermont Department of Fish and Wildlife's *Management Guide for Deer Wintering Areas in Vermont*, (1990).

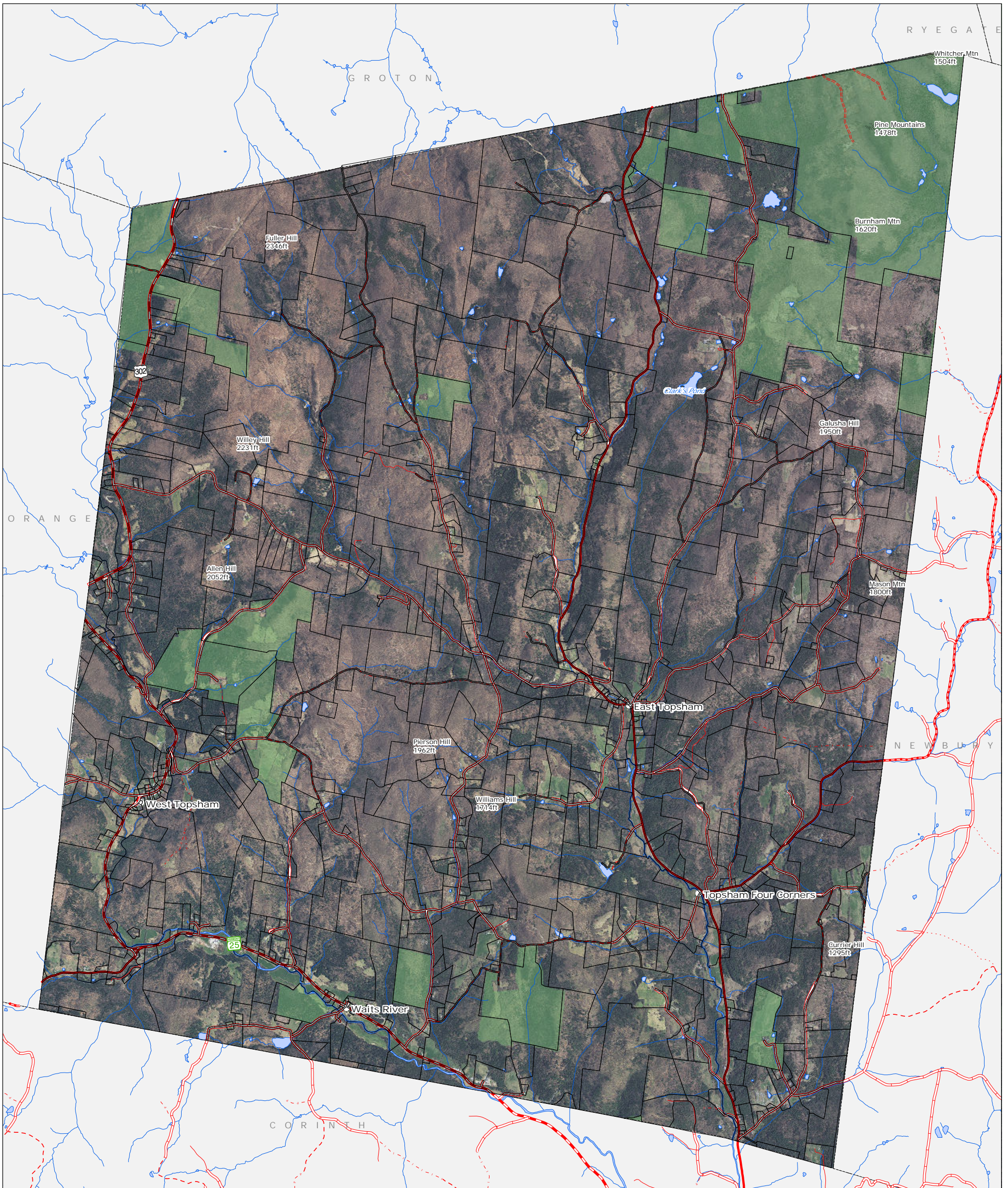
When managing timber along streams designated as important wildlife corridors, avoid harvesting trees within 100 feet of a stream.

Energy - New development should reduce energy used for transportation by:

- Minimizing unnecessary lengths and widths of new roads in order to reduce energy used for trips, materials, construction, and maintenance;
- Laying out new roads to allow clustering of structures, unit orientation for optimum solar gain, and location of structures in wind shadows;
- Locating development to facilitate creation of public and pooled transportation and promote pedestrian access to activities and facilities within and among settlements;
- Using local materials and labor in construction to reduce transportation energy costs; and
- Providing appropriate opportunities for jobs, retail goods and services within villages and neighborhoods in order to reduce the need for travel.

Involvement with the Regional Economy - Ideally, a new or expanding business affecting Topsham should:

- Create community pride and have a positive effect on the community's image;
- Strengthen and preserve the community's assets, particularly those identified in the Town Plan as important;
- Provide fiscal revenues that exceed direct and indirect costs;
- Invest in the community (e.g., sponsor groups and activities, allow community use of land and buildings, build affordable housing, provide day care);
- Help keep money circulating in the community (e.g., be owned by local residents; hire local people; use local resources or products; provide services or products presently obtained from outside community);
- Produce products or services that meet community needs and will benefit the community;
- Add value to a local renewable resource or product (e.g., dairy, cheese factory, furniture manufacturer);
- Be committed to reducing negative environmental impacts; and
- Minimize traffic impacts.

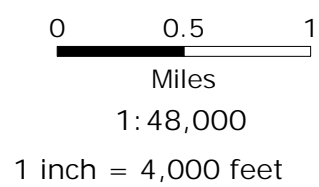


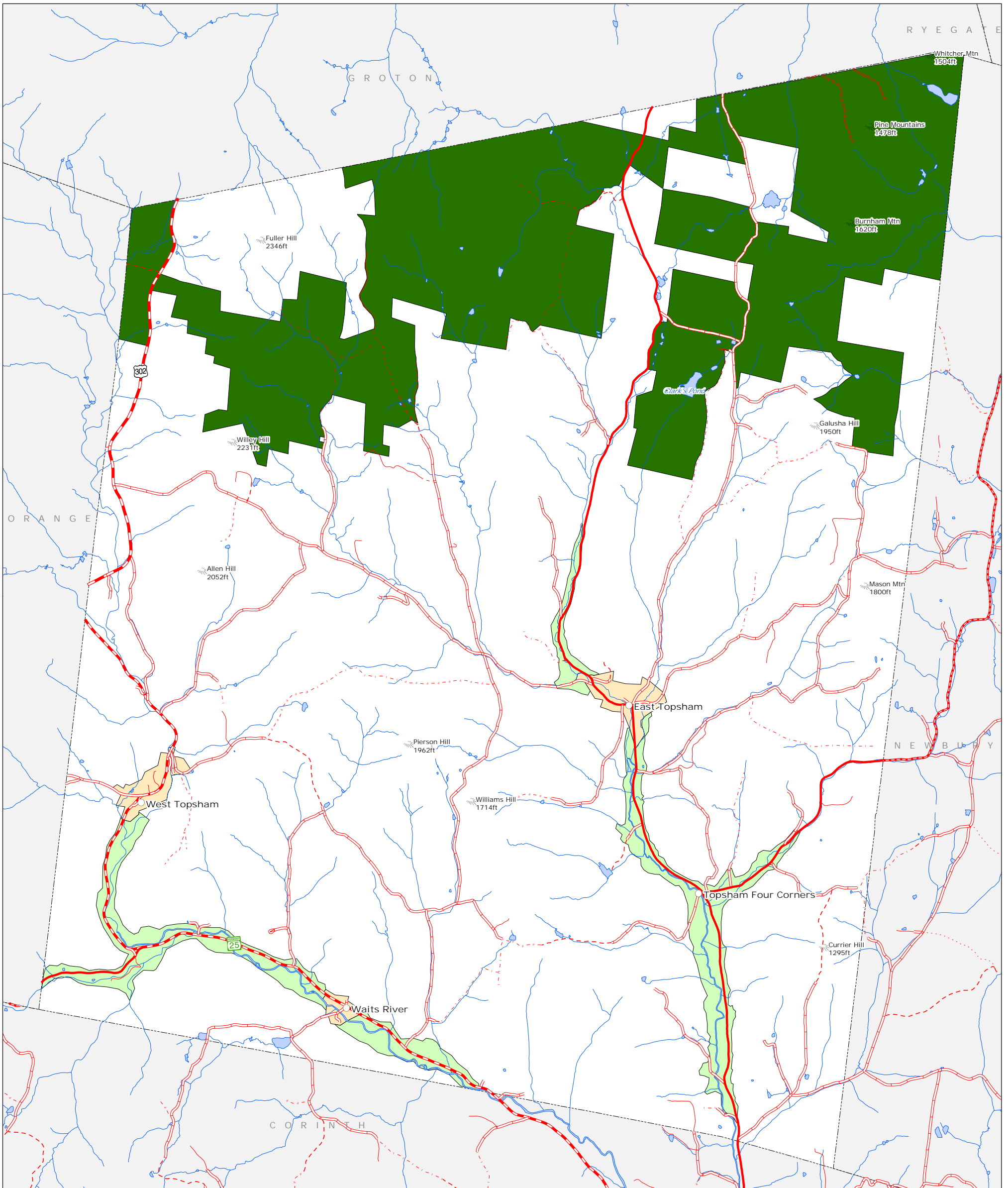
Current Land Use

Topsham, Vermont

Town Plan
Map 1 of 4
Adopted
8/21/23

- TH cls 1 (village VT rt)
- TH cls 2
- TH cls 2 gravel
- TH cls 3
- TH cls 3 gravel
- TH cls 4 gravel
- TH cls 4 primitive
- TH cls 4 impassable
- VT forest hwy
- trail
- private
- VT route
- US route
- US interstate





Future Land Use Topsham, Vermont

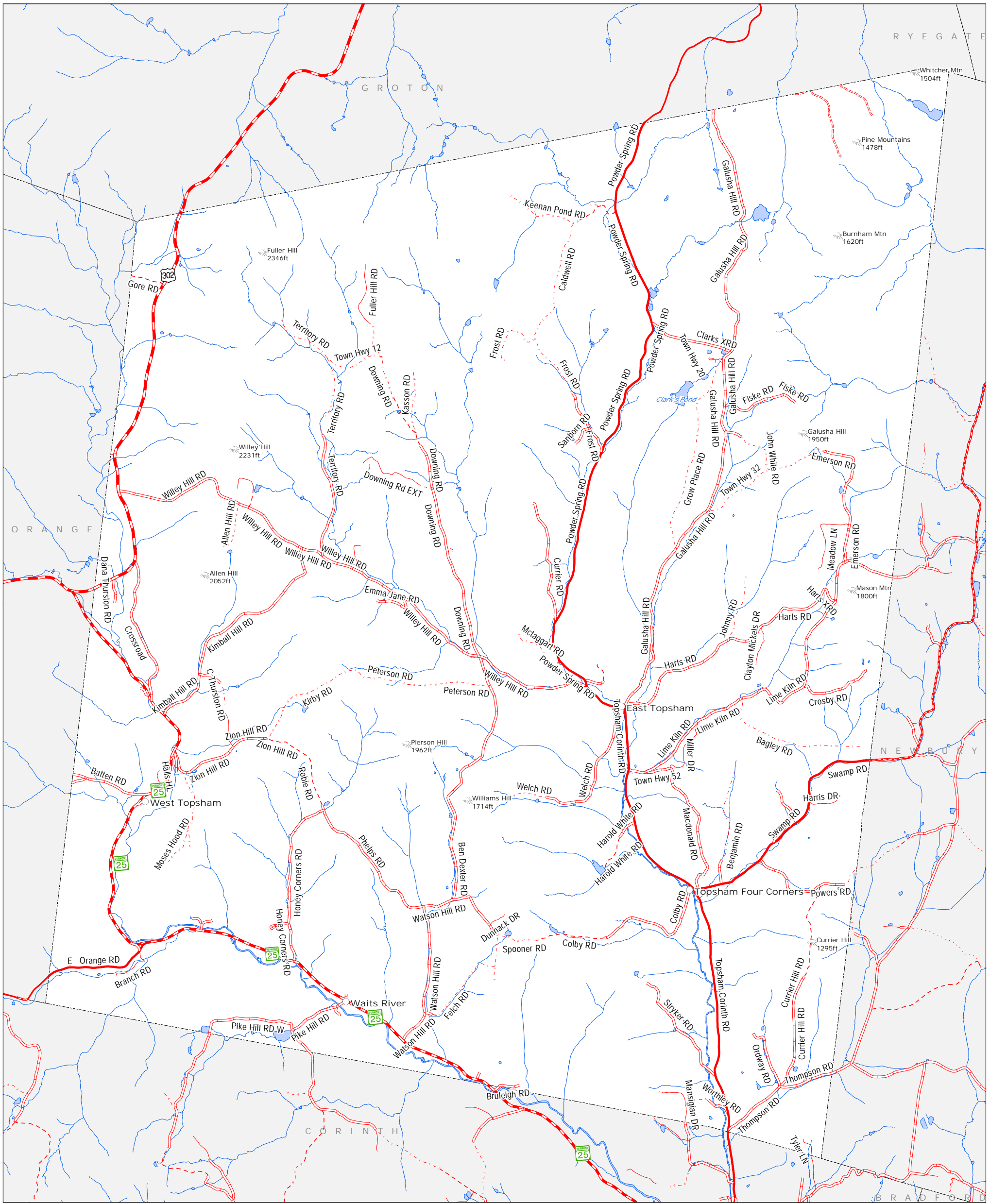
Town Plan
Map 2 of 4
Adopted
8/21/23

- TH cls 1 (village VT rt)
- TH cls 2
- TH cls 2 gravel
- TH cls 3
- TH cls 3 gravel
- TH cls 4 gravel
- TH cls 4 primitive
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- VT forest hwy
- trail
- private
- VT route
- US route
- US interstate

- Future Land Use Areas
- Working Forest Area
 - Valley Agricultural Area
 - Village Areas
 - Rural Residential Area

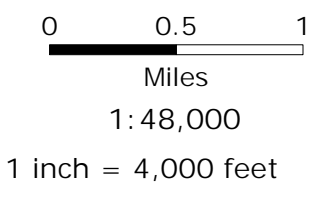


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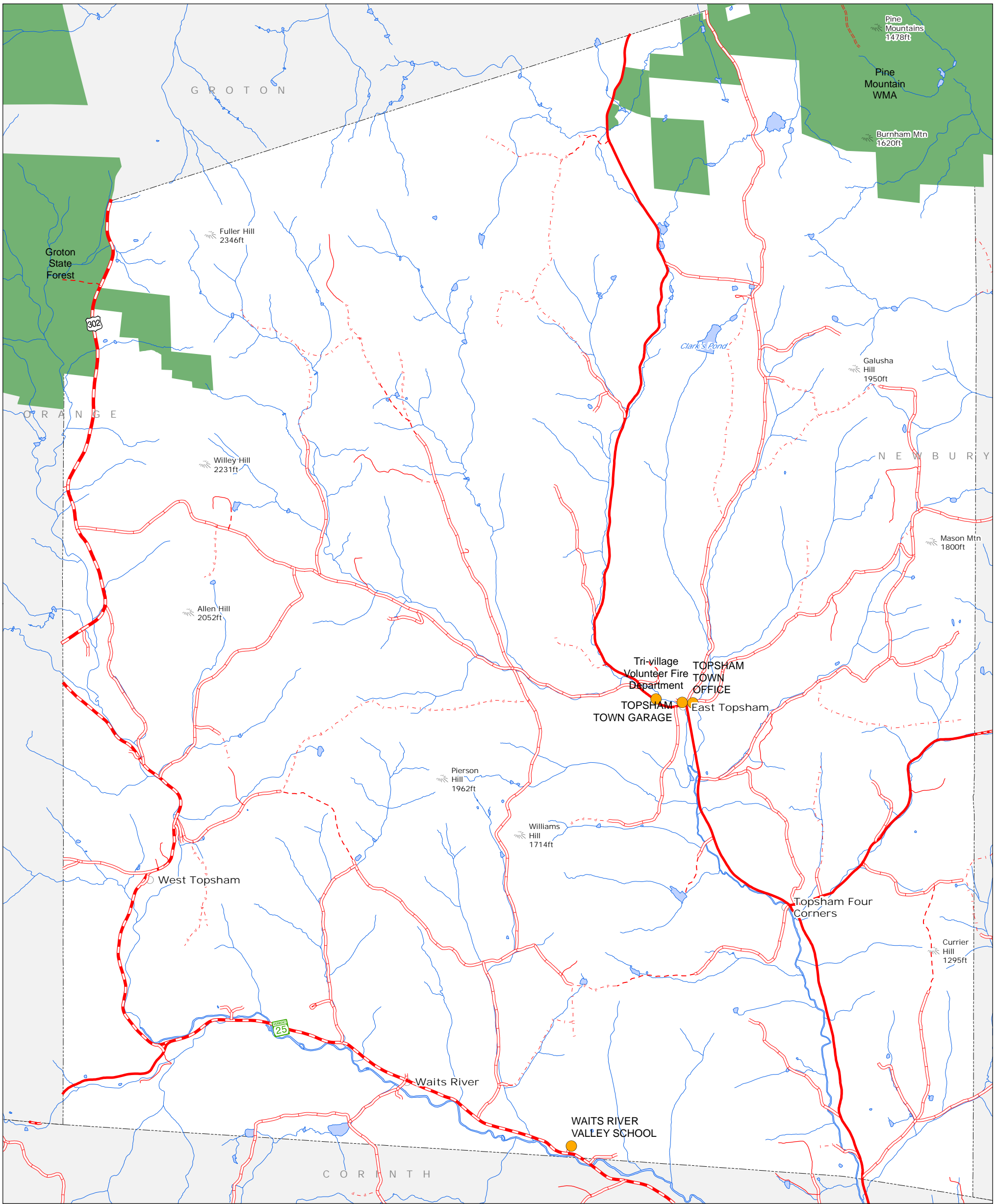


Current and Future
Transportation
 Topsham, Vermont

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- TH cls 2
- TH cls 2 gravel
- TH cls 3
- TH cls 3 gravel
- TH cls 4 gravel
- TH cls 4 primitive
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- VT route
- US route
- US interstate



Town Plan
 Map 3 of 4
 Adopted
 8/21/23

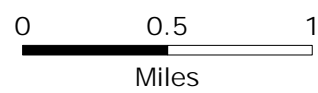


Current and Future
Utilities, Facilities & Education
 Topsham, Vermont

Town Plan
 Map 4 of 4

Adopted
 8/21/23

- TH cls 1 (village VT rt)
- TH cls 2
- TH cls 2 gravel
- TH cls 3
- TH cls 3 gravel
- TH cls 4 gravel
- TH cls 4 primitive
- TH cls 4 impassable
- VT forest hwy
- trail
- private
- VT route
- US route
- US interstate
- Facilities
- Public Lands



1:42,000

1 inch = 3,500 feet

