MORETOWNPLAN



Adopted by the Selectboard: xxxxxxxxxx

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1. Introduction

This major update of Moretown's Plan has been organized to improve transparency, readability, and more directly align with State planning requirements. It takes into account important changes which have impacted Moretown – and the world – in recent years.

1.1 Purpose

Simply put, the purpose of the Moretown Plan is to outline the Town's vision and recommend strategies for achieving that vision.

The Moretown Plan is a comprehensive, long-range plan for the future. This plan:

- Describes the forces that have shaped our history
- Analyzes our current condition
- Expresses our shared community values and aspirations
- Examines the forces that have potential to change our community in the future
- Establishes goals and policies for guiding and managing change in a manner consistent with our shared values and community aspirations
- Complies with Vermont's municipal planning laws

The Plan also sets short- and long-range goals to guide planning, budgeting, and policy decisions made by local boards and officials, including the capital budget and changes to Moretown's Land Use Bylaws. It provides a useful reference for local and state officials when making decisions affecting the community, and it informs anyone interested in Moretown's history, resources, challenges and policies. In particular, this plan establishes a framework within which Act 250, Public Utility Commission and other state, as well as local, permitting will take place. The Town Plan is also used by public and private agencies, such as the Vermont Land Trust (VLT), Central Vermont Regional Planning Commission (CVRPC), Vermont Agency of Transportation (VTrans), Agency of Commerce and Community Development (ACCD), and Department of Fish and Wildlife (DFW), when making decisions to fund conservation, planning and infrastructure projects. An updated Plan helps ensure that the Town's current conditions, vision, and best interests are considered when decisions are made.

1.2 Authority

Vermont state law (24 VSA, Chapter 117, The Vermont Municipal and Regional Planning Act) authorizes, but does not require, municipalities to adopt a plan. The Moretown Planning Commission and Zoning Administrator prepared this plan, which was adopted by the Moretown Selectboard in accordance with state law.

1.3 Planning Process

The Planning Commission engaged in an open, comprehensive planning process that invited public participation and has prepared a plan that is consistent with state law. This process began with the Moretown 2024 Community Survey completed by townspeople, as well as information made available at two consecutive annual Morefest celebrations, and continued with discussions of each chapter at Planning Commission meetings. While the plan meets state requirements, it does so in a manner that reflects Moretown's specific conditions and needs, and the residents' unique vision and aspirations for the community's future. Results of the 2024 Community Survey may be found in Appendix A.

1.4 Compatibility and Consistency

Because of Moretown's geography, dispersed settlement pattern, small population, and limited resources, it has always been, and will continue to be, necessary for the Town to work with adjacent communities to efficiently and affordably serve residents. Many of Moretown's needs, issues and goals are shared by other Vermont towns – both in the region and around the state. This plan identifies opportunities for ongoing or further cooperation and coordination with neighboring communities, and with others in the region and the state as a whole.

1.5 Vision and Challenges

As affirmed by the Selectboard through adoption of this statement in 2021, "the Town of Moretown condemns racism and welcomes all persons, regardless of race, color, religion, national origin, sex, gender identity or expression, age, or disability... As a town, we formally condemn discrimination in all of its forms and commit to fair and equal treatment of everyone in our community. The Town of Moretown has been and will continue to be a place where individuals can live freely and express their opinions."

Moretown's vision is that it will continue to be a thriving, welcoming community which:

- Serves the needs of its residents in a sustainable and resilient manner
- Values and protects its natural resources
- Retains its essentially rural character

Substantial social and environmental changes challenge the town's ability to achieve this vision. As detailed in later chapters, Moretown's population grew considerably from 2010 to 2020. This growth was concentrated in the 65 and older age group. Available evidence suggests that this trend will continue. Moretown's 2024 Community Survey results indicate that affordability of housing and increases in property taxes are felt by residents to be the top challenges facing Moretown, followed by preparing for climate change, managing growth and development, and conserving forests and agricultural land. This need to protect and enhance the Town's natural setting is reflected in the Survey's indication that Moretown's greatest asset is the rural setting/lifestyle it allows for while being close to 189, Waterbury, and Montpelier. Also noted as top assets for the Town are its sense of community and that it is considered to be a good place in which to raise a family.

There are two significant challenges to pursuit of the Town's vision. The first is physical: Moretown's topography, and its brooks and rivers impede the development of a cohesive community. These natural features make the town especially vulnerable to flooding, and limit possibilities for the development of a municipal center. The second is fiscal: the findings from the Moretown 2024 Community Survey make it clear that our residents are very concerned about the growing cost of living. It is critical for the Town to pursue its vision in a manner that does not impose significant new financial burdens on its residents.

1.6 Goals, Objectives, and Strategies

Each chapter in this Plan outlines goals and objectives related to its subject matter, as well as strategies to be pursued in working toward those goals.

Overarching goals for the Town are to:

- Support population growth and development in a manner that preserves important natural resources and the town's essentially rural character.
- Ensure that Moretown is an attractive community for people of all income levels and ages.

2. Background

This chapter provides important background for the remainder of the report. It includes a synopsis of relevant aspects of Moretown's history plus a profile of the town's population and how it has been changing. A more detailed history appears in Appendix B.

2.1 Synopsis of Moretown's History

2.1.1 Indigenous people

Evidence of human activity in Moretown dates back to approximately 9,000 B.C.E. The arrival of Europeans devasted the indigenous Abenaki population through disease and conflict. When colonial settlers arrived in Moretown the Abenaki, and evidence of their culture, had largely disappeared, although there is substantial archeological evidence of this culture throughout New England.

2.1.2 Establishment and Development of Moretown

In 1763, Governor Benning Wentworth of New Hampshire drew the boundaries of the Town of Moretown, along with those of 36 other towns, in a manner that fragments the Town geographically. Wentworth's straight and orderly boundary lines pay scant attention to the mountains, valleys and rivers that define the landscape. Mountains and hills fragment Moretown into four watersheds (Exhibit 2.1). Reflecting this fragmentation, development has occurred in multiple small settlements rather than adjacent to Moretown Village. Settlement occurred along Moretown Common above the Village, in North Moretown along and above the Winooski River, over Moretown Mountain along Cox Brook near the Berlin/Northfield town lines, and in the Jones Brook area bordering on Berlin and Middlesex; these locations are all in different sub-watersheds of the larger Winooski watershed.

The geographic fragmentation of Moretown also led residents to engage with the outside world in different ways, depending on where they lived. Starting in the 1870s, the Ward family lumber and milling business, one of the largest in the region, was centered in Moretown Village; the business employed many workers from adjacent towns, especially to the southeast. Many Moretown residents living outside of the Village worked in industries and government agencies in Waterbury, Montpelier, and Northfield. Also reflecting the multiple settlements, the location of town meetings migrated from North Moretown/Duxbury Corners (an area arbitrarily split by one of Governor Wentworth's lines) to Moretown Common and then, by 1832, to present-day Moretown Village.

Fragmentation of Moretown also shaped the development of the Town's schools. When World War II and the post-war baby boom ushered in a period of population growth, the town operated five one- and two-room schoolhouses. Voters resisted consolidation of these schools until 1960, when the School Board established the centralized Moretown Elementary School. Continued demographic pressure and increasing high school attendance led Moretown to join with Duxbury, Fayston, Waitsfield, Warren and Waterbury in 1966 to create Harwood Union High School and Middle School, for grades 7 through 12. Declining enrollment at Moretown Elementary and changes to the State's education funding structure led Moretown to join in forming the Harwood Unified Union School District, in 2017.

The fragmentation of activities in Moretown continues today, with no single, cohesive town center. Residents in the various areas of Moretown have very different environments for work, transportation, basic utilities, providers of goods and services, schools, and recreation. Moretown Elementary remains in operation, however parents of some elementary-age students may choose to send their children to other elementary schools in the School District. Although advances in transportation and communication

made it easier for Moretown residents to connect with each other and to consolidate the multiple original primary schools, the town's geography continues to be a challenge for development, governance, education, and the town's sense of community.

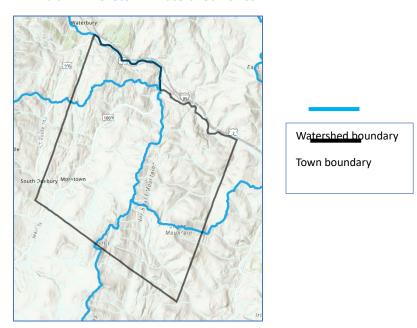


Exhibit 2.1 Moretown Watershed Zones

2.1.3 The Roles of Two Rivers

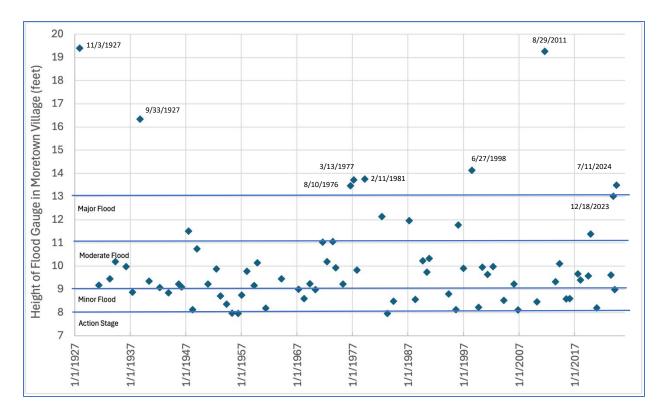
Two major rivers – the Winooski River, on Moretown's northeast border, and the Mad River, flowing through the Village – played central roles in Moretown's development. For the earliest settlers, including the Abenaki, the waterways were used for fishing and transportation. For later settlers the streams were used to float logs to mills. Today they continue to be used for recreational fishing and transportation.

Eventually the two rivers also became a primary source of power. Sawmills, gristmills and mining operations were located along the rivers and their tributaries in Moretown in the 19th century. Three hydroelectric dams were constructed on the rivers between 1895 and 1910. Two of these remain in operation today—the Middlesex Dam on the Winooski built in 1895, and the Moretown #8 Dam on the Mad River built in 1910.

Until the 1950s, it was common practice for residents and businesses to discharge raw sewage into the rivers and their tributaries, as in other rural areas throughout New England. The 1972 Clean Water Act spurred efforts to reduce this pollution. Today the rivers are generally safe for fishing and swimming.

Floods on the two rivers have shaped Moretown's history. A catastrophic flood in 1927 was a defining event for Moretown and many Vermont towns. Flooding on both rivers and their tributaries damaged or destroyed homes, mills, bridges, roads and the Central Vermont Railroad. Moretown was isolated after bridges at both ends of the Village, at Middlesex, across the Winooski River at Duxbury Corners, and over brooks on town highways were washed away. Several dams failed. Houses were lifted off their foundations and overturned. Those buildings in the village that remained standing were filled with mud and water. Only two of the hydroelectric dams survived and rail service in Middlesex and Waterbury was not restored until 1929.

Exhibit 2.2 Mad River Flood Gauge Peaks in Moretown Village, 1927-2024 (Source: US Geological Survey)



2.1.4 More Recent Flood Events

In August 2011, Tropical Storm Irene dropped more than six inches of rain in the area, flooding Moretown Village and homes and other buildings along the Mad River, the Winooski River, and various tributaries. The Mad River's peak water level was just below the 1927 record (Exhibit 2.3). The 2011 school year opened with Moretown Elementary School students attending classes in a tent. The Town Office was destroyed, and the Fire Station and Town Hall both flooded. The Route 100B bridge south of the Village was temporarily closed, and then reduced to one-lane traffic until it was eventually replaced in 2020. The Moretown Town Office was destroyed, and temporarily located on Route 2 before being replaced with a new building in a higher location in the Village.

There is an increase in moderate and major flooding on the Mad River, from 5 floods in the 49 years from 1927 to 1975, to 11 floods in the 48 years from 1976 to 2024. Significant flash flooding events occurred in 2023 and 2024, caused by intense rainfall over short periods of time. In both events there was substantial damage to roads throughout the town, including washouts of small bridges and flooding of homes and Moretown Elementary School.

The Town of Moretown, along with its residents and businesses, spent millions of dollars on recovery following Tropical Storm Irene and each of the 2023 and 2024 flooding events. Although state and federal governments and insurers have compensated residents, businesses, and the Town government to varying degrees, the net financial burden on residents has been high—especially when the impact on daily economic and other activities are considered. Hence, the Town has a strong interest in better understanding the likely impacts of future flooding and in taking steps which may serve to mitigate impacts to homes, businesses, and infrastructure.

2.1.5 Forestry and Agriculture

Logging and agriculture in the 18th and 19th centuries shaped Moretown's landscape in ways that continue to be important. The logging and milling industries led to the clearing of forests throughout the town and enabled subsistence farming. Many Moretown farmers participated in the two-decade long Merino sheep boom starting in the 1820s. In the four decades that followed, logging and sheep farming resulted in massive clearing of the native forest. Remnants of stone walls, foundations, and old roads and trails throughout the remote areas of Moretown are reminders of the 19th century "hill farms" and of other activities of the early European settlers. The old roads and trails include, but are not limited to, those the Town has designated as Class 4 Highways or Legal Trails. The remaining farms in Moretown are located on the relatively small amount of acreage in the Town that is suitable for field crops or pasture.

2.1.6 Infrastructure development

Over 175 years, several waves of infrastructure development have reshaped the Moretown community: railroads, telephones, electrification, roads and highways, and most recently the internet. Each wave has changed residents' daily activities and provided better economic opportunities for many. The effects of these changes on Moretown's sense of community have likely been mixed. Some changes have made it easier for residents in disparate parts of the Town to engage with each other, including through the consolidation of schools. Many of the changes have also made it easier for residents to focus on people and activities outside of Moretown. Some improvements to communication, utilities, and transportation occurred later in Moretown than in more densely populated areas of Vermont and the surrounding states. These delays may have initially encouraged emigration to urban areas, followed later by the return of former residents or new immigration into Moretown as infrastructure improved.

The Vermont Central Railroad was built through the Winooski River valley in 1848 and 1849, making it more feasible to ship lumber, farm products, stone, minerals, and other commodities to markets in Montreal, Boston and New York City. During the next 100 years, the construction and improvement of state and federal highways facilitated the commercial and personal use of larger wagons, carriages, and later automobiles and trucks.

Telephone service was first established in Vermont in the 1910s. In rural areas such as Moretown, local companies organized to string wires along roads and create switchboard offices. Though primitive by today's standards, access to telephones allowed residents to communicate and conduct business over long distances at low cost.

Although by 1900 there were three hydroelectric plants in Moretown, most of the electricity generated was exported to cities, both in and out of Vermont. Most of Moretown, like much of rural Vermont, was not electrified until the 1940s. Electricity enabled better lighting, plus appliances and tools powered by electricity. It was a major boost to the competitiveness of dairy farms and other rural businesses.

A major development for Moretown was the construction of Interstate 89. The highway reached Waterbury in 1960 and was completed throughout Vermont by 1965. The Interstate system made it much easier for Moretown's residents and businesses to trade with other parts of the country and the world. Interstate travel also made it easier for Moretown residents to travel afar, and for millions of non-residents to enjoy skiing, hiking, fishing and other recreational activities in and near Moretown. Both the Town's recreational resources and proximity to Interstate 89 are major reasons that people choose to live in Moretown, as evidenced by responses to both the 2013 and 2024 Planning Commission surveys.

Growth in tourism has also increased demand for vacation homes and short-term rentals. The Interstate system has largely displaced the railroad for most transportation and shipping.

Starting in the 1990s, the advent of the internet has brought significant change to the daily lives of Moretown residents—making it easier to obtain information and to communicate both far and near. In this century, broadband internet and wireless communication is gradually replacing landline telephone service, however the expansion of this service at affordable rates into many areas of Moretown has been slow. Those with high-speed internet access use it for on-line shopping, working from home, entertainment, and many other activities. The COVID pandemic accelerated efforts to expand broadband internet service to facilitate virtual education, online delivery of health and other services, ordering goods for pickup or delivery, and working from home. High-speed internet service is making it feasible for many people attracted to Moretown's rural character to move here and to work from home or retire.

Like past changes in communication and commerce, broadband expansion has had mixed effects on the Town's sense of community. Residents outside of the Village now have virtual access to town government meetings and various social activities, but may see each other in-person less frequently as a result. Further, there may be more interaction with commercial and social activities outside of Moretown, and less with other town residents and local businesses.

2.2 Population Profile

This section focuses on the characteristics of Moretown's population that are significant for planning.

2.2.1 Population Growth

Moretown has experienced a pattern of growth that is typical of many Vermont communities; a population increase from the late-1700s through the Civil War, followed by a century of decline and stagnation, then rapid growth beginning in the 1960s. The growth that began in the 1960s remained strong through the 1990s, slowed substantially after 2000, and may now have started to accelerate.

The 2020 Census counted 1753 people living in Moretown, an increase of 95 residents, or 6%, from the 2010 count. It should be kept in mind that the COVID pandemic started as the 2020 Census was being conducted. While the 2020 Census was underway some people who already owned a second home in Moretown left their primary homes to live here and others purchased properties as pandemic refuges; an unknown number of these may have since returned to their primary homes.

An estimate of the 2025 population of Moretown is 1744 according to Vermont Demographics, indicating a slight recent decline consistent with the estimated change from 2022-2023. It is anecdotally understood that some families who moved to their second homes in Moretown during the pandemic have decided to stay, while others were only here temporarily. Others have moved into the area because of concerns about the risk of climate change where they lived. The expansion of high-speed internet service within Moretown has made it a more attractive place to live, especially for telecommuters who prefer to live in a rural area. The rapid growth in housing prices in Moretown may also be evidence of population growth. A housing price index for Moretown on the real estate website Zillow.com increased 41% from January, 2020 to August, 2024. Based on the Consumer Price Index, that increase is almost double the 21% inflation in prices over the same period. It is too soon to determine if the floods of 2023 and 2024 have dampened interest in living in Moretown.

2.2.2 Population Age Profile

As with the rest of Washington County and the entire State, the age profile of Moretown is heavily influenced by the aging of the "baby-boom" generation—those born between 1946 and 1964. Baby-boomers settled here as young adults, raised families, have now retired or are about to retire, and many of their children have left the area.

In the last decade, the aging of the baby-boom generation has had a major effect on population growth across age groups. From 1990 to 2010, the size of the group aged 18 to 64 grew as a share of the town's population (Exhibit 2.3), however this pattern started to change in 2011 when the leading edge of the baby-boom generation reached age 65. Continued aging is the apparent explanation for why the number of 18 to 64-year-old residents declined by 50 people from 2010 to 2020, while the population age 65+ increased by 146. During this time the number of residents under 18 was essentially unchanged. The share of the population in the 65+ age group increased from 12% in 2010 to 20% in 2020.

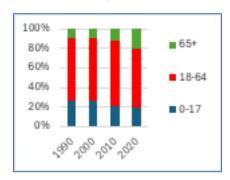
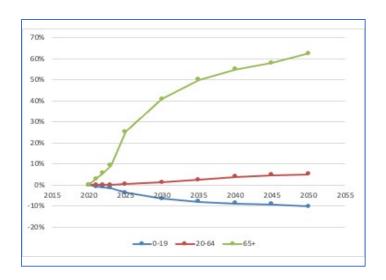


Exhibit 2.3: Age Distribution of Moretown's Population, 1990 to 2020 (Source: Decennial Census)

The percentage of Moretown's population age 65+ has likely increased further since 2020, although no data are available. Nationally, the Census Bureau estimates that the population age 65+ increased by 25% from 2020 to 2025, the population 19 or younger shrank by 4 percent, and the population age 20 to 64 hardly changed. The Census projections, which are largely determined by the aging and predicted mortality of those already alive, show that the effect of the aging baby boom on the share of the national population above 65 is expected to continue for at least 25 years (Exhibit 2.4).





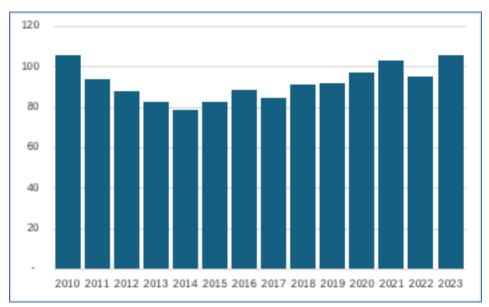
The rapid growth in the population age 65+ has had consequences for Moretown, Washington County, and the entire state. It has:

- Increased competition for housing that might otherwise be occupied by younger adults and children, dampening growth in the workforce and school-age children;
- Increased demand for health care, home assistance, transportation and other services needed by individuals with significant health conditions or functional limitations;
- Encouraged more people to work after age 65.

Based on the Census projections, the aging of the baby-boom generation can be expected to continue to put substantial upward pressure on the number of people over age 65 living in Moretown for the foreseeable future. How the aging of the baby-boom generation affects the age distribution of Moretown's population depends on many other factors, however. State, regional, and town initiatives to make Moretown more attractive to young families with children seem critical to relieving workforce shortages, reversing the decline in the size of the school-age population, and increasing the availability of services to our growing population of older adults. Examples include efforts to expand affordable housing, complete the buildout of broadband internet, and keep our elementary school.

Trends in the number of young children living in Moretown are of special interest because of their implications for the continued viability of Moretown Elementary School. From 2010 to 2020, the number of children aged 0 to 4 years increased from 71 to 86, the number aged 5 to 9 years increased from 84 to 106, and the number aged 10 to 14 years declined from 109 to 94. These changes didn't translate into comparable changes in enrollment at Moretown Elementary because some parents may have chosen to send their children to other schools in our District or to provide home schooling. Actual enrollment at Moretown Elementary School in grades 1 to 6 declined from 108 in 2010 to 79 in 2014, and then returned to 108 by 2023 (Exhibit 2.5). These enrollment numbers suggest that few, if any, families with school-age children left Moretown after the pandemic subsided.

Exhibit 2.5 Enrollment in Grades 1 through 6 at Moretown Elementary School, 2010 to 2023 (Source: Vermont Agency of Education)



2.2.3 Household Characteristics

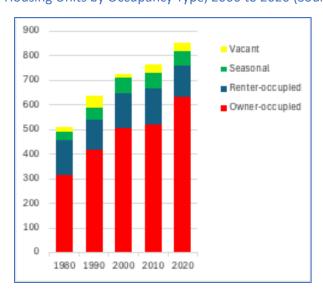
The number of households in Moretown increased by 9% from 2010 to 2020. The consequences of the aging of the baby-boom generation are evident in the makeup of these households. Most notably, Moretown has experienced growth in households without children (Exhibit 2.6). Some of the most recent change may be attributable to the COVID pandemic. What happens in the next 10 years will depend on migration in and out of Moretown.

Exhibit 2.6 Makeup of Moretown Households, 2000 to 2020 (Source: Decennial Census)

	2000	2010	2020
One adult (%)	22	26	27
Unrelated adults (%)	10	8	9
Married without children (%)	27	33	34
Married with children (%)	28	22	20
Single-parent with children (%)	8	7	3
Other (%)	4	3	7

Housing occupancy statistics indicate that the increase in housing prices in Moretown is driven, at least in part, by growth in families choosing to own and occupy their Moretown homes relative to growth in the number of housing units available. From 2010 to 2020, the growth in the total number of owner-occupied housing units, 107, was well above the 57-unit increase in total units (Exhibit 2.7). The number of renter-occupied units declined by 15 and there were 7 fewer seasonal dwellings. During this decade the number of vacant housing units remained very low. Owners who chose to move into their former rental or seasonal units presumably contributed to this housing trend, however this choice cannot fully account for the changes.

Exhibit 2.7 Moretown Housing Units by Occupancy Type, 2000 to 2020 (Source: Decennial Census)



Census statistics do not distinguish between short- and long-term rental units. Any shift from long- to short-term rentals potentially contributes to a decline in affordable housing, however the extent to which this has occurred is not fully understood.

2.2.4 Population and Household Projections

The Vermont Agency of Commerce and Community Development (ACCD) has not released statewide population projections for 2030 and 2040; the most recent projections were based on data through 2010 and made for 2020 and 2030. Data from the 2020 census show that the last ACCD projections were too low. The actual population of Moretown in 2020 (1753) exceeded the upper bound of the ACCD projection for 2020 (1724), and approached the number ACCD projected for 2030 (1766).

Using an ACCD methodology, the CVRPC projected that Moretown and Duxbury combined needed 45 additional housing units by 2030. That projection also appears low since Moretown alone added 57 units from 2010 to 2020. Further, Moretown needs 17 new rental units to return to the number which were available in 2000. The apparent conversion of rental to owner-occupied dwelling units in Moretown substantially increases the need for new rental units to meet housing needs. Recent work by the Vermont Housing Finance Agency indicates that the Central Vermont region will need an additional 2540-3864 homes in the next five years, and another 8045-15,856 homes made available in the years 2025 – 2050. While most of these units will likely be added in the more densely populated areas of the region's cities, it is expected that smaller, more rural towns such as Moretown will also increase their housing supply.

2.2.5 Race/Ethnicity

The racial/ethnic composition of Moretown's population is similar to that of Washington County and the entire state. In the 2020 Census, nearly 92% of Moretown residents reported that they are "white-only"—slightly higher than the 90.5% for Washington County and 89.8% statewide. No other single racial group accounts for more than 2% of the Moretown population; more substantial numbers identify as multiracial. Of the 2020 Census categories, Hispanics accounted for less than 2% of the town's population—again similar to county and statewide percentages.

Statistics indicating racial/ethnic diversity for Moretown and Washington County are not available from the Census before 2020. It seems likely, however, that Moretown is becoming more diverse at a pace comparable to that for the state. The percentage of Vermont residents reporting their race as "white-only" has decreased from 96.8% in 2000 to 89.8% in 2020. Statewide, residents identifying as Hispanic has increased from 0.9% in 2000 to 2.4% in 2020.

2.2.6 Education and Income

As a whole, Moretown's population has attained a higher level of formal education relative to the statewide population, and has a substantially higher income. It also appears that educational attainment and income are growing more rapidly in Moretown than statewide. Moretown's relative levels of education and income likely reflect the numerous jobs in the area requiring at least a bachelor's degree, and an increase in residents who telecommute.

The educational attainment and income estimates reported below are imprecise, in part because the sample size for each estimate is small. The estimates are from the U.S. Bureau of the Census' annual American Community Survey (ACS). Each year the Census Bureau calculates an estimate from the previous 5 years of data. In this analysis the ACS estimates for 2008-12 and 2018-22 periods are used.

These periods bracket the 2010 and 2020 decennial censuses respectively and may contain some imprecision. The differences described below between these two five-year periods are unlikely due to imprecision alone.

The second 5-year period includes 2020 and 2021, the years that were most affected by the COVID pandemic. Hence changes in education and income from the first period to the second are potentially related to the arrival of an increased number of college-educated adults with high incomes seeking refuge during the pandemic. We know that at least some "COVID migrants" have stayed in Moretown.

2.2.6.1 Education Levels

The most recent ACS 5-year summary estimates that 97% of Moretown residents age 25+ have earned a high school diploma or equivalent and 56% have earned a bachelor's or higher-level degree. These percentages are well above the statewide percentages (Exhibit 2.8). The gap between the Moretown and statewide education percentages has increased in the 10 years between the two ACS periods. Although some of the change between the two periods could be due to estimation error, the greater magnitude of the change in Moretown residents who have earned a bachelor's or higher-level degree is unlikely to be due to estimation error alone.¹

2.2.6.2 Income

The estimated household median income in Moretown is also higher than the statewide median income, and increased significantly in the 10 years between the two ACS periods (Exhibit 2.8). The higher estimated median income for Moretown is not due to estimation error alone; however, the larger estimated growth for Moretown might be.²

2.2.6.3 Poverty

Despite Moretown's relatively high median income, a substantial share of Moretown's population lives in households with very low incomes. Some residents are in households below the federal poverty standard; a considerably larger share live in households with income that is below twice that standard. The Moretown percentages are lower than the corresponding estimates for the state, and have declined somewhat in the 10 years between the two ACC periods.

¹ The margin of error (MOE) for each estimate is defined as the half-width of a 90% confidence interval. The MOE for the estimate of the percentage with a bachelor's degree is 5 percentage points for Moretown and 0.5 percentage points for the state. The estimated 15 percentage point increase in this percentage for Moretown is 7 percentage points larger than the estimated 8 percentage point statewide increase—large relative to the MOEs for both estimates.

² The margin of error for Moretown's estimated median income is about \$11,500 (inflation-adjusted). For Vermont it is about \$850.

Exhibit 2.8 Estimated Education and Income Statistics, 2008-12 and 2018-22

	2008	3-12	2018-22 Change		nge	
	Moretown	Vermont	Moretown	Vermont	Moretown	Vermont
Attained at least: (age 25+)						
High school or GED (%)	92	91	97	94	5	3
Some post-secondary (%)	65	60	73	67	8	7
Bachelor's degree (%)	42	34	56	42	15	8
Median household income (inflation adjusted \$)	93,322	74,161	104,350	78,476	11,028	4,316
Household income below:						
Federal poverty level	5	12	4	10	-1	-1
200% of federal poverty level	17	29	12	25	-5	-4

Notes: Bureau of the Census estimates based on 5-year American Community Survey samples for the 5-year periods indicated.

2.3 Goals, Objectives, and Strategies

Goal 2.1: Encourage sustainable growth while maintaining the Town's character and
protecting its natural resources

Objective 2.1.1: Ensure new development complements the existing land uses of the area in which it will be located

Consider updating the Land Use Regulations (LURS) to promote thoughtful siting of a mix of housing types, sizes, occupancies, and costs that complement Moretown's settlement patterns

Consider updates to the LURs to ensure they guide development in ways that preserve the Town's mostly rural nature and natural features

Consider updates to the LURs to ensure that development does not erode recreational opportunities

Explore non-regulatory tools to help achieve this objective

Recognize and appreciate the role of historic structures and settlement patterns in creating Moretown's character and documenting local heritage

Objective 2.1.2: Manage population growth to accommodate demand for housing, economic opportunity, and community services

Work with neighboring towns and the CVRPC to plan for population growth

Encourage a socially and economically diverse population that includes families with children, young adults, senior citizens, and those new to Town

Develop growth management strategies to address the potential cumulative impacts of development

Goal 2.2: Protect and build upon Moretown's historic settlement pattern

Objective 2.2.1: Cultivate Moretown Village, the civic center of the community

Encourage new or expanded businesses that provide places for residents to shop and dine locally

Objective 2.2.2: Establish a better-integrated commercial and residential center in North Moretown

Encourage new or expanded businesses that provide places for residents to shop and dine locally

Objective 2.2.3: Protect the scenic and rural character of the Route 100B corridor outside of Moretown Village

Pursue appropriate land use planning and regulatory approaches

Goal 2.3: Experience a high-quality, pedestrian friendly, and attractive built environment in Moretown Village and North Moretown

Objective 2.3.1: Consider developing standards for these mixed-use areas

Consider incorporating appropriate design standards into Moretown's LURs

Consider incorporating performance standards in Moretown's LURS to protect the quality of life for nearby residents

Goal 2.4: Increase the vitality of the Village and North Moretown areas, to benefit the existing community and attract new residents and businesses

Objective 2.4.1: Establish centralized or decentralized community wastewater system(s) in Moretown Village

Continue to explore options for developing wastewater treatment for the Village

Objective 2.4.2: Expand mixed use of Moretown Village structures

Continue development of sidewalks in the Village

Encourage the revitalization of older or vacant Village buildings

Review the LURs to ensure that they allow for appropriate Village development

Objective 2.4.3: Increase housing and mixed-use opportunities in North Moretown

In collaboration with Duxbury and Waterbury, pursue creation of an appropriate neighborhood designation as allowed under new state regulations.

Coordinate with Waterbury and Duxbury to develop a wastewater system in North Moretown that is an extension of Waterbury's existing system

Undertake efforts to construct sidewalks in North Moretown that connect residential areas to Waterbury's downtown

Work with VTrans to consider replacement of the traffic lights with a roundabout

3. Natural Features and Ecological Systems

Moretown's natural setting and ecology are the foundation for its history, community, economy and way of life.

3.1 Climate

Moretown's climate is characterized by wide-ranging temperatures, both daily and annually, and large differences between the same seasons from year to year. Relative to other areas of the country, a greater number of low-pressure storm systems and fronts pass over or near Vermont – commonly caused by the convergence of dry, cold air from the Canadian Arctic and moist, warm air from the Gulf of Mexico. Regionally, the Green Mountains have a strong effect on precipitation. Precipitation, clouds and fog result from cooling of air as the prevailing winds from the west are forced up and over the mountains.

The climate in Moretown, and all of Vermont, has been warming significantly and becoming wetter. This warming and increased precipitation is primarily due to more emissions of greenhouse gases, especially carbon dioxide, methane, and other gases. Temperatures in Vermont have increased about 3°F since 1900. The period 2010-2020 was the warmest 11-year period recorded. The annual number of warm nights has also increased and was near to above average from 2000 to 2020, with a historically high peak for the 5-year period of 2015–2020. Higher spring and fall temperatures have extended the frost-free season length: first fall freeze dates are later and last spring freeze dates are earlier. The growing season has increased by 3.7 days per decade from 1900 to 2020. Annual average precipitation has generally been above the long-term average since 1970 and has increased nearly 6 inches since the 1960s. Annual average temperatures are projected to increase throughout this century. The coldest end-of-century projections, assuming lower greenhouse gas emissions, is expected to be about 3°F warmer than the historical average. Assuming higher greenhouse gas emissions, the hottest end-of-century projection is expected to be about 12°F warmer than the hottest year in the historical record. Increases in the number of hot days and decreases in the number of very cold nights are projected to accompany the overall warming.³

In the Mad River Valley, July is usually the warmest month with a mean daily maximum temperature around 77°F, and January is usually the coldest with a mean daily minimum temperature around 10°F. High and low temperatures in Moretown vary noticeably with elevation. The region receives approximately 50 inches of precipitation annually. The precipitation is fairly evenly distributed throughout the year with an average of 3 to 5 inches each month. The growing season is currently around 130 days with the last frost likely during the second or third week of May and the first frost likely during the last two weeks of September. The growing season also varies with elevation.⁴

Floods and droughts, Vermont's most likely natural disasters, are expected to worsen due to increased variability of rain and changing water tables. As of the writing of this Plan, Moretown and the State are in the midst of one of the most severe droughts since records have been kept. Changes in winter precipitation are of particular concern in the Mad River Valley, where winter recreation is a major component of the local economy. It is expected that the Vermont ski season will be shorter by one

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³ Runkle, J., K.E. Kunkel, S.M. Champion, L.-A. Dupigny-Giroux, and J. Spaccio, 2022: Vermont State Climate Summary 2022. NOAA Technical Report NESDIS 150-VT. NOAA/NESDIS, Silver Spring, MD, 4 pp. https://statesummaries.ncics.org/chapter/vt/

⁴ National Centers for Environmental Information, NOAA, U.S. Climate Normals Quick Access for Waitsfield 1991-2020; https://www.ncei.noaa.gov/access/us-climate-normals/

month (assuming higher greenhouse gas emissions) or by two weeks (assuming lower greenhouse gas emissions) by 2080. Rising temperatures and longer growing periods may be beneficial to farming, however more intense rainstorms will negatively impact farm and forestry operations.⁵

3.2 Air Quality

Air quality throughout Vermont generally poses little or no risk to health. Most areas of the state are considered "clean air" regions under the federal Clean Air Act. As such, there is only limited monitoring of air quality statewide by the Agency of Natural Resources sites. With little heavy industry in Vermont, most poor air quality results from heavy traffic and congestion and from wildfires. Compromised air quality can cause health problems for people with asthma, children, and older adults. Wildfires in the west and Canada have increased the incidence of haze and smoke in Vermont. Recent fires increased the PM2.5 levels (fine particulates) in the air. ⁷

Whereas overall air quality in Moretown is excellent, there are a few localized air quality concerns. These include:

- Emissions from vehicles idling or waiting in traffic "No idling" policies, such as the one adopted by the Moretown Elementary School, help address this problem. A State law prohibiting idling for more than five minutes in a 60-minute period (with exceptions) took effect in 2014.
- Older, inefficient heating systems, and burning fuels for which the system was not designed.
 System maintenance, and replacement when necessary, can minimize related air quality problems.
- Fugitive dust from farming, trucking, construction, and driving on dry gravel roads Watering or
 using dust inhibitors on gravel roads and construction sites, and following accepted agricultural
 practices can serve to reduce this dust.
- Gases escaping from the closed Moretown Landfill could reduce air quality in the surrounding neighborhood The landfill has operated under two separate state air quality permits, one for the landfill itself and the other for the landfill gas electrical generation facility. Air quality is regularly monitored at and around the landfill; monitoring will continue until at least 2043.

3.3 Terrain and Elevation

Moretown is located in the Green Mountains, and the mountainous terrain has directly shaped the Town's history and development. The Northfield Range, one of the major ranges in the Green Mountains, crosses the southern Town boundary and terminates in the northern part of Town in a series of hillsides sloping towards the Winooski River. West of Moretown is the main ridge of the Green Mountains with a ridgeline defined by recognizable peaks such as Camel's Hump. The Winooski River with its broad floodplain cuts through these mountains on its way to Lake Champlain, and is fed by tributaries which flow in narrow valleys down the mountain slopes. The Mad River and Jones Brook watersheds both drain north into the Winooski River. Steep slopes and substantial changes in elevation are a common feature in Moretown as shown on the Elevation Map and Slope Map (Maps #1 and #2).

⁵ Iford, G.L., Faulkner, J., Dupigny-Giroux, L.-A., Posner, S. and Edling, L. (eds.) (2021). The Vermont Climate Assessment 2020. Gund Institute of Environment, University of Vermont, Burlington, VT. DOI: 10.18125/kowgvg. Accessed online at https://vtclimate.org

⁶ Agency of Natural Resources, Department of Environmental Conservation, Air Quality Data; https://dec.vermont.gov/air-quality/air-quality-data

⁷ Vermont Department of Health, Air Quality; https://www.healthvermont.gov/environment/tracking/air-quality

The highest point in town is 2491 feet above sea level and is near the summit of Bald Mountain along the Waitsfield line. It is more than 2,000 feet above the lowest point in town, which is 412 feet above sea level where the Winooski River flows into Waterbury and Duxbury.

Mountainous terrain and steep slopes significantly restrict development and can limit travel from one area of town to another in winter and mud seasons and during flooding. High elevations and steep slopes are fragile environments that are easily damaged by human activities. Clearing natural vegetation, disturbing soil, and altering natural grades can also cause environmental damage. The activities can cause high rates of erosion and run-off, reduce water quality, increase flooding, and damage property downslope. Human activity in fragile environments can also lead to loss of habitat for plants and wildlife.

The USDA Natural Resource Conservation Service (NRCS) has established slope categories and described the constraints and management requirements associated with each. These categories are summarized below:

- Slopes in excess of 25% are generally not suitable for development or widespread clearing for farming and forestry. Any disturbance of these severely steep slopes is discouraged and will require careful attention to erosion control and stormwater management.
- Slopes from 15-25% are generally poorly suited for development. Use of these lands for farming
 or forestry will require special consideration and best management practices to conserve soil
 and minimize erosion. Any disturbance of these moderately steep slopes will require specific
 measures to control erosion and manage stormwater.
- Slopes from 8-15% can generally accommodate development. Disturbance of these slight slopes may still require measures to control erosion and manage stormwater.
- Slopes of less than 8% generally do not pose any particular development constraints due to the slope itself, although level land (<3% slope) may be poorly drained and prone to ponding.

The steeper the slope, the larger the area of disturbance has to be to accommodate a development footprint. The cost of development generally increases as slope and elevation increases, as does the ongoing cost of providing services to what are often remote areas. It is challenging to provide adequate access for emergency and service vehicles to development on steep slopes or at high elevations. Additionally, development on higher elevations is typically more visible than downslope development as high elevations and ridgelines are frequently visible from many locations. See "Geology and Soils" for discussion of ridgeline development and scenic resources.

While land above 2500 feet receives a higher level of protection under state law, Moretown's highest areas are just below that elevation. Approximately 4% of land in town, including 1000 acres around Bald Mountain, Chase Mountain and Mount Cobb, is between 2000 and 2500 feet in elevation. More acreage in Moretown is located on steep slopes than at high elevation. Approximately 40% of the land in Town is moderately steep (15- 25% slope) and another 20% is severely steep (>25% slope).

3.4 Geology and Soils

Bedrock is the most basic component of our environment. The bedrock underlying Moretown, and throughout the northern Green Mountains, is primarily metamorphic rocks such as schist, phyllite, gneiss and quartzite. The Green Mountains formed millions of years ago and have eroded to a fraction of their original height. When highways were constructed through the Town, numerous rock cuts were needed to accommodate the terrain. Those cuts expose the bedrock that underlies Moretown, providing a unique opportunity to investigate the geological processes that created the Green Mountains.

The landscape today was significantly shaped by the advance and retreat of glaciers during the last Ice Age. Melting glaciers left a mixture of clay, silt, sand, and gravel covering the bedrock. This mixture, known as glacial till, covers the landscape, except for areas of exposed bedrock. The valley floors also contain sediment, including sand and gravel, that was deposited in glacial lakes 10,000 or more years ago.

The NRCS maintains a website with a soil survey of Washington County. This survey includes a map and inventory of soils, and describes the characteristics of each soil type and its suitability for various uses.

Soil conditions play a critical role in determining the location and intensity of development in Moretown. In addition to their suitability for supporting roads and structures, soils must be suitable for septic systems. Currently there is no municipal sewer service in Moretown and all development relies upon onsite septic systems for waste disposal. Map #3 shows the general suitability of soils in town for septic systems. Approximately 60% of soils in Moretown are moderately suited to treat wastewater and 20% are marginally suited, meaning that most landowners will need to build septic systems that may be more technologically advanced, more expensive, and require more land than a conventional in-ground system.

3.5 Surface and Groundwater

3.5.1 Rivers and Streams

Moretown is within the Winooski River watershed, which is part of the larger Lake Champlain watershed. Most of the Town drains to either the Mad River or the Dog River (two of the Winooski's seven major tributaries). A small amount of land drains directly to the Winooski River. The 1,080 square mile Winooski River watershed includes all of Washington County and portions of Chittenden, Lamoille and Orange counties – approximately 10% of Vermont's land area.

The Winooski River forms Moretown's northern boundary. The Town has more than seven miles of frontage on the river. The river originates in Cabot and flows westward to Lake Champlain. The portion of the river valley running through Moretown has a very gentle slope, with a change in elevation from one end of town to the other of only 80 feet, an average grade of approximately 0.2%.

The Winooski River valley is a vital east-west transportation corridor through the Green Mountains. US Route 2, Interstate 89 and a rail line all share the relatively narrow valley floor with the river. To accommodate this transportation infrastructure and other development, the Winooski River channel has been straightened, the banks have been armored, and berms have been built in an attempt control the river.

These efforts have not changed the process of the river to meander around the valley floor, depositing sediment in one location while eroding it in another – and periodically surging out of its banks to cut a new channel. It is increasingly evident that these natural processes and forces cannot be engineered away. Nor is it affordable to relocate major infrastructure and development further from the river. Instead, new approaches must be found to balance the needs of the natural and built environments.

A 2015 Phase II Geomorphic Assessment for the Mid-Winooski River found that the major stressors within the mid-Winooski watershed are stream channel straightening and corridor encroachment by roads and development. Whereas new roads currently aren't being built in the floodplain, existing road and development encroachment has limited the area's waterways access to floodplains; this limitation

has caused moderate to extreme lowering of the river beds, resulting in sediment build up, channel widening, and lateral movement of the river channels.⁸

The Mad River enters Moretown from Waitsfield and flows north 7.5 miles before emptying into the Winooski River. Much of the Town's historic development was focused along the Mad River and to a lesser degree the Winooski River because the rivers provided both power and transportation. Vermont Route 100B travels along the Mad River creating many opportunities for residents and visitors to enjoy the river's scenic and recreational qualities. The federal Highway Administration recognized Route 100B as a Scenic Byway in 2007.

A 2018 Moretown Phase 2 Stream Geomorphic Assessment included approximately 11 miles of stream channel within the Mad River, Welder Brook (a.k.a. Stevens Brook), Dowsville Brook, Jones Brook, Kelley Brook (a.k.a. Ward Brook), and Herring Brook. This study also found that the major stressors within the studied watersheds are stream channel straightening and corridor encroachment by roads and development.⁹

Whereas the main stem of the Dog River does not pass through Moretown, one of its major tributaries---Cox Brook---flows down the eastern slope of the Northfield Range into Berlin where it enters the Dog River. The State has classified the Dog River and all of its tributaries as "wild trout waters." As productive trout streams, the river and its tributaries are popular with anglers. There is strong interest in protecting and restoring riparian buffers along the Dog River and its tributaries to provide a suitable environment for trout, along with expanding fishing access. The benefits of riparian buffers are discussed below.

Other tributaries draining portions of Moretown include the lower reaches of Crossett Brook, draining into the Winooski River in Duxbury, and Doctor's Brook in Moretown village, draining into the Mad River.

3.5.2 Wetlands

Moretown does not have any large wetland areas, however smaller wetland areas are found throughout town. These areas are identified in the Vermont Significant Wetlands Inventory (VSWI) and shown on the Water Resources Map (Map #4). Most of the wetlands are associated with brooks or unnamed streams. Altogether, there are fewer than 160 acres of mapped wetlands in Moretown. The average size is 2½ acres and the largest wetland area is approximately 15 acres. The VSWI is currently undergoing a complete overhaul: this project began in 2023, should be completed in 2026, and will potentially result in a larger number of wetlands and greater number of acres included in Moretown's wetland coverage.

Vermont's Agency of Natural Resources (ANR) considers all of the mapped wetlands in Moretown to be Class 2 Wetlands. ANR updated the VSWI in 2010, which resulted in some minor changes to the extents and boundaries of wetlands in Moretown. It is likely that there are additional wetlands in Moretown that have not yet been identified and mapped. The Washington County Soil Survey shows numerous areas in Moretown with hydric soils, which are indicators of potential wetland conditions in those locations.

Ecological and hydrologic studies have shown that wetlands are a necessary and valuable element of the landscape. Wetlands filter run-off and allow water to infiltrate into the ground, recharging groundwater supplies. They absorb and store floodwaters, reducing flood-related hazards to people and property.

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⁸ Waterbury, VT Middle Winooski River Corridor Plan. Bear Creek Environmental, LLC for the CVRPC, December 15, 2015; https://centralvtplanning.org/wp-content/uploads/2021/09/MidWinooski Waterbury RCP.pdf

⁹ Moretown, VT Phase 2 Stream Geomorphic Assessment & River Corridor Plan, Bear Creek Environmental, LLC for CVRPC, April 20, 2018; https://centralvtplanning.org/wp-content/uploads/2021/09/MadRiver Moretown RCP.pdf

Wetlands are home to a variety of wildlife, aquatic and plant species, and are essential for the survival of some of those species.

Wetlands are not well suited for development because of their poor drainage and high water table. Historically, people filled in wetlands to create development sites and, as a result, ANR estimates that nearly 50% of wetlands statewide have been lost. 10

Filling in wetlands is no longer an accepted practice. State and federal regulations limit disturbance and development in wetland areas to preserve ecological functions. Generally, all development in Moretown which may be allowable within wetlands and associated buffer areas will require a state permit.

3.5.3 Groundwater

Groundwater is one of the Town's most essential resources. The majority of residents rely on groundwater as their drinking water source, with most homes and businesses served by individual wells. The only municipal water service in Moretown serves a small number of residences in North Moretown. Most properties have drilled wells, however some residences still obtain water from dug wells or springs. Despite the reliance on this resource, relatively little is known about the quality and quantity of groundwater available in Town.

Detailed mapping of groundwater quality and quantity has only been completed for a few areas of the state and is not available for Moretown. It is unlikely that Moretown will be mapped in the foreseeable future without additional state or federal funding of either the Vermont or U.S. geological surveys.

Per state law passed in April 2019, owners of single-family residences who install or deepen a new groundwater well for drinking water must test the water before using it. Yet there is no ongoing requirement that wells serving individual homes be regularly tested to assess water quality. Groundwater is susceptible to contamination from discharges of waste, chemicals and other contaminants in recharge areas. Potential contamination sources include agricultural run-off, road salt or similar materials, fuel and petroleum products, and failed septic systems. Failed septic systems are of particular concern in higher population-density areas such as Moretown Village. Further discussion of this issue is included below.

3.5.3.1 Moretown Landfill

Based on a petition from the Moretown Landfill, the ANR reclassified the groundwater underneath the landfill and downslope towards the Winooski River from Class III (potable) to Class IV (non-potable) in 2012.

This decision was based on the presence of elevated levels of arsenic, iron, and manganese in the water from monitoring wells near the landfill. However, the groundwater uphill of the landfill also has high levels of arsenic and manganese, which suggests that elevated levels may be naturally occurring in the area.

There is no evidence that reductions in groundwater quality downslope of the landfill are impacting the water quality in the Winooski River.

https://anr.vermont.gov/sites/anr/files/maps/biofinder/CVNH%202013 FINAL.pdf

¹⁰ Austin, JM, etal. Conserving Vermont's Natural Heritage: A Guide to Community-Based Planning for the Conservation of Vermont's Fish, Wildlife, and Biological Diversity, 2nd ed, 2013. Vermont Fish and Wildlife Department and Agency of Natural Resources, Montpelier, VT;

The reclassification of groundwater under and downslope from the landfill prohibits the development of any potable water supplies within a delineated area (Findings of Fact and Reclassification Order: Groundwater Reclassification at the Moretown Landfill. Vermont Agency of Natural Resources and the Vermont Groundwater Coordinating Committee, 2012).

3.5.4 Public Water Supplies

The ANR's Drinking Water and Groundwater Protection Division regulates and requires regular testing of public water supplies. These are water sources serving 15 or more service connections or serving 25 or more individuals at least 60 days a year. The public water supplies located in or serving Moretown are Moretown Elementary School, Harwood Union High School, Moretown General Store, The Commons, Riverside mobile home park, and Edward Farrar Water System.

As required by state and federal law, each public water system has a source water protection plan and mapped source water protection area to avoid contamination of the water supply. Moretown's zoning regulations currently do not apply additional restrictions on development within the mapped source water protection areas.

3.5.5 Surface Water Quality

Clean water is a basic necessity – essential for residents' health and the overall health of the natural environment. Federal and state laws have been enacted to improve and maintain water quality so that most rivers, streams, lakes and ponds are "fishable and swimmable." The ANR has classified all the surface waters in Moretown as Class B. When water quality falls below the standards for Class B surface waters, the state lists the water body or portion of the water body on the 303(d) List of Impaired Surface Waters as required by the federal Clean Water Act.

The state's current water quality standard for the *E. coli* bacteria level is not to exceed a geometric mean of 126 organisms/100 ml obtained over a representative sampling period of 60 days, and no more than 10 percent of samples contain more than 235 organisms/100 ml. Historic *E. coli* bacterial testing data is available from the Friends of the Mad River, which has monitored water quality in the Mad River and several of its tributaries since 1985.

ANR recommended actions for maintaining *E. coli* water quality standards include:

- Septic Systems Development should be discouraged on steep slopes and on soils not suited for septic systems. New septic systems should be properly designed and constructed. Existing septic systems should be properly operated and maintained. Resources are available from the Department of Environmental Conservation (DEC) for property owners about septic system functions, identifying a failed system, and replacing or upgrading a failed system.
- Agriculture Follow "Vermont Required Agricultural Practices Rule" 11
- Conservation Conserve priority lands, including contiguous forest, wetlands, and floodplains, within the watershed.
- River and Riparian Corridors Further development in floodplains and river corridors should be limited. Development should retain naturally vegetated riparian buffers along streams and rivers.

¹¹Vermont Required Agricultural Practices Rule for the Agricultural Nonpoint Source Pollution Control Program (Effective November 23, 2018); Agency of Agriculture, Food, and Markets, Water Quality Division; https://agriculture.vermont.gov/sites/agriculture/files/documents/RAPFINALRULE12-21-2018 WEB.pdf

- Property owners should be encouraged to re-establish naturally vegetated buffers where they have been removed.
- Sedimentation and Erosion Control Sedimentation reduces water quality and affects aquatic
 ecosystems more broadly. Excess sediment can smother or suffocate aquatic plants and animals,
 and can block the sunlight that aquatic plants need to thrive. Sediment can also carry other
 pollutants such as petroleum products, metals, chemicals and fertilizers into brooks and rivers.
 Sedimentation also contributes to and is exacerbated by flooding.
 - Movement of sediment downstream is a natural process, and various human activities change land cover and disturb soil. Construction, agriculture, logging, road maintenance, and other activities can result in excessive erosion and sedimentation. The rate of erosion in areas with bare soil is 100 times greater than in areas that are forested. Potential for excessive erosion is greater at high elevations, in areas with shallow or poor soils, and on steep slopes. Development in these fragile areas poses direct threats to water quality. The extension of roads and utilities to serve such development further exacerbates erosion, sedimentation and habitat loss.

3.5.6 Stormwater Management

Managing water flowing off of developed land is essential to protecting and improving water quality. The first step in stormwater management is to reduce the volume of run-off that a site will generate by minimizing the:

- Amount of impervious surface, which directly reduces the amount of stormwater to be managed
- Area of disturbance, which offers multiple environmental, energy and financial benefits
- Soil compaction, which reduces the ability of water to infiltrate into the ground.
- Disruption of natural drainage patterns
- Clearing of natural vegetation

The ANR's Stormwater Program issues stormwater permits for run-off from impervious surfaces, construction sites and industrial facilities. Coverage under the State's Construction Stormwater Permit must be obtained for: (1) Construction activities that result in a total earth disturbance of equal or greater than one acre of land area; (2) construction activities that result in a total earth disturbance of less than one acre that are part of a larger common plan of development that will ultimately disturb equal to or greater than one acre of land area.¹²

Practices to control excess erosion and sedimentation during road construction and maintenance, on construction or industrial sites, in agricultural fields, and while harvesting timber include:

- Limiting the area of disturbance and preserving existing vegetation
- Marking boundaries and installing silt fences on downslopes of disturbed areas and near water bodies or wetlands
- Limiting the amount of soil exposed at any one time
- Providing a stabilized entrance to the area for vehicles and equipment
- Using berms and ditches to divert run-off
- Slowing down channelized run-off by installing check dams in drainage channels
- Stabilizing disturbed areas before winter

¹² Agency of Natural Resources, Department of Environmental Conservation, Stormwater Program, Stormwater Construction Permit; https://dec.vermont.gov/watershed/stormwater

Regularly inspecting sediment and erosion control measures to ensure proper function

For smaller projects and sites that don't require a state permit, the ANR encourages municipalities and property owners to use Low Impact Development (LID) to prevent and minimize environmental degradation by run-off from developed land – often referred to as nonpoint source pollution. Simple LID practices and tools appropriate to residential properties and small-scale development projects include:

- Disconnecting roof drains and collecting water in rain barrels or cisterns, or directing water to rain gardens, vegetated swales or infiltration trenches to slow the flow of stormwater and maximize soil infiltration
- Minimizing lawn and garden watering by using drip irrigation, soaker hoses or micro-spray systems, and avoiding directing water onto paved surfaces or drainage ways
- Minimizing or reducing areas of mowed lawn, particularly in riparian areas, by planting gardens
 or native plants, which are typically more drought tolerant and pest resistant, requiring less
 watering and pesticide use
- Avoiding and minimizing the use of fertilizers, pesticides, and other chemicals; using
 environmentally friendly cleaning products; properly disposing of household cleaners and
 chemicals, pet waste, leaking or spilled oils or fuels; directing vehicle wash water to infiltrate into
 the ground; and composting leaves, grass clippings, and tree trimmings on-site

In Moretown, many construction projects or other activities that disturb soil fall below the threshold for a state permit. Currently, to promote erosion control and stormwater management practices that maintain pre-development erosion rates and hydrology, Moretown's zoning regulations require that erosion prevention or sedimentation controls for development which must go through some level of review by the Development Review Board if the development will occur on steep slopes of 15% or greater. Extraction and quarrying operations are required to have and follow an approved erosion control plan. The Town's Zoning and Subdivision Regulations point to Low Impact Development Standards to be used where appropriate, and reference ANR's "Low-Risk Handbook for Erosion Prevention and Sediment Control" and "The Vermont Standards and Specifications for Erosion Prevention and Sediment Control."

3.6 Riparian Buffers

The word "riparian" simply means the area alongside a river, stream, pond, lake or wetland. Riparian buffers are naturally vegetated areas adjacent to surface waters and wetlands. Throughout Moretown, the "natural" vegetation alongside rivers and streams is primarily woody vegetation – trees and shrubs – except some wetland areas which would naturally be wet meadows with primarily herbaceous vegetation.

Maintaining or restoring riparian buffers along streams and rivers would have multiple beneficial effects. Riparian buffers protect water quality, provide wildlife habitat, filter run-off, absorb floodwater, shade surface water (keeping it cooler), contribute to scenic character, and reduce the likelihood of human disturbance. Woody vegetation in riparian buffers intercepts rainfall, slows run-off and promotes infiltration.

Streams and rivers with naturally vegetated buffers experience more gradual changes in water level, which may reduce downstream flooding. Riparian buffers along small tributaries higher up in the watershed are more effective at attenuating downstream flooding and limiting sedimentation than buffers along major rivers.

The effectiveness of a naturally vegetated riparian buffer to protect water quality depends on several factors: soil type, slope, amount of water flowing through the buffer, time of year, type of vegetation, and buffer width. Of these, buffer width is the easiest to regulate. Nearly all the benefits of riparian buffers are enhanced as the buffer width increases. Considerable scientific research on the relationship between buffer width, water quality protection and habitat protection concludes:

- 50-Foot Buffer the effectiveness of a 50-foot naturally vegetated riparian buffer for pollutant removal is heavily dependent on local conditions such as soil type and slope. It provides shade to control the temperature of small streams, and some protection for aquatic plants and animals. It does not provide adequate habitat for most non-aquatic animals.
- 100-Foot Buffer a 100-foot naturally vegetated riparian buffer generally removes 60% of pollutants from run-off. This occurs even where the soil and slope conditions are less than optimal. It also protects plants and animals that are aquatic or stay very close to the water's edge. It likely does not provide adequate floodwater abatement.
- 300-Foot Buffer a 300-foot naturally vegetated riparian buffer provides wildlife habitat for a broad array of species that are dependent on both water and uplands, as well as a travel corridor for both small and large animals. It generally removes at least 90% of pollutants from run-off and provides greater floodwater abatement.

Currently, Moretown's Zoning and Subdivision Regulations require a minimum setback of 50 feet from all streams and rivers. No disturbance or development is allowed within the 50-foot buffer and vegetation is to be left in a natural condition. The regulations allow for clearing and site development within the 50-foot buffer as necessary to accommodate: road, driveway and utility crossings; stream bank stabilization and restoration projects; unpaved paths and trails; residential landscaping; and public recreation facilities and water access. The zoning regulations also require a minimum of a 75-foot naturally vegetated buffer around all Class 2 wetlands and a 100-foot buffer around Class 1 wetlands. No development or disturbance is allowed within the wetland buffer unless it is permitted by the ANR's Wetland Rules.

3.7 Forests

Forest covers approximately 22,000 acres (85%) of land in Moretown. As of 2024, 15,000 acres of forest land is enrolled in Vermont's Use Value Appraisal (UVA; also called Current Use) program. UVA, which has been in place since 1980, is intended to keep farm and forest land in production and slow the development on those lands. It allows enrolled land to be assessed and taxed based on its value for farming or forestry, rather than for development. A property owner must pay a land use tax to remove enrolled land from the UVA program for development purposes.

Northern hardwood forests and related communities—composed of sugar maple, American beech, and yellow birch, along with eastern hemlock — characterize much Moretown and the surrounding region.

The distribution of forest types across Moretown is influenced by multiple interconnected factors that include soils, climate, topography, natural disturbance patterns, time, and the varying ways people have used and changed the land over time.

Parcelization, the splitting of land parcels into smaller parcels, typically occurs through subdivision of properties. A Vermont Natural Resources Council 2005-2020 study based on statewide Grand List and UVA program data found that acreage in "residential" parcels increased whereas acreage in "farm" and "woodland" parcels decreased with "woodland" showing the greatest decrease. Some of the

"woodland" decrease was due to forest land changing to public ownership, and some "woodland" parcels may have changed to "residential" because of the construction of a house. In Vermont, the acreage of forest in large parcels is shrinking due to subdivision. However, a little over 70% of the privately owned acreage in Vermont is still in parcels over 50 acres. For woodland parcels over 50 acres, 71% of the acres in parcels that were enrolled in the UVA Program in 2005 remained in "woodland" in 2020 (https://vtforesttrends.vnrc.org/home).

In Moretown, although there are individual landowners who own relatively large blocks of undeveloped, forested land, most of the forested land remains in smaller parcels and woodlots associated with rural residences. Most of Moretown's forest land is mapped by the state as Highest Priority Interior Forest Block with a lesser amount classified as Priority. (Map #5). Total forest acres in Moretown enrolled in the UVA program in 2020 was 15,240, a little over a 4% increase from 2005 to 2020. While the UVA program has helped to reduce parcelization of woodland, other strategies and polices may be needed to preserve Moretown's Highest Priority Forest Blocks to meet Vermont's Act 171 requirements: "to minimize forest fragmentation and promote the health, viability, and ecological function of forests".

3.8 Wildlife and Fisheries

Respondents to the Moretown's 2024 Community Survey indicated strong support for protecting wildlife habitat and travel corridors.

No comprehensive inventory of species or their habitat needs has been undertaken in Moretown. Regional studies and posts on Front Porch Forum indicate that a variety of game and non-game wildlife species reside in town or pass through during migration, including white-tail deer, black bear, moose, coyote, mink, otter, fisher, bobcat, turkey, ruffed grouse and numerous species of raptors and migratory songbirds. The wildlife species that are most abundant in Moretown are those better adapted to survive in close proximity to humans. There also remain areas of remote, contiguous forest habitat in town that are home to wildlife species which require large areas or undisturbed areas to survive.

The specific landscape elements that are critical to the survival of a wide range of species include:

- Large tracts of undeveloped forest
- Wetlands
- Riparian corridors, especially those connecting large forest tracts
- Travel corridors, including sheltered road crossings
- Vernal pools (isolated, temporary water holes that water does not enter nor leave via a stream)
- Open meadows and associated forest edge
- Habitat for specific species, such as rare and endangered species and deer wintering areas

The Vermont Department of Fish and Wildlife (DFW) maintains some information about wildlife habitat and travel corridors. In addition, private organizations, such as the Friends of the Mad River, sponsor the Keeping Track® volunteer-based wildlife monitoring program in portions of Moretown. Despite the absence of a comprehensive habitat inventory, specific needs of several species have been identified in Moretown to varying levels of detail, as discussed below. Map #5 depicts Moretown's Forest Cover and some of its likely Wildlife Corridors.

3.9 Deer Habitat

Deer are Vermont's most popular game species. Despite their relative abundance and adaptability to human activity, deer have specific habitat needs. Most important are adequate wintering areas, referred

to as deeryards, to ensure survival during severe winter conditions. Areas of coniferous forest on predominately south- or west-facing slopes, typically below an elevation of 2000 feet, are best suited for deeryards. The state has mapped more than 5000 acres of deer wintering areas in Moretown.

In addition to benefitting deer, these areas provide winter food supplies and shelter for other species including porcupine, snowshoe hare, fox, fisher, coyote, bobcat, crow, raven, and crossbill. The DFW offers specific management recommendations for these areas in its publication, "Management Guide for Deer Wintering Areas in Vermont."

Between 2007 and 2010, the Selectboard and School Board placed conservation easements on 116 acres within the Town Forest to provide deer wintering habitat in perpetuity. The VLT holds the easement, and ANR supported this action. The Town's decision to grant the easement was linked to the State's requirement that Moretown Landfill, Inc. mitigate an anticipated loss of deer wintering habitat if the landfill expanded. A Town Forest Land Management Plan sets specific goals and policies for the management of the Moretown Forest for recreation, wildlife habitat protection (deeryard specifically), education, hunting, and timber production.

3.10 Bear Habitat

A viable population of black bears requires a large area of contiguous forest and specific types of habitat. Given the broad habitat requirements of the black bear, they are considered an "umbrella species" for many wildlife species. Thus, conserving habitat for black bear serves to protect habitat for many other species.

Black bears rely on beechnuts and acorns for a significant part of their diet. Nut-producing beech and oak trees are referred to as "hard mast" and groupings are called "mast stands." The Vermont DFW considers mast stands necessary wildlife habitat as defined by Act 250. The State has identified one mast stand on the eastern slope of the Northfield Range and approximately 3,500 acres of bear habitat in Moretown.

Bear habitat in Moretown is connected to significantly larger tracts in Duxbury and Fayston. Wildlife corridors connecting these areas with the Northfield Range are important so black bears can travel between areas to access food and prevent populations from becoming isolated. Frequent bear sightings occur each year throughout Moretown, suggesting that the bears are moving between core habitat in the Northfield Range and wetland areas located between Route 100 and Route 100B, south of Cobb Hill.

Bearwise.org has a concerted education effort to instill property owner practices designed to keep bears wild, such as securing garbage.

3.11 Rare, Threatened and Endangered Species

Rate of species loss is a barometer of the overall health of our natural environment. State and federal laws define and protect rare, threatened and endangered species. The Vermont Endangered Species Law protects approximately 200 species of plants and animals and a smaller number are federally recognized under the Federal Endangered Species Act. Species may be rare, threatened or endangered because they are on the edge of their native range, they are separated from the main population of their species by a large distance, or they occur only in a unique or rare natural habitat or community. The state has identified two locations of rare, threatened or endangered plant species in Moretown.

3.12 Fisheries

Moretown's streams and rivers support moderately healthy fish populations. Native brook trout populations are found in many upper watersheds, including Jones, Herring, Doctor's, Crossett, and Cox Brooks.

Limited stocking of rainbow trout occurs in the Mad and Winooski Rivers annually. As discussed above, improving water quality would improve the health of local fisheries.

3.13 Goals, Objectives, and Strategies

Guai	3.1: Protect and preserve important natural resources.
fore	ctive 3.1.1: Minimize the fragmentation, degradation and destruction of agricultural land, st blocks, wetlands, floodplains, important wildlife habitat, and significant natural munities.
	Pursue land use planning and regulatory approaches that will protect and enhance Moretown's working farm and forest lands
	Continue to discourage development on Class 4 Highways and Legal Trails
	Consider limiting, through the Town's Land Use Regulations (LUR), the length of subdivision roads extending into forest blocks and agricultural land
	Consider refining the mapping of Moretown's wildlife habitats, wildlife road crossings, and wildlife corridors
	Consider updates to LUR dimensional standards in the Preserve District
	Consider updates to the Town's LUR erosion control standards
Obje	Consider updates to the Town's LUR erosion control standards
Obje	Consider updates to the Town's LUR erosion control standards Encourage housing development in existing residential areas Ective 3.1.3: Promote land conservation. Support landowners and conservation organizations seeking to permanently conserve working lands or open space in Moretown through the donation, sale and/or purchase of property or
Obje	Consider updates to the Town's LUR erosion control standards Encourage housing development in existing residential areas Citive 3.1.3: Promote land conservation. Support landowners and conservation organizations seeking to permanently conserve working
Goal	Consider updates to the Town's LUR erosion control standards Encourage housing development in existing residential areas Inctive 3.1.3: Promote land conservation. Support landowners and conservation organizations seeking to permanently conserve working lands or open space in Moretown through the donation, sale and/or purchase of property or development rights Maintain existing public land as a community resource 3.2: Maintain and improve the health and quality of Moretown's air, water, wildlife, and resources.
Goal	Consider updates to the Town's LUR erosion control standards Encourage housing development in existing residential areas ctive 3.1.3: Promote land conservation. Support landowners and conservation organizations seeking to permanently conserve working lands or open space in Moretown through the donation, sale and/or purchase of property or development rights Maintain existing public land as a community resource 3.2: Maintain and improve the health and quality of Moretown's air, water, wildlife, and resources. ctive 3.2.1: Promote responsible use and stewardship of Moretown's land, roads, trails, and
Goal land Obje	Consider updates to the Town's LUR erosion control standards Encourage housing development in existing residential areas ctive 3.1.3: Promote land conservation. Support landowners and conservation organizations seeking to permanently conserve working lands or open space in Moretown through the donation, sale and/or purchase of property or development rights Maintain existing public land as a community resource 3.2: Maintain and improve the health and quality of Moretown's air, water, wildlife, and resources. ctive 3.2.1: Promote responsible use and stewardship of Moretown's land, roads, trails, and

4. Moretown's Economy

4.1 Moretown's Workforce

In 2020, just over 1,000 Moretown residents were employed at least part-time, an estimated 60% of all residents. The number of workers represents a small increase since 2015, when an estimated 985 residents worked. Although these estimates are the best available, they are imprecise because they are based on 5-year samples from the US Census Bureau ACS.

Only a minority of employed Moretown residents work at a physical location in Moretown, however this minority has increased substantially since 2015. Moretown's economy is inextricably linked to the economy of neighboring towns and the Central Vermont region. Many Moretown residents now work remotely from home. In 2020, an estimated 24% of residents worked in Moretown, up from 13% in 2015. These percentages include those who worked where they lived, which increased from 7% in 2015 to 20% in 2020. Although percentages may not be completely accurate, the trend is clear: a growing share of Moretown's working residents are working in Moretown because more people are working remotely from home. Presumably this has resulted from increased access to broadband internet in parts of Moretown combined with more opportunities for telecommuting and home-based self-employment. There may also be substantial growth in the number of hybrid workers – people who commute to work on some days and work at home on others, however this cannot be ascertained from the annual ACS. Respondents to the ACS were only asked where they worked most frequently in the week before they completed their survey. The COVID pandemic also influenced this change; many people worked from home while social limitations were in effect, and some continue to work from home, at least for a portion of their work week.

Although the share of workers commuting to jobs outside of Moretown is declining, the percentage commuting to jobs outside of Washington County is increasing. An estimated 76% of Moretown workers commuted to jobs outside of the town in 2020, down from 87% in 2015. In 2020, 33% commuted to jobs outside of Washington County, up from 26% in 2015. In line with the latter change, the estimated percentage of Moretown workers with typical commute times of longer than 30 minutes increased from 44% in 2015 to 57% in 2020. It is likely that the increase in employment outside of Washington County is fueled by growth in the Burlington area and by limited availability of housing closer to Burlington. Some Moretown residents commute to the Upper Valley, including White River Junction, Hanover, Lebanon, and West Lebanon.

As outlined in Section 2.2.6, Moretown's population has attained a higher level of formal education relative to the statewide population. More than half of all Moretown workers (53%) had jobs in management, business, science, technology, or arts occupations in 2020 based on the survey data — more than the statewide estimate of 45%. An estimated 13% had service jobs, 14% had sales and office support jobs, 12% had jobs in natural resources, construction, and maintenance, and 9% had jobs in production, transportation or material moving. Fewer than 1% of Moretown residents are employed in agriculture, forestry, fishing, hunting, or mining — occupations that were common in Moretown many decades ago. The distribution of jobs across industries is more similar to the statewide distribution, with small percentages in most industries. The largest share in any industry in 2020 was 29%, for educational services, health care and social assistance—essentially the same percentage as statewide.

4.2 Moretown Businesses

The Vermont Department of Labor (VDOL) reported that, in the first quarter of 2024 there were 80 employers located in Moretown, employing a total of 380 people (Exhibit 4.1). These figures include only those employers who are required to contribute to Unemployment Insurance (UI). The statistic does not include self-employed individuals who do not employ others, or, if they do, are not required to provide Unemployment Insurance.

Commuting data gathered through Moretown's 2024 Community Survey indicates that almost 90% of those who commute to work travel to towns other than Moretown, and almost 60% of those responding indicate that they work from home either some or all of time.

Most of the employers in Moretown that provide UI coverage are private, and are in service industries.

Ownership		Number	Employees	Total wages
Private	Goods producing	12	21	\$237,872
	Service producing	63	149	\$3,381,721
Public	Federal Transportation and Warehousing	1	2	\$28,457
	Public admin.	2	17	\$126,738
	Education	2	191	\$2,318,665
Total		80	380	\$6,093,453

Exhibit 4.1: Employers in Moretown and their Employees, First Quarter 2024

A number of primarily retail or service businesses are clustered around the intersection of Route 2 and Route 100, and multiple businesses, both services and goods producing, are scattered along Route 2 until it crosses the Winooski River into Middlesex. Local businesses on Route 100B in the Village include the historic Ward Clapboard Mill, a general store, small professional offices, and personal services. Also within the Village is the school, which is one of the town's largest employers, several buildings with Town employees, and two churches, each with a few employees.

A significant number of small businesses in Moretown are not included in the statistics above because they have no employees. A majority of these are small home-based businesses – many in the construction trades and various professionals, consultants and artists. There is no data available to determine which of these home-based businesses are among the 80 identified by the VDOL data.

State sales-tax revenue generated by Moretown-based businesses is increasing faster than the rate of inflation. Vermont Department of Tax data show that inflation-adjusted receipts subject to sales tax increased by 19%.

There were 26 commercial properties on Moretown's 2025 grand list. These figures have not changed substantially in more than a decade.

One major industry in Moretown has been closed by the state since 2016 for environmental reasons, the landfill on Route 2. The closure resulted in a significant loss of revenue to the Town. In 2012 property taxes and tipping fees paid to the Town by the landfill's owners was about half a million dollars.

4.3 Looking Ahead

The main reason to encourage business growth is to meet the service needs of both Moretown residents and those in neighboring communities. Growth in jobs, *per se*, is not a rationale for business growth in Moretown; growth in services is.

About 35% of respondents to Moretown's 2024 Community Survey indicated that Moretown needs more restaurants and 28% would like more retail establishments—the highest percentages of all the items on the survey's "needs more" list. Smaller, but substantial, numbers expressed the need for more service providers, light industry, cottage/home businesses, agriculture and related businesses, forestry, entertainment, professional services, and recreational facilities—several of which would presumably help meet the service needs of residents. In response to a separate question, 44% expressed a need for more services for seniors, 43% support for more trail networks, 43% a need for more library services, and 36% a need for more preschool and child-care services.

In order to protect natural resources and achieve other objectives, such as hazard mitigation and reduced use of fossil fuels, it is highly desirable to encourage denser development in places that are already substantially developed. Further business growth in Moretown is constrained by the limited availability of suitable land and options for wastewater disposal. Two areas in town, Moretown Village and North Moretown, are already zoned for dense commercial and residential mixed-use, however development in those areas is constrained by lack of options for wastewater disposal.

It would make economic sense to provide a wastewater system in Moretown Village. In 2023-24 the Town obtained a grant to explore options for building and financing a wastewater system in Moretown Village. An appropriate disposal site was not able to be obtained, however there will likely be exploration of options for construction of a public system in the future. Funding from the state would be necessary to finance such a project.

Another economically attractive option for development is to bring Waterbury's wastewater system across the Winooski River into North Moretown. Waterbury's system has substantial excess capacity and town leaders have expressed strong willingness to extend the system into Moretown. Financing for this would need to come from grants or the private sector. Expansion into the areas of North Moretown and Duxbury Corner that already have access to Waterbury's water supply—the part of the Edward Farrar Utility District that is south of the Winooski River—is especially appealing.

One potentially attractive strategy to support dense mixed-use development in North Moretown is to seek approval for the appropriate development status from ACCD. Such a designation may provide access to grant funds for bringing Waterbury's wastewater system across the river and for building roads, paths and other public infrastructure in the area. Examples of desirable public amenities include:

- replacement of the traffic light at the intersection of Routes 100 and 2 with a more convenient and safer roundabout
- walking/biking paths from the intersection to Crossett Brook Middle School
- a park with access to the Winooski River

Moretown has already secured funding for a sidewalk from the Route 100/Route 2 intersection to Gallagher Acres, to the east on Route 2. Establishment of the appropriate development status would also remove Act 250 jurisdiction for certain levels of development. Even though space for development is substantially limited by the risk of flooding, the potential for this area to become a densely populated mixed-used settlement seems high.

The potential for development in North Moretown is appealing, however there are many bureaucratic and financial obstacles. It is not expected that Moretown or Duxbury taxpayers will pay for development. Ultimately developers would need to see enough potential for investment in this area that they would be willing to provide sufficient matching funds for state or other grants. It will take considerable time and effort, plus luck, to successfully implement this strategy.

The aging of Moretown's population (see Chapter 2) and related need for more services for seniors suggests another economic development strategy: to encourage development of a small community of housing and retail establishments, designed to accommodate pedestrians, in which older members of the population would be able to live with others of all ages and access some services without needing transportation. This strategy would require identification of a landowner with suitable property and developers with sufficient financial backing to proceed.

4.4 Goals, Objectives, and Strategies

	Goal 4.1: Promote a sustainable and diverse local economy characterized by varied employment and entrepreneurial activity.				
Obje	ctive 4.1.1: Develop a community vision for Moretown's economic development.				
	Convene a series of community forums to discuss perspectives on economic development				
Obje visito	ctive 4.1.2: Encourage growth in businesses that meet the needs of Moretown residents and ors.				
	Review the LURS and consider if there are areas of Moretown besides the Village and North Moretown that might support service-oriented businesses which meet community needs				
	Support tourism and recreation that is based upon the Town's cultural and ecological assets and rural character				
Obje	ctive 4.1.3: Encourage mixed use development in North Moretown.				
	Support new or expanded businesses that provide for local shopping and dining				
	Continue to explore options for providing wastewater services to this area				
	In coordination with Waterbury and Duxbury, continue to explore the designation of an appropriate state-designated development status				
Obje	ctive 4.1.4: Encourage business development in Moretown Village.				
	Consider LUR updates to allow for local shopping and dining in the Village				

the Moretown economy.

	Identify the types of employment and business use undertaken in these categories by Moretown residents, and outline the key factors necessary for their success				
	Consider changes to the LURs, if applicable, related to home-based businesses				
_	Objective 4.1.6: Encourage the development of sustainable land-based economic activities and support strategies to improve the economic viability of agricultural and forestry operations.				
	Encourage new or expanded businesses that produce local and sustainable food, farm, and forest products				
	Support the sustainable harvesting of timber and the conservation of forestlands in Moretown				
	Support efforts to increase the market for food and other farm/forest products produced by Moretown residents and businesses				

5. Housing

5.1 Housing Change

Until the mid-20th century, Moretown Village was the only area of Town with concentrated housing – the other settled areas were much more dispersed with just a handful homes in close proximity to each other. Additional homes were farmsteads throughout the Town. As the population declined, many of the hill farms were abandoned and the settlement pattern contracted, placing a greater emphasis on the Village as a population center.

Moretown's settlement pattern has changed again during the last 50 years. From the 1960s through the 1990s, new homes were built in the valleys along rural roads and on hillsides above them, while there was little additional growth in the Village. As a result, the Village is no longer the main population center and there are other areas of concentrated housing located throughout the Town. Expansion of the Village is limited by the terrain. The Village is in a narrow valley along the Mad River with few viable housing lots. The Mad River is in a gorge characterized by exposed bedrock, steep river banks and a meandering course. The Village is also the site of the Town Garage, Town Sand Pit, Town Hall, Historical Society, and Moretown Elementary School. The Ward's Clapboard mill, a venerable and historic business, also occupies space in the Village, limiting further residential development. Perhaps the most significant limitation to Village expansion is the lack of a community wastewater disposal system. Virtually all Village homes and businesses have individual septic systems, the majority of which are aging.

The Village, and North Moretown along Route 2, are areas which experienced significant flooding during Tropical Storm Irene and in subsequent rain events, most recently in July 2024. In 2023 and 2024, homes at higher elevations have also been affected by floods and in several instances, landslides. New home construction will require being mindful of the vulnerability of the homes to flooding and erosion, the need to manage stormwater, and designing buildings to withstand extreme weather events. How increased flooding and its related effects influence future housing locations is unclear.

The 2020 Census counted 854 dwelling units in Moretown housing a population of 1753. That was 57 more homes than were counted in 2010. There is significantly more demand for housing than there is supply, which has driven up costs. The COVID pandemic prompted changes in both local zoning and state law to allow for the development of additional housing units. The homes built during the past decade were dispersed throughout the Town as shown on the Housing Map (Map #6).

Current economic trends suggest that as people move to Central Vermont and are able to work remotely, demand for housing in Moretown will remain very strong. Moretown's zoning has been amended to accommodate increased housing units where they do not affect protected natural habitats or result in flooding and extreme weather vulnerabilities. However, the demographic profile of Moretown residents suggests that housing needs and preferences may change. As discussed above, empty-nesters and seniors have very limited housing choices other than to stay in their current homes. Many will need to "age in place" if they want to continue living in Moretown, which in turn restricts housing opportunities for younger people and families who would like to locate in Moretown. Currently, according to the most recent ACS, approximately 19 percent of Moretown's population is 65 or older. The 16 units in the Fairground Apartments, discussed below, are the only senior housing in Moretown. Given demographic trends in Moretown and throughout the state, it is likely that there will be increased demand for smaller, easier to maintain homes and apartments that are more accessible than most of the existing housing stock. New accessible units will provide single-story living, universal design features, proximity to services or transit, easy to maintain amenities, and efficient heat sources and appliances.

5.2 Housing Profile

Typical of rural bedroom communities around Vermont, housing in Moretown is overwhelmingly owner-occupied. Also, according to the ACS, 86% of year-round homes in Moretown were owner-occupied in 2022, which was a higher rate of homeownership than in the county as a whole. Of 854 housing units in Moretown that year, 760 were owner occupied. Rental housing includes both long-term and short-term rentals. According to the website AirDNA, there were 63 short-term rentals in Moretown in October 2024. Whereas 35% of those were available between 271 and 365 nights a year, the balance were available for less time, with 25% being available for between 1 and 90 nights. While this may suggest that some short-term rentals could be transitioned to long-term or are occupied by owners for portions of the year, Moretown's number of short-term rentals does not appear to have the same impact on housing availability as in some surrounding communities.

Moretown's Grand List includes 53 seasonal dwellings which are not suited for occupancy year-round, and 240 homes that are available for year-round use but that are not occupied full-time by the owners. This sets Moretown apart from other Mad River Valley towns that have a significant number of vacation and second homes. Although other Mad River Valley towns have significantly more seasonal housing, the health of the Valley's tourism and recreation sector does influence Moretown's housing market. When demand for second homes is high, there is inflation in home prices throughout the region.

As typical of rural Vermont bedroom communities, most of Moretown's housing units are detached single-family homes according to the 2020 Census. Mobile homes accounted for a small percentage of Moretown housing in 2020, as did multi-unit or attached unit dwellings. Most housing in Moretown was built since 1970 providing a newer housing stock than in the county or state.

5.3 Housing Costs

One of the factors that historically drew many new residents to Moretown between 1960 and 2000 was the relative affordability of housing compared to nearby communities. Yet today residents are concerned that Moretown is less affordable – due to both increased home values and higher taxes, especially municipal and educational property taxes. In 2025, the median assessed value of a primary home in Moretown was approximately \$420,800 and the median sale price was \$312,000.

The more costly housing in Moretown today is likely related to recent real estate, employment, construction cost, and property tax trends. Strong demand caused the value of homes and residential properties in Moretown to increase during the first half of the 2000s – a trend common throughout the region and most of the state. Since the COVID pandemic and climate impacts in other parts of the country, home values in Moretown and Central Vermont have increased substantially. Moretown's 2024 reappraisal increased property values an average of 60%.

When asked about housing costs in Moretown's 2024 Community Survey, half of those responding indicated their costs were very or mostly affordable, and the other half responded their costs were barely or not at all affordable. Many survey respondents commented on the affordability of living in Moretown now and in the future. The cost and availability of housing has been an issue of concern in the region for many years – particularly in the Mad River Valley where prices are heavily influenced by vacation and second home markets. Given the high cost of land, steepness of slopes and lack of infrastructure, it is challenging to build new, affordable single-family homes in Moretown and neighboring communities. Moretown does have potentially viable residential development sites, which are now in agricultural and forestry use.

5.4 Affordable and Workforce Housing

The term "affordable housing" is widely misunderstood and frequently has negative connotations. State law defines affordable housing as a residence that a household earning 80% of the median family income for the county could rent or own without spending more than 30% of household income on housing costs. The housing that is needed in Moretown is primarily workforce housing – homes that people working in the region can afford to own or rent.

In 2013, approximately one-third of homes in Moretown might have qualified as "affordable housing" under the state's definition. However, assessing housing affordability is complex. Median income in Moretown is higher than the county average, increasing what would be an "affordable" housing cost for that household. Approximately 60% of homes would have been affordable to a household earning the median family income in Moretown. This suggests there is not a significant gap between income and housing costs for those who already reside here. The questions remains of whether living in Moretown is an option for those who aspire to live here. Other data, however, presents a different picture of affordability. For example, in 2023, the ACS indicated that 91 Moretown households were spending over 30% of their income on housing.

5.5 Multi-Unit Housing

Moretown recognizes the importance of multi-unit dwelling options as one strategy for addressing housing needs, and allows for two-unit dwellings as a permitted use in all zoning districts. Larger multi-unit dwellings are allowed in each zoning district, following Site Plan or Conditional Use review.

5.6 Rental Housing

Renting is generally more affordable than purchasing a home. Low-income households, defined as those earning less than 80% of median family income, are more likely to be renters, as are young adults, singles, and seniors.

According to the Census Bureau, there were approximately 105 rental units in Moretown in 2020. These are largely single-family homes rented as one unit, homes converted to two or three apartments, and a few condominiums and mobile homes. The 2025 Grand Llist identified five properties as "commercial apartments" including the Fairground Apartments. The remaining multi-family properties have five or fewer units.

There is relatively little data about rental housing costs in Moretown. According to the 2020 ACS, the median rent (including utilities) in Moretown was approximately \$892 per month.

The Fairground Apartments in North Moretown have provided 16 one-bedroom units for low-income elderly or disabled residents since 1979. The Housing Foundation, Inc. owns the property and the Vermont State Housing Authority manages it, ensuring that it will continue to provide affordable housing in perpetuity. USDA Rural Development provided the initial construction financing and subsidizes rents so that qualified tenants pay no more than 30% of their income for housing.

5.7 Mobile Homes

In rural communities, mobile home parks are a common type of affordable housing and many parks are more affordable than market-rate rental units. There is one mobile home park in Moretown – the privately-owned Riverside Community on River Road. As of 2025, there were twelve mobile homes in the park and the lot rent, including water, sewer, and snow removal, was approximately \$500 per month.

The median assessed value of a mobile home in 2025 was approximately \$206,200, about half the median value of all primary residences in Moretown.

5.8 Attached Housing

Attached housing is typically more affordable than detached single-family homes because of lower construction, energy costs, and land costs. Attached housing is less common in rural communities, including Moretown. Because it is higher density or more compact, some see this type of housing as out of place in rural areas and small-towns. It also requires the developer to invest in community water and sewer systems, where there is no municipal infrastructure.

The only attached housing development in Town, the Commons, was built between 1973 and 1975 with 30 condominium units on a 10-acre parcel. In 2025, the median assessed value of a condo in the Commons was \$206,800 - providing a more affordable opportunity for home ownership. Moretown's current zoning would likely not allow a new housing development as dense as the Commons to be built today. However, accessory housing units are permitted under state law and could be built in Moretown to increase availability of senior or more affordable housing.

5.9 Goals, Objectives, and Strategies

Goal 5.1: Maintain a sustainable rate of housing development to accommodate Moretown's
population in a manner that does not overburden public services and is consistent with the
Town's character and natural environment.

Objective 5.1.1: Promote the mixed-use development in Moretown Village and North Moretown.

Continue to explore creation of an appropriate development status for North Moretown

Consider expanding the Village Center Designation in Moretown Village

Objective 5.1.2: Prevent housing development that fragments large forest blocks, agricultural lands, and other ecologically sensitive landscapes.

Review and adjust, if appropriate, the allowance of a density bonus for Planned Unit Developments (PUD)

Encourage housing development in or near areas where residents have a greater access to transit

Pursue land use planning and regulatory mechanisms that will minimize and mitigate visual and ecological impacts of development on hillsides and ridgelines.

Goal 5.2: Increase the diversity of housing in Moretown to meet the needs of a wide range of income levels and household configurations.

and/or can walk to obtain basic goods and services

Objective 5.2.1: Promote housing development of housing for low-income and moderate-income households.

Consider adding definitions of low- and moderate-income households to the LURs				
Consult with regional organizations that develop housing for these households				
Consider providing regulatory and financial incentives for housing development meeting these				
needs				
Review lot coverage allowances for the Village and Commercial Zoning Districts				

	Support energy efficiency and weatherization programs
	Endorse the continued operation of Fairground Apartments as permanently affordable housing fo low-income seniors and people with disabilities
Obje	ctive 5.2.3: Incentivize housing development that fills market gaps.
	Consider incentives for the creation of affordable and workforce housing, senior housing,
	accessible housing, smaller homes, and/or highly energy-efficient homes
	Provide education about the benefits of creating PUDs and their potential for development of
	shared infrastructure and housing
	Explore the repurposing of existing buildings
	Obtain an increased understanding of local housing needs for the elderly
	Promote the development of Accessory Dwelling Units where appropriate
	Allow for a range of housing types to be built in Moretown while maintaining the Town's characte
_	ctive 5.2.3: Ensure that subdivision regulations provide for moderate development while staining the integrity of the landscape
	Consider revising the LURS to clarify that minor subdivisions are approved by the Zoning Administrator

6. Transportation

6.1 Introduction

While transportation patterns and practices in Moretown have not significantly changed since the last municipal plan update, the use of main corridors has increased, and a need to reduce greenhouse gas emissions is critical. As well, the CVRPC expects to "require inclusion of Complete Streets principles as a condition of project support and town plan certification", and to prioritize safety improvements to reduce potential vehicular crashes and limit conflicts between modes of transportation. Likewise, the CVRPC seeks to require adoption of road and bridge standards as a condition of town plan certification and to expand access for all users. The Regional Plan foresees a transportation network that facilitates tourism and recreation, and one hopes, economic sustainability.

In March 2021, Moretown adopted state road and bridge standards, and the Agency of Transportation (VTrans) certified that adoption. Moretown also completed a survey of hydrologically connected road segments to comply with the state Municipal Roads General Permit (MRGP). Moretown has 500 hydrologically connected segments of roadway totaling 30.1 miles, or 63.3 percent of total Town Highway miles. "Hydrologically connected road segments" are those that convey stormwater runoff to waters of the state. The MRGP requires the Town to manage this stormwater to reduce or eliminate its flow to waters of the state.

6.2 Route 100B

Vermont Route 100B is the primary transportation corridor through Moretown. This state highway travels 7.9 miles from the Route 100 intersection south of Moretown Village to the US Route 2 intersection in Middlesex. Route 100B largely parallels the Mad River. Route 100B is part of the Mad River Scenic Byway, which is approximately 36 miles long. The Byway, designated by the Federal Highway Administration in 2007, is close to the Mad River and has been significantly damaged during major floods, including those in 2011, 2023, and 2024.

Route 100B is a two-lane highway with paved shoulders/bike lanes on each side. The width of the shoulders varies, but is generally at least four feet, and includes several scenic pull-off areas. Some sections are constrained by narrow bridges, topography, or proximity to the river, particularly the S curves on the south end of the Village as one approaches the bridge. The wide paved shoulders, scenic views and byway designation all make Route 100B a popular driving and bicycle route for both tourists and area residents. An Active Transportation Corridor along Routes 100 and 100B is in planning stages, with a southern terminus in Warren and a northern terminus at Camp Mead in Middlesex. In April 2024, CVRPC, the Mad River Path (MRP) and Mad River Valley Planning District (MRVPD) received an \$84,000 grant to conduct a scoping study for this project.

The Route 100B corridor includes a new sidewalk on the east side of Moretown Village from Moretown Mountain Road to Hurdle Road. It was designed and built in 2013, with a \$375,000 grant from the VTrans Bicycle and Pedestrian Program. The Moretown Elementary School (MES) is on the same side of Route 100B as the sidewalk; MES has spent significant resources and volunteer effort to encourage safe travel for students. In 2008, MES was accepted into the VTrans Safe Routes to School (SRTS) program. The school received a \$10,000 for education, encouragement, and enforcement programs, and funding for speed feedback signs. A sidewalk is planned for the west side of Route 100B through the Village, with clearing planned for 2025 and construction targeted for the winter and summer of 2026.

VTrans classifies Route 100B as a major collector, which is a road that connects local roads with arterial highways. A VTrans estimate of Average Annual Daily Traffic (AADT) is 3049 for the southern end of Route 100B, and traffic counts in 2023 indicated an AADT of 3075 for the northern end of Route 100B. Truck traffic, speeding vehicles, noise and dust created by the traffic are significant concerns for Village residents.

VTrans rates the current Level of Service (LOS) on Route 100B as a C and expects the highway to maintain this rating. LOS is a measurement of how a roadway functions, with LOS A indicating free flowing traffic and LOS F indicating severe congestion. LOS C is the target for most rural highways and is a stable flow of traffic that is usually able to move at the posted speed. With a LOS C rating, a roadway is safely operating below, but efficiently close to, its capacity.

VTrans had not identified any high crash locations on Route 100B. However, there are two intersections with safety concerns – the intersection of Route 100 and Route 100B, and the intersection of Moretown Mountain Road and Route 100B – as described below:

At the Route 100 and Route 100B intersection, the sight distance for southbound motorists turning left from Route 100 onto Route 100B is limited. VTrans has recommended widening the shoulders and repaying the intersection, however neither of these projects would improve visibility.

Moretown Mountain Road intersects Route 100B with a steep grade and at a difficult angle. The intersection is on a curve of Route 100B, resulting in extremely poor sight distances for motorists. The intersection is also dangerous for pedestrians and bicyclists, particularly children walking or biking to school. This segment of Route 100B was not included in the first phase of the sidewalk improvement project because of safety concerns associated with this intersection, and significant engineering challenges. A road safety audit of the intersection in 2009 recommended short-term and long-term actions to improve safety. Some simple recommendations in the audit related to signage, pavement markings, tree removal (the 'Lone Pine') and snow storage practices have been completed. A citizen recommendation for mirrors to show on-coming traffic has not been implemented. With the exception of the removal of the Lone Pine, the recommended physical changes to Moretown Mountain Road and the property on the south side of the intersection have not been implemented.

6.3 Route 100

Route 100, a two-lane state highway, is classified as a rural minor arterial. A minor arterial's function is to serve through traffic while also providing some access to adjacent land. Two segments of Route 100 pass through Moretown. The southern segment, with 11-foot travel lanes and narrow shoulders, travels slightly more than one mile between the Waitsfield and Duxbury town lines. The northern segment, with 11-foot travel lanes and shoulders that widen towards the Route 2 intersection, runs less than 400 feet from the Duxbury town line to Route 2.

In 2023, VTrans estimated that the AADT on Route 100 from the Waitsfield town line to Route 100B was 6200 vehicles per day and from Route 100B to the Duxbury town line was 4136 vehicles per day. The 2023 VTrans estimate for traffic on Route 100 near the Route 2 intersection was 3075 vehicles per day. Traffic counts are undertaken at three locations in Waitsfield: the intersection of VT 100 & VT 17, the Sugarbush Access Road north of the Sugarbush Inn, and VT 17 west of German Flats Road. Those locations experienced gradual decreases in AADT during 2020, which were likely due to COVID, after slight increases from 2016 to 2019. Traffic began to gradually increase again in 2021. One could surmise that similar fluctuations hold along the Moretown segments of Route 100.

VTrans has rated both the northern and southern segments of Route 100 in Moretown area as having a a LOS of C.

6.4 Route 2

US Route 2 travels more than three miles through North Moretown from the Duxbury to Middlesex town lines. Route 2 follows the Winooski River and, like Route 100B, is within or adjacent to a flood hazard area. The highway was constructed in 1805 to connect Burlington and Montpelier, and is one of the primary east-west routes across Vermont.

Route 2 is a two-lane highway with paved shoulders on each side. The travel lanes are 11 feet wide, with 9-foot paved shoulders west of Route 100 and 2-foot shoulders east of Route 100. There are sidewalks on the south side from the Route 100 intersection west into Waterbury. This section of Route 2 is a popular, but not particularly safe, bicycle route.

VTrans classifies Route 2 through Moretown as a major collector. It serves as an alternate route to Interstate 89, primarily for local traffic, and connects Route 100, Route 100B and other local roads to the Interstate. VTrans' 2023 ADTC on Route 2 from Route 100 to the Duxbury town line was 4136 vehicles per day, which was lower than in the previous decade. From Route 100 to the Middlesex town line the 2023 count was 3739 vehicles per day.

Route 2 east of the Route 100 intersection has a LOS of C and is expected to maintain that rating. The segment west of Route 100 had an LOS D rating in 2000, but was upgraded to LOS C in 2006. If traffic increases significantly, the rating would likely fall back to LOS D.

The intersection of Route 100 and Route 2 in North Moretown is another area of concern. It has a LOS F rating for traffic turning left from Route 100 onto Route 2. The intersection lacks bicycle and pedestrian facilities, and is of particular concern because of its proximity to the Crossett Brook Middle School. The alignment of Commercial Drive and the access it provides to several businesses creates further conflicts and safety issues. A 2012 North Moretown Transportation Study recommended multiple improvements for this intersection. Two recommendations in the study, a traffic light and closure of one access to Route 2, have been accomplished. Other proposals, including a path between Crossett Brook School and the intersection, and the realignment of Commercial Drive have not been implemented. A different approach would be to construct a roundabout at the intersection, and add sidewalks on the north side of Route 2 to the bridge into Waterbury, along Route 100 to Cobb Hill Road, and along Route 2 to Gallagher Acres. Should Moretown pursue a more dense development strategies for North Moretown, these options would be further considered.

6.5 Town Highways

Moretown owns nearly 50 miles of TownHighways (Map #10) and maintains more than 35 miles of them for year-round vehicular travel. The highway surfaces are gravel, except for short paved sections of Moretown Mountain Road and River Road. Moretown's Highway Department, with the support of the CVRPC, uses a Road Surface Management System (RSMS) to maintain a detailed inventory of Town Highways and their condition to more effectively manage roadways and prioritize improvements.

There are 10.73 miles of Class 2 Town Highways which include Moretown Mountain Road, Pony Farm Road and River Road. These highways are local collectors that provide access to adjoining development and connection to neighboring communities. They are also the most heavily traveled Town Highways. Another 25.71 miles of Town Highways are designated as Class 3. These highways are negotiable under

normal conditions by a standard manufactured pleasure car and designated as Class 3 by the Selectboard after consultation with VTrans; they primarily provide access to adjoining development, and are not typically used by other traffic. A remaining 13.35 miles of 21 Town Highways are designated as Class 4. These highways are not maintained for year-round vehicular travel and the Town receives no State highway aid for their maintenance. Class 4 highways *may* be maintained to the extent required by the necessity of the Town, the public good, and for the convenience of residents. The Town does not regularly maintain these roadways, although their culverts and bridges are maintained to some degree. Moretown also contains multiple Legal Trails, which are not considered highways and the Town is not responsible for any maintenance, including culverts and bridges.

Whereas the Town performs only limited maintenance on Class 4 Town Highways and Legal Trails, and does not plow them in the winter, these roadways provide access to several dozen homes. Landowners take responsibility for keeping these roads maintained for year-round vehicular traffic. Of the homes accessed by Class 4 Town Highways and Legal Trails, at least one-third have been built since 2000. Zoning regulations currently allow for the improvement of existing development on Class 4 Town Highways and Legal Trails. As of 2023, those who purchase property on a Class 4 Town Highway or Legal Trail are informed of that status. Continued development on Class 4 Town Highways and Legal Trails raises a number of issues including:

- Whether Class 4 Town Highways and Legal Trails can provide adequate access for emergency and service vehicles
- The wisdom of allowing development on Class 4 Town Highways and Legal Trails which would facilitate growth in remote areas of town and in currently designated preserve areas
- Development in those remote areas may violate restrictions now being designed and mapped by the Land Use Review Board pursuant to Act 181 of 2024
- Whether Class 4 Town Highways and Legal Trails will need to be upgraded to Class 3 Town Highway standards, and maintained as such, should more residents start to rely on them to access their property
- Determination of who would be responsible for the cost of upgrading a Class 4 Town Highway or Legal Trail if it became necessary

To address some of the issues, the Selectboard adopted a Class 4 Road and Trail Policy in 2013, and an ad hoc Committee made recommendations for updates to the Policy in 2024. The resulting revised Policy was adopted in early 2025. Class 4 Town Highways have been classified into two groups, A and B. Group A roadways are in sufficiently good condition that Town equipment can be used on them, whereas the Group B roadways generally cannot be graded by Town equipment. The Highway Department does not perform summer maintenance on Group B Class Town Highways or on Legal Trails, and does not perform winter maintenance, including snow removal, on any Class 4 Town Highway or Legal Trail. The Class 4-Legal Trail Committee recommended that the Town not provide any summer maintenance of Class 4A highways except as required by necessity and the public good and convenience of the inhabitants. This maintenance may include bridges, culverts and ditches to control erosion of roads or runoff to adjacent property, and removal of obstructions.

The cost of maintaining Town Highways accounts for a significant portion of Moretown's annual budget. These costs are largely funded through property taxes. To be eligible for Town Highway Aid from the state, a town must appropriate an annual highway budget of at least \$300 per mile for each mile of Class 1, 2 and 3 Town Highway. In 2024, Moretown received \$99,681.06 in state aid for maintaining 10.73 miles of Class 2 and 25.71 miles of Class 3 Highways. There is no state aid for Class 4 Highways or Legal

Trails. The operating expenses of the Highway Department have been increasing above the rate of inflation for more than a decade in spite of considerable efforts to control costs.

Recent severe flooding events in July 2023, December 2023, and especially July 2024 resulted in Town road, culvert and bridge washouts. As of October 2024, the Town has spent in excess of \$5 million to repair Town roads and enlarge and replace culverts damaged in the flooding. Culvert replacement and upsizing has been completed on multiple roadways in all parts of Town following the floods. Expectations are that some of those expenditures will eventually be recovered from FEMA.

6.6 Private Roads

As of 2013, there were 52 private roads, totaling more than 12 miles, in Moretown. The roads provide access to approximately 150 homes. For 911 addressing purposes, a shared driveway that serves 3 or more homes is defined as a private road. The average length of a private road in Moretown is ¼ mile and none exceed a mile in length. On average, there are 3 homes on each private road and Dean's Mountain Road serves the largest number at 14 homes. Approximately one-third of homes built during the 2000s are accessed by a private road.

The cost of maintaining a private road is entirely the responsibility of the property owners served by the road. Moretown's policy is to not "accept" new development roads, as that would include the road as a Class 3 Town Highway. Most private roads are not being built to Class 3 Town Highway Standards, and currently are not required to meet those standards. Current zoning requires that private roads meet state standards at their intersection with a public road, and conform to state regulations regarding stream and river buffer strips and wetlands. Development served by private roads can raise some of the same issues as development on Class 4 Highways and Legal Trails discussed above, particularly related to emergency access and development in remote areas.

6.7 Bridges and Culverts

The Moretown Highway Department, with the support of CVRPC, has maintained an inventory of bridges and culverts since 2001. The inventory currently includes more than 400 structures – each of which represents a critical interface between the natural and built environment. Failure of bridges and culverts is often a root cause of damage to roads and adjacent property during floods, which are becoming more frequent and severe. The Selectboard adopted new road and culvert standards in 2012 following Tropical Storm Irene. Bridges and culverts that have been repeatedly flooded, eroded or washed away have been identified and the Highway Department has upsized many of the culverts and continues to install larger culverts annually. The Selectboard has established a Bridge and Culvert Fund with the intent of allocating at least \$10,000 annually to fund this effort.

As noted above, recent severe flooding events resulted in numerous road, culvert and bridge washouts. Culvert work has been completed on Jones Brook, Bradley, Howes, and Honan Roads, as well as Lover's Lane and Old Route 100, and additional work is planned.

Most of the structures identified in the bridge and culvert inventory are driveway culverts. The Town's policy requires that property owners maintain and replace any driveway culverts installed in the Town right-of-way as necessary.

In addition to the Town-owned bridges, there are six bridges in Moretown owned by the State. These included a historic truss bridge which carried Route 100B across the Winooski River between Moretown and Middlesex, which was replaced by VTrans at a location slightly upstream in 2009. VTrans also

replaced the Route 100B bridge at the south end of the Village in 2020. There are also three State-owned bridges on Route 100B north of the Village, which are currently not considered to be structurally or functionally deficient.

6.8 Curb Cuts and Access Management

Town Highways serve to carry through traffic and to provide access to adjacent property. Locations where driveways and parking areas intersect a road are referred to as curb cuts; the frequency and location of curb cuts directly affects efficiency and safety of a road. Their location and design may also affect road drainage and maintenance. As a result, both the Town and State require property owners to obtain an access permit before building a curb cut onto a public road.

VTrans recommends that municipalities implement appropriate access management techniques such as:

- Enforcing minimum sight distance standards at driveways and intersections based on the posted speed of the road. The faster that traffic is moving on the road, the greater the sight distance that is needed to allow motorists to safely enter and exit the roadway. Moretown's Town Highways, almost all of which are gravel-surfaced, have a 35-mph speed limit
- Minimizing the number of curb cuts along a road to reduce potential conflict points
- Requiring development to provide adequate off-street loading and unloading, parking and turnaround space so that motorists, including service vehicles, do not have to block the roadway or back out onto the roadway. Moretown's zoning regulations include modified parking and loading requirements
- Establishing maximum driveway widths and corner turning radii that adequately control the speed, location and angle at which motorists can enter or exit the roadway
- Requiring development to use site elements such as landscaping, signs and lighting to visually
 define and enhance access points. These elements increase awareness of locations where
 vehicles may be entering or exiting the roadway

Current zoning regulations incorporate a number of access management elements. These include allowing only one access to a property and limiting the width of the access point. The Selectboard and Road Foreman are responsible for granting curb cut permits in Moretown.

6.9 Complete Streets

Complete Streets is an approach to planning, designing, building and maintaining a town's transportation network which considers the needs of everyone who uses the road. This includes pedestrians, bicyclists, transit riders, children, elders, and people with disabilities. Complete Streets are an essential component of a multi-modal transportation system that improves everyone's safety and creates more options in getting from one place to another.

Pedestrians and bicyclists in Moretown generally must share the road with vehicles. Fortunately, most of the traffic on Moretown's Class 3 roads, which are gravel surfaced, is accommodating of pedestrians and bicycles. As described above, the existing sidewalk network in Moretown is limited to portions of the Village along Route 100B and a small segment along Route 2 in North Moretown. Most paved roads in Town either have shoulders that are too narrow to safely accommodate pedestrians or bicyclists or have no shoulders at all – the only exception being Route 100B, most of which has shoulders suitable for walking and bicycling. Recent and future transportation projects are anticipated to improve these conditions and incorporate Complete Streets principles on those paved roads.

Moretown's Zoning Regulations do not currently require new subdivisions or development to implement Complete Streets principles.

6.10 Truck Traffic

The state highways – Route 100, Route 100B and Route 2 – are corridors for trucks carrying goods to and from local and regional destinations. Such freight traffic is essential for the region's businesses. These highways also travel through the most developed portions of our community – Moretown Village and North Moretown – where the greater noise, dust and hazards created by truck traffic can conflict with local vehicle and pedestrian traffic, adjacent land uses, and the quality of life. In the aftermath of Tropical Storm Irene, when Route 100B was closed through the Village, truck traffic was notably absent and the village was remarkably quiet. However, following the flooding of July 2024, all of the truck traffic headed south to the Mad River Valley towns was forced to use Pony Farm Road. This created traffic, speeding, and related issues along that route.

6.11 Public Transit

Public transit services are limited in Moretown, as in many other rural Vermont communities. Dispersed, low-density development patterns pose a significant barrier to providing cost-effective, efficient public transit service in most areas of Town. Public transit service is currently available along the Route 2/I-89 corridor.

Green Mountain Transit (GMT) provides public transit service in Central Vermont. GMT operates fixed route and commuter buses, and a variety of demand response service, local shuttle service, winter seasonal service, and special individual service. GMT routes and services most likely to be used by Moretown residents include:

- The Waterbury Commuter provides service on Route 2 between Waterbury and Montpelier. The
 bus makes one stop between those two communities at the Red Hen Bakery, just over the town
 line in Middlesex.
- The Montpelier Link Express provides commuter service between Montpelier and Burlington via Interstate 89. It makes limited stops along the route. The closest stop to Moretown is in Waterbury.
- The "Mad Bus" that operates between Montpelier and Sugarbush during the ski season and stops at the Moretown Store.

GMT and various social service organizations provide individual transportation services for the elderly, people with disabilities, and others with special needs. Given the anticipated increase in older residents during the next 10 to 20 years, as well as rising transportation costs and changing social norms, demand for alternatives to driving is likely to increase. In 2019, the Free Wheelin' transportation service began, serving the Mad River Valley towns and Moretown. Volunteer drivers of this service provide over 100 rides a month for people with no access to transportation; these rides are primarily to medical appointments, grocery stores, and some social gatherings.

6.12 Interstate Bus, Rail and Air Travel

The New England Central Railroad operates the rail line across the Winooski River from Moretown. This line provides Amtrak passenger service, and is an important freight link between Canada and Southern New England.

Moretown residents have convenient access to passenger rail service via Amtrak and can travel by train to various New England cities, New York City and Washington D.C. from stations in Waterbury Village, Montpelier, and Burlington. Interstate bus service via Greyhound is available in Montpelier.

Air passenger and freight services are located at Burlington International Airport in South Burlington, and State-owned E.F. Knapp Airport in Berlin. Interstate 89 provides relatively easy access to both airports.

6.13 Transportation Planning

CVRPC's Transportation Advisory Committee (TAC) is composed of representatives from each member municipality. Participation on the TAC provides Moretown with an important opportunity to provide local input into transportation planning at the regional, state and federal level. The TAC guides the development and implementation of the Central Vermont Regional Transportation Plan. It is also responsible for identifying and prioritizing transportation projects in the region, and providing regional input and direction to VTrans, the Federal Highway Administration, and state and federal legislators regarding Central Vermont's transportation needs.

6.14 Goals, Objectives, and Strategies

Goal 6.1: Manage the Town's transportation network to meet community demand while protecting important natural, cultural, and scenic characteristics of the system.				
over	ctive 6.1.1: Maintain Town Highways and infrastructure in a manner that is cost-effective the long term, improves safety for all roadway users, incorporates Complete Streets iples, and protects rural and scenic character.			
	Work with VTrans to improve the safety of the intersection of Moretown Mountain Road with			
	Route 100B and implement the recommendations of the 2009 road safety audit Pursue land use planning and regulatory approaches that result in a pattern and density of development that can be supported by the existing transportation infrastructure without requiring costly upgrades or reducing the rural and scenic character of the road corridors			
	Support development of traffic calming measures for the Village			
	Explore replacing the traffic light in North Moretown with a roundabout			
	Follow maintenance practices recommended in Appendix C of Designating Scenic Roads – A Vermont Field Guide, and in accordance with State guidelines and best practices			
	Maintain Town control of Class 4 Highways and Legal Trails for sustainable recreational use			
	Discourage the extension of existing Town Highways, the upgrading of Class 4 Highways or Legal Trails for year-round vehicular use, and the Town's assuming ownership of private roads, except when such an action would have a significant and broad public benefit			
_	ctive 6.1.2: Maintain and improve the Town Highway system for increased water quality and resilience.			
	Continue participation in and compliance with the Municipal General Roads Permit program			
	Implement transportation related mitigation actions identified in the Moretown Local Hazard Mitigation Plan			
	Minimize curb cuts on Town Highways and maximize the use of shared driveways			

	Identify demand for, and support development of, additional Park and Ride locations
	Promote increased public transportation options
Obje	tive 6.2.2: Bicycle and pedestrian infrastructure
	Fully implement the sidewalk plan for the Village
	Fully implement traffic calming measures in the Village
	Implement pedestrian and bicycle transportation improvements in North Moretown
	Support development of a multi-use path along Routes 100 and 100B
	Support grant funded construction for pedestrian and bicycle transportation access
Obje	tive 6.2.3: Encourage and support the shared use of transportation services and facilities
	Support and promote the use of ride-sharing services such as Free Wheelin'
	Promote safe and convenient alternatives to single occupancy vehicles
Goal	6.3: Reduce the need for vehicle transportation.
	6.3: Reduce the need for vehicle transportation. tive 6.3.1: Guide development to compact, mixed-use settlement patterns
	tive 6.3.1: Guide development to compact, mixed-use settlement patterns
	Support the development of attractive, walkable, vibrant Complete Street environments in the
Obje	Support the development to compact, mixed-use settlement patterns Support the development of attractive, walkable, vibrant Complete Street environments in the more densely populated areas of Moretown Encourage land use patterns and transportation infrastructure that support alternative modes of
Obje	Support the development to compact, mixed-use settlement patterns Support the development of attractive, walkable, vibrant Complete Street environments in the more densely populated areas of Moretown Encourage land use patterns and transportation infrastructure that support alternative modes of travel including transit, carpooling, bicycling, and walking Etive 6.3.2: Coordinate with neighboring towns when planning for transportation.
Obje	Support the development to compact, mixed-use settlement patterns Support the development of attractive, walkable, vibrant Complete Street environments in the more densely populated areas of Moretown Encourage land use patterns and transportation infrastructure that support alternative modes of travel including transit, carpooling, bicycling, and walking Etive 6.3.2: Coordinate with neighboring towns when planning for transportation. Incentivize new transportation mechanisms to connect Moretown to surrounding communities an different sections of Moretown
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Obje	Support the development to compact, mixed-use settlement patterns Support the development of attractive, walkable, vibrant Complete Street environments in the more densely populated areas of Moretown Encourage land use patterns and transportation infrastructure that support alternative modes of travel including transit, carpooling, bicycling, and walking Etive 6.3.2: Coordinate with neighboring towns when planning for transportation. Incentivize new transportation mechanisms to connect Moretown to surrounding communities an different sections of Moretown
Objec	Support the development of attractive, walkable, vibrant Complete Street environments in the more densely populated areas of Moretown Encourage land use patterns and transportation infrastructure that support alternative modes of travel including transit, carpooling, bicycling, and walking Etive 6.3.2: Coordinate with neighboring towns when planning for transportation. Incentivize new transportation mechanisms to connect Moretown to surrounding communities an different sections of Moretown Support efforts in neighboring towns to focus development in growth centers

7. Utilities, Facilities, and Services

7.1 Solid Waste

7.1.1 Solid Waste Management and Planning

Since 1987, municipalities have been responsible for solid waste management under Vermont law. In 1987, Act 78 changed the State's solid waste management system. Beginning in 1988, landfills were required to have protective liners installed underneath the trash to prevent pollution of the surrounding soil and water.

The 1987 legislation also required towns to prepare Solid Waste Management Plans to be approved by the Agency of Natural Resources (ANR). As management of solid waste became more regulated and complex, municipalities joined together, forming solid waste districts or alliances, to carry out waste management responsibilities.

Moretown has been a member of the Mad River Resource Management Alliance since 1994, when it was created by an inter-local agreement. As of 2025, the Alliance includes Fayston, Moretown, Waitsfield, Warren, and Waterbury. A board, comprised of a representative from each member municipality, governs the Alliance, overseeing policy, programs and a District Administrator. Member municipalities pay annual dues to support the work of the Alliance.

The Alliance maintains a current Solid Waste Implementation Plan (SWIP) on behalf of its members, which is incorporated into this plan by reference. The Alliance also sells compost bins and regularly holds events to collect household hazardous waste, tires, appliances, and textiles. It educates residents about solid waste management through its website, newsletter and events.

7.1.2 Solid Waste Services

The increasing complexity of solid waste management has also led to the private sector's taking over the collection and disposal of solid waste. Moretown, like most Vermont towns, does not provide municipal trash pick-up, nor does it own or operate any solid waste management facilities. Similarly, the Mad River Resource Management Alliance does not directly collect, transport, process or dispose of solid waste. Moretown residents either contract with private haulers to collect their trash and recyclables, or drop off their household waste at a collection point.

Disposal has changed as a result of the State's universal recycling law (Act 148), which was adopted in 2012. In 2015, the disposal of various recyclable materials such as aluminum, glass, plastic, cardboard and paper in landfills was banned. In 2016, leaf and yard debris and clean wood wastes were also diverted from landfills. Since 2020, composting of all food scraps, including those from households, is required.

7.1.3 Solid Waste Facilities

Moretown is host to a closed regional landfill located on a 200-acre site on the south side of Route 2 in North Moretown. Moretown had an agreement, authorized under State law, that required the landfill to make compensatory payments to the Town when it was operating.

When the Moretown landfill opened, it was an unlined landfill and operated in conjunction with a sand and gravel business. The unlined landfill was closed in the 1990s and new owners began accepting waste in a series of lined compartments referred to as cells. Cell 1 operated from 1994 to 1999, Cell 2 operated

from 1999 to 2006, and Cell 3 operated from 2006 to 2013. On March 13, 2013, the Agency of Natural Resources (ANR) denied the recertification of the landfill on the grounds it failed to address off-site odors caused by waste and because it did not comply with the Vermont Groundwater Protection Rule and Strategy.

The following November Moretown Landfill Incorporated (MLI), the landfill operator, submitted an application for a new cell at the landfill, which ANR found to be incomplete. (Interestingly, the potential permitting of a fourth cell was inked to the 2007 preservation of 81 acres of deer habitat in the Town Forest, mentioned in Section 3.) MLI withdrew its Cell 4 application, and subsequently submitted a closure plan for the landfill. A final cap was placed on the lined landfill cells in 2018, in accordance with an approved closure plan for the facility.

A solid waste post-closure certification for the landfill was renewed in 2024 and is valid through 2029. The certification describes the roles and responsibilities for the owner. This includes the ongoing operation of a landfill gas collection system and leachate systems, financial assurance, maintenance activities, and environmental monitoring. Currently, groundwater monitoring is required annually to ensure that the current cover system and monitoring is still protective of human health and environment. Waste Management is the current owner of the landfill, and is responsible for the certification requirements.

7.2 Utilities

7.2.1 Telecommunications

Access to telecommunications has become essential for economic development, education and overall quality of life. However, the area's terrain and low population density have limited access to telecommunications in many parts of Moretown since the earliest days of telephone service. Most of the Town has access to satisfactory internet and cell phone service; there remain pockets of minimal internet service and several areas where no cell phone service is available.

Several firms provide landline phone and internet services in specific geographic coverage areas in Town, and the type of internet connection available varies. There is minimal competition within the various service areas, with most residents' having no choice of providers. Much higher connection speeds are possible with fiber than with service over copper wire (DSL), cable or wireless. Various companies also offer broadband internet service via satellite. However, the speed, reliability, and cost are typically not competitive with other forms of broadband internet service.

Cell phone service from various carriers is available in some areas of town, but others remain dead zones or have low quality service. A wireless signal is transmitted by line of sight from the wireless device to an antenna and it can be lost or severely weakened by hilly terrain, dense foliage, distance and atmospheric conditions. There are three telecommunications towers hosting multiple wireless service providers in Moretown:

- A 74-foot monopole tower on Mount Cobb, built in 2003
- A 107-foot monopole tower adjacent to the landfill site, built in 2007
- A 100-foot monopine tower off of Hoover HII Road, built in 2020

The Vermont Telecommunications Authority offers an online form for property owners interested in hosting wireless telecommunications infrastructure to submit their sites. The characteristics that telecommunications providers look for when selecting sites for wireless towers include:

A minimum of 180-degree views and preferably 360-degree views

- Ability to access the facility at any time, preferably vehicular access
- Proximity to electric power and public roads, preferably no more than 500 feet from the road
- A minimum area of 100 by 100 feet that is at least 100 feet from property boundaries within a zoning district that allows telecommunication towers

The characteristics that telecommunications providers look for when selecting an existing building or structure to mount a wireless antenna on include:

- A minimum of 180-degree views and preferably 360-degree views
- Ability to access the facility at any time, preferably vehicular access
- Proximity to electric power and public roads, preferably no more than 500 feet from the road.
- A minimum of 30 feet tall and preferably 60 feet or higher
- A flat roof capable of handling a minimum load of 150 pounds per square foot, or the ability to mount antennas on the side of the structure
- A minimum area of 20 by 30 feet for equipment either on the roof, in the building, or on the ground immediately next to the building or structure

7.2.2 Electricity

Electricity has been generated in Moretown for more than a century and, as a result, there is a considerable amount of electric generation and transmission infrastructure in Town:

The Vermont Electric Power Company (VELCO) owns and operates a 115kV transmission line that runs east-west through Moretown south of Route 2 (Map #10). This line is connected to a Green Mountain Power (GMP) 33kV sub-transmission line which runs south through Town to the east of Route 100B. Two additional GMP 33kV sub-transmission lines travel west from the VELCO 115kV line. There are also three major electric generation facilities in Moretown - two hydropower dams and a landfill gas electrical generation facility described in Section 7.1.3 of this plan. Several substations located in Moretown link the generators to the transmission grid, interconnect the multiple transmission lines, and provide power to the local distribution system.

Several utilities provide electric service in Moretown. These include GMP, which serves the northern part of town along the Route 2 corridor and much of the Route 100B corridor, including Moretown Village. A small area in the southeast corner of town is served by the Town of Northfield Electric Department. Washington Electric Co-op (WEC) serves the remainder of town.

Vermont, like many other states, is modernizing its electric grid. This "smart grid" effort is integral to the state's effort to promote efficiency, conservation and renewable energy. GMP and WEC have replaced their customers' old, analog electric meters with new digital meters known as "smart meters." Smart meters can provide customers with detailed information about their energy use, which allows them to make decisions to change their consumption habits. The newer meters also improve the utilities' ability to manage power supply and demand.

7.2.3 Water and Wastewater

Waterbury's Edward Farrar Utility District provides water service for some residences and fire hydrants in North Moretown, no other area in Town is served by a municipal water supply. There is currently no municipal wastewater service in Moretown. All development is dependent on private on-site wells and septic systems. Moretown, like many rural Vermont communities, did not build centralized water or wastewater facilities when federal funding was widely available. Now federal and state dollars for water

and wastewater infrastructure are limited and small communities like Moretown are severely challenged to raise funds for such an investment.

In 2022, Moretown applied for a 0% loan from the Vermont Clean Water State Revolving Fund to develop a preliminary engineering study for an indirect discharge wastewater system for the Village. Otter Creek Engineering, guided by the Moretown Clean Water Committee, has completed a 90% report. The Committee and Otter Creek investigated possible disposal sites for such a system, surveyed residents about developing a village system, contacted property owners that might have soils appropriate for inground disposal, reviewed various systems that might work for Moretown, and held two public meetings to present their findings. After a thorough investigation, the Committee concluded that no disposal site could be secured which would provide the capacity needed for Moretown Village's 40+ homes and businesses. It's hoped that, in the future, a viable disposal site may be acquired and work can continue towards a solution that can be presented to the voters.

Respondents to the 2024 community survey indicated that several development issues were important to them that could be enhanced with a centralized wastewater. Those issues are: develop more retail establishments, restaurants, and light industry. Without water and/or wastewater infrastructure, our ability to promote compact development patterns - particularly in and near existing settlement areas such as Moretown Village, Moretown Common and North Moretown – is limited. Similarly, the lack of infrastructure limits the potential for economic development in Moretown. The Town is aware, through its work on a possible in-ground system for the Village, that there are alternatives other than individual wells and conventional municipal water systems, and other than traditional inground septic systems and municipal centralized wastewater systems. Shared, community and decentralized systems are also possible for provision of water and wastewater treatment for homes and businesses. These systems are less expensive to establish and maintain than conventional, centralized systems. As such, the smaller systems provide more feasible options for rural Vermont communities.

Moretown is also examining the possibility of connecting North Moretown to the wastewater system serving Waterbury. Such a development would complement the drinking water system which serves part of North Moretown. A wastewater system here could kickstart some of the needs expressed in the 2024 Community survey.

Changes made to the state's wastewater regulations in 2002 are supportive of shared or community water and wastewater systems, and allow for alternative types of septic systems. Shared and community systems also encourage more compact development to conserve open space and working lands. Shared or community systems may serve only two neighbors or an entire neighborhood. In the past decade, two Mad River Valley towns - Warren and Waitsfield - have pursued decentralized wastewater treatment to serve their village centers and designated growth areas. Decentralized systems consist of multiple individual, shared, or community systems that are commonly managed and maintained.

7.3 Education

Moretown belongs to the Harwood Unified Union School District (HUUSD), together with the towns of Duxbury, Fayston, Waitsfield, Warren and Waterbury. HUUSD is governed by a Union Unified District School Board, which includes two representatives from Moretown. Moretown students from pre-K through grade six attend the Moretown Elementary School in Moretown Village. The Town's 7th and 8th grade students attend Harwood Union Middle School in Duxbury with students from the southern portion of HUUSD. Ninth through 12th grade students from the entire district attend Harwood Union High School in Duxbury. All buildings in the HUUSD are in need of major renovations and maintenance work.

7.3.1 Moretown Elementary School Building and Grounds

The Moretown Elementary School, located in the center of the Village, has a student capacity of approximately 230 students. The last major renovations of the school took place in 1996 when the building was expanded. The building's roof was replaced in 2008. The school is located within the 500-year floodplain. The building sustained minor damage during Tropical Storm Irene in 2011 and additional damage during several flood events in 2023 and 2024.

For the 2024-2025 school year, Moretown Elementary School enrolled 42 preschool students across three separate two-full-day classes taught by highly qualified staff. The campus contains two licensed preschool spaces, each with a capacity of 15 students. The current enrollment for school aged children in kindergarten through sixth grade is 125. This enrollment is spread across seven classrooms; one kindergarten, and two each of the following combinations – first and second, third and fourth, and fifth and sixth grades. Preschool classes are capped by a State Child Development licensing division at 14 students. K-6 classrooms range in enrollment from 16 to 21 students. The school building has a library with an office space for the school counselor, a staff kitchen, a gym with an associated stage, an administrative office, nurse's office, two special education classrooms, a student support office, an intervention classroom, a cafeteria and conjoined kitchen, speech language therapy office space, basement storage, a custodial office, teacher work space with lamination materials, a combined art and music space, and a separate basement boiler room. Moretown Elementary's campus extends beyond the building and includes nine ECO base camps in the Moretown Town Forest. The camps were cocreated and are co-maintained through a partnership between the North Branch Nature Center and the Town of Moretown.

The Town owns approximately 175 acres of Town Forest in the area surrounding the school; approximately 20 acres of that property is developed with a parking lot and recreation facilities that are shared by the school and community. Recent construction of stormwater retention areas has been completed to address the runoff from the parking lot and other areas of the property.

The Moretown Elementary School is an important source of community pride and identity. It is a gathering place that hosts many community and family activities year-round, including Town Meeting. The future of our elementary school is clearly of concern to many residents. Others worried about the loss of community identity that would result if the school were to close.

7.3.1.1 Moretown Elementary School Enrollment

Enrollment at Moretown Elementary School reflects the wider demographic trends affecting our community, region and state. The last peak in enrollment occurred in the early-1990s when more than 200 students attended the school. In the 30 years since, the number of students has declined. In recent years, enrollment at Moretown Elementary has in some years been below 120 students in pre-K through grade 6. Current projections indicate that PK-6 enrollment throughout the HUUDS will decline gradually over the coming years.

7.3.2 Harwood Union Middle and High School

The Harwood Union Middle and High School is located off Route 100. The building is in Duxbury, however the school grounds extend into Moretown. The building was renovated and expanded in 1997 to add a wing to house the middle school. The middle school serves students from Moretown, Fayston, Waitsfield and Warren, while the high school serves students from those towns plus Waterbury and Duxbury.

The core facility of the building (cafeteria, gymnasium, auditorium, etc.) was designed to accommodate up to 1,000 students, and is currently in need of extensive deferred maintenance work and facility upgrading, as the last major renovation was 27 years ago.

7.3.3 Vocational Training

Harwood students are also able to attend classes at the Central Vermont Career Center in Barre City. The Center currently offers a variety of programs including automotive technology, culinary arts, cosmetology, digital media arts, emergency services, medical professions, plumbing and heating.

7.3.4 Post-Secondary and Adult Education

Moretown residents have access to a variety of post-secondary, adult, and vocational educational opportunities in Central Vermont. The Community College of Vermont (CCV) offers 12 associate degree and a number of career certificate programs from 12 locations, one of which is in Montpelier, and also through online courses. There are several four-year colleges in the wider area including Norwich University, Vermont State University, which includes five campuses, and the University of Vermont, as well as specialized educational institutions, such as the Vermont College of Fine Arts and the Yestermorrow Design/Build School.

There are also a number of state entities and nonprofit organizations that provide workforce training and adult education in Central Vermont. Central Vermont Adult Basic Education provides free literacy instruction. Capstone Community Action offers workforce development programs, job training opportunities, and workshops. The Vermont Department of Labor's Workforce Development Division provides support through their Job Centers.

7.3.5 Education Spending and Taxes

Moretown's education spending and related tax rate is subject to the State's education funding formula, which was implemented with the passage of Act 60 in 1997 and has been evolving since then. In 2016, several local school districts, including the Moretown School District combined to form the HUUSD. In 2024, the district's budget passed on the third vote after being reduced by the HUUSD School Board. In 2025 the HUUSD Board is considering ways to reduce costs for the district, including reconfiguration and potential closing of some school buildings; an extensive facility evaluation is taking place as part of this process. Also, the State Legislature is working to change the funding formula; the proposed changes include consolidation of school districts throughout the State. While education taxes have become burdensome for many residents, there is also concern regarding the potential lack of a Town elementary school and further loss of local control that would result from some of the State-level recommendations.

7.4 Child Care

Some of Moretown's child care needs are addressed through programs run at the Elementary School, including the robust Pre-K programming, and afterschool programs run at the facility for both preschool and school-age children. These programs are run by Neck of the Woods, a provider who also has a facility nearby in Waitsfield that serves a range of ages. It is anecdotally understood that some Moretown residents access child care through services closer to their place of employment. Moretown encourages the development of other childcare facilities by allowing for smaller facilities as a permitted use in all zoning districts, and for facilities serving more than six children as an allowed use in all zoning districts following Site Plan or Conditional Use review. Pre-K needs are included in the current configuration discussions taking place at the HUUSD level.

7.5 Goals, Objectives, and Strategies

0k:-	ative 7.1.1. Duravide manufactual complete managements are unable to be althought to the complete and the co
_	ctive 7.1.1: Provide municipal services necessary to ensure the health, safety, welfare, and gency needs of Moretown's residents and visitors.
	-
	Continue to support the Moretown Volunteer Fire Department Continue to provide annual financial support for the emergency service organizations that serve
	the various areas of Town
	Continue to support the Moretown Community Library
	Ensure that all development is accessible to emergency service vehicles
	Require that new development provides fire protection measures or facilities as deemed necessary
	Encourage Moretown residents to volunteer for local emergency service organizations
	Explore the potential for public water supply and wastewater disposal services
 Obje	ctive 7.1.2: Provide high-quality education for Moretown's youth.
	Stay informed of HUUSD's efforts to identify current and future space needs, and alternatives for
	addressing those needs
.01111	Support efforts to provide high-speed internet service for all areas of Moretown
	Support efforts to provide high-speed internet service for all areas of Moretown
	Continue to provide the option at Town Meeting for voters to support such organizations
	7.2: Increase cooperation and coordination with neighboring towns, the Central Vermont n, and the State.
Obje	ctive 7.2.1: Foster cooperative partnerships with neighboring towns to better address issues
of m	utual concern and enhance efficiency through cost sharing.
	Continue participation in groups addressing issues related to the Mad River and Winooski watersheds
	Continue participation in the Mad River Recreation District
	Continue participation in the Mad River Recreation District Collaborate with Duxbury and Waterbury on development of North Moretown, Duxbury Corner, and the immediately adjacent area of Waterbury
_	Collaborate with Duxbury and Waterbury on development of North Moretown, Duxbury Corner,
_	Collaborate with Duxbury and Waterbury on development of North Moretown, Duxbury Corner, and the immediately adjacent area of Waterbury ctive 7.2.2: Ensure that State decisions affecting land use, transportation, and provision of

8. Energy

8.1 Overview

Moretown's enhanced energy planning puts State and Regional goals into a local context to achieve the broader climate goals defined in Vermont's 2022 Comprehensive Energy Plan (CEP) to:

- In the transportation sector, meet 45% of energy needs from renewable energy by 2040
- In the thermal sector, meet 70% of energy needs from renewable energy by 2042
- In the electric sector, meet 100% of energy needs from carbon-free resources by 2032, with at least 75% from renewable energy

8.2 Energy Supply and Demand

The following sections provide data on Moretown's historic data across the transportation, residential thermal energy, and renewable energy generation sectors with targets provided for each sector that represent Moretown's portion of the statewide energy and climate goals.

8.2.1 Transportation

Transportation represents 41% of all energy use in Vermont and is responsible for 45% of the State's energy cost burden. Since transportation is one of the largest sources of greenhouse gas (GHG) emissions in Vermont (39%), switching from gasoline to electric-powered vehicles and reducing the number of vehicle miles driven are critical strategies of the CEP¹³. Setting goals and monitoring progress toward this transition to cleaner transportation requires establishing a current baseline for transportation for the Town. Exhibit 8.1 provides information on the total number of vehicles registered in Moretown, the estimated number of miles those vehicles drive, as well as the estimated amount of gasoline they use, and the annual cost of fuel.

Exhibit 8.1: Estimated Current Transportation Energy Use in Moretown (Source: Moretown Energy Plan)

Transportation Data	Municipal Data
Total # of Vehicles (ACS 2011-2015)	1,336
Average Annual Travel per Vehicle (VTrans estimate)	12,500 miles
Estimated Total Distance Traveled	16,700,000 miles
Average Annual Consumption of Gasoline per Vehicle	576 gallons
Estimated Total Moretown Fuel Consumption per Year	897,800 gallons
Transportation Energy Consumption	108 billion BTUs
Average Cost per Gallon of Gasoline (CVRPC)	\$2.31
Gasoline Cost per Year of Moretown Residences	\$2,074,000

¹³ 2024 EAN Annual Progress Report, p. 10: https://eanvt.org/wp-content/uploads/2025/01/EAN-APR-2024-updatedJan2025.pdf

Annually, residents of Moretown are estimated to spend over 2 million dollars on gasoline. Improvements, such as increased fuel efficiency and fuel-switching to biodiesel or use of electric vehicles, may result in lower costs as well as reduced emissions. In the absence of public transportation and widespread ridesharing to reduce vehicle miles traveled, a focus on switching from gasoline to electric passenger vehicles is a high priority for rural towns, including Moretown.

As of 2023, 55 electric vehicles were registered in Moretown. This included 38 battery electric vehicles and 17 plug-in hybrid vehicles ¹⁴. Exhibit 8.2 below shows the Moretown targets for 2035 and 2050 for transportation fuel switching. In addition to reducing tailpipe emissions and operating costs, electric vehicles will be able to utilize increasing amounts of renewable energy to meet residents' transportation needs.

Exhibit 8.2: Moretown Passenger Car Electric and Plug-in Hybrid Vehicle Targets for # of vehicles registered (Source: CVRPC, 2025)

	2035	2050
Battery Electric Vehicles	353	831
Plug-in Hybrid Vehicles	5	1
Total	358	832

8.2.2 Residential Thermal Energy

Vermont has long, cold winters and one of the oldest housing stocks in the country. This combination makes residential heating one of the highest energy uses and costs for most homeowners. Weatherizing homes to reduce heating loss and transitioning from fossil fuel-based heating to cleaner, more efficient sources, such as heat pumps, is a critical strategy of the CEP. Exhibit 8.3 provides data on the number of homes, square footage, and energy consumed by fuel source for homes in Moretown.

Exhibit 8.3: Current Residential Space Heating Energy Use in Moretown (Source: Moretown Energy Plan)

Fuel Source	Number of Households (ACS 2011-2015)	Percent of Households	Square Footage Heated	BTU of Energy Consumed (in Billions)
Natural Gas	4	0.5%	8,032	0.48
Propane	275	37.8%	442,806	26.57
Electricity	39	5.4%	70,404	4.22
Fuel Oil	207	28.4%	351,074	21.06
Coal	3	0.4%	6,024	0.36
Wood	195	26.8%	370,472	22.23
Other (Includes Solar)	5	0.7%	10,040	0.60
Total	728	100%	1,258,900	75.53

¹⁴ 2023 data from EAN's Vermont Energy Dashboard for Moretown: https://eanvt.org/vermont-energy-dashboard/

A properly weatherized home can save energy, reduce GHG emissions, and cost less to heat and cool. Better insulated homes also improve health and comfort, especially during extreme cold weather and heat waves. Increasing the number of weatherized homes is a critical strategy of the CEP. As of 2023, approximately 14% of homes have been comprehensively weatherized, that is 100 out of a total of over 700¹⁵ homes. Weatherization goals for residential buildings in Moretown are listed in Exhibit 8.4. It is worth noting that a number of homes use more than one type of fuel for heating.

Exhibit 8.4: Residential Weatherization Targets (Source: CVRPC, 2025)

	2035	2050
Number of Moretown households to be weatherized	446	722

Heat pump technology offers homeowners and businesses a cleaner, more efficient option for heating and cooling compared to traditional fossil fuel-based heating and air conditioning. Heat pumps can be 2.5 to 4 times more efficient than a typical fossil fuel powered boiler or furnace¹⁶. Since heat pumps can save significant energy and operating costs, while reducing GHG emissions, they are a critical strategy of the CEP. As of 2023, 187 heat pumps have been installed in Moretown homes for space heating and cooling.¹⁷ Exhibit 8.5 provides residential heat pump fuel-switching targets for Moretown.

Exhibit 8.5: Residential Fuel Switching Targets (Source: CVRPC, 2025)

	2035	2050
New Heat Pump units installed	767	1,130

8.2.3 Renewable Energy Generation

Moretown has a long history of renewable generation going back to the first electricity producing dam built on the Mad River in 1885. Hydro power continues to be the largest source of electrical generation in the town representing 4.4 megawatts (MW) or 52% of total generation. The methane digester at the former Moretown landfill represents the second largest source at 3.2 MW or 38% of generation. Solar power provides the remaining 10% of renewable generation at 0.86 MW. This relative percentage of solar generation is expected to significantly increase. Exhibit 8.6 shows the distribution of current renewable energy generation in Moretown.

¹⁵ EAN Vermont Energy Dashboard, 2023, https://eanvt.org/vermont-energy-dashboard/

¹⁶ 2024 EAN Annual Progress Report, p. 10: https://eanvt.org/wp-content/uploads/2025/01/EAN-APR-2024-updatedJan2025.pdf

¹⁷ EAN Vermont Energy Dashboard, 2023, https://eanvt.org/vermont-energy-dashboard/

Exhibit 8.6: Renewable Electricity Generation in Moretown (Source: Vermont Department of Public Service, Distributed Generation Inventory, April 2024)

Renewable Type	Megawatts (MW)	Megawatt Hours (MWh)
Solar	0.86	1080
Wind	0.00	0
Hydro	4.40	22,810
Other (methane digester)	3.2	18,900
Total Existing Generation	8.46	42,790

Exhibit 8.7 shows the potential in Moretown for additional renewable energy generation. Although the wind generation is noted as having the highest potential, the challenges of siting wind projects make rooftop and ground-mount solar generation more feasible in Moretown.

Exhibit 8.7: Renewable Generation Potential in Moretown (Source: Moretown Energy Plan)

Energy Type	MW	MWh
Rooftop Solar	0.96	1,200
Ground-mounted Solar	410.71	503,700
Wind	759.25	2,327,900
Hydro	0.00	0
Biomass and Methane	0.00	0
Other	0.00	0
Total Renewable Generation Potential	1,170.92	2,832,800

Meeting the CEP's goal of achieving 90% renewable energy by 2050 will require a dramatic expansion of distributed solar generation in Vermont. As of 2024, Moretown has 115 solar installations.

Exhibit 8.8 provides Moretown's incremental renewable energy generation targets for ground mount and rooftop solar.

Exhibit 8.8: Moretown's Total Incremental MW 2050 Target (Source: CVRPC, 2025)

Total Target	Ground Mount Solar (70%)	Rooftop Solar (30%)
2.9 MW	2.0 MW	0.9 MW

In view of these targets and potential, Moretown's ground-mount solar generation has a potential for far exceeding the target set by the state CEP. Moretown's 2050 goal – 2.9 MW – could be attained by building only 1% of the potential ground-mounted solar. With this in mind, Moretown should be able to avoid land use conflicts in achieving its renewable energy goals.

To achieve GHG reduction goals, the vital role of carbon sequestration should be factored into land use decisions, including those related to energy generation and siting. For example, the thousands of forested acres in the Northfield Mountains serve as a valuable carbon sink and have other ecological and wildlife benefits.

8.3 Mapping

The following maps identify resources related to solar, wind, hydroelectric, and woody biomass. These maps identify constraints that may limit the area of possible energy resource development within the Town. The following information will address the evaluation of current and future generation potential within Moretown.

For the purpose of this Plan, constraints are separated into two main categories: known and possible. Known constraints are those areas where development of a renewable energy resource is very limited and therefore is not likely to occur. Known constraints that have been identified by the State include:

- Vernal Pools, both confirmed and unconfirmed
- River Corridors as identified by the Vermont Department of Environmental Conservation
- Federal Emergency Management Agency Identified Floodways
- State-significant Natural Communities and Rare, Threatened, and Endangered Species
- Class 1 and Class 2 Wetlands, as identified in the Vermont State Wetlands Inventory or Advisory GIS Layers, or so identified after the adoption of this Plan
- Regionally or Locally Identified Critical Resources

Similarly, the State has identified a list of possible constraints to be considered. Possible constraints identify areas where additional analysis is needed to determine if development of renewable energy resources is appropriate. In some cases, conditions may be prohibitive, whereas in others they may be suitable for renewable energy development. The possible constraints include:

- Agricultural Soils
- Federal Emergency Management Agency Special Flood Hazard Areas
- Protected Lands, including both State fee lands and private conservation lands
- Act 250 Agricultural Soil Mitigation Areas
- Deer Wintering Areas
- Vermont ANR Conservation Design Highest Priority Forest Blocks
- Hydric Soils
- Regionally or Locally Identified Resources

In addition to the constraints listed above, the CVRPC's Regional Energy Committee has identified additional possible constraints which are important for this region. These should be studied further at the municipal level for siting renewable energy in Moretown. The regional possible constraints include:

- Slopes greater than 25%
- Municipally Owned Lands

8.4 Methodology

With all the known and possible state or regional constraints identified, this information was overlaid on the resource maps for solar and wind resources. Where known constraints existed, the energy resource areas were deleted. Where possible constraints existed, the energy resource areas were shaded. The resulting areas included lands where prime energy resources exist without any constraints and prime energy resource areas with possible constraints. The total area within these two categories determines the renewable energy resource that is available for potential development within Moretown.

As noted in Exhibit 8.7 above, approximately 412 megawatts of solar energy could be produced, well above the Town's CEP allocation of 2.9 megawatts by 2050. In Vermont it generally requires 8 acres to produce 1 MW of electricity. However, because of private land ownership and landowner priorities, the State of Vermont advises municipalities to plan for 1 MW requiring 60 acres. For Moretown, this translates to about 174 acres, or 0.7% of land area, needing to be available for possible solar development.

8.5 Transmission Infrastructure

In addition to identifying and calculating the possible generation of renewable energy based on resources and constraints, the mapping in this plan also incorporates the existing three-phase power infrastructure throughout the municipality. This is important to include because renewable energy generation needs three-phase power to provide electricity back to the grid. Without three-phase power, renewable energy generation would be limited and only serve uses in close proximity.

Similar to limits on the availability of three-phase power lines, there are potential limitations on existing transmission infrastructure and its ability to transmit electricity from the point of generation to users. As noted previously, the mapping includes the three-phase power network, and other information on current transmission infrastructure. This is another factor to consider when identifying where specific generation types should be located. Planning must ensure that transmission capacity exists within the grid or identify areas where upgrades may be needed before development of renewable energy generation can be sited. Based on the factors noted above, it may be appropriate for mapping to identify areas where significant energy loads are currently, or anticipated based on future land use.

8.6 Preferred & Unsuitable Siting Locations

The Town of Moretown recognizes the preferred locations that have been identified by the State of Vermont's Net Metering Rules. Additional preferred locations may be identified after an analysis of community needs. The State preferred locations include but are not limited to:

- Parking lots
- Gravel pits
- Brownfield sites
- Landfills
- Rooftop installations

Regarding areas unsuitable for renewable energy development, the Moretown Energy Committee has recommended the following additional constraints in Moretown:

- Parcels with no access or access only via a Class 4 Highway or Legal Trail should not be considered for renewable energy development
- Parcels along the Mad River Byway shall be reviewed for scenic impacts and should not be considered for renewable energy development
- The impacts to forests throughout Town, especially in priority forest blocks, shall be considered and minimized wherever possible

8.7 Local Mapping

To provide a more specific visual representation of renewable energy resources and constraints, maps have been produced by CVRPC which show:

- Solar Resource Areas
- Wind Resource Areas
- Hydroelectric Resource Areas
- Known Constraints
- Possible Constraints
- Woody Biomass Resource Area
- Existing Renewable Generation Sites
- Statewide Preferred Generation Sites

These maps should be used as a starting point to determine the areas in Moretown that would support renewable energy development. More detailed review and analysis should be conducted to determine specific boundaries for renewable energy resource areas and constraints. These maps can be found in Moretown's Energy Plan.

8.8 Goals, Objectives, and Strategies

Objective 8.1.1: Increase energy conservation and efficiency, while supporting the transition to renewable energy sources, and in concert with the Plan's ecological goals.			
	Provide education for homeowners regarding the benefits of weatherization measures		
	Promote Efficiency Vermont's weatherization services		
	Increase residents' awareness of efficiency programs and incentives		
Objec	tive 8.1.2: Promote renewable generation and storage on least constrained sites		
	Assess the feasibility of using Town land and/or buildings for the siting of solar infrastructure to provide electricity for municipal buildings and/or Moretown Elementary School		
	provide electricity for municipal bundings and/or inforetown elementary school		
	Participate in the Section 248 permitting process for projects in or affecting Moretown and seek to ensure that any decisions are compatible with the goals of this Plan and will protect the overall health of Moretown's environment, economy, and community		
_	Participate in the Section 248 permitting process for projects in or affecting Moretown and seek to ensure that any decisions are compatible with the goals of this Plan and will protect the overall		
-	Participate in the Section 248 permitting process for projects in or affecting Moretown and seek to ensure that any decisions are compatible with the goals of this Plan and will protect the overall health of Moretown's environment, economy, and community Etive 8.2.4: Pursue planning and design strategies that focus on using land efficiently to		

Objecti	ve 8.2.5: Promote carbon sequestration
	Assist residents and businesses in accessing education and resources on opportunities for carbon sequestration
Objecti	ve 8.2.6: Promote community resilience and adaptation
	Leverage tools and programs that promote infrastructure resilience, including the Municipal Vulnerability Indicators tool, Climate Toolkit, and Resilience Implementation Strategy
Goal 8.	2: Reduce transportation emissions
Objecti	ve 8.2.1: Increase the use of electric powered vehicles
	Pursue resources for installation of public EV charging in Moretown
	Consider electric options when purchasing Town vehicles and equipment
	Support the provision of alternative fuel and electric vehicle infrastructure throughout the region
Objecti	ve 8.2.2: Reduce the number of vehicle miles traveled
	Support access to public transit and ridesharing
	Encourage walkability and nonmotorized vehicle use
	Support and promote nonmotorized connectivity to neighboring towns
Goal 8.	3: Reduce emissions resulting from use of buildings
Objecti	ve 8.3.1: Reduce reliance on fossil fuels for heating and cooling
	Encourage the generation of energy from renewable sources for on-site use
	Assist Moretown residents and businesses in accessing education and resources on weatherization, renewable generation, and clean heat options
Objecti	ve 8.3.2: Reduce energy use in municipal facilities
	Improve the energy efficiency of municipal buildings
	Replace heating and cooling systems in municipal buildings with cleaner, more efficient technologies

9. Historic and Cultural Resources

We have a wealth of community resources to build a sustainable future for Moretown.

9.1 Farms and Farmland

As of 2025 approximately 128 parcels in Moretown were enrolled in Vermont's Use Value Appraisal (UVA) program; which includes both agricultural and forestry lands.

Respondents to the 2013 survey ranked supporting local farm and forestry enterprises as the most important goal for the town; 75% of respondents stated it was a high priority. Maintaining rural character and minimizing the loss of productive farm and forest land ranked second and third, respectively – each with 70% of respondents stating those goals were a high priority. These sentiments were echoed in the 2024 Community Survey, where Moretown's rural area and lifestyle (along with its location) were noted as the top Town asset. Additionally, respondents indicated a preference for support of agriculture and related businesses as well as a desire to consume more locally sourced food.

Historically, much more land in Moretown was farmed than is farmed today. The remaining agricultural land is generally some of the highest quality and most productive land in town. The Natural Resource Conservation Survey (NRCS) has mapped and classified soils based on their productivity for various agricultural uses. Primary agricultural soils include prime soils and soils of statewide significance:

Prime agricultural soils have the highest potential productivity because of their chemical and physical properties, and have the fewest limitations for farming. They have the greatest potential for sustained agriculture and little or no limitation for a wide variety of crops adapted to Vermont's climate.

Soils of statewide significance also have good potential for growing crops, however they have one or more limitations. These include restrictions on the choice of crops or requirements for more intense management.

The NRCS has identified approximately 530 acres of prime agricultural soils and 2,230 acres of statewide agricultural soils in Moretown (see Agricultural Soils Map #7). However, only a portion of these soils are currently being farmed or available for agricultural use. Many of the soil qualities that make land good for farming, also make it good for development. For example, Moretown Village is located on prime agricultural soils, as is the cluster of development near the Route 2 and Route 100 intersection. As a result, less than 60% of Moretown's prime and statewide agricultural soils, approximately 1,650 acres, remain available for farming.

Under Act 250, applicants for development on agricultural soils may mitigate their impact by making cash payments to a state fund used to conserve farmland elsewhere. The off-site mitigation payment must be sufficient to conserve at least twice the number of acres of agricultural soils that are comparable to those lost to development.

In recent years, the localvore movement has begun to influence agriculture in Vermont. This movement supports a return to small, diversified farms which produce basic and specialty foods, and has been particularly active in the Mad River Valley. This change has come at a time when small- and medium-sized dairy farms have been struggling economically and has provided new opportunities for agriculture in Vermont. There are no longer active dairy farms in Moretown, however within the past two decades several diversified farms have begun operating. Over half the respondents to the 2024 Community Survey indicated regular consumption of locally sourced food, and more than 25% would prefer to include a larger portion of locally sourced food in their diet.

9.2 Forestry

A booming 19th century lumber industry in Vermont led to the widespread clearing of forests along major river valleys such as those of the Winooski and Mad Rivers, which provided natural transportation routes for logging. The valleys and hills were largely denuded of trees, and forest clearing extended far up the mountain slopes. Since then, most of the formerly cleared hillsides and mountain slopes have reverted to forest. The 20th century brought a reduction in large-scale timber harvesting and the abandonment of many of the more marginal hill farms and less productive valley farms. The regrown forest has the same tree species that were found in the pre-settlement forest, but the percentages have changed, partially as a result of the past timber harvesting practices. Estimates of the overall percentages of beech and red spruce have declined sharply, while sugar maple and red maple have increased in abundance.

While there are individual landowners who own relatively large blocks of undeveloped, largely forested land in Moretown, much of the Town's forestland remains in smaller parcels and woodlots associated with rural residences. The 2024 Grand List includes 978 parcels with a total of 24,991 acres. There are 119 parcels with 50 acres or more, which accounts for 19,031 acres (76% of total town acreage). Eight parcels over 300 acres account for approximately 7,500 acres (30% of the total town acreage).

9.3 Public and Conserved Lands

Unlike many area towns, Moretown contains no state or federal forestland. There are two public forests in Moretown, the 175-acre Town Forest behind the Elementary School and part of the forest behind Harwood School High School. A number of private landowners have sold or donated their development rights on several parcels of land in Moretown, ensuring that the land will remain undeveloped farm or forest land in the future. (Conserved lands map #8)

9.4 Mineral Extraction

Historically, sand, gravel, talc, and marble were commercially mined in Moretown. Some landowners may also remove small amounts of sand or gravel from existing pits, however there is currently no large-scale mineral extraction occurring in town.

Sand and gravel are essential for maintaining and repairing roads, and other construction. The costs of hauling these materials from out of the area are high and increasing. Sand and gravel deposits are primarily located in the river valleys, where they were deposited under glacial lakes and streams thousands of years ago. The river valleys also have soils and slopes more conducive to development than the upland areas of town. As a result, a large percentage of the Town's sand and gravel resources are now beneath or near homes – thus greatly limiting access to those resources in the foreseeable future. Major earth extraction and minor quarrying operations are currently allowed as a conditional use in all zoning districts except for the Village District. Town regulations include limits on hours of operation, minimum setbacks and buffers, and escrow requirements to cover the cost of site reclamation.

9.5 Groundwater

Moretown rarely faces a scarcity of water – making groundwater a resource often take for granted. Without statewide groundwater mapping, it is a resource that is not well understood. In the face of rapid expansion of the bottled water industry in the Northeast, Vermont began regulating large groundwater withdrawals in 2008 and authorized municipalities to manage their groundwater resources. Under the Vermont Groundwater Act, any proposed project involving large groundwater withdrawals must be

consistent with the town plan to receive a state permit. Moretown's zoning regulations currently do not define groundwater extraction as a specific use, however light industry and cottage industry are allowed in several districts and some of these businesses could involve groundwater extraction.

9.6 Archeological and Historic Resources

9.6.1 Archaeological Resources

Archeological sites provide an opportunity to learn more about earlier people who lived in Moretown – whether in the historic or prehistoric past. Remnants of the historic past, including abandoned farms and water-powered mills, are visible in town. While pre-European contact historic settlement is less evident to the untrained eye, the likelihood of finding Native American artifacts in Moretown is relatively high.

According to the Vermont Division for Historic Preservation, prehistoric archeological sites are more likely to be located on level, well-drained soils near rivers and streams, on high terraces that command a view of the landscape below, and adjacent to major river confluences. Native Americans used rock ledges as temporary shelters and sought out mineral resources, such as talc, for raw materials. Most of those landscape elements are present in Moretown and we can assume that locations with one or more of those characteristics have potential to contain prehistoric archeological resources.

There are two documented archeological sites in Moretown where projectile points were found - near the Route 100/100B intersection and off of South Hill Road. A Native American settlement site has also been identified on the Middlesex side of the Winooski River near the confluence of the Mad River.

9.6.2 Historic Resources

The Vermont Division for Historic Preservation completed a Historic Site and Structure Survey in Moretown in 1983. Nearly 100 structures in Moretown were listed on the Vermont State Register of Historic Places, making those properties eligible for listing on the National Register of Historic Places.

Approximately 30 of the listed historic structures are located in Moretown village, which is recognized as a Historic District in the State Register of Historic Places and therefore eligible for listing on the National Register of Historic Places as a Historic District. Many residents value the historic, small-town character of Moretown village and 75% of respondents to the 2013 survey supported protecting the historic character of the Village.

There is one federally recognized Historic District in Moretown, the Mad River Valley Rural Historic District. This Historic District encompasses approximately 2,000 acres in Moretown and Waitsfield with a collection of farms in a well-defined geographic area that reflects the evolution of Vermont agriculture. It recognizes the historic and cultural significance of the working landscape bordering the Mad River, and shows the diversity of agricultural traditions, periods of economic prosperity, and the importance of the natural environment in shaping the built environment. The following Moretown properties are part of the Historic District:

- Bis-May Farm
- Freeman-Murphy House
- Belding House
- David Belding, Sr. Farm
- David Belding, Jr. Farm
- G. Bulkeley Farm

- Goodyear Farm
- Moretown Village Cemetery

The State's survey of historic structures in Moretown has not been updated in more than 20 years. Some structures identified in the survey have been lost and others have become eligible for listing. Sites and structures that are eligible for listing on the State Register of Historic Places are typically more than 50 years old and:

- Are associated with historically significant events or the lives of historically significant people;
- Represent the distinctive characteristics of a type, period, method of construction, or designer or builder; or have archeological or historical information

The Mad River Valley Planning District (MRVPD) is a Certified Local Government under the National Historic Preservation Act, which makes MRVPD eligible for funding of historic preservation efforts. MRVPD and the Vermont Land Trust established the Mad River Rural Resource Commission in 1987 to inventory and promote conservation of the Valley's rural resources. As a result, there has been more research and documentation of historic resources in the Valley, including a portion of Moretown even though the Town is not a member of MRVPD.

The federally recognized Historic District is one result of the MRVPD efforts, as is a 2002 survey of historic barns in the valley. The barn survey identified approximately 40 barns in Moretown built before 1950 eligible for listing on the National Register. Unfortunately, the high cost of upkeep and maintenance of large barns has resulted in several falling into disrepair after they were no longer used for agriculture.

9.6.3 Regulations for Resource Protection

Moretown's current zoning regulations refer to historic character, historic resources, and archaeological sites, but do not include standards to protect these resources. The regulations have provisions for the "adaptive re-use" of historic barns, allowing those buildings to be used for a variety of non-agricultural purposes. These provisions were adopted in response to the findings of the survey of historic barns.

State and federal regulations related to archaeological and historic resources apply to development activities which require state or federal permits and to projects which receive state or federal funding. The Vermont Division of Historic Preservation reviews state or federally funded or permitted projects to evaluate their potential impact to historic buildings and structures, historic districts, historic landscapes and context, and known or potential archeological resources. This includes development activities that require an Act 250 permit or a Certificate of Public Good through Section 248 approval.

9.6.4 Incentives and Benefits for Resource Protection

The owners of income-producing properties listed on, or eligible for listing on, the National Register of Historic Places may be eligible for federal tax credits for historic building restoration. Under the state's Designated Village Center program, owners of income-producing historic properties in the Moretown Village Center may receive state tax credits for building improvements. The tax credits are intended to support general rehabilitation, code compliance, and exterior improvements that follow historic preservation best practices.

9.7 Rural and Scenic Character

Moretown is fortunate to retain much of its rural character. This aspect of the Town is highly valued by residents, as demonstrated in the responses to the 2024 survey. Survey respondents ranked maintaining rural character as the second highest priority for the town. Elements of rural character include:

<u>Working Landscape</u>. Most residents want the landscape to remain largely as it is, yet since the settlement of Moretown 250 years ago the landscape has never been static. Looking at the forested slopes of Moretown, much of the landscape appears to be wilderness shaped by natural forces. However, in reality, generations of Moretown residents have modified the landscape as they worked to make a living from the land by farming, forestry, energy production, or resource extraction. As their activities changed over time, so too did the landscape. This suggests that it is possible to accommodate future change and still retain rural character as long as there is sustainable use of the land.

<u>Clean, Healthy Environment</u>. A clean and healthy natural environment, including clean air, clean water, healthy and diverse habitats and wildlife populations, is an essential component of our rural character.

<u>Open Space</u>. A rural place has a relatively low population density and large blocks of open space, both working lands and natural areas. A close examination of the rural landscape shows that the historic settlement pattern was one of small groups of buildings separated by fields or forests. Large expanses of open space provide opportunities for outdoor recreation and enjoyment of nature that are hallmarks of a rural lifestyle.

Respect for Tradition and a Sense of Community. While rural character may be founded on the natural environment, it is enhanced by the built environment and social institutions that have created community for generations of Moretown residents. The relatively small population makes it more possible and likely that neighbors will know one another. Rural residents have a strong sense of independence and individualism, frequently accompanied by strong community ties and a sense of shared responsibility.

Specifically, the following landscape features define Moretown and contribute to its rural character:

- Open farmland and meadows, particularly when located in the foreground of an expansive view.
- Forested knolls, steep mountainsides and ridgelines, which provide the unbroken background for most distant views.
- Riparian areas along the Winooski River, Mad River and their tributaries.
- Scenic and gravel roads, especially those designed to discourage high-speed travel and to be pleasant places for walking, bicycling and other recreational activities.
- Historic settlement patterns, including traditional settlements and small clusters of buildings arranged around a common focal point.
- Individual buildings that serve as a visual and cultural touchstone such as large barns, silos, churches and civic buildings.
- Public land, protected natural areas, conserved working lands, and recreational areas

Two areas of critical importance to the town's rural character and scenic landscape are the Route 100B/Mad River corridor and the high elevation areas of the Northfield Range and Mount Cobb. These areas are discussed in greater detail below.

9.7.1 Route 100B/Mad River Corridor

The drive along the length of Route 100B is among the most beautiful in Vermont, which is why the corridor received federal designation as a Scenic Byway in 2007. The meandering river, broad floodplains, rolling hills and deep gorges combine to create a stunning landscape. The areas visible from the highway primarily include the valley and its enclosing hillsides. The peak of Bald Mountain and the Northfield Range ridgeline are also visible from many vantage points along the road. The Mad River Valley Corridor Management Plan includes a detailed assessment of the highway's scenic qualities and features. It finds a consistent level of scenic quality along the Corridor because of the:

- Presence of the Mad River with many engaging visual, physical and recreational assets.
- Historic homes, barns, farmsteads and villages which are aesthetically pleasing and fast disappearing elsewhere in the state and nation.
- Overall, intact and quintessential Vermont landscape quality present throughout the valley.

The Management Plan also notes that a substantial portion of the corridor is highly sensitive to visual impact and change due to its open landscape qualities and topography. It states that highly visible, out-of-character, context-insensitive development could have a significant impact on the corridor's scenic character and aesthetic qualities.

Prior to the work completed for the Scenic Byway designation in 1999-2000, the Moretown Planning Commission analyzed the Route 100B corridor and concluded that most of its defining features are within 300 feet east and west of the 100-year floodplain of the Mad River. Regulation of the flood hazard area provides some scenic view protection by limiting development opportunities in close proximity to the river. However, development on the hillsides above the protected flood areas has potential to affect the scenic character of the corridor.

9.7.2 High Elevation Areas

The Planning Commission also analyzed Moretown's high elevation areas in 1999-2000 and considered:

- The location of steep slopes
- The location of soils classified as poorly suited for septic systems
- The location of existing homes
- The location of maintained Town Highways and private driveways
- The location of large tracts of productive forest land
- The location, configuration and size of existing parcels
- Visibility from distant vantage points

Based upon these features, the Planning Commission concluded that the land above an elevation of 1000 feet in the Northfield Range and 1100 feet on Mount Cobb was largely undeveloped, remained in large parcels and was managed timberland. Above those elevations, Town Highways and services were also very limited. The land generally has steep slopes and poor soils for septic systems. Above those elevations, the land is highly visible. The Northfield Range ridgeline is a highly visible feature of the landscape and can be seen from many areas of town. The ridgeline is especially visible from the slopes west of the Mad River. Mount Cobb is visible primarily from the western slopes of the Northfield Range. These high elevation areas are primarily located within the Preserve District.

9.7.3 Scenic Roads

One's perception of a place is influenced by what can be seen when traveling by road. The perception of Moretown as a rural, scenic community is also based primarily on the "view from the road." Because of this, there is particular concern about how development will change the landscape as viewed from the road. The Federal Highway Administration designated Route 100B as a Scenic Byway in 2007.

In many instances, roads themselves contribute to the rural and scenic quality of the landscape. Features such as tree canopies, stone walls and narrow, unpaved travel lanes are elements of the Town's rural character. These features also discourage high-speed travel, which makes it possible for people to use the roads for recreation with relative safety and to see and enjoy the surrounding landscape.

9.8 Recreation Resources

9.8.1 Public Lands

Moretown's primary recreation resources are the recreation fields and Town Forest behind the Moretown Elementary School. The fields and forest offer a variety of activities including community events, picnics, team and individual sports, and trails. The recreational activities include bicycling, baseball, basketball, soccer, tennis, hiking, skiing, pickleball, and skateboarding. Moretown maintains a Recreation Fund, primarily used to maintain the Town property, although the fund has not had tax dollars allocated in recent years. Money generated through donations and private fundraising supports recreation programs and facilities.

High school athletic teams, including cross-country and Nordic skiing teams, use the Harwood School Forest trails for training and competitive meets. There is a disc golf course through portions of the Forest. Forest trails are open to the public for hiking, walking, running, mountain biking, skiing, snowshoeing, horseback riding and other passive recreational activities. A major VAST trail also travels through the property.

9.8.2 Rivers

The Mad River and, to a lesser degree, the Winooski River and smaller streams offer multiple recreation opportunities in Moretown including fishing, canoeing, kayaking, and swimming. The state has recognized the Mad River as recreational resource of statewide significance and it has been described as one of the state's best swimming resources. In the spring, the Mad River's white water makes it a popular destination for boaters. There is formal public access to the Mad River at the town-maintained Ward Memorial Access Area and at the hydro station. Several segments of Route 100B and Town Highways are located immediately adjacent to the river, which creates informal opportunities to access the river directly from the public right-of-way.

There are many swimming holes on the Mad River, however several factors have reduced the opportunities for swimming in the river. Popular sites for swimming include the Ward Access and in the Moretown gorge at the south end of the Village. Other swimming holes are located on private land, and in recent decades, private landowners have become less willing to allow public access from their property. In addition, elevated *E. coli* levels in the Mad River and sedimentation may at times limit opportunities for swimming in the river.

9.8.3 Trails

9.8.4 Town Highways and Legal Trails

Moretown has approximately 14 miles of Class 4 Town Highways and 15 miles of Legal Trails. Together these roads, trails and right-of-ways comprise more than 175 acres of land owned or controlled by the town and available for public use. A number of these roads and trails are particularly valuable recreation resources because they are interconnected loops or connect to maintained town highways.

Many of the town's Class 4 Highways and Legal Trails are popular with motorized recreationists. In recent years, a number of these Highways and Trails have been seriously damaged by heavy use when the surface was wet and muddy. This has made segments of these routes difficult or impossible for bicyclists or other non-motorized recreationists to travel.

9.8.5 Nature and Recreational Trails

There are public nature and recreational trails in the Town Forest behind the Moretown Elementary School and in the Harwood School Forest. The forest management plans recommend building a trail between the two properties. This would connect the schools to Moretown Village. The plans also recommend extending trails from the Town Forest to South Hill Road, creating a contiguous block of protected forest available for public recreational use.

The Mad River Path (MRP) has been working since 1987 to build a continuous path from Warren to Moretown along the Mad River which would connect community centers and schools. To date, nine segments of the path exist, although none are located in Moretown. Those path sections are available for walking, running, bicycling, cross-country skiing and snowshoeing. MRP seeks landowners who are willing to donate, or in some cases sell, an easement across their property for the path. More information about the Mad River Path is available online at www.madriverpath.com.

A Mad River Valley Active Transportation Corridor is in planning stages, and will run largely adjacent to Route 100 and 100B, with a southern terminus in Warren and a northern terminus at Camp Mead in Middlesex. In April 2024, the CVRPC, MRP and MRVPD jointly received an \$84,000 grant to conduct a scoping study for this project. It is anticipated that the first segment will be constructed between Warren Village and Riverside Park, once funding is finalized.

A Vermont Association of Snow Travelers (VAST) snowmobile trail passes through the southwestern corner of Moretown generally paralleling Route 100 along the Moretown-Duxbury town line. VAST is a statewide association of local snowmobiling clubs, which maintain a network of winter trails located primarily on private land. The trails are for use by members or riders who have purchased a pass. More information about the VAST trail system in the region is available online at www.vtvast.org.

Moretown also contains a segment of the Cross Vermont Trail, a multi-use, four-season path that travels 90 miles across Vermont from the Connecticut River to Lake Champlain through the Wells and Winooski River valleys. It follows the Winooski River through Moretown on River Road, Route 100B, Hooper Lane, Lovers Lane and Route 2. There is a parking area and river access for trail users off Route 100B near the River Road intersection, and a riverside park and picnic area on Route 2 west of the landfill site. The trail is a combination of on-road segments (such as in Moretown), community paths (like the Central Vermont Bike Path in Montpelier), and a long rail-trail segment (the old Montpelier-Wells River Railroad). Vermont included the Cross Vermont Trail in the Vermont Trails System in 1996 and the federal government

designated it as a National Recreation Trail in 2003. More information about the Cross Vermont Trail is available online at www.crossvermont.org.

9.8.6 Public Access and Landowner Liability

Most of the hunting, fishing, trail use, swimming, and other recreation activities in Moretown are on private land and would not be possible without the cooperation of landowners. Thus, it is important that people respect the land, take only pictures, and leave only footprints.

Recognizing that legal liability concerns cause some landowners to post their land and discontinue public access, Vermont has a Landowner Liability Law (12 VSA §§ 5791-5795), which protects landowners who allow people to recreate on their property free of charge. The law encourages landowners to open their land for recreational use and provides landowners with substantial legal protection from personal injury or property damage claims.

9.8.7 Tourism and Economic Development

As a designated Scenic Byway, Route 100B attracts visitors who want to enjoy the scenery and recreation opportunities, including many bicyclists and canoeing/kayaking enthusiasts. While the economy of the Mad River Valley is built around tourism, Moretown has only occasionally capitalized on the opportunities created by its scenic and recreation resources. There is a popular bicycle shop in North Moretown that serves riders of roads and trails in the area.

9.9 Goals, Objectives, and Strategies

Goal 9.	1: Sustain a high quality of life for residents and visitors.
_	ve 9.1.1: Pursue land use planning and regulatory approaches that will protect and e rural character and scenic resources
	Gather input to determine where in Town scenic views are noted and appreciated
	Implement strategies to protect high visibility and priority scenic views by maintaining open land or siting development to avoid impact to those views
Objecti	ve 9.1.2: Support and expand educational, cultural, arts, and music events.
	Support the annual Morefest celebration
	Support the educational, cultural, and artistic programming of the Moretown Community Library
	Support the Moretown Historical Society in preserving and sharing the history of Moretown
	Support individual artists who make Moretown their home and add to its vibrancy
Goal 9.3	2: Preserve Moretown's historic structures.
_	ve 9.2.1: Prevent the degradation and loss of historic structures which are a link to wn's past and contribute to its heritage and scenic beauty
	Encourage preventative maintenance, preservation, and use of historic structures
	Recognize the role of historic structures and settlement patterns in creating the community's character and preserving its heritage

	Encourage the preservation of historical documents, photographs, and memorabilia by the
	Moretown Historical Society
	INITIAL SOCIETY
Goal 9.	3: Provide recreational opportunities for all ages in all seasons.
Object	ive 9.3.1: Preserve and enhance access to land- and water-based recreation.
	Coordinate with the Recreation Committee in developing, maintaining, and promoting Moretown's recreational assets
	Support the work of organizations such as Friends of the Mad River and Friends of the Winooski.
	Support access to trail networks
	Educate landowners regarding local efforts to align environmental protection and recreational
	access
Goal 9.	4: Protect scenic views.
Object	ive
	Consider developing regulations to provide for compatibility with Dark Sky standards
	Consider regulations to avoid development impacting views of hillsides and ridgelines

10. Flood Resilience and Hazard Mitigation

10.1 Floodplains and River Corridors

10.1.1 Flooding

Major floods occur periodically in Moretown on the Mad and Winooski rivers. There was major flooding of one or both rivers in 1927, 1938, 1976, 1998, 2011, 2023, and 2024.

The worst recorded flood in Moretown occurred in 1927. The second worst flood, particularly in the Village, was due to Tropical Storm (TS) Irene in 2011. Historic reports and photographs indicate the 1927 flood levels were two to three feet higher than they were during TS Irene, during which up to seven feet of flooding occurred in the Village. TS Irene caused \$1.8 million in damage to public infrastructure and flooded 52 homes in Moretown. Most recently, stormwater flooding in 2023 and 2024 caused significant damage to most of the Town Highways. Although there was flooding in the Village in July and December, 2023 and in July, 2024, the damage, fortunately, was not near the scale of TS Irene.

The current estimate to repair the damage to Town Highways from the July 2023 flood is \$4.7 million. Fortunately, 90% of the cost should be paid by the Federal Emergency Management Agency (FEMA) and 8% by the State. The anticipated cost for the Town is approximately \$95,000. The estimate for Town Highway repairs associated with the July 2024 flood is \$4.3 million. Many of these repairs have not yet been completed. As of Spring 2025, the Town's cost share is anticipated to be about \$640,000, which equates to 15% of the cost, with the remainder potentially to be paid by FEMA and the State. The Town is advocating with state and federal elected officials to reduce its cost share. These two recent floods highlight the importance of flood mitigation and upgrading town infrastructure to reduce future flood-related damages. The Town is pursuing public assistance and hazard mitigation funding to replace four undersized road crossings, two on Moretown Mountain Road, one on Jones Brook Road, and the fourth on River Road. The estimated cost for these projects is more than \$4 million.

In addition, the Moretown Elementary School was seriously affected by the 2023 and 2024 flooding, and several homes in North Moretown were damaged in the July 2024 flooding. One of those homes is currently in the process of being elevated.

Minor flooding is a regular occurrence in Moretown, particularly in areas adjacent to the Winooski and Mad Rivers as a result of ice jams or spring snowmelt. Smaller flash floods caused by brief, but intense, storms are also common and often result in road washouts. Flooding can be exacerbated by blocked or undersized culverts. There are an estimated 700 culverts and bridges in Moretown.

10.1.2 Floodplains

Floodplains are the lands adjacent to bodies of water that flood during storms and other periods of high water. They are vital to the health of rivers and brooks, and to the safety of the community. Floodplains serve as a "safety-valve" by retaining runoff from heavy rains and spring thaw, and by reducing the flow velocity of rivers and brooks. They also improve water quality by filtering stormwater before it reaches streams and rivers. In Central Vermont the floodplains are commonly flat with gravelly, nutrient-rich soils and thus are also high-quality farmland.

Floodplains are poorly suited for development because of the hazards associated with periodic flooding. Development within floodplains often has a harmful effect on channel capacity and increases the flood

hazard. There is also a risk of groundwater contamination from septic systems associated with high water tables typically found in floodplains.

FEMA has mapped flood hazard zones along major water bodies based on the likelihood of flooding. If land has a 1% chance of flooding in any given year, it is described as being within the 100-year floodplain. The area that has a 0.2% chance of flooding is referred to as the 500-year floodplain. FEMA has further classified a portion of the 100-year floodplain as a floodway. The floodway is the area required to carry the 100-year flood waters without causing an increase of more than one foot in flood elevation downstream.

The current FEMA-designated floodways and floodplains in Moretown are shown on the Water Resources Map. FEMA last updated the floodplain maps for Washington County in 2013. These maps are called Flood Insurance Rate Maps (FIRMs) and must be referred to for any regulatory purpose. The FIRMs are available at the Town Office and online on the Town website, the Vermont Natural Resource Atlas, and the FEMA Map Service Center. The U.S. Geological Survey has recently submitted hydrologic and hydraulic studies, which include updated FIRMs for Moretown. The revised maps may expand the area covered by both the 100-year and 500-year flood zones and revise floodway boundaries along both the Mad and Winooski Rivers. It is anticipated that these updates will be made available for public comment as early as 2026.

Because they will be based on analyses of historic floods, the forthcoming updates to FEMA floodplain and floodway maps does not necessarily account for increased flooding due to climate change. The consensus among climate scientists is that total precipitation and the number of extreme precipitation events in New England will continue to increase. Thus, because of climate change, both the frequency and the extent of major flooding in Moretown is likely to be greater than shown on the new FEMA maps.

Approximately 430 properties, or 1,055 acres, in Moretown are within the 100-year floodplain. 505 of these 1,055 acres are within the designated floodway. Another 170 acres in Moretown are within the 500-year floodplain.

A number of the Town's civic buildings are located within the 100-year flood zone including the Catholic Church and Moretown Fire Station. The Elementary School, Post Office, Town Hall, Methodist Church, salt storage building, and part of the Town Garage are in the currently designated 500-year flood zone. Whether to rebuild or reinvest in public buildings within the floodplain is an issue where municipal goals and policies may conflict. In the 2024 community survey, residents supported preserving the character of the Village and developing Village infrastructure, and also clearly expressed support for ensuring that new development will not be susceptible to, nor exacerbate, flooding. Existing buildings may be retrofitted to reduce the likelihood of flood damage and reduce the time and cost for cleanup after a flood. These floodproofing retrofits may be considered for Village residences and other structures.

10.1.3 Floodplain Management

Moretown adopted floodplain regulations as part of the Zoning Regulations in 1978 and has updated them several times since. These regulations must meet federal requirements for property owners to participate in the National Flood Insurance Program, which is required for obtaining a mortgage for property in the floodplain. The regulations are intended to protect life and property and allow the water to follow the course needed during flood events. Moretown's current floodplain regulations apply to land within the 100-year flood zones depicted on the FIRMs. The regulations set building design

standards to minimize property damage in the 100-year floodplain and prohibit new buildings or fill in floodways.

Standard property and casualty insurance does not cover damages from flood water. Instead, floodwater damage is covered by an insurance policy written through the FEMA National Flood Insurance Program (NFIP). Federal law requires mortgage lenders to have flood insurance on structures within the 100-year floodplain.

With the passage of Vermont Act 121 (Flood Safety Act) in 2024, floodplain management will likely change in Moretown within the next 3 to 8 years. Act 121 requires the Vermont Agency of Natural Resources (ANR) to establish a study committee to provide recommendations on whether and how to shift NFIP administration from municipalities to the ANR. These recommendations were due to the legislature in 2025, but have not yet been provided. If NFIP administration is not shifted to ANR, municipalities will likely have to adopt State minimum flood hazard standards. These standards will likely be more stringent than the current Town floodplain regulations. The Town will update its regulations accordingly when appropriate.

10.1.4 River Corridors

The Federal flood maps and regulations are designed primarily to address inundation flooding, however some properties in Moretown are at greater risk of damage from erosion than from inundation. Erosion which occurs along rivers and brooks is referred to as fluvial erosion. Buildings and infrastructure within a river corridor, but outside of the floodplain, may be vulnerable to erosion. Such development may also exacerbate erosion and flooding problems downstream.

Since the last Town Plan was adopted, river corridor mapping has been completed for Moretown. Until Act 121 was adopted, towns had an option to adopt state river corridor standards; Moretown has yet to do so. However, with passage of Act 121, ANR will eventually regulate river corridors throughout the state, including in Moretown. The rules will address development in river corridors. The Act stipulates that a statewide permit will be required to commence or conduct development in a river corridor by January 1, 2028.

10.1.5 Flood and Erosion Hazard Mitigation

Moretown has taken many actions to address flood mitigation since the 2023 and 2024 flooding – many of these efforts were initiated before the storms, in recognition of the Town's vulnerability to flooding from its experience with Tropical Storm Irene. Moretown revised its Local Hazard Mitigation Plan (LHMP) in 2020 and is updating it in 2025; the Moretown LHMP is adopted by reference into this Town Plan. Its purpose is to identify the hazards the Town potentially faces and outline strategies to reduce the risks those hazards pose to life, property, and town infrastructure. The 2023 and 2024 flooding reinforces the Town's vulnerability to flooding and severe storms, as identified in previous Plans.

The LHMP recommended actions to minimize impacts to future flooding and erosion hazards. In general, these actions include:

- administrative tasks, such as, updating applicable regulations as needed
- culvert, bridge, and road projects to make our infrastructure more flood resilient
- policy recommendations to support flood mitigation efforts, such as buyouts and federal Emergency Watershed Protection (EWP) projects

The specific recommended actions can be found in the LHMP. Section 10.2 below articulates overall goals, objectives and tasks to increase flood resiliency in Moretown.

Any upcoming significant flooding or erosion event will strain the Town's resources and capacity in response and recovery. In reality, this is true for many flood mitigation and resilience activities. Moretown will continue to pursue federal, state, and other resources to become more flood resilient and better prepared for the next flood. The Town will continue to work with elected and government officials as wells other groups, such as Central Vermont and Chittenden County Regional Planning Commissions, Friends of the Winooski, Montpelier Commission for Recovery and Resilience, Vermont River Conservancy, the Winooski Natural Resources Conservation District, and Community Resilience for the Waterbury Area (CReW), to improve flood resilience, whether through mitigation projects, policy, or education outreach.

10.2 Goals, Objectives, and Strategies

	l 10.1: Reduce impacts to existing and future development and highway infrastructure from re flooding and fluvial erosion.
Obje	ective 10.1.1: Minimize future development within floodplains and river corridors.
	Discourage new development in identified flood hazard areas and river corridor protection areas (if applicable when the requirements from ACT 121 go into effect)
	Continue to regulate and enforce applicable flood hazard and river corridor requirements so that new development does not exacerbate flooding or fluvial erosion,
	Update flood hazard maps, flood hazard regulations, including river corridor mapping and regulations (as necessary) to comply with applicable state and federal requirements
_	ective 10.1.2 Encourage Activities and Projects that restore access to the floodplain and gate flood and fluvial erosion hazards.
	Continue to coordinate and support efforts by state, regional, local, or long-term recovery groups, where appropriate and practical, in flood response and recovery, including buyouts of structures susceptible to flooding.
Goa	l 10.2: Continue Hazard Mitigation Planning and Implementation efforts.
Obje	ective 10.2.1: Maintain updated hazard-related mitigation plans.
	Complete updating local hazard mitigation plan in 2025 and update as needed, typically every five years
	Continue to update Local Emergency Management Plan annually, or as required by state statute
Obje	ective 10.2.2: Implement priority actions identified in the local hazard mitigation plan.
	Upsize culverts and bridges on Town Highways and support upsizing of culverts on private drives
	Continue to regularly inspect Town High infrastructure to evaluate bank stabilization, bridge repairs/upgrades, and other hazard mitigation needs as necessary
	Coordinate with long term recovery groups and government agencies to assist Moretown residents and businesses in disaster preparedness, response, and recovery
	Implement other actions, as appropriate and practical, outlined in the Local Hazard Mitigation and

Emergency Management Plans

11. Land Use

A great deal has changed since the Moretown Town Plan was last adopted in April 2016, well before the world even knew that the COVID pandemic was headed our way. Moretown's experience reflects the rest of the state: significant numbers of people have moved to small towns and remote work; the population has grown as people moved to Vermont – viewed as a tolerant environment which is potentially safe from the worst effects of climate change and pandemics; a substantial housing crisis has sent property values soaring and severely reduced the number of homes available for people seeking to move to Moretown. Legislation significantly reshaped the planning and land-use permitting landscape, with the passage of the HOME Act in 2023, Act 181 in 2024, S.127 in 2025, and subsequent housing laws.

Moretown's goals of expanding housing at all income levels to accommodate growth, welcoming new business sized to a rural community, and retaining its character, while also caring for forest blocks, habitat corridors, riparian buffers, other high-value natural areas, and increasing the town's resilience to climate change is an extremely tall order for a municipal land use plan. Yet Moretown is committed to achieving those objectives.

Mountains, valleys, fields, rivers, and brooks define Moretown's landscape and have shaped land use and settlement patterns throughout its history. Largely because of the terrain, Moretown did not develop with a single village center around which the rest of the community is oriented. Instead, the terrain and waterways divide Moretown into several distinct areas. Parts of Moretown developed outward from centers in neighboring municipalities; they remain more connected to, and identified with, those communities than with other parts of Moretown. The discussions below pertain to those geographic areas (Map #11 Land Use Planning)

Moretown is primarily a rural bedroom community. Its mountainous terrain is mostly forested, with only a few large areas of farmland remaining: in the Mad River Valley, Moretown Common, and along the Winooski River. There is a small, historic village center on Route 100B and a more recent growth area, with most of the Town's commercial development, in North Moretown. Development in the 21st century has primarily been the creation of approximately 65 new residential parcels.

Local land-use development and regulation is constrained by state laws and regulations and regional plans, goals and requirements. This chapter discusses current land use patterns and the limits on opportunities for development. It also describes anticipated future land use, including changes likely to result from recent legislation (Act 181 of 2024), the HOME Act (Act 47of 2023), regional planning priorities, and local land use visions, goals and regulations.

The discussion below is organized by land use planning areas which largely follow watershed boundaries. This organization recognizes that the natural landscape will continue to be the dominant factor guiding growth and development in Moretown. It is important to note that the boundaries of these planning areas do not coincide with current zoning boundaries. Currently, all of the planning areas have land with agricultural/residential zoning and, with the exception of the Moretown Village Planning Area, have land with preserve zoning. In addition to agricultural/residential and preserve zoning, the North Moretown Planning Area also has commercial zoning along Route 2.

Maintaining the rural character of Moretown is a high priority and one of the principal reasons that many residents moved to Moretown. In a 2024 community survey, 75% of respondents selected rural character and lifestyle as one of Moretown's three greatest assets. Part of the rural character is maintained by undeveloped public lands owned by the Town and the Harwood Unified Union School

District, and by land conserved through the Vermont Land Trust. Most acreage conserved through the Vermont Land Trust is on the west side of Route 100B and on the eastern slope of Chase Mountain.

In the coming years, development, zoning and floodplain regulation, and Act 250 permitting will be significantly influenced by new regulations and guidance under development by the Land Use Review Board, Agency for Natural Resources, Agency of Transportation, and the Central Vermont Regional Planning Commission (CVRPC). Forthcoming requirements may include the regulation of river corridors, the implementation of a tiered system for state Act 250 permitting, and zoning changes related to a Future Land Use map prepared by the CVRPC in consultation with the Town.

11.1 Moretown Village Planning Area

11.1.1 Current Land Use

Moretown Village is distinguished from the larger Mad River watershed by its historic settlement pattern. It is a traditional Vermont village center that developed in a linear pattern along Route 100B, a state highway. Most of the buildings are 1½ to 2½ story with peaked roofs and wooden clapboard siding, and are set back 10 to 40 feet from the road. Many were built in the first half of the 19th century and are typical vernacular New England architecture of the period.

The Village is bounded on the north and south by bridges over the Mad River, on the west by the river, and to the east by a Green Mountain Power (GMP) transmission line. It is the most densely populated area of Town, with approximately 55 homes, and several commercial and civic buildings built along a one-mile stretch of Route 100B. All Moretown's public buildings and functions are located in the Village. Most of the land between Route 100B and the Mad River is within the 100-year floodplain, as is a limited amount of land east of the highway.

Very little new private development has occurred within this area in recent decades. There has been considerable revitalization and reinvestment in public buildings and facilities within the village since the mid-1990s. Several private residences have been renovated and repaired to improve flood resilience following flooding associated with Tropical Storm Irene and after flooding in 2023 and 2024.

11.1.2 Development Constraints and Opportunities

Floodplains of the Mad River and Doctors Brook are the most significant natural constraint to development in the Moretown Village area. The other major constraint is the absence of community water or wastewater infrastructure. These constraints limit more intensive use of existing properties and further growth at a density that would extend the historic settlement pattern.

Route 100B is both an asset and liability for the Village. Its traffic brings travelers who may stop at Village businesses. At the same time, heavy traffic, including truck traffic, creates noise, dust and safety concerns. Transportation in the Village along Route 100B is improving with the addition of a sidewalk on the east side from the Moretown Mountain Road intersection south to Hurdle Road in 2013, and a second sidewalk on the west side planned for construction in 2025. A rebuild of the municipal parking lot completed in 2024 contains stormwater management infrastructure and is shared with the elementary school. The lot has reduced the need for on-street parking along Route 100B.

Future improvements to the Route 100B corridor, such as street trees, landscaping, narrowing of the travel lanes, and decorative downward-facing streetlights, would further calm traffic and enhance the scenic character of the Village. The development of a bicycle/pedestrian path connecting the Village, Harwood Union High School, and the Mad River Path would encourage less use of motorized

transportation. The Mad River Path Association is spearheading an effort to construct a multi-use path running from Warren Village to Route 2 in Middlesex, this path's planned route will run through Moretown along Routes 100 and 100B. This will tie into the elementary school's acceptance into the VTrans Safe Routes to School program.

The frontage property along Route 100B is largely built-out with only limited opportunity for additional independent structures. There are, however, auxiliary buildings, such as barns and garages, which could be converted to housing if wastewater capacity existed. The best opportunity for expanding Village development above the floodplain would be to extend one or more streets to the east of Route 100B.

In June 2017, the Vermont Agency of Commerce and Community Development, designated most of Moretown Village as a Village Center. The designated area extended from the intersection of Route 100B and Moretown Mountain Road south to the northernmost curve in Fox Farm Run. This designation has numerous benefits for tax credits, flood mitigation credit, and State grant funding. The Town hopes to expand the area designated as a Center for the Village on the forthcoming Regional Plan Future Land Use Map.

11.1.3 Future Land Use

Maintaining the historic character of Moretown Village and its traditional role as the center of the community remain important land use goals. Construction of one or more centralized or decentralized wastewater systems, and a community water supply system, would allow more businesses and housing in the Village. The Town recently hired an engineering firm to study the construction of a centralized wastewater system for the Village through a Clean Water State Revolving Fund 0% loan. This study produced a 90% Preliminary Engineering Report which is a resource for future use. The Town hopes that centralized wastewater treatment will be possible in the future, either with technological advancements or with landowner approval for location of a treatment facility. In the interim, this planning area should be enhanced with streetscape and Complete Streets improvements, and flood hazards should be mitigated to the greatest extent feasible. Any future development should consider the potential for flooding from the Mad River and, if applicable, Doctors Brook.

11.2 North Moretown Planning Area

11.2.1 Current Land Use

The North Moretown Planning Area is in the northwestern part of Moretown. It includes land within the Crossett Brook watershed and land west of the Mad River that drains directly into the Winooski River. Route 2 travels through this area along the Winooski River, and strongly ties North Moretown to Waterbury and its nearby downtown.

There is a continuous linear pattern of largely auto-oriented commercial development along Route 2 from Waterbury across the Winooski River into Duxbury and North Moretown. With more than 20 commercial properties in North Moretown, this area is where most commercial businesses are located.

In addition to businesses in the Route 2 corridor, the area has approximately 150 homes. At least 20 homes were built in the 21st century, with many on new private roads off Route 2. As a result of flooding in 2023, eleven homes in this area have been approved for FEMA buyouts. Once property owners accept the buyout amounts offered, the structures on the properties will be demolished and the Town will assume ownership. Federal law restricts future use of these properties, which will likely be either recreation or parkland.

In addition to the residences along Route 2, this area includes a primarily rural residential neighborhood along Cobb Hill Road to the south of the Route 2.

11.2.2 Development Constraints and Opportunities

Most of the land between the Winooski River and Route 2 is within the 100-year floodplain or within the Winooski River Corridor. South of Route 2, the terrain rises steeply, keeping most development within 500 feet of the highway. Most of the developable frontage along Route 2 has been developed, however, a number of properties could accommodate infill development or more intensive use, particularly if water or sewer infrastructure was available.

The Route 100-Route 2 intersection is another constraint on development in North Moretown. The intersection is approaching an unacceptable level of service, leading to concerns about traffic from additional development. This intersection, and adjacent properties, also serve as a gateway to the community. The intersection would function better with infrastructure improvements, including making the area more pedestrian friendly, and a more welcoming and attractive entrance to Moretown. A study of options for reconstructing the intersection was completed in 2012 and has not been updated.

Concerns about traffic on Route 2 were partially addressed in 2024 when the speed limit was reduced from the Winooski River bridge in Waterbury to Gallagher Acres in Moretown. The speed limit in this area is now 35 mph.

11.2.3 Future Land Use

In Moretown's 2024 Community Survey, respondents agreed or strongly agreed that the Town should accommodate an increase in both commercial (73% in agreement) and residential (62% in agreement) development in the Route 2/Route 100 intersection area of North Moretown. With its location along Route 2 and proximity to employment opportunities to Waterbury, this area is should be considered for additional housing.

The general concept of maintaining North Moretown as a commercial and mixed-use area remains the goal for future land use. Any future development in this area should consider the potential for flooding and erosion by the Winooski River and/or its tributaries, including Crossett Brook.

11.3 Moretown Common and South Hill Planning Area

11.3.1 Current Land Use

The Moretown Common and South Hill Planning Area is within the larger Mad River watershed. It includes the land along Moretown Common Road, Moretown Mountain Road and several intersecting Town Highways extending uphill from Moretown Village. Some of these areas were among the first to be settled and with good reason. They feature high quality farmland, much of which is still in agricultural production, moderately sloping terrain with excellent views, and elevations that are well above the Mad River floodplain. This area also includes the steep, rugged, and forested western slopes of the Northfield Range. A series of small streams flow down the slopes, joining together to create a dense network of tributaries which feed into Doctors Brook and ultimately the Mad River.

There are approximately 165 homes in this planning area. Most are single-family houses on lots that are several acres or more in size. Other than farming or forestry, the businesses in this area are primarily home-based enterprises, short-term rentals, and an event venue.

11.3.2 Development Constraints and Opportunities

In contrast to many areas of Moretown, the natural features in and near Moretown Common are generally as favorable for development as they are for agriculture. Most of the soils are moderately to marginally suited for on-site septic systems. South Hill, however, has steep slopes, shallow soils, rugged terrain, and numerous headwater streams that pose greater constraints on development. Tree clearing and soil disturbance at higher elevations, on steep slopes, and near these streams could reduce water quality and increase flooding downstream.

11.3.3 Future Land Use

The future land use in this area should preserve its rural character, working farms, forest lands, open space, and scenic roads and views. Although these goals apply town-wide, they are particularly relevant on South Hill because of the many small tributary streams flowing down the hillside towards the Village. Infiltrating, storing and attenuating run-off in this area can help reduce the severity of flooding in the Village. Future land use in and near Moretown Common could include additional housing. Where applicable, future development should consider the need for stormwater management and, the potential for flooding and erosion near Doctors Brook and/or its tributaries.

11.4 Mad River Planning Area

11.4.1 Current Land Use

The Mad River Planning Area includes the remaining land within the Mad River watershed in the central and southwestern part of Town not included in the Moretown Village or Moretown Common and South Hill planning areas. This planning area includes the highly scenic valley of the Mad River, hills and valleys west of the river towards Duxbury, hills south of the Village towards Waitsfield, and hilly areas on both sides of the river between the Moretown Common/South Hill and North Moretown planning areas. Route 100B bisects much of this planning area and parallels the river providing access from Interstate 89 to the Village and to Mad River Valley communities beyond. This area of Moretown is more a part of the Mad River Valley community than the other parts of town which have closer links to village centers in Waterbury, Middlesex, Montpelier, or Northfield. It is connected to the Valley's recreation and tourism-driven economy, and to various Valley-wide organizations, initiatives and activities.

In this area, there are approximately 175 homes and a handful of small, primarily farming and lodging businesses. They are located along Route 100B and a network of town roads which extend up the hillsides from the valley floor. Although there is a floodplain along the entire Mad River, it broadens considerably south of Moretown Village.

11.4.2 Development Constraints and Opportunities

The Route 100B corridor, which is designated as a scenic byway, creates an opportunity for recreation and tourism-oriented businesses. A Mad River Valley Active Transportation Corridor is being scoped for Routes 100 and 100B throughout the Mad River Valley and Moretown. Development in this corridor will need to contend with the floodplain, future river corridor requirements, and protection of its scenic character. The terrain rises fairly steeply from the valley floor in most of this area.

11.4.3 Future Land Use

The future land use for this area should continue to focus on protecting its rural and scenic character, while taking advantage of natural assets for sustainable, small-scale recreation and tourism-based

economic development. Any future development in this area must also consider the likelihood of flooding and erosion by the Mad River, and if applicable, Dowsville Brook or Welder Brook.

11.5 River Road Planning Area

11.5.1 Current Land Use

The River Road Planning Area includes the land east of the Mad River that drains directly to the Winooski River in the northeastern part of town. Route 100B travels through this area, crossing the Winooski River into Middlesex. River Road intersects with Route 100B and continues east along the Winooski River into Berlin and on into Montpelier. Activity here is often oriented to Middlesex and Montpelier.

There are approximately 70 homes within this area. Most of them are close to either Route 100B or River Road. There are a few businesses as well, primarily along Route 100B. Farming continues along River Road and Route 100B in the floodplain and terraces of the Winooski River. Much of the land between the Winooski River and Route 100B or River Road is within the 100-year floodplain or the Winooski River Corridor.

11.5.2 Development Constraints and Opportunities

Much of this area is characterized by steep slopes and restricted access. Development is largely limited to the fairly narrow valley floor, which is also constrained by the floodplain. There are some relatively small areas with fewer constraints where limited growth and infill development may be feasible, particularly along Route 100B.

11.5.3 Future Land Use

Significant changes in the type and intensity of development in this area are not envisioned. The goals for future land use in this area should be to maintain its primarily rural and residential character, and to encourage some additional small business activity in suitable locations near Route 100B. Any future development must consider the likelihood of flooding and erosion by the Winooski River or its tributaries.

11.6 Jones Brook Planning Area

11.6.1 Current Land Use

The Jones Brook Planning Area includes the slopes of the Northfield Range along the eastern side of Town. Most of this area drains to Jones Brook, with a small portion draining directly to the Winooski River. This area of Moretown is not directly accessible from elsewhere in town and it is oriented more towards Montpelier.

There are approximately 70 homes in this primarily forested area. Much of the land remains in large parcels, including several that are managed for timber harvesting. The landscape in this area creates a setting of isolation and solitude, which residents value.

The network of Class 3 and 4 Town Highways and Legal Trails in this area is a legacy of the 19th and early 20th century development of hill farms and lumber camps. Today these roadways provide access to otherwise remote land and have recently allowed more residential development. They have also

resulted in off-road vehicle traffic, which is not authorized, erodes steep slopes, and is often an annoyance to adjoining landowners.

11.6.2 Development Constraints and Opportunities

Most of this area of town is remote, with steep terrain, shallow soils, and headwater streams. Further development could require upgrades and improvements to roads to accommodate additional traffic and would likely increase the Town's road maintenance costs.

11.6.3 Future Land Use

The land use in this area is unlikely to change because of environmental constraints and the high cost of providing services to remote areas. Future land use in this area should preserve its rural character and forest lands. Any additional development along Herring, Kelley, or Jones Brooks should address the potential for flooding, fluvial erosion, and landslides.

11.7 Cox Brook Planning Area

11.7.1 Current Land Use

The Cox Brook Planning Area is in the southeastern corner of town. East of the gap through the Northfield Range, this area is primarily oriented to Northfield a few miles away. Moretown Mountain Road and Cox Brook bisect this area through a narrow valley. The terrain rises steeply on either side, keeping most development within a few hundred feet of the road. This area also includes the headwaters of Chase Brook, a tributary of the Dog River.

There are approximately 45 homes in this area, with very little development over the past two decades. Any development pressure would likely originate from Northfield, which is home to Norwich University, a significantly younger population that Moretown, and is considered more affordable then Moretown, yet has not experienced significant growth in many years.

11.7.2 Development Constraints and Opportunities

The steep terrain and numerous tributaries to Cox Brook create significant challenges to development within this area. Moretown Mountain Road provides the only access to this area from other parts of Moretown. The road is unpaved, traverses steep terrain, and was washed out in multiple locations in the July, 2024 flood.

11.7.3 Future Land Use

No major change in the type or intensity of land use is desired in this area. Some additional residential development may be possible at lower elevations closer to the Berlin/ Northfield town lines. Any additional development must consider, where applicable, the likelihood of flooding and erosion from Cox Brook and its tributaries.

11.7.4 Future Land Use Mapping in the Context of Regional Planning

The Planning Commission is working in conjunction with the CVRPC to accurately represent Moretown's vison for land use in the Regional Land Use Map that is required by Act 181. Moretown's Future Land Use Map (Map #12), which is more a generalization than the Land Use Planning Map and narratives included above, is also included in this Plan.

11.8 Goals, Objectives, and Strategies

Goal 1	1.1: Maintain and enhance Moretown's compact settlement patterns, natural resources, space, and sense of community as well as provide appropriate locations for residential,
Object	tional and commercial uses. ive 11.1.1: Maintain development of compact areas of settlement surrounded by rural cyside.
	Promote infill opportunities in the North Moretown and Village areas Identify areas of Town where more dense housing development is desirable and feasible
-	rive 11.1.4: Allow for limited expansion of recreational land use that is compatible with nmental goals, climate change, and community values
	Evaluate the feasibility of establishing trail networks along Class 4 Highways and Legal Trails.
	Support the Mad River Path in establishing a multi-use path along the Route 100/100B corridor.
	Evaluate properties acquired through FEMA's Voluntary Flood Buyout Program for recreational use.
	Ensure that trail development considers community values and traditional outdoor recreation.
Object	ive 11.1.5: Maintain the scenic and rural character of Moretown.
	Ensure that scenic views along Route 100B, and Howes, Moretown Common, Moretown Mountain, River, and South Hill roads are preserved.
	Consider scenic road designations for specific sections of Moretown's Town Highways
	Work with landowners to ensure that ridgelines and mountain tops, including Bald Mountain, Chase Mountain, and Mount Cobb, remain tree covered.
	Enhance the scenic beauty, quality of life, and transportation safety of Moretown Village.
	tive 11.1.6: Protect the integrity of high-value natural lands for wildlife and plant habitats, e forest ecosystem.
	Strictly limit or prohibit zoning variances and exceptions in ecologically sensitive areas.
	Strictly limit or prohibit extension of driveways and upgrading of Class 4 Highways and Legal Trails in high-value natural lands.
	Work with Vermont Land Trust and landowners to increase the acreage with conservation easements.
Object	ive 11.1.7: Maintain and enhance the historic character of Moretown.
	Encourage the repair and floodproofing of historic buildings in Moretown Village that are within, and proximal to, the flood zones of the Mad River and Doctors Brook.

Support the repair and restoration of historic buildings and homes in Moretown, including barns and former schoolhouses.

Appendix A: 2024 Community Survey Results

What are Moretown's three greatest assets?

Rural area/lifestyle	75	Recreation opportunities	17
Location - close to I89, Montpelier,	75	Personal/family safety	14
Waterbury			
Scenic beauty	60	Family is from here/lives here	7
Sense of community	54	Village areas	4
Good place to raise a family	53	Availability of goods and services	1
School system	40	Economic opportunity/employment	1
Location - close to Mad River Valley/ski	37	Local government and municipal services	1
areas			
The Mad River	25	Housing affordability and availability	1
Town is not a center of tourism	25	Other-Library	1
Size/scale of the community	19	Other-Was affordable to be here	1

What are the top three challenges facing Moretown in the next 5 - 10 years?

Controlling education taxes	94	Controlling traffic congestion	14
Providing affordable and adequate	85	Developing North Moretown	9
housing		infrastructure	
Controlling municipal taxes	64	Reducing greenhouse gas emissions	0
Managing growth and development	36	Other-Refunding education	1
Preparing for climate change	35	Other-Partnering with MRVPD for	1
		recreation	
Conserving forest and agricultural land	33	Other-Maintaining our beautiful school	1
Maintaining roads, sidewalks, trails	27	Other-Affordable businesses	1
Creating sustainable community	24	Other-reduce speeding on 100B	1
Preserving the character of the Village	23	Other-Flood mitigation	1
Developing Village infrastructure	23	Other-Attracting young families	1
Preserving water quality/natural resources	21	Other-Move Village out of flood plain	1
Economy/job growth	15		

Moretown needs more:

Restaurants	56	Affordable housing	4
Trail networks	46	Paved roads	2
Retail establishments	45	Other-Library air conditioning	1
Cell service	38	Other-Forest fire prevention	1
Internet service	34	Other-Flood shelter at higher elevation	1
Cottage/Home business	31	Other-Uniting slogan, purpose, vision, vibe	1
Agriculture/related business	30	Other-Community spaces	1
Recreation facilities	28	Other-Nothing, fine the way it is	1
Renewable energy	26	Other-Keep it rural	1
Light industry	26	Other-Sidewalk in North Moretown	1
EV charging stations	25	Other- Sidewalks/trail systems	1
Public transportation	21	Other-Walkable areas w/no motorized vhcls	1
Public art	18	Other-Multi-family housing or condos	1
Entertainment	16	Other-Reopen landfill	1
Service providers	16	Other-Community outreach	1
Forestry	13	Other-Affordable housing and property tax	1
Civic spaces	13	Other-landline service	1
Professional services	9	Other-Publick house	1
Housing	5	Other-Modern welcoming gathering spaces	1
Office space	5	Other-Restaurant/bar in Village	1
Campgrounds	4	Other-Town pool	1
Tourism	4	Oth-Local owner/more variety at Mrtwn Store	1

Comments/Clarifications:

Affordable eating places, not high end places like Waitsfield. We are a small town and don't make a lot of money.

We live here because it is quiet and rural - I don't think we need retail/businesses unless they are located near Rt. 2. - it would help lower our taxes. I love the idea of public art!

We do not need to turn Moretown from a sleepy small town into Williston

Again, look to the Route 2 corridor for public transportation opportunities and really any other growth that you have listed here. Look at the success of Middlesex Camp Meade area. People love that stuff. And although I'm advocating for development in the North Moretown area. The project of a "bandshell" "play stage" behind the tennis courts is a great idea, which never seems to go beyond the drawing board.

Moretown can't attract the majority of the things on this list without reliable cell and internet, particularly internet. As someone who has had consistent trouble with reliable internet from multiple providers it's a huge detractor to not be able to count on an internet connection, let alone a high-speed option.

We need to attract more business to our town, there is room for it.

I don't really know, but I think if we had more light industry we would have a better tax base for the municipal taxes, and a restaurant could also bring in taxes and provide a place to meet up with folks. I think we are too spread out for many of the other things. When we focus on the village we leave out so many people, so where would we put more trails, recreation, civic and art spaces? I'm not against them if someone has a vision!

Place where community members can come together to sup and chat.

I am unable to get a landline at my home

The Town needs to support CV Fiber in establishing affordable high-speed internet service for all residents who currently do not have it.

The new town plan needs to think outside the box! and add new thoughts for replacing the lost tax revenue of the Hazard mitigation buyouts that the town is losing!!!!

Trails for only nonmotorized use

Breaking down walls between people that feel they have lived here first with those that want to help build and contribute to a sense of ongoing community is important. Change is imminent, people age out, we need ongoing involvement to ensure that great ideas, concerns, opportunities are loved by many.

Maybe a bus that goes from 100 to 100B to Middlesex so people can catch the bus north or south

Bike/Walking trails! Connect the Mad River Path to the Cross Vermont Trail. Get the CVT off route 2. Use Legal Trail Right-of-ways to create bike trails.

Get more businesses to take some of the tax burden off the residents.

Zoning and health codes to be enforced in the village. Plan should reflect that property needs to be maintained

Moretown's brand should lean toward the rural and bucolic, and not motorized and extreme sports.

EV charging stations should go along with an affordable housing development.

Mtown owns some significant chunks of land, a lot of which is remote enough it's not really accessible for non-motorized recreation. Why not open some of it up for trail use for ohv's (utv, atv, dirt bike), and charge a yearly use/registration fee? A lot of common recreation in vt is kind of in a grey area, why not have something legit?

Would be great to have a place to get food in town and support a local business.

Please-cable/fiber optic internet in remote places. My road has only 4 houses-internet and cell has deteriorated

Small business that can create a tax base and activity in the community

The Town should provide support for:

Senior or disability services	71	Other-Property tax reform	1
Trail networks	68	Other-Community building	1
Library services	68	Other-Small businesses	1
Land conservation	67	Other-Social engagement	1
Preschool/child care	57	Other-Housing construction	1
Traffic enforcement	49	Other-Taxes	1
Energy conservation	35	Local government and municipal services	1
Public transportation	33	Housing affordability and availability	1

Arts programs	32	Other-Library	1
Police protection	29	Other-Was affordable to be here	1
Health care	13	Other- All of the above, but within reason	1
Other-Walkable areas free of high-speed traffic	1	Other- Probably all of the above, but in moderation	1
Other- Nothing else, the town needs to stay out of all the other items	1	Other- Publicly maintained recreation like Waterbury pool and Waterbury sports fields	1
Other-Flood mitigation on brooks and the Mad River	1	Other- The town supports all of the above already!	1
Other- Maintaining the safety we currently enjoy here in Moretown	1	Other- Trails for only nonmotorized use	1
Other- Speed control on RT100B, people constantly speed through town, t's annoying and dangerous	1	Other- All use of dirt bikes and ATVs on town roads for ALL. If not, then be consistent and do something about teens/kids use on roads	1
Other- Individualized climate change preparedness	1		

If you live here full time, do you consider your housing costs to be:

your mousting costs to be.			
Very affordable	10	Barely affordable	68
Mostly affordable	77	Not at all affordable	
			13

Level of agreement for actions/strategies which can be followed regarding development:

			Neither		
	Strongly		Agree nor		Strongly
	Agree	Agree	Disagree	Disagree	Disagree
Accommodate all market demand	5	20	58	44	37
Accommodate market demand in already					
developed areas	25	66	50	18	7
Accommodate increased commercial					
development in North Moretown	44	77	28	9	8
Accommodate increased residential density					
in North Moretown	36	67	44	13	7
Accommodate the development of					
attainable/affordable housing	61	59	33	5	9

Ensure that new development preserves important town features and natural resources	93	55	10	3	8
Ensure that new development preserves important forest blocks, wetlands, and wildlife corridors	107	40	11	3	7
Ensure that new development will not be susceptible to nor exacerbate future flood events	124	27	13	1	4
Limit development at high elevation	69	28	43	15	12
Encourage maintenance and development of paths and trails	70	60	27	7	5
Limit development along Class 4 roads and Town Trails	52	47	44	14	11
Encourage the development of renewable energy infrastructure such as solar arrays and windmills	51	47	31	18	21
Allow more than one Accessory Dwelling Unit on a lot with a single-family residence	42	56	51	12	8
Allow an Accessory Dwelling Unit on a lot with a duplex	41	56	52	9	7
Stipulate that Short-Term Rentals only be allowed on owner-occupied properties	49	34	49	21	15

Appendix B – Moretown History

Our history tells the story of the people, events and forces that have shaped Moretown and created the community we know today.

Before 1763

Archeological evidence suggests that people have been living in Vermont for approximately 11,000 years. As the last glaciers retreated northward and the Champlain Sea shrank to the lake we know today, people began to expand northward from the Hudson River into New England following the major watercourses.

The first Native Americans in Moretown likely arrived on the Winooski River. They would have traveled primarily by water and lived in close proximity to rivers and streams. One of the oldest Paleoindian artifacts yet discovered in Vermont - a fluted projectile point – was found in Moretown on a ridge near a small brook off South Hill Road. It dates from approximately 9000 B.C.E.

Over the centuries, the human population and way of life responded to changes in the climate, landscape and ecology. Thick forests and smaller game replaced the grassy plains and the big game that characterized the landscape after the retreat of the glaciers. Approximately 3,000 years ago, the Abenaki culture observed by European explorers 400 years ago was already thriving. The Abenaki lived in villages of up to 1,000 people along lakes and in river valleys – evidence of such settlements have been found along the Winooski River in our region. The Abenaki were Vermont's first farmers and added cultivated crops like corn, beans and squash to a diverse diet of game, fish, berries, nuts and other wild plants. They also tapped maple trees and boiled the sap for sugar.

This way of life persisted until the arrival of Europeans in North America brought sudden and rapid change. Before Samuel de Champlain ever saw the land that is now Vermont, European diseases had already had devastating effects on the native population. The centuries of conflict that followed as European powers battled for control of the new world further disrupted the Abenaki's way of life. Having aligned with the French, many migrated north into Quebec when England prevailed in the French and Indian War. When settlers arrived in Moretown in the 1790s, the Abenaki and much of the evidence of their centuries- old culture had largely disappeared.

1763 to 1860

Charter and Organization

We celebrated Moretown's 250th anniversary in 2013. Moretown was one of 36 Vermont towns chartered in 1763 by colonial Governor Benning Wentworth of New Hampshire. Moretown came into existence on June 7 that year with an original grant of 6 square miles (23,040 acres) of land. The reason why the town was named "Moretown" is lost to history, although it was likely in honor of the members of the Morehouse family who were among the original proprietors, but no other municipality in the country shares our name.

Looking at the proprietors' map on the wall of Town Office, you will notice that the land grants are drawn in straight and orderly lines. The original grants did not take into consideration the mountains, valleys and rivers that define our landscape and hinder travel from one area of town to another. As a result, Moretown does not have a single, cohesive "center" like many Vermont towns. Hamilton Child noted this fact in his 1889 Gazetteer of Washington County where he stated "Owing to the mountainous condition of the township it is divided into several separate neighborhoods, which prevents building up any large

village within its borders." The town is divided into multiple zip codes and telephone exchanges, reflecting the orientation of different parts of Moretown to centers in adjacent towns resulting from our topography and settlement pattern.

Although the proprietors signed the charter in 1763, settlers did not arrive in Moretown until sometime around 1790. The first settlement was in the North Moretown / Duxbury Corners area. The town's first school district was organized in that area as well. Some of the original families to settle in Moretown were the Munsons, Haseltines, Parchers, Heatons and Bartletts. They held the first Town Meeting on March 9, 1792 at Joseph Haseltine's home.

Early Settlement, Growth and Development

The location of the annual town meeting speaks to the progress and pattern of settlement in Moretown. Shortly after that first meeting in 1792, residents began holding the annual meeting in Moretown Common. In 1832, they voted to hold future meetings in the "Hollow" or what we now know as the village, and they have been held there ever since. Following that decision in 1832, residents raised money through a subscription to build a meeting hall. Our Town Hall was built in 1835 and remains a centerpiece in the village today. It is a unifying feature for our dispersed community and central to Moretown's identity. The building was restored in 1985 in celebration of its 150th anniversary, and that event spurred the formation of the Moretown Historical Society.

Within two decades, Moretown grew from a small group of settlers to a town of more than 400 residents. Throughout the first half of the 19th century, Moretown's population grew by 20 to 30 people each year reaching a peak of 1,410 residents in 1860. By the mid-1800s, Moretown had multiple small settlements dispersed around town – Moretown village, Moretown Common, North Moretown near the Duxbury/Waterbury town lines, Cox Brook over Moretown Mountain near the Berlin/Northfield town lines, and Jones Brook bordering on Berlin and Middlesex.

The lumber industry fueled Moretown's early growth, aided by the power and transportation provided by the Mad River and the Winooski River. Sawmills and gristmills proliferated. There were large mills located in Moretown village on the Mad River and on the Winooski River opposite Middlesex. There were also smaller mills on the brooks and tributaries in the Jones Brook area, Cox Brook and South Hill. In addition to the mills, there was an array of small businesses operating in Moretown by 1860 that provided most of the basic goods and services residents would need – including 2 general stores, 3 blacksmith shops, a hotel, harness shop, a door and window maker, a box factory, 2 carriage and sleigh shops, a dressmaker, 2 milliners, a goldsmith and a tinsmith.

For the first several decades, Moretown's early settlers operated small subsistence farms. In the 1830s, raising merino sheep for wool, meat and breeding stock came to dominate Vermont agriculture. Merino sheep were well adapted to hilly terrain and marginal pastureland. Our landscape in the mid-1800s would have looked dramatically different than it does today. In less than 50 years, logging and sheep farming resulted in massive clearing of the native forest. Not only would there have been farms in

the valleys, as there still are today, but there were many "hill farms" in places that are now forest. Remnants of stone walls and foundations found throughout the remote areas of town today remind us of this earlier settlement pattern.

The Vermont Central Railroad line was built through the Winooski valley during 1848 and 1849. It traveled along the Middlesex side of the Winooski River, with a station in Middlesex and a rail yard in Northfield. The railroad made it possible for lumber, farm products, stone, minerals, and other commodities produced in the region to be shipped to urban markets in Montreal, Boston and New York City.

1860 to 1960

After the Civil War, Vermont's agricultural economy shifted primarily to dairy farming and the marginal "hill farms" began to disappear as families moved westward in search of more productive land, or to cities where the industry was booming. Improved transportation and communication (telegraph lines were constructed alongside the railroad during 1865 and 1866) facilitated the out-migration of people. Moretown, like most rural Vermont communities, experienced nearly a century of population decline and stagnation.

In the 1870s, the Ward family started a lumber and milling business that became one of the largest in the region and continues to operate today. By the mid-20th century, the Wards owned thousands of acres in Moretown and surrounding towns. They practiced a forest management program, and planted plantations of softwoods that they pruned and thinned until the trees were of harvestable size. In Moretown, Ward's operated the Upper Mill where they processed softwood lumber and manufactured wooden boxes and components for wooden furniture, and the Lower Mill (Clapboard Mill) that produced hardwood clapboards. The original Upper Mill burned in 1955 and another was built across the road, which still survives and is now a private residence. While the company still produces clapboards using some of the original equipment from the late- 1800s, the mill building was severely damaged by fire and was replaced by the current structure. The business was for many years, the town's largest employer with loggers and haulers (first with horse teams and then later with trucks) working from logging camps, in addition to those employed in the mills.

During the first half of the 20th century, the mining of talc was another major industry in Moretown. Starting in 1913, the Eastern Magnesia Talc Company extracted and processed the mineral in the Rock Bridge area of town, employing up to 50 people at the height of their operation. In 1960, the talc company was the fourth largest taxpayer in Moretown. The facility closed in 1961 as new materials replaced talc powder in various manufactured products, resulting in a substantial loss of jobs and revenue for the town. We are again facing the possible loss of a major industry with the future of the landfill - and the associated revenues for the town – uncertain.

Moretown's rivers, which had powered mills since the arrival of the first settlers, were harnessed to produce electricity at the turn of the 20th century. There were three hydroelectric plants in operation prior to 1927 – the Middlesex Plant built in 1895, a plant on Lover's Lane built in 1904 and the #8 Dam built in 1910. The 1927 flood heavily damaged all three plants and the Lover's Lane plant was not rebuilt. The other two remain in operation – the #8 Dam is privately owned and Green Mountain Power now owns the Middlesex Plant.

While electricity was first generated in Moretown in 1895, it took more than 50 years for electric power to become available throughout town. It was 1951 before wires reached the Jones Brook schoolhouse, for example. Major regional or national corporations owned most of the hydro plants in Vermont and they shipped the power to cities like Boston and New York.

Power companies saw no financial benefit to serving rural areas and even argued that farm families would have little use for electricity – a situation not dissimilar to what we have faced in recent years with getting high speed internet and cell phone service throughout town.

The 1927 flood was a defining event for Moretown, as it was for Vermont as a whole. The flood damaged or destroyed many

homes, mills, bridges, roads and the railroad (which was so badly damaged that service did not resume until 1929). The bridges at both end of Moretown village, the bridges at Middlesex and across the river at Duxbury Corners, as well as most of the small bridges on town roads, were washed away isolating

Moretown. Several dams failed, and houses were lifted off their foundations and overturned. Those buildings in the village that remained standing were filled with mud and water.

Since 1960

By the late 1950s, Moretown's demographics were beginning to change. The post-war baby boom was filling the town's five one- and two-room schoolhouses. In 1957, a study committee proposed building a central school and bussing all Moretown students to the village — a proposal that the voters turned down for several years before finally approving it. The Central Elementary School opened in September 1960 with an enrollment of 145 students in grades 1 through 8. Demographic pressure and increasing rates of high school attendance led Moretown and neighboring towns to join together to form Union #19 in 1964. Harwood Union High School opened in 1966 serving grades 7 through 12.

The first segment of Interstate 89 from Montpelier to Waterbury opened in 1960. The highway was completed through Vermont by 1965. Interstate highways made a visit to Vermont a day trip for millions of people living in southern New England and New York, greatly expanding the role of tourism in the state's economy. In our region, the ski areas developed into major attractions and created demand for vacation homes.

Similar to rural communities around Vermont, new people moved into Moretown in significant numbers during the 1960s and 1970s, something that hadn't occurred for more than a century. Vermont promoted itself as a recreation destination and rural haven, and many people – primary young, babyboomers – moved to the state. Moretown, because of our proximity to both Interstate 89 and the ski areas in the Mad River Valley, was strongly affected by these trends. Our location near the interstate between Montpelier and Burlington remains one of the major reasons people choose to live here, as evidenced by the responses to the 2013 community survey.

Tropical Storm Irene in August 2011 tore through Moretown, flooding village homes along Route 100B adjacent to the Mad River, as well as homes adjacent to the Winooski River and its tributaries, and ripping up roads throughout the town and state. Vermont was declared a national disaster area and Moretown was recognized as one of the most severely affected towns in the state. Moretown residents spent the next month cleaning up and preparing to rebuild. The 2011 school year opened with Moretown Elementary School students attending classes in a tent. The Town Office was destroyed, and the fire station and Town Hall both flooded. As we have rebuilt our buildings and infrastructure, we have tried to do so in ways that will protect them in the event of future floods and with a new awareness of the vulnerabilities of living in our river valleys.

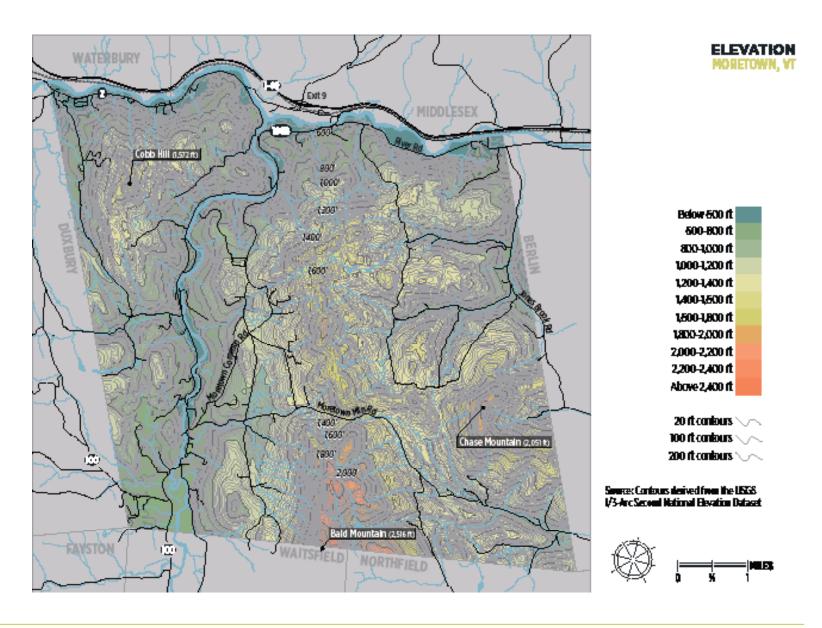
More recent flooding in 2023 and 2024 impacted both the Town's highways and the Elementary School, with widespread road damage experienced in July 0f 2024.

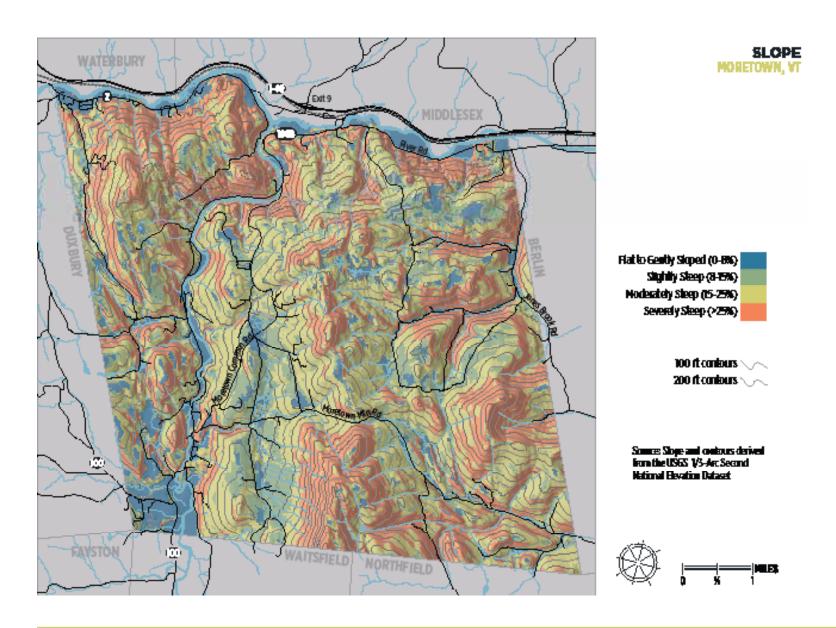
A community celebration known as Morefest was initiated following the recovery from Tropical Storm Irene; Morefest has become a well-attended annual event featuring music, food, information, and fireworks.

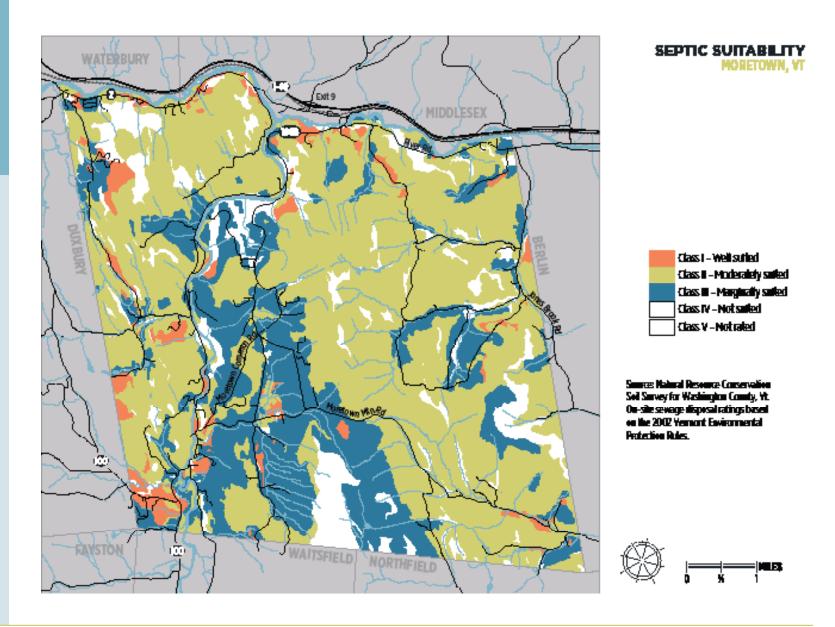
The Moretown Historical Society was founded in 1984 to preserve and share the Town history. Currently with 12 members, it supports the identification, documentation, and preservation of historical artifacts and landmarks in Moretown. This has included collecting oral and written histories and memorabilia, supporting the 1985 Town Hall Semiquincentennial, restoration of the Honan (District 12) School site, installation of historical entry signs to the Village on Route 100B, and publication of a Town history. In 2023, the Society established the Moretown History Center in the former location of the Memorial Library in the Village. The Center is open to the public, contains displays, photographs and documents about Town history, and serves as a meeting place for the Society. Future Society activities include

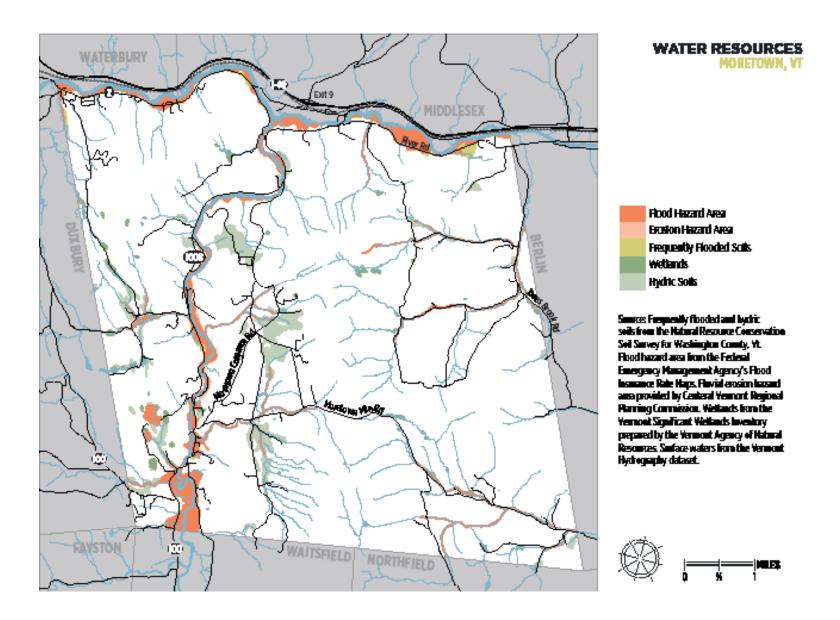
preserving and displaying the sled used for winter mail delivery by the Moretown Post Office and
exploring restoration of the Taplin (District 8) schoolhouse.

Appendix C - Maps

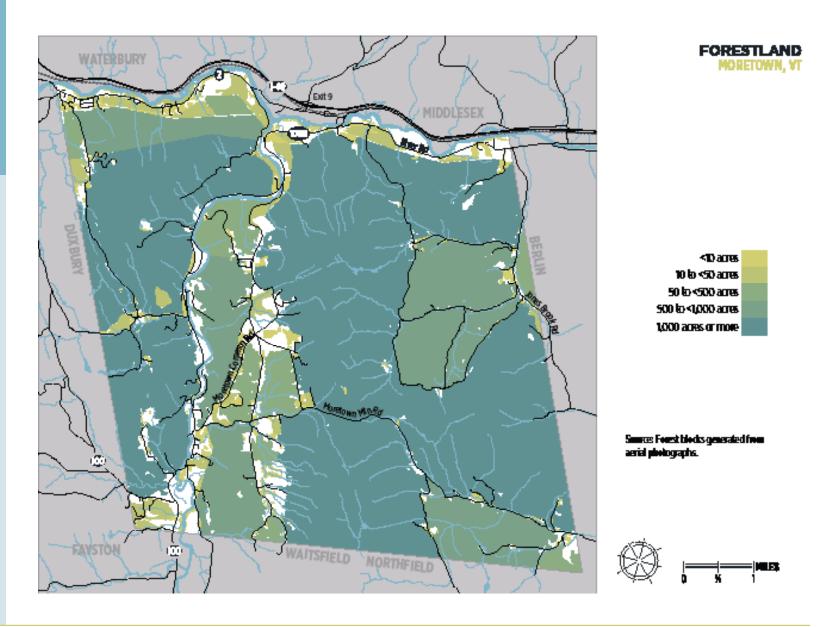


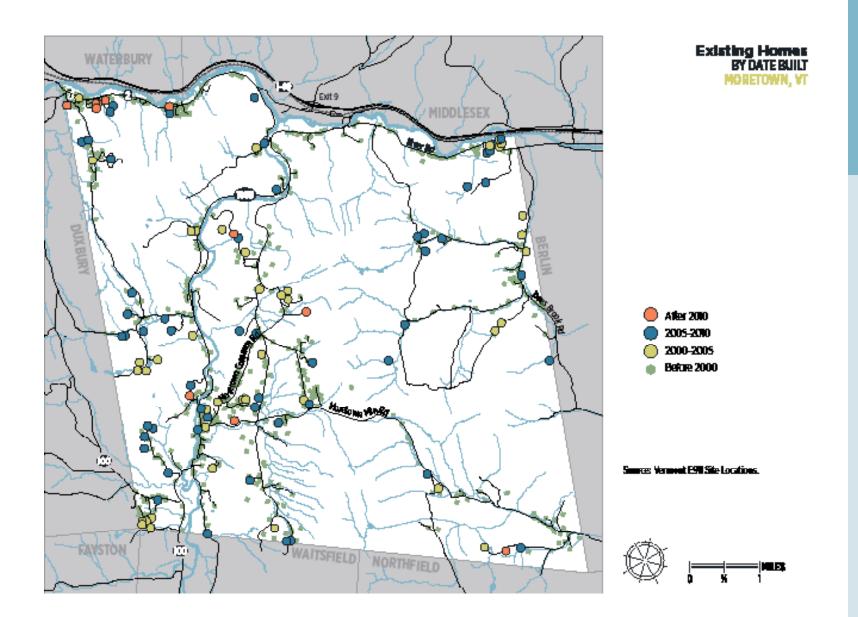


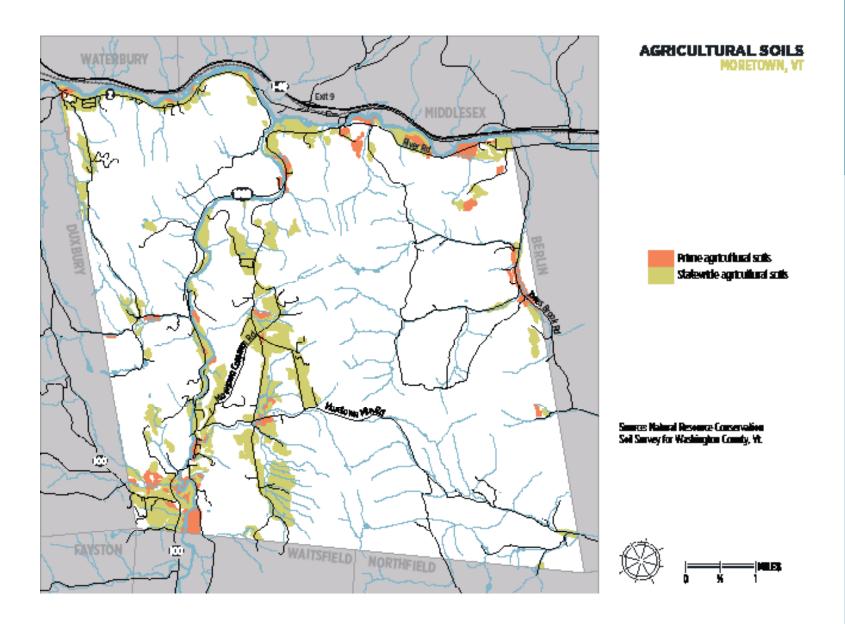




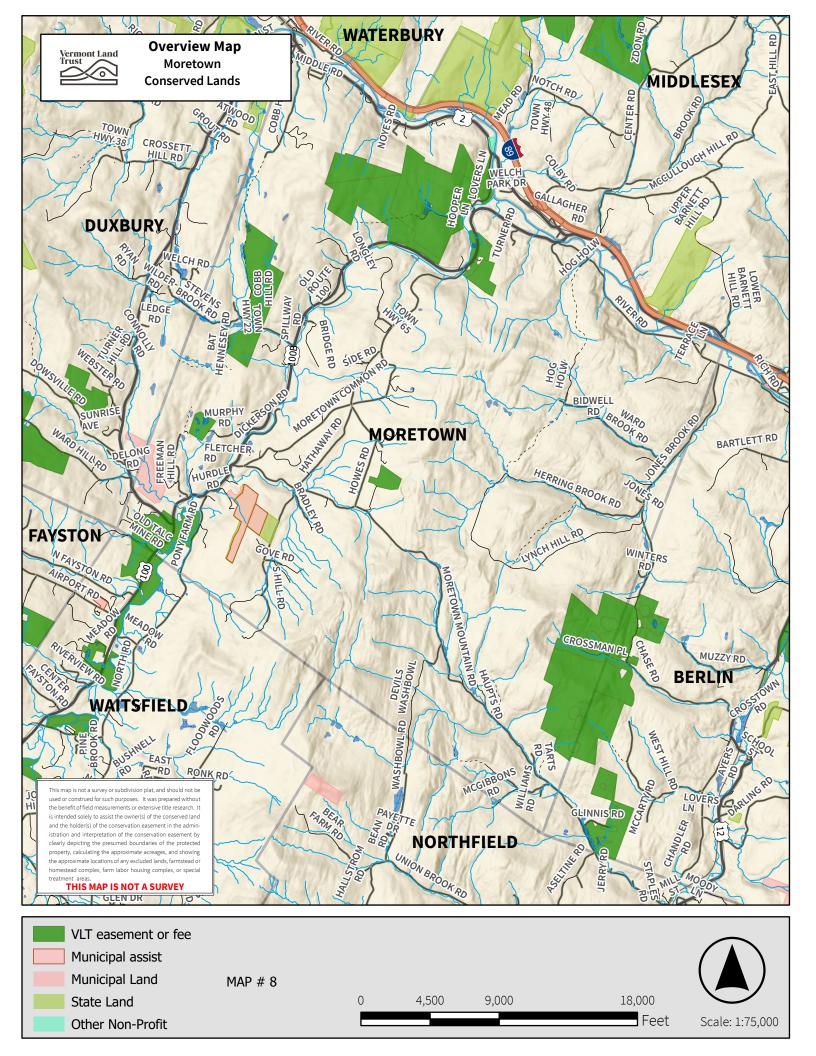
MAP #4

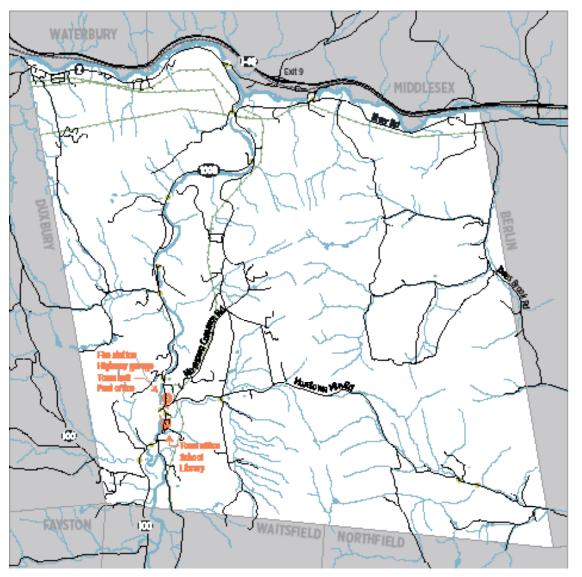






MAP #7





INFRASTRUCTURE AND FACILITIES MORETOWN, YT

Civic and educational facilities

State highways

Class 2 town roads

Class 3 town roads

Class 4 town roads

Town legal traits

Private roads

Buildges and major culverts

Transmission lines

Source: Ovic and educational facilities from Yemook EMI site locations . Roads and Agency of Transportation class from Yemook EMI road centerfine data. Transportation structures from the Yemook Bridge and Colvert Inventory. Transmission fines derived from YELOD transmission fine data, statewide electric transmission fine data and aerial photos.



