

Moretown, VT Town Plan

**Adopted
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Prepared by:
Moretown Planning Commission

Moretown Town Plan

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Town Plan Revision & Adoption History

- Adopted by Select Board on August 27, 2002.
- Revisions adopted by the Select Board on January 14th, 2008

CHAPTER 1. PLANNING PROCESS

What is the Town Plan?

The Moretown Town Plan is a comprehensive, long range plan for the town's future. The plan was prepared to:

- identify many of the trends that have shaped the community's history;
- document current conditions regarding a variety of topics;
- identify community values and aspirations, as defined by local citizens;
- predict, to the extent practical, the factors that will influence change in the future; and
- set forth goals, policies and implementation strategies for addressing change in a manner that best reflects community values and achieves community aspirations.

The Moretown Town Plan was prepared by the Moretown Planning Commission under the authority of 24 VSA, Chapter 117, The Vermont Municipal and Regional Planning Act (the "Act"). While towns are not required adopt a plan, those that do must include specific elements required in the Act (§4382). In addition, this plan also addresses the twelve general state planning goals also listed in the Act (§4302). Although the plan is consistent with these goals, the background information, goals and policies presented throughout the document were carefully prepared to meet the unique conditions and needs of the Town of Moretown.

Purpose of Town Plan

Simply stated, the purpose of a town plan is to provide a vision for the town and offer strategies for achieving that vision. It provides a useful reference for local and state officials when making decisions affecting the community, and may be used to inform anyone interested in the town of its history, resources, challenges and policies. Important benefits and/or uses of the plan include:

- ***Community Assessment*** For Moretown to accommodate growth and change, local officials and residents should be aware of the town's strengths and weaknesses and anticipate the factors that will influence future conditions. The process of preparing a town plan provides a structured process for assessing the community's past, taking stock of current conditions, and predicting future trends and influences. This process of community assessment and debate regarding the town's future can be as important as the plan itself.
- ***Land Use Planning and Development Regulation*** Moretown first adopted zoning regulations to implement a community land use plan in 1977. These regulations served the town during two decades of rapid growth. In 2000, the regulations were overhauled to correct deficiencies and address development pressure. At that time, the land use plan (i.e., zoning districts) that had been in effect for several years was, with the exception of changes to the Village District, left largely intact. As of 2007 this continues to be true. As the town continues to evaluate and improve local regulations, including zoning districts, this plan should serve as the blueprint for possible future changes.
- ***Public Facilities and Services*** The town plan is useful for identifying desired community facilities and services, projecting future demand for those facilities and services, and setting priorities for meeting those demands in a cost effective manner. In many respects, this is

among the most important functions of a town plan.

- ***Open Space & Natural Resource Protection*** In the future, Moretown will be presented with opportunities to help set aside open space for future generations. The town plan can help establish the community's conservation priorities and identify those properties, features and/or resources that are most deserving of protection.
- ***Economic Development*** Most past economic development initiatives have been the responsibility of private businesses. The town can support economic development, however, through the provision of facilities and services and by creating a regulatory climate that encourages different business activities in appropriate locations. The town plan is an important mechanism for addressing how local government, private businesses and economic development agencies and associations can coordinate their efforts to foster a healthy local economy.
- ***State Development Regulations*** Many state regulations, most importantly Act 250, are administered in a manner which gives some credence to local development policies. One of Act 250's ten review criterion requires that new development be compatible with a locally adopted municipal plan. Moretown's Selectboard and Planning Commission both have "party status" allowing for their involvement during Act 250 proceedings. The policies set forth in this plan address a wide range of topics, and are designed to serve as the town's unambiguous position during the Act 250 and other review processes.
- ***State, Federal and Private Policies & Programs*** State development regulations are not the only forum in which it is important for the town to have clearly articulated policies. Many decisions of state and federal agencies and non-profit organizations can affect the towns future well-being concerning such matters as transportation improvements, environmental protection, land conservation, economic development, education and so on. In many instances, public agencies and private organizations seek the guidance of local governments to ensure that their activities are compatible with the community's values and vision. This is especially true regarding increasingly competitive grant programs, where conformance with a local plan is often an important eligibility requirement.
- ***Define Balance Between Conflicting Interests & Articulate a Community Vision*** Moretown is a rural, bedroom community whose population reflects a diversity of opinions and attitudes. The plan is an effective vehicle for forging consensus, identifying issues in which consensus is not possible, and setting forth a process for resolving future conflict. Hopefully, the end result of the plan will be a future vision that reflects, to the extent possible, the hopes and aspirations of the community.

Organization and Format

This plan includes eight separate chapters. The first chapter describes the plan's purpose, the importance of public participation in the planning process, and regional coordination and compatibility of this plan with the plans of neighboring communities. Chapter one also includes a brief town history provided by the Moretown Historical Society.

Chapters two through seven address a variety of topics, including the town's population, housing, transportation, natural and cultural resources, and land use. These chapters include background information related to each topic and, where appropriate, projections or anticipated changes and planning considerations. The end of each chapter sets forth related goals, policies and specific tasks and strategies.

The final chapter provides a brief description of implementation measures that should be undertaken to put the plan into action.

Public Participation in the Planning Process

Moretown residents value their ability to participate in the process of making local decisions. Although the community's legal obligation for public involvement in the preparation of this plan is limited to a single public hearing, the Commission contacted local boards and organizations (e.g., Moretown School Board) to solicit input on the plan. The Planning Commission encourages the public to attend its regularly scheduled meetings. In the future, all local boards are committed to encouraging active participation in town government.

Regional Cooperation

Due to its geography, it makes sense for Moretown to work with adjacent communities to better serve its citizens. In the past, Moretown has cooperated with neighboring communities to provide education, emergency services and to share in addressing specific road maintenance, solid waste management and water supply needs. Other services available to Moretown residents that are shared with residents of neighboring communities include health care, library services, and public transit.

Moretown has a long history of coordination with the Central Vermont Regional Planning Commission (CVRPC), which assisted with the preparation of the attached maps. In addition, CVRPC coordinated a study of possible pedestrian and bicycle connections from Waterbury Village through Moretown to the Crossett Brook School in Duxbury. By maintaining a regional perspective during this planning process, the town was able to ensure this plan's compatibility with the plans of neighboring towns and the region.

In 1985 the towns of Warren, Fayston & Waitsfield created a planning partnership called the Mad River Valley Planning District (MRVPD). The purpose of the MRVPD is to carry out a program of planning for the future of the Mad River Valley. The planning programs are directed toward the physical, social, economic, fiscal environmental, cultural and aesthetic well being of the member towns. The current MRVPD steering Committee encourages Moretown to participate.

Compatibility with neighboring towns is particularly important with regard to land use, where incompatible policies could result in conflicting development activities and land uses along town boundaries. Moretown's land use plan calls for agriculture, forestry, low to moderate density residential development and very limited non-residential uses along the boundaries of Berlin, Northfield, Waitsfield, Fayston and Duxbury. These uses and densities are similar to those allowed in adjacent towns along the boundary.

The exception to these low density land use designations is the town's Commercial District, which is adjacent to the Middlesex Village District at the point Route 2 crosses the Winooski River to enter that town, and the Waterbury Village District at the point Route 2 crosses the Winooski to enter that town. Both adjacent districts allow for higher density, mixed use development consistent with the Commercial District. The Commercial District is also contiguous to the Duxbury State Farm PUD – a designated center for mixed-use development.

Town History

Moretown was chartered June 7, 1763 by King George III through Governor Benning Wentworth of New Hampshire. The original grant was 6 square miles with 23,040 acres of land. If any one has ever seen the proprietors map on the wall of the town office, they will notice that the land grants are drawn in neat, straight, orderly lines. Unfortunately the drawer did not take into consideration mountains, valleys, rivers or any other topographical features that might hinder accessibility from one area of town to another.

Therefore, Moretown, like some other Vermont towns does not have a true "town center" but several neighborhoods or communities. North Moretown, near the Duxbury/Waterbury town lines, Cox Brook, over Moretown mountain, near the Berlin/Northfield town lines, Jones Brook, bordering on Berlin and Middlesex, and the village area. Within those neighborhoods there were also sub-neighborhoods, Cobb Hill, Lovers Lane, Rockbridge, Herring Brook, Ward Brook, Devil's Washbowl, South Hill, Moretown Common, River Road just to name a few.

Although the charter was signed in 1763, the actual settlement of the town did not occur until sometime around 1790. The first settlement was in the North Moretown / Duxbury Corners area. Some of the first settlers were the Munson, Haseltine, Parcher, Heaton, and Bartlett families.

The first Town meeting was held at the home of Joseph Hazeltine in 1792. Evidently, at some point in time, the population center shifted to the common area since town records show that town meetings were held on the common until 1832 when a vote was taken to move the town meetings to the "Hollow". The Town Hall was started by subscription shortly after and Town meetings have been held in the village ever since.

Although farming and lumbering are probably the best known sources of livelihood, Moretown has also had a harness shop, carriage shop, blacksmith shop, tin shop, general and hardware stores, barber shop, dressmaker, hotel, cider and gristmills, distillery, creamery, undertaker, doctor, lawyers, restaurants, garages etc.

The lumber business was aided by having two sources of power at their disposal, the Mad River and the Winooski River. There were sizable mills located in the village on the Mad River and also on the Winooski opposite the town of Middlesex. There were also smaller mills located on

smaller brooks and tributaries in the Jones Brook area, Cox Brook and South Hill.

The Ward family owned probably the largest and best known lumber/ milling operation in town, employing a large number of people from the village and surrounding areas. The upper mill (beside Ed and MiMi Clark's house) was a box shop and sawed mostly softwood lumber. It later made rockers and dowels for furniture. This building was destroyed by fire in 1955. A new mill was built across the road from the original site and is now the home of Roger and Carol Dean. The lower mill sawed mostly hardwood lumber. The clapboard mill remains at its same location. It is using the same equipment today, made by Lane Manufacturing Company of Montpelier, that was originally installed in the late 1800's. The Ward mills, at one time had their own logging camps and employed loggers and truckers in addition to those working in and around the mills.

The Wards owned thousands of acres of land in Moretown, the valley towns and Duxbury .They practiced a forest management program where by plantations of softwoods were planted and then pruned and thinned until they were of harvestable size. Many school children were hired during school vacations to prune and set out trees. They also had the "Ward Farm" on South Hill (where John Summers and his family live) which was a dairy farm and employed several people to take care of the farm chores.

The talc industry was also important to the Town of Moretown. In 1913 the Eastern Magnesite Talc Company opened in the Rock Bridge area. They employed about 35- 50 people. The talc was used in the manufacture of paint, rubber, powdered insecticides, and roofing materials. This plant closed in 1961 when talc was being converted from powder to liquid. Insecticides were changing to spray instead of powder.

Moretown also was home to 3 hydroelectric plants, two of which are still in operation. The # 8 dam, as it was known, was built in 1910. It is now privately owned. (near Rick Hungerford's residence). The Middlesex plant was built in 1895 and is still in operation owned by Green Mountain Power Corporation. The Lover's Lane plant went into operation in 1904. All three plants were damaged in the 1927 flood. The Lover's Lane plant was not rebuilt.

As the population grew, places of worship were needed. The first religious organization was probably a Congregational Church. Around 1840 the membership dwindled and the church merged with the Congregational Church in South Duxbury .The first Methodist Church was on the Common where the first meeting house was built about 1832. The present Church was built in 1854. Up until very recently the minister lived in the parsonage in Moretown and was shared by the Middlesex church. The first Catholic Church was on South Hill at the St. Patrick's cemetery. It was built in 1857.

The stone steps leading to the church can still be seen. The date of the building of the present St. Patrick's church is unclear, it is also unknown whether the church or parts of the church on South Hill were moved to the present Church. The newest religious order is the Church of the Crucified One. The Congregation began in Warren in 1977, a branch of a larger Community which has its roots in Pennsylvania. They moved to Moretown in 1984 when a larger space was needed for the growing congregation.

The Town History is a compilation of Lydia Goss Billing's history, written in 1963, Mary Reagan's history written in 1982 and the article in the Waitsfield Telecom phone directory written by members of the Historical Society in 1999.

Planning Considerations

- This plan was prepared to include all required elements of a municipal plan, as required by the Act (§4382). In addition, while the plan was prepared with the primary objective of addressing the needs of the town and its citizens, the goals and policies included below are consistent with the state planning goals also listed in the Act (§4302).
- Moretown is located within a wider region, and Moretown residents interact with those of neighboring towns on a variety of levels. In addition, the town's geography, potential efficiencies and economies of scale, and a desire to avoid conflicting development activity along the town's boundary, make coordination with neighboring towns essential. At present, the primary regional planning format is the Central Vermont Regional Planning Commission (CVRPC). In recognition of this regional context, the goals and policies set forth in this plan were prepared to be compatible with the plans of neighboring towns and the region.
- The Largest portions of Moretown fall within the Mad River Valley. At present, Moretown does not participate in planning activities with the Mad River Valley Planning District.
- Moretown residents value the opportunity to participate in the local planning and decision making process.

Planning Process Goals

- 1) *The widespread involvement of Moretown citizens and landowners at all levels of the local planning and decision-making process.*
- 2) *The ongoing cooperation and coordination with neighboring towns and the Central Vermont Region.*

Planning Process Policies

- 1) Opportunities for citizen input will be provided at every stage of the planning and decision-making process and decision making shall only occur in an open, public environment.
- 2) Statutory hearing requirements will be recognized as an absolute minimum level of public involvement, and will be exceeded in all instances where public interest is evident. Public forums, direct mailings, and notices placed in local newspapers, will be used to inform the public of governmental activities on a regular basis.
- 3) The Town Plan and related planning documents will be reviewed on a regular basis and modifications made as appropriate to address changing circumstances.
- 4) Continue active participation in the Central Vermont Regional Planning Commission to

coordinate local planning activities with those of neighboring towns and the regions, and continue to support regional organizations which most efficiently provide services and facilities to local residents and those of surrounding towns (e.g., Waterbury-Mad River Valley Solid Waste Alliance).

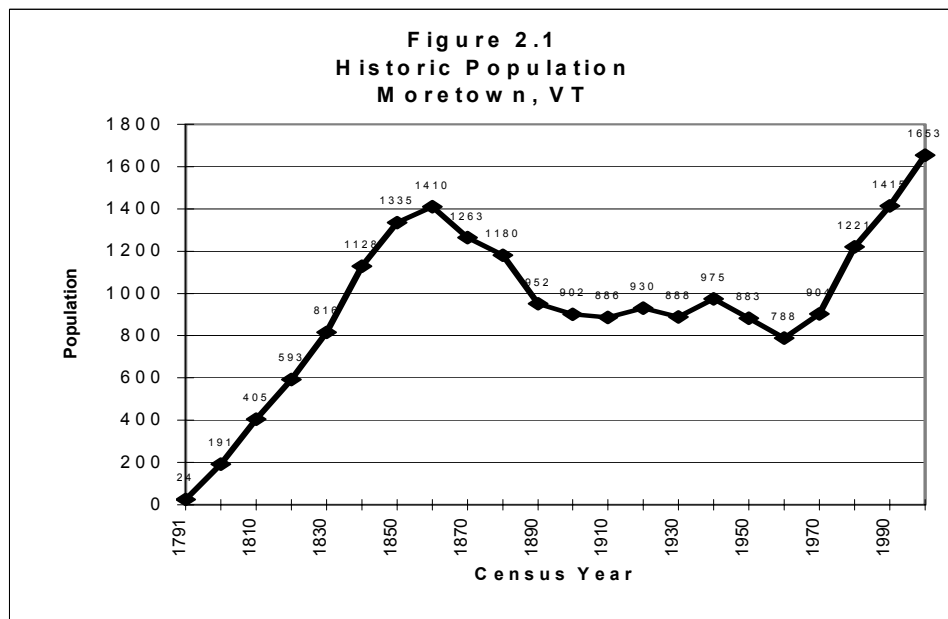
- 5) Review and consider on a regular basis the costs and benefits of joining the Mad River Valley Planning District.
- 6) Provide neighboring towns with an opportunity to comment on local matters of concern through notification of pending decisions which may affect them.

CHAPTER 2. POPULATION

Trends

Moretown's population has generally followed the same pattern of growth, subsequent decline and recovery as that of most Vermont communities. Having peaked in 1860, the town's – and state's – population declined sharply until the turn of the last century. Remaining fundamentally stagnant for the first half of the 1900s, the number of Moretown residents declined to a level in 1960 not seen since the 1830s.

Since 1960, however, the town's population has risen steadily, exceeding historic levels in 1990 and continuing to increase into the 21st century. Population trends, from Moretown's earliest settlement by Europeans until the most recent census, are presented in Figure 2.1.



Population figures for Moretown show a significant increase during the past decade and forecasts predict continued growth. The Town's population grew by 16.8% in the 1990's (as compared to 5.7% for Washington County). With the exception of Northfield, each of Moretown's

	1990	2000	% Change
Berlin	2,561	2,864	11.8%
Duxbury	976	1,289	32.1%
Fayston	846	1,141	34.9%
Middlesex	1,514	1,729	14.2%
Moretown	1,415	1,653	16.8%
Northfield	5,610	5,791	3.2%
Waitsfield	1,422	1,659	16.7%
Waterbury	4,589	4,915	7.1%
Washington County	54,928	58,039	5.7%

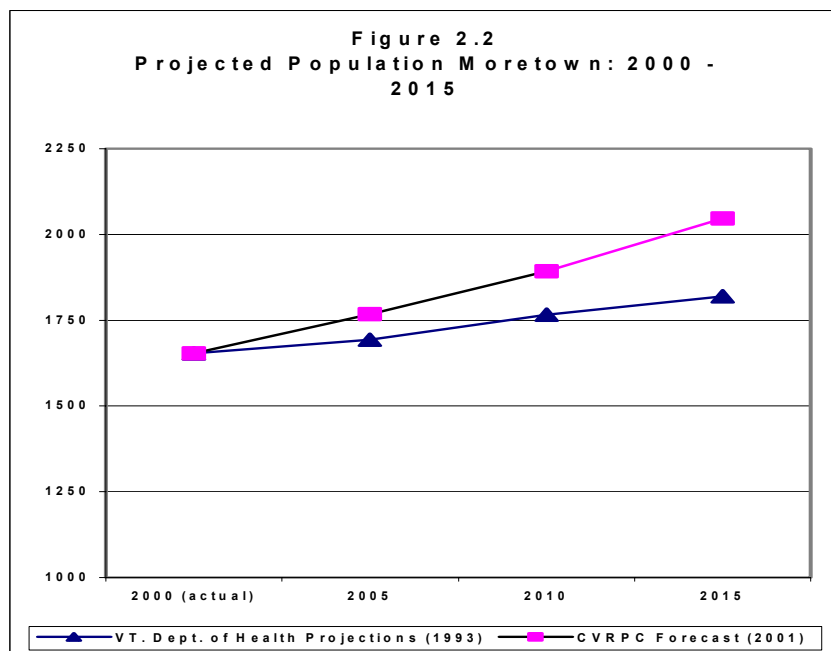
Source: U.S. Census

neighboring communities experienced population growth greater than the county as a whole, with the Mad River Valley towns showing the greatest rate of change. Population changes between the 1990 and 2000 census are presented for Moretown and adjacent communities in Table 2.1.

According to the University of Vermont Center for Rural Studies, approximately 68% of Moretown's population growth during the 1970's was due to in-migration (people moving to town). During the 1980s, however, nearly 90% of the population change was attributed to natural increase (the number of local

births minus local deaths).

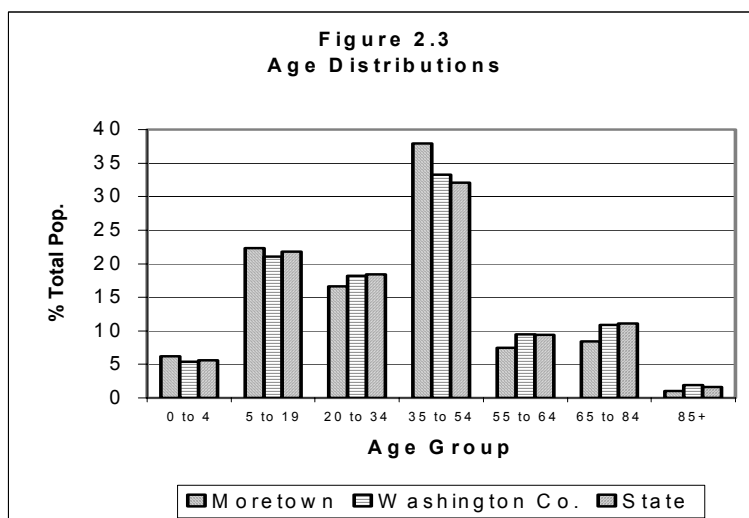
A review of vital statistics data for the 1990s, provided by the Vermont Department of Health, indicates that approximately 40% of Moretown's population growth between 1990 and 2000 (95 new residents) can be attributed to natural increase, with 60% of the increase resulting from in-migration. The relatively high percentage of the local population over 35 years of age – coupled with the relatively low percentage of residents aged between 20 and 25 – will likely result in a greater share of future population growth being attributable to in-migration.



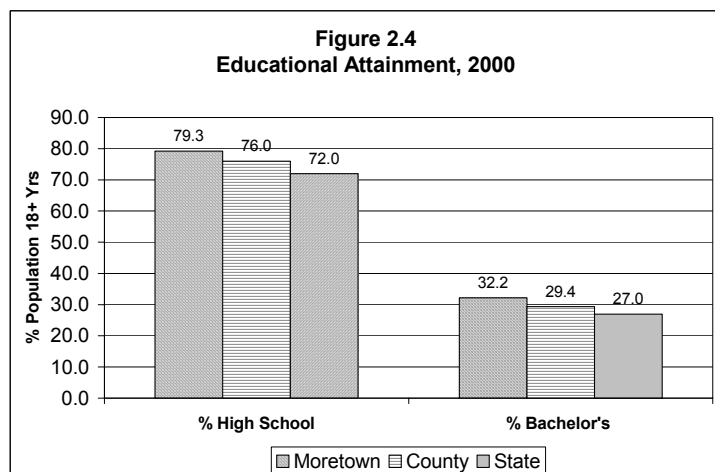
In addition to past trends, future population changes should be considered to avoid unanticipated burdens to the community. The Vermont Department of Health published population projections for Vermont towns in the mid-1990s. Those projections provided a slightly low forecast of Moretown's 2000 population (1,623 projected population versus 1,653 actual population). According to CVRPC estimates, by 2020, nearly 600 people will be added to Moretown's population (for a total of 2,301)*¹.

Population Characteristics

Like Vermont as a whole, Moretown residents are predominately white (98.2%) and evenly split between males and females (49.9% and 50.1%, respectively). Despite having a median age similar to the county and state (38.2 years, compared with 37.7 for the state and 38.5 for the county), Moretown has a proportionately higher percentage of the population under 19 years of age, and a proportionately lower percentage over 65. A breakdown of Moretown's population, by life-cycle age categories, is presented in Figure 2.3.



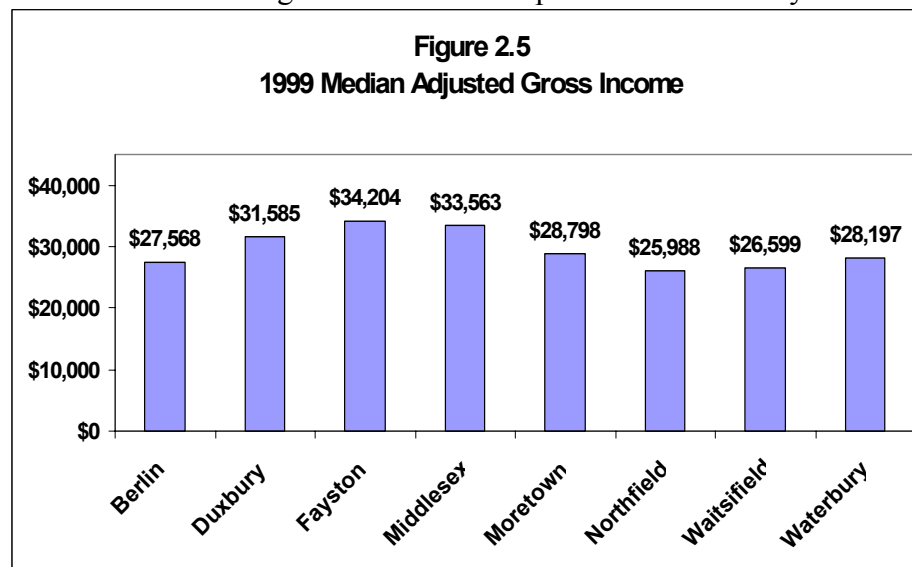
¹ Based on information provided in the CVRPC Northwest Growth Study and Build-out Analysis.



While this would appear to indicate a lower median age, Moretown has a relatively large population of people in the 35-54 age range. This high percentage of “baby-boomers” is likely the result of the high level of in-migration during the 1970s, and would explain the high rate of natural increase during the 1980s and 1990s as the town mirrored a nationwide trend of a baby boom “echo,” in which many baby-boomers in their 30's opted to have

children.

Characteristic of baby boomers and their offspring, a large percentage of Moretown residents have secured a college education in comparison to the county and state (Figure 2.4).



Surprisingly, however, according to 1990 census figures a slightly lower percentage of the population (aged 18 or older) have completed high school.

In 1999, Moretown residents' income was comparable with neighboring communities (see Figure 2.5), all of which enjoyed higher incomes than the state average of

\$25,508. Moretown's 1999 average income reflects a modest increase from a 1995 median of \$25,368 (this figure is not adjusted for inflation). The median adjusted gross income was slightly higher than the average wage paid employees working in Moretown (both residents and non-residents) during the same year (\$27,019). That figure does not include wages earned by sole proprietors working in town.

A final population characteristic, related to income, is the percentage of Moretown residents receiving state assistance. As of 2001, only 0.4% of local residents received aid to families with needy children, and 1.4% received foodstamps. According to the Vermont Department of Prevention, Assistance, Transition and Health Access (PATH), 8.1% of the town's population is eligible for social services, compared with 21% of the county's population.

Planning Considerations

- A relatively large percentage of Moretown's population is comprised of families with children under 18 years of age.
- Despite the large population under 18 years of age, the disproportionately high number of residents between 35 and 54, and disproportionately low percentage between 20 and 34, may indicate that the town's school age population is experiencing a "bubble" that will decline in future years as the bubble moves through the school system.
- A relatively low percentage of Moretown's population is elderly (65+ years of age), and it does not appear that this segment of the population will increase significantly in the next ten years.
- Moretown's population growth, which was heavily influenced by natural increase during the 1980s, has shifted to a greater percentage of growth being attributable to in-migration during the 1990s (as was the case during the 1970s). Considering the make up of the current population, in-migration will likely be the dominant factor in population growth in the coming years.
- Moretown should expect a population between 1,750 and 1,850 in 2005, which will likely increase to more than 2,000 by 2015.
- Moretown has a relatively low percentage of residents eligible for state assistance, although the number of residents actually receiving assistance is considerably lower than those eligible.

Population Goal

- 1) *A reasonable rate of growth and development that does not overburden existing or planned facilities and services.*

Population Policies

- 1) Accommodate, through land use, housing and community facilities goals and policies, a level of development over the next 10 years that does not exceed an average annual rate of population growth between 1.4% and 1.8% (between 23 and 30 new residents annually).
- 2) Encourage, through land use and housing goals and policies, a socially and economically diverse population.

Population Tasks & Strategies

- 1) The Planning Commission will:
 - review U.S. Census data after its release;
 - monitor population and housing estimates, prepared by the Vermont Department of Health, on an annual basis;

- track annual permit data to identify correlation between housing development and population growth.
- 2) The Planning Commission will consider regulatory tools to manage the rate of development in the event that population growth exceeds the rate referenced in the aforementioned policies.
 - 3) The School Board and/or Planning Commission should periodically review and update population and enrollment projections.
 - 4) The Planning Commission should prepare a Capital Budget and Program, for submission to the Selectboard, to schedule capital improvements relative to anticipated population growth.
 - 5) Planning Commission and/or Selectboard shall exercise party status in the Act 250 development review process and other state regulatory proceedings, as appropriate, to ensure that the Town's growth needs and limitations are properly addressed respective of this Town Plan.

CHAPTER 3. HOUSING

Trends & Characteristics

Moretown is a rural community with a traditional Vermont village situated along one of the state's most scenic highways. Housing is concentrated in the village and areas contiguous to adjacent villages (Waterbury, Middlesex and Northfield), as well as in the old farmfields and other areas around Moretown.

According to the U.S. Census, there were 727 housing units in Moretown in 2000, 650 of which were comprised of year-round households. The total number of housing units increased by 13.8% from 1990, from 639 units – an increase of 88 homes. Map 3-1 shows the location of structures throughout town. Information regarding the housing stock for Moretown and surrounding communities is provided in Table 3.1.

Table 3.1							
2000 Housing Data for Moretown & Surrounding Communities							
	Total	% Vacation	% Occupied	% Owner	% Renter	Owner Vacancy	Rental Vacancy
Moretown	727	8.7	89.4	77.5	22.5	0.6	0
Berlin	1172	2.6	94.6	80.5	19.5	0.4	2.3
Duxbury	569	10.2	87.5	84.1	15.9	0.7	1.3
Fayston	900	44.6	53.8	79.3	20.7	1	3.8
Middlesex	719	4.9	92.2	87	13	0.5	5.5
Northfield	1958	3.4	95.9	68.4	31.6	1.2	3.4
Waitsfield	908	17.5	80.8	71.3	28.7	0.6	1.9
Waterbury	2106	2.8	95.5	70	30	0.6	1.3
Washington Co.	27644	11.2	85.6	68.5	31.5	1	3.5
Vermont	294382	14.6	81.7	70.6	29.4	1.4	4.2
Source: U.S. Census 2000							

The majority of the town's 727 housing units are comprised of year-round households. Only 14 of the 664 year-round units were vacant. In 2000, there were 63 seasonal dwellings (vacation units including camps). Of Moretown's neighbors, only Waitsfield, Fayston and Duxbury had higher percentages of seasonal dwellings (17.5%, 44.6% and 10.2%, respectively). This may indicate that Moretown experiences some pressure for vacation homes associated with the Valley's tourism industry.

The ratio of owner-occupied to renter-occupied dwellings is comparable to surrounding communities, although Moretown has a higher percentage of owner-occupied units than the county and state. Adjacent towns with larger village centers (Waterbury, Waitsfield) and large transient populations (Northfield) tended to have a higher percentage of renter occupied dwellings.

The town exhibited a very low vacancy rate (0.6%) for owner-occupied units, compared with a vacancy rate of 1.0% for the county and 1.4% for the state. Moretown's vacancy rate was generally comparable with neighboring communities. The vacancy rate for renter-occupied units, however, is too low to be reported, in comparison with a rate of 3.5% for the county and 4.2% for the state. Each of the neighboring communities reported higher vacancy rates for renter-occupied units, indicating that the demand for rental units in Moretown far exceeds the current supply.

Information available from the Moretown Grand List in 2000 provides additional insight with regard to housing trends in Moretown, including:

- the number of vacation homes has remained fairly stable over the past five years, as has the number of year-round homes on less than 6 acres (R1 properties);
- by far the greatest increase in residential properties has been in residential properties greater than 6 acres (R2 properties);
- the number of mobile homes in town (51) has declined steadily in recent years; and
- approximately 140 apartment units (dwellings other than single family homes, including condominium units) existed in Moretown in 2000.

In addition to information regarding the housing stock, the census also provides information concerning household characteristics. Households refer the inhabitants of dwelling units occupied on a year-round basis. This information is presented in Table 3.2.

Table 3.2						
2000 Household Characteristics						
	Households	% w/ <18	%w/>65	% Nonfamily	% 65+ alone	Avg. Size
Moretown	650	37.2	18.3	32.8	7.7	2.54
Berlin	1109	35.2	24.5	30.2	10.5	2.46
Duxbury	498	33.9	15.9	32.1	6.2	2.52
Fayston	484	31.4	16.9	35.5	5.6	2.36
Middlesex	663	39.8	13.9	26.7	5.3	2.61
Northfield	1819	34.6	21.7	32.7	9.7	2.46
Waitsfield	734	29.8	19.1	33.9	6.5	2.26
Waterbury	2011	34.4	19.3	34.3	9.5	2.42
Washington Co.	23659	32.6	22.1	36.4	10.2	2.36
Vermont	240634	33.6	22.5	34.4	9.5	2.44
Source: U.S. Census, 2000						

The number of persons per household in Moretown is above the state average for owner-occupied dwellings. This may be attributable to the number of young families in Moretown, as

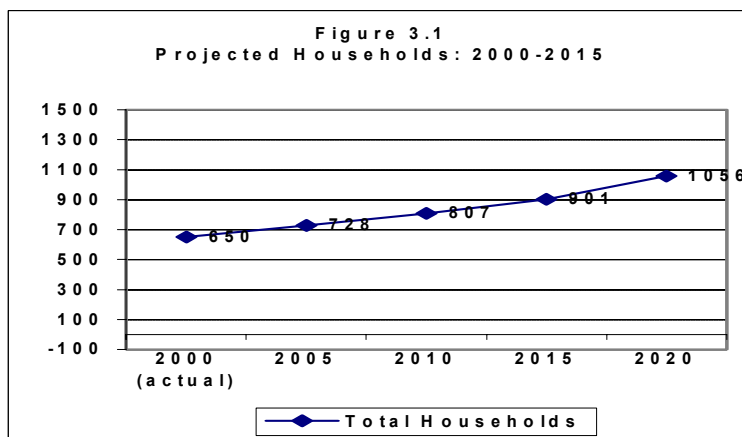
indicated by the town's smaller elderly population (65 years or older) relative to the county or state. Moretown's household characteristics generally mirror the town's population characteristics discussed in Chapter 2.

Housing Development

The majority of recent housing development has involved the construction of single family homes on parcels larger than 6 acres. Most new construction in 2000 and 2001 has occurred in the Mad River watershed in close proximity to Route 100 and Route 100B (see Chapter 7. Land Use). Despite the construction of several multi-family projects in the 1980s, including the 24-unit Moretown Commons and the 16-unit Fairground Apartments off Route 2, no new multi-family dwellings have been constructed in recent years. Local zoning permit activity for new dwellings, since 1996, is shown in Table 3.3.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1-Family	6	4	12	6	11	10	7	8	4	12	15
Camp	-	-	-	2	2	1	2	-	1	2	1
Multi-Family	-	-	-	-	-	-	-	-	-	-	-

In addition to developing population projections for CVRPC, Economic Policy Research Inc. also prepared housing demand forecasts for the next 20 years. The number of households in Moretown are projected to increase at an average annual rate of 2.5% for the 20 year period – nearly double the 1.3% average annual rate of growth forecasted for Washington County. A total of 373 new housing units are expected between 2000 and 2020 (for a total of 1,023 or 57% growth)*¹. In fact, only neighboring Duxbury and Fayston are predicted to have higher (2.6%) average annual increases. The towns of Middlesex and Worcester are also predicted to experience a 2.5% annual increase over the 20 year period. Moretown's projected growth – which translated to 406 new households by 2020, for a total increase of 62% – is presented in Figure 3.1.



It is worth noting that the projected increase in the number of households exceeded projected population growth. This indicates that the size and composition of households is expected to change, with smaller households likely to be comprised of older residents and more non-traditional families. If the general make-up and average size of existing households does not

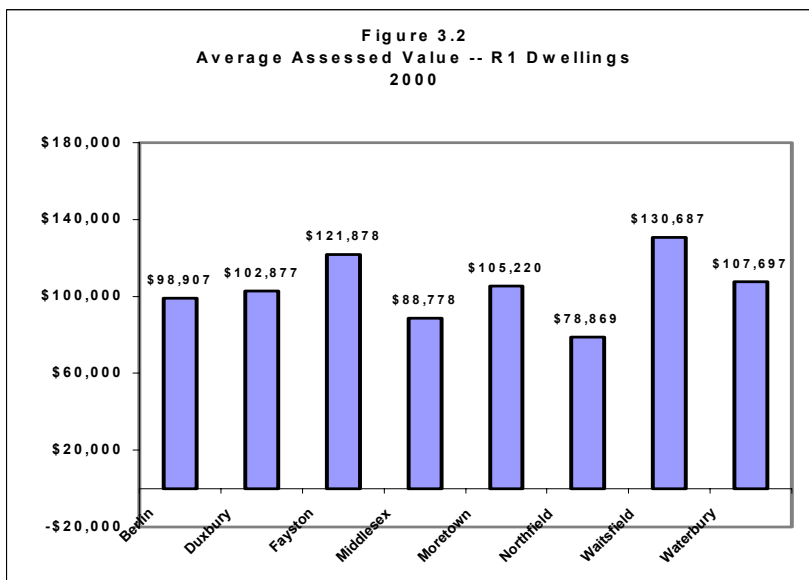
¹ Based on information provided in the CVRPC Northwest Growth Study and Build-out Analysis.

change significantly, the projected addition of approximately 157 households over the next 10 years will result in a population increase beyond the projected average annual increase of 1.6% discussed in the previous chapter. Based upon the current average household size of 2.54 people, 182 new households would result in an increase of approximately 400 people over the next 10 years.

Monitoring growth in population and households will identify whether changes in average household characteristics are occurring. Without such monitoring, however, a more reasonable rate of household growth, relative to the projected population increase, is an average of no more than 2.0% over the next 10 years (an average of 13 households per year over the 10 year period). Such a growth rate would be significantly higher than the 1.4% average increase in new dwelling units experienced during the 1990s.

Housing Affordability

The Vermont Department of Taxes provides data concerning the average assessed value of year-round dwellings located on less than 6 acres (R1 dwellings). Estimates for Moretown and neighboring towns for the year 2000, which are based on equalized grand list data, are included in Figure 3.2.



Based upon the Department of Taxes data, Moretown's housing values are generally comparable with neighboring towns, with higher values being found in the Mad River Valley towns of Fayston and Waitsfield, and Northfield having the lowest values. It is useful to compare assessed values with recent property transfers for an indication of whether actual sales prices reflect the current assessed values. In 2000 the average sale of an R1 dwelling was \$207,500 or 97% more than

the average assessed values of R1 dwellings.

In 1995, the Moretown Planning Commission conducted a survey of local residents to determine, among other items, whether a housing shortage existed in the community. That survey was supplemented by a limited analysis of the housing stock and available demographic and economic data. At that time, the Commission concluded that the town did not have an affordable housing problem in that local incomes were relatively high and local housing costs relatively affordable. Since that time, however, the limited availability of affordable housing within the County and state has become a matter of serious concern.

According to the Vermont Agency of Development and Community Affairs, housing is

affordable when households with incomes at or below county median pay no more than 30 percent of their net household income on housing costs. Housing costs for renters include rent and utilities, while housing costs for homeowners include principal, interest, property taxes and insurance. Table 3.4 presents a simple analysis of the Affordability of Moretown's owner-occupied housing stock, based upon the median income for the County, the Town and the average wage paid to workers employed in Moretown relative to the average assessed value of single-family homes on less than 6 acres.

It is important to note that Table 3.4 provides a very generalized indication of affordability and should not be considered conclusive. More recent information is available from the "Vermont Housing Data" website (<http://www.housingdata.org/profile/resultsMain.php?town=023060>), however, this new information has not been integrated into Table 3.4.

Table 3.4 Housing Affordability Analysis							
Household Income Estimates	Income	Monthly Gross Inc [x.12]	Monthly Costs [x.30]	Monthly Payment [x.80]	Mortgage Amount [@7.5%]	Price w/ 5% Down [x.95]	R1 Gap [@\$105,220]
1999 HUD County							
Median	\$45,800	\$3,817	\$1,145	\$916	\$131,000	\$111,860	\$6,640
Low (80%)	\$36,640	\$3,053	\$916	\$733	\$104,800	\$89,488	(\$15,732)
Very Low (50%)	\$22,900	\$1,908	\$572	\$458	\$65,500	\$55,930	(\$49,290)
MAGI (x2)							
Median	\$57,596	\$4,800	\$1,440	\$1,152	\$164,700	\$173,700	\$68,480
Low (80%)	\$46,077	\$3,840	\$1,152	\$922	\$132,000	\$138,700	\$33,480
Very Low (50%)	\$28,798	\$2,400	\$720	\$576	\$82,000	\$86,300	(\$18,920)
Avg Wage (x2)							
Average	\$54,038	\$4,503	\$1,351	\$1,081	\$154,600	\$162,600	\$57,380
Low (80%)	\$43,230	\$3,603	\$1,081	\$865	\$123,700	\$130,200	\$24,980
Very Low (50%)	\$27,019	\$2,252	\$676	\$540	\$77,200	\$81,200	(\$24,020)
Notes:							
1) Housing is defined as "affordable" when households with incomes at or below median income pay no more than 30% of their gross income on household expenses.							
2) Median county income reported is for a family of four on 4/6.2001 [US Dept. of Housing and Urban Development]. Although the income figure is for a different year than the other figures, it was included for illustrative purposes.							
3) Median adj. gross income as reported by the state for 1999; doubled to estimate household from 2 wage earners [VT Tax Dept.]							
4) Average annual wage reported by the state for 1999; doubled to estimate household income from 2 wage earners [VDET].							
5) Mortgage amount assumes financing for 30 years at a fixed rate of 7.5%.							
6) The median listed value of an R1 property in 1999 was \$105,220 [Moretown Grand List].							

Despite these limitations, the table does provide an indication that average housing costs are generally affordable to people with a range of incomes, including moderate income households and workers employed in Moretown earning an average wage. However, evidence indicates that housing affordability has become a significant problem since 2000. The relatively high housing

costs found in the Mad River Valley town's of Fayston, Waitsfield and Warren, and in Chittenden County, has placed additional pressure on housing costs in Moretown. Moretown's increasing affluence, desirability as a bedroom community, and proximity to the resort housing market may be having an effect on its housing market. According to the 2000 Census, the median housing value in Moretown ranked somewhat above that of Washington County (\$120,900 vs. \$105,200). Similarly, rents in Moretown were slightly higher than average. By 2005, the average price of a single family home in Moretown was \$224,357, a price exceeding the County average by almost 20%*². While it should be noted that "home price" includes only those homes sold in a given year, the startling difference in both raw numbers and comparison figures between 2000 and 2005 is noteworthy and would appear to suggest a dramatic increase in housing prices is occurring in Moretown.

Affordable housing is generally defined as housing that is no more than 30% of a household's income. Based on that, a family of 4 earning \$50000 per year would be able to spend no more than \$1250 per month on housing. In most places, the real estate market supplies adequate housing for families earning up to 80% of the area's median income. However, the 2006 "Mad River Housing Study"*³ found that Mad River Valley households earning up to 130% of the area median of \$69800 are priced out of the real estate market. With the high price of rental housing, households cannot save in order to purchase homes; Valley employers have trouble attracting workers because the workers cannot find Valley housing; and young adults who grew up in the Valley find that they cannot stay here.

Special Needs Housing

In addition to affordable housing for moderate income, housing for very low income Vermonters and people with special needs is also a consideration. Typically, housing for people with very low incomes requires some level of public support or subsidy. Presently, the 16-unit Fairground Apartments are the only subsidized units, two of which are handicap accessible. They are restricted for occupancy by elderly residents.

Planning Considerations

- Population growth during the 1990s was, not surprisingly, accompanied by moderate growth in the housing stock (1.4% average annual increase).
- The number of households is projected to continue growing over the next 20 years, at nearly double the rate experienced over the past decade.
- In contrast with the 1980s, growth in housing during the 1990s was attributable entirely to new detached, single-family homes; no multi-family housing was developed in Moretown in the past decade.
- The majority of housing development has occurred in the Mad River watershed, on large (greater than 6 acre) lots.
- Moretown's housing market appears to be influenced by the same general trends affecting

² Based on information provided in the CVRPC Northwest Growth Study and Build-out Analysis.

³ Released and June 2006 by the Mad River Valley Planning District.

housing demand in the western portion of Washington County, in addition to the tourism/second home development pressures in the Mad River Valley.

- The actual fair-market cost of housing (according to property transfer data) appears to be higher than the assessed fair market value (as evidenced by grand list data), indicating rapid appreciation of housing values in recent years.
 - Vacancy rates for both owner-occupied and rental housing is extremely low, indicating a very tight housing market.
- X Based upon simplistic analysis of housing affordability, there is indication that housing costs are high relative to local wage levels and incomes.

Housing Goals

- 1) *A sustainable rate of housing development to ensure safe and affordable housing for all Moretown residents and to accommodate the Town's "fair share" of regional housing growth, in a manner that does not overburden public services and maintains the Town's rural character and natural resources.*
- 2) *A diversity of housing types and prices in locations convenient to town facilities and services, and regional commercial centers, consistent with traditional settlement patterns.*

Housing Policies

- 1) Accommodate, through land use and community facilities goals and policies, a level of development over the next 10 years that does not exceed a 2.0% average annual rate of increase in the number of households (average of 13 new units/year).
- 2) Avoid a level of growth in housing development that exceeds an annual rate in excess of 2.5% for more than 3 consecutive years (16 households, annually).
- 3) The development of housing that meets the needs of a diversity of social and income groups, including elderly, low, and moderate income residents, will be supported under local development regulations, and in the provision of public facilities and services. Such housing should, however, be well integrated into the community and not be segregated in isolated locations away from community services and transportation options.
- 4) Encourage, through land use goals and policies, a diversity of housing types, including multi-family housing in appropriate locations, accessory dwellings, and manufactured housing.
- 5) Moretown's existing subsidized housing should be maintained as long-term affordable units.
- 6) The annual rate of housing growth should not exceed the ability of the Moretown School to absorb the growth in the number of pupils.

Housing Strategies & Tasks

- 1) Maintain those provisions of the Town's zoning bylaws that encourage a diversity of housing types, including:
 - establishing a minimum lot size of one acre in those areas of Town appropriate for moderate density residential development, and one half acre in Moretown Village;
 - allowing multi-family housing in those areas with good access to public services;
 - avoiding any distinction between manufactured housing (e.g., mobile homes, modular and other pre-fabricated housing) and single family homes;
 - allowing accessory dwellings in accordance with standards that are less restrictive than required by state statute; and
 - encouraging planned residential developments (PRDs) to promote creative site design to minimize development costs; allow for a mix of housing while preserving natural resources and open land; and, in appropriate instances, provide a density bonus to projects which include affordable housing units.
- 2) The Planning Commission and/or Selectboard should support the efforts of regional and state agencies to maintain and develop housing units that are affordable to people of low and moderate incomes and other special needs populations, providing the units meet the other goals and policies of this plan.
- 3) The Planning Commission will:
 - review U.S. Census data after its release;
 - monitor population and housing estimates, prepared by the Vermont Department of Health, on an annual basis;
 - track annual permit data to identify the rate of housing development;
 - update the 1995 "Moretown Affordable Housing Survey"; and
- 4) The Planning Commission will consider regulatory tools to control the rate of development in the event that housing development exceeds the rate referenced in the aforementioned policies. Should this option be explored, however, special consideration will be given to exempting special needs housing (e.g., housing for elderly or low-income households).
- 5) The Moretown School Board will forecast student population growth over a 5 to 10 year period. These forecasts will be provided to the Select Board, Planning Commission, and Development Review Board.

CHAPTER 4. NATURAL & CULTURAL RESOURCES

Town Setting

Moretown is located in west-central Washington County, entirely within the Winooski River drainage basin. The town is defined by mountains and river valleys, with the Northfield Mountain Range being a central feature. Consequently, Moretown is located within both the Dog River watershed and the Mad River watershed, with extensive bottomland along the Mad River serving as another principal feature of an attractive landscape.

Elevations range from a height of land above 2,500' mean sea level (msl) near the summit of Bald Mountain along the Waitsfield boundary, to below 500' msl where the Winooski River enters Waterbury and Duxbury. Elevations along the ridge of the Northfield Range generally slope downward in a northerly direction toward the Winooski River. The summit of Chase Mountain, east of the main ridge of the Northfield Range, reaches a height of 2,080' msl; Mount Cobb, located west of the Mad River, reaches nearly 1,600' msl.

Historically, the town's settlement patterns have been influenced by natural land forms and the distribution of natural features. The integration of natural and cultural features, unique to every community, combines to form a distinct character that is valued by local residents. This chapter describes the unique blend of natural and cultural resources which shape the town's character, identifies threats to those resources, and provides strategies for their use and protection.

Rural Character

Moretown is fortunate to retain much of its rural character. That character is shaped by a blending of complementary cultural and natural features (see Map 4-1), most of which are discussed in greater detail elsewhere in this and other chapters of the Plan. It is useful to consider how these diverse features combine to shape the town's rural character. For the purposes of this Plan, rural character is defined by the following elements:

- A **working landscape**, defined by the productive use of land for farming and forestry. Although local residents are increasingly less dependent upon the land for their livelihood, the town's landscape and historic settlement pattern are among Moretown's most important attributes.
- A healthy **natural environment**, including clean air and water, expanses of open land, healthy wildlife populations, and public commitment to protecting those resources.
- A respect for **tradition**, including the preservation of historic buildings and support for local institutions and organizations.
- A **rural lifestyle** marked by relative privacy, peace and solitude; access to the land and nature; a lack of formality; and a strong sense of independence and individualism that is coupled with, though not always balanced with, a perception of community spirit and shared responsibility.

Soils & Earth Resources

Moretown's soils are generally comprised of glacial till. Details regarding the distribution of soil types, their characteristics and suitability for a variety of land uses, are provided in the *Soil Survey of Washington County*, published by the U.S. Natural Resource Conservation Service (NRCS).

- **Development Suitability:** Historically, development has relied upon on-site septic systems for waste disposal. Thus, soil conditions are a critical factor in determining the location and intensity of development. The Town and State regulate wastewater disposal. These regulations require on-site disposal (septic) systems to be designed in accordance with the Agency of Natural Resources Small Scale Wastewater Treatment and Disposal Rules. These rules establish design standards dependent, in part, upon site and soil conditions. The Agency of Natural Resources recently (2002) amended the wastewater disposal rules (which the town has adopted by reference in its on-site sewage disposal ordinance). These rule changes were designed to provide greater flexibility and utilization of modern septic system designs, making it feasible to develop in areas that were previously unsuitable.

The NRCS has evaluated predominant soil types in Vermont and placed them into categories corresponding to their suitability for on-site disposal. The original classification system included seven categories. However, NRCS's classification system was modified (2003) to match the changes made to the State of Vermont's Environmental Protection Rules noted above. The new classification system includes five categories. Under the old system approximately 75% of Moretown's land area (19,350 acres out of 25,740 acres) was classified as marginally suitable or unsuitable for on-site systems (class 5-6 and unrated). The remaining 25% (6,336 acres out of 25,740 acres) was considered generally suitable. Under the new system the amount of land considered generally suitable for on-site systems increased to 64% of Moretown's land area (16,554 acres out of 25,740), a significant increase.

Figure 4.1 Moretown Septic Suitability by Soil Classification		
Soil Category	% area	Acres
I-Well Suited		1346
II-Moderately Suited		15208
III-Marginally Suited		5410
IV-Generally Not Suited		3479
V-Not Rated		297

Source: VT NRCS

Map 4-3 shows the distribution of these soil categories throughout town. *It is important to note that the scale of the map and inventory is not suitable for site-specific analysis.* The nature of soils is that isolated pockets of suitable materials for on-site disposal may be found in unlikely locations surrounded by otherwise unsuitable soils.

- **Agricultural Soils:** Soils that are best suited for farming are classified as prime and statewide agricultural soils. Prime agricultural soils are those which, due to chemical and physical properties, possess the highest potential productivity and the fewest limitations for farming. They have high potential for sustained agriculture and little or no limitation for a wide variety of crops adapted to Vermont's climate. Soils classified as being of statewide significance have good potential for growing crops, but one or more limitations will restrict

the choice of crops and require more intensive management than soils in the prime category. Both categories are a finite resource upon which the future viability of agriculture depends. Approximately 530 acres of prime and 2,230 acres of statewide agriculture soils are located in Moretown, the most significant of which are those included as part of large tracts and/or currently under farm management (see Map 4-1). Cultural, economic and environmental issues related to agriculture and the preservation of farmland are discussed in greater detail under the Cultural Resources section of this chapter, and under Chapter 7 Land Use.

- ***Extraction of Earth Resources:*** No commercial mineral deposits have been located in Moretown, although several concentrations of sand and gravel (natural deposits) have been excavated over the years. Because of the importance of sand and gravel to the community for road maintenance and construction, some future extraction of these resources should be anticipated. However, the environmental and social impacts of large scale extraction need to be considered prior to development. Such impacts can be avoided or mitigated through careful site planning, operation and reclamation. Demonstrating, during the permitting process, that adverse impacts on neighbors and the Town will be minimized and adequate provision for site reclamation made, are an important means of avoiding problems.

Fragile Features

Fragile features include distinct environmental resources which serve important ecological functions, such as water filtration, wildlife habitat and stormwater retention, which are especially susceptible to degradation due to land use and development activities.

- ***Wetlands:*** Wetlands serve several ecological functions, including water quality enhancement, flood retention and wildlife habitat. Wetlands also pose severe development constraints associated with poor drainage and high water tables, although draining and/or filling wetlands for development has historically been common. In recent years, state and federal regulations have provided a degree of protection for Vermont's remaining wetlands.

Moretown does not contain expansive wetlands, but does have many smaller wetland areas. The National Wetlands Inventory (NWI), conducted by the U.S. Fish & Wildlife Service in the 1970s, identified 156 acres of palustrine (upland) wetlands in Moretown. This information requires updating since wetlands experience seasonal fluctuations and are subject to change due to land use activities. Furthermore, not all significant wetlands are identified by the NWI. The NWI does, however, give a general indication of the distribution and concentration of wetlands, which is depicted on Map 4-2.

- ***Floodplains:*** Floodplains are vital to the health of rivers and streams and the safety of the community. They serve as a "safety-valve" by retaining runoff during periods of heavy rain and spring thaw, and reducing the velocity of rivers and streams. Floodplains also improve water quality by filtering stormwater prior to reaching streams and rivers.

In addition to the ecological functions of floodplains, they pose limitations for development due to the hazards associated with periodic flooding. Harmful effects on channel capacity and downstream properties often result from filling, and there is risk of groundwater contamination from septic systems associated with typically high water tables. Finally, because floodplains are generally flat with gravelly soils, they are well suited to agriculture.

The Town has adopted floodplain regulations as part of its zoning bylaw which conform to federal requirements for participation in the National Flood Insurance Program (NFIP).

Restrictions are intended to protect life and property and allow property owners to obtain flood insurance, and mortgages, at affordable rates. These regulations apply to land within the 100 year flood zones depicted on the federal Flood Hazard Boundary Maps. Within these floodplain areas, building design standards are imposed to minimize property damage during flood events; within the designated floodway, however, building and land-filling is prohibited.

- **Steep Slopes:** Large areas of steeply sloping hillsides are a significant feature of Moretown's varied terrain. Such areas pose several land use and development challenges, including susceptibility to erosion and high rates of runoff, particularly when cleared for construction, agriculture or forestry.

The Natural Resource Conservation Service (NRCS) identified slope categories and development limitations associated with each category. Their findings are summarized in figure 4.2. Generally, slopes in excess of 25% should not be developed and clearing for agriculture and forestry should be conducted with careful attention to erosion control and stormwater management measures. Most development should also be avoided on slopes of 15-25%, although limited development may take place providing measures are taken to ensure slope stabilization, erosion control and down-slope protection from stormwater runoff.

Map 4-4 shows those areas characterized by steep slopes, which are generally concentrated at high elevations (above 1,300 feet msl) in the Northfield Range, on Cobb Hill and also found in locations along the Mad and Winooski River (e.g., Moretown gorge, the "Narrows" adjacent to Middlesex Village).

In addition to physical constraints, development on slopes may adversely impact the town's scenic landscape. Development on steep slopes, especially at higher elevations, tends to stand out from many vantage points in town, diminishing the scenic feature formed by a forested background. Special measures may be required to accommodate development in such areas, including the careful siting of structures, landscaping and screening to obscure the view of buildings, and control of outdoor lighting.

- **Natural Heritage Sites:** The State of Vermont maintains an inventory of rare, endangered and fragile environments. One such site has been identified in Moretown – a rare plant species located within the river gorge adjacent to Middlesex Village (see Map 4-1). The site is located on land owned by Green Mountain Power Corporation and is not considered threatened by current or planned management of the area.

Figure 4.2

Development Constraints Associated with Steep Slopes

Slope Recommended Management

0-3%	suitable for development, may require drainage improvements
3-8%	most desirable for development, having the least restrictions
8-15%	suitable for low density development with consideration given to erosion control, runoff and septic design
15-25%	unsuitable for most development and septic systems, construction costly, erosion and runoff problems likely
25%+	all construction should be avoided, careful land management required

Source: U.S. Natural Resource Conservation Service

Water Resources

The availability of clean, plentiful water is an asset which should not be taken for granted. A description of Moretown's water resources and threats to its quality is provided below.

- **Rivers and Streams:** As stated previously, Moretown lies within two of the Winooski River's most significant tributaries – the Mad and Dog Rivers. Smaller tributaries draining portions of Moretown include Jones Brook (including Herring and Kelley Brooks), which flows directly into the Winooski River, Cox Brook, which enters the Dog River in Berlin, and the upper reaches of Crossett Brook, which drains into the Winooski River in Duxbury. Approximately 7.5 miles of the main stem of the Mad River flow through Moretown, and the town's northern boundary is formed by over 7 miles of frontage on the Winooski River.

While the main stem of the Dog River is located in neighboring Berlin and Northfield, Cox Brook – which drains much of the eastern side of the Northfield Range in Moretown – is a significant tributary to the Dog. The Dog River is among Central Vermont's most productive trout streams. Recent efforts have focused on protecting riparian buffers along the Dog, providing fishing access, and stabilizing streambanks in a manner that prevents erosion and restores riparian habitat.

Unlike the Dog River, a significant segment of the Mad River flows through Moretown. The River provides a central focal point for the town's landscape and, according to the Agency of Natural Resource's unpublished state swimholes study, it is a recreational resource of statewide significance. Vermont 100B, which runs along the Mad River, was recently (2007) recognized as an official Scenic Byway by the Federal Highway Administration. The Mad River has also been the focus of one of the most comprehensive and broad-based citizen initiated, watershed planning and protection efforts in New England. The Friends of the Mad River, formed in 1990, have actively promoted a program of River advocacy, education and protection. In 1995 the Friends initiated a comprehensive public planning process which resulted in the publication of *The Best River Ever; a conservation plan to protect and restore Vermont's beautiful Mad River Watershed*.

The *Best River Ever* addresses a broad range of issues related to the health and well being of the Mad River. The breadth of topics addressed in the plan include water quality issues related to wastewater disposal and non-point run-off, the maintenance of riparian vegetation, farm and forestry practices and their impact on the River, wildlife, recreation and the cultural history of the River. Among the most important of the *Best River Ever's* recommendations are those designed to protect and improve water quality in the Mad River and its tributaries. Though developed for the Mad River, several of the issues addressed in the *Best River Ever*, and the proposed strategies, are generally applicable to all streams and rivers in Moretown. These include:

- **Water Quality**, which may be measured in a number of ways. The Friends of the Mad River currently sponsor the Mad River Watch program, which has monitored water quality in the Mad River and several tributaries every summer since 1986. For these purposes, water quality is measured by the level of *E. coli* bacteria in the River. *E. coli* is an indicator of the presence of human and animal waste and, as such,

generally indicates the extent to which untreated waste is finding its way into the river through inadequate septic or wastewater treatment systems. Among the most important means of maintaining water quality standards is through the proper siting, installation and maintenance of septic systems and controlling agricultural runoff.

- A specific threat to water quality is **non-point pollution** associated with surface run-off from impervious surfaces and erosion. Not only does run-off harm water quality through the addition of petro-chemicals, heavy metals and other toxins from parking areas and other facilities, it can cause excessive sedimentation endangering fish habitat. Proper stormwater management and erosion control, especially in close proximity to streams, for any project involving extensive clearing and on steep slopes, is absolutely critical to the health of rivers and streams.
- **Riparian vegetation** and buffer strips provide shade, stabilize streambanks, minimize erosion, filter sediment and stormwater run-off and provide habitat for a variety of wildlife. Ensuring an adequate vegetated buffer along all streams is critically important to the overall health and well being of rivers and streams.
- The specific threats to the quality and health of **upland streams** posed by development at high elevations, on steep slopes and in areas with poor soils. Not only does development in these fragile areas pose direct threats to water quality, but the extension of roads and utilities necessary to service such development often results in additional development pressure which further exacerbates erosion, sedimentation and habitat loss.
- **Groundwater:** Most Moretown residents and businesses obtain potable water from groundwater sources. Generally, private drilled wells and springs are the town's principal water supply. In areas of concentrated development, such as Moretown Village, the dependence on private water supplies and on-site sewage disposal on small lots raises the potential threat to water supplies. Opportunities for either community water supplies or wastewater treatment in these areas should be further explored.

Five public water supplies (e.g. water sources serving 10 or more service connections or 25 or more individuals at least 60 days a year) are located in Moretown. Groundwater is susceptible to contamination from the discharge of waste, chemicals and other contaminants within recharge areas. Federal clean water standards require that a source protection plan be prepared for every public system to guard against contamination. Such plans should be considered when developing local land use regulations to ensure that water supplies are not imperiled by future development activities within recharge areas. There are three identified source protection areas in Moretown, two of which are associated with private systems serving two housing developments, and one which serves the Moretown School. Neither of these sites has a history of contamination.

Air Quality

Air quality in Moretown, as in most of Vermont, is exceptional. The Town lies within a Class II “attainment” or “clean air” region as defined by Vermont’s Air Quality Implementation Plan. As such, moderate changes in existing air quality are permissible. As such, additional emissions – or air pollution – is permissible, although a maximum level of pollution, as defined by emissions, cannot be exceeded.

Given the lack of industrial development, local air quality concerns are limited mainly to emissions from traffic, especially during periods of peak traffic at congested intersections (e.g., Route 100 and Route 2), heating systems (e.g. woodstoves), some agricultural practices and the operation of the MLI landfill. Unlike the other sources, the landfill is subject to an air quality permit issued by the state. In Vermont, air quality standards exceed national air quality standards with regard to several types of emissions.

While local residents currently enjoy an abundance of clean air, the cumulative effect of existing pollution sources may increase with additional growth and may have a greater impact on air quality in the future. Of more immediate concern, however, are pollution sources emanating from out of state activities such as energy generation.

Wildlife Habitat

A variety of game and non-game wildlife species reside in Moretown, including white-tail deer, black bear, moose, coyote, mink, otter, fisher, bobcat, turkey, ruffed grouse and numerous species of raptors and migratory songbirds. While many species can thrive in close proximity to humans, this co-existence is tenuous in that modern human activities can have a harmful impact on many species.

No comprehensive inventory of species or their habitat needs has been undertaken in Moretown. Several natural features, however, are recognized as being critical to the protection of a wide range of species. These include:

- large tracts of undeveloped forest;
- wetlands;
- riparian corridors, especially those connecting large tracts of forest;
- 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 maintenance of large tracts of undeveloped forest, which remain along the Northfield Mountain Range, and physical connections (e.g. riparian corridors and travel corridors) to other large forest areas (e.g. Green Mountain Range) is critical to prevent wildlife populations from becoming isolated. The identification and protection of critical travel corridors, and development policies designed to maintain wide riparian corridors, is critical to maintaining the current diversity of species.

The Vermont Department of Fish & Wildlife is developing a database with habitat data and information related to 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. Both of these sources of information could help with future habitat identification and protection efforts.

Despite the lack of a comprehensive habitat inventory, the specific needs of several species have been identified in Moretown to varying levels of detail. These include the following.

- **Deer:** Deer are Vermont's most popular game species. The Vermont Department of Fish & Wildlife has estimated that approximately 3.79 deer per square mile may be found in town, indicating the presence of a healthy and stable population. In 2000, 134 deer were taken by licenced hunters in Moretown. Despite their relative abundance and adaptability to human activity, deer have specific habitat needs. Most important are adequate wintering areas (deeryards) to ensure survival during severe winter conditions. Deeryards are characterized by coniferous forest on predominately south or west facing slopes, typically below elevations of 2,000'. Not only are such areas critical to deer, but nearly half (169 species) of Vermont's vertebrate wildlife species rely on coniferous forests for at least part of their life needs. Approximately 3,785 acres of deeryard have been identified and mapped in Moretown. Large expanses are located along the sloping land that rises from the Mad River to the generally level plateau that runs parallel to the main ridge of the Northfield Range, including South Hill and Moretown Common (See Map 4.1).

In 2007 the Moretown Select Board and School Board established an 81 acre deeryard conservation easement on Moretown's Town Forest (a ~175 acre parcel of town own landed behind the elementary school). The easement is held by the Vermont Land Trust (VLT), and endorsed by the Vermont Agency of Natural Resources (ANR). The primary driver behind the establishment of the deeryard easement was the requirement that Moretown Landfill Inc. (MLI) mitigate for anticipated deeryard habitat disturbance relating to their proposed Cell 4 expansion. A detailed Town Forest Land Management Plan is currently (fall 2007) under development by the Planning Commission and the parties noted above. The Plan will articulate specific goals and policies related to the management of the Town Forest for recreation, wildlife habitat protection (deeryard specifically), education, hunting, and timber production.

- **Bear:** Because of the large land-area required to sustain viable populations of black bear, they serve as an "umbrella" species for Vermont wildlife. This means that if habitat for black bear is maintained, habitat for other species also will be maintained. Generally, bears require large tracts of undeveloped forest with specific habitat needs including large stands of mast producing tree species (e.g., beech, oak). The Vermont Department of Fish & Wildlife Service has also identified one such mast production area in Moretown, on the eastern slope of the Northfield Range.

Approximately 3,487 acres of bear habitat are located in Moretown – primarily in the Northfield range and the Cobb Hill/Stevens Brook area – and significantly larger tracts of core habitat may be found in the adjacent towns of Duxbury and Fayston. Travel corridors connecting these areas with the Northfield Mountain Range are an important means with which bear can travel between habitat, and access low elevation wetlands which serve as an

important food source in the early spring, and prevent populations from becoming isolated. Frequent bear sitings – and bear/vehicle collisions – have occurred on Route 100 in Duxbury, just north of the Moretown town boundary. These likely indicate the presence of a travel corridor linking core habitat in the Green Mountain Range with wetland areas located between Route 100 and Route 100B, south of Cobb Hill.

- ***Rare & Endangered Species:*** Endangered species in town are limited to the rare plant specie discussed above (under Fragile Features).
- ***Fisheries:*** Moretown’s streams and rivers support moderately healthy fish populations. Native brook trout populations are found in many upper watersheds, including Jones, Crossett and Cox Brooks. Limited stocking of rainbow and brown trout occurs in the Mad River and several small tributaries near the Winooski. Strategies to protect and improve Moretown’s water quality should also enhance the town’s fisheries. Maintaining or reestablishing riparian vegetation is a critical strategy for maintaining healthy fish habitat.

Forest Resources

Forest covers approximately 22,270 acres, or 87%, of the town. Existing forest cover is associated with low density residential development and privately owned undeveloped parcels under forest management. Unlike most neighboring towns, no state or federal forest land is located in Moretown. However, Moretown is fortunate to have a large (~175 acre) parcel of municipal forest land behind the elementary school. This land presents a number of opportunities to Moretown’s citizens, including recreation, hunting (outside the safety zone near the school), wildlife viewing, as well as educational opportunities for Moretown’s Elementary School Students. As noted earlier in this chapter, Moretown is currently in the process of drafting a detailed Municipal Forest Land Management Plan for the property.

Much of the private forest land in Moretown is under some form of forest management. The benefits of sound forest management include the ecological and recreational benefits to the public as well as the economic benefits available to landowners. To encourage the preservation and sound management of private forest land, the State of Vermont established a “use value appraisal” (current use) program to reduce the tax burden on owners of forest parcels larger than 25 acres that manage their property in accordance with a forest management plan approved by the County Forester. In 2001, 13,330 acres of forest land in Moretown was enrolled in the current use program (slightly more acreage than was enrolled the previous year).

The location of forest land, especially on level terrain in proximity to agricultural land, also provides opportunities to locate development in a manner that is well integrated into the existing landscape. In areas in which one or more fragile features exist, however, such development may not be appropriate and forest management activities should, at minimum, incorporate acceptable management practices (amp’s) to minimize soil erosion and impacts to surface waters.

Cultural Features

Cultural resources help us understand and celebrate our community heritage. These include archaeological sites; historic sites, structures and/or settlement patterns; and larger cultural landscapes that reflect the character of a time, place or economy. Moretown’s cultural resources

offer a link to the past, help define the town's present character, and provide a context for future growth and development

- ***Archaeological Sites***; Moretown's history dates back long before the founding of Vermont. It is assumed that native Americans ventured into portions of Moretown as far back as the Paleo-Indian period (10000 - 7500 BC). The most promising location for finding such artifacts is along the higher terraces of the Winooski River, adjacent to Middlesex and Waterbury villages. In addition to land along the Winooski River, at least one Paleo-Indian artifact (a fluted projectile point) has been documented along the Mad River, in the vicinity of the town's boundary with Waitsfield.
- ***Historic Sites and Structures***: Moretown's rural landscape is shaped by the integration of natural land forms, traditional land uses and the historic built environment. Nearly 100 properties have been listed on the Vermont Historic Sites and Structure Survey, completed by the Division for Historic Preservation in 1983. Properties included in the survey are eligible for listing on the National Register of Historic Places. The survey has not been updated for nearly 20 years, so it is possible that some historic structures have been lost, and that some additional structures have become eligible in that period. An update of the survey is needed to document currently eligible sites.

More than half of the identified historic structures are located in Moretown Village, which is eligible for listing on the National Register as a Historic District. Such a designation would make owners of commercial properties who restore their buildings eligible for tax credits. The designation also offers some protection against federal actions which could harm historic resources (e.g., expanding a road using federal money may only be allowed if it does not destroy historic features). Listing on the national register imposes no restriction on the use or alteration of the historic structures, and therefore provides only limited protection of these resources.

A portion of one such district exists in town, immediately south of the Village. The Mad River Valley Rural-Agricultural Historic District, which encompasses approximately 2,000 acres in Waitsfield and Moretown, including the area surrounding the Maynard Farm, recognizes the historic and cultural significance of the entire landscape bordering the Mad River. Placement of this district on the National Register is a fitting honor to the farmers whose dedication and hard work shaped the Town's landscape.

Historic structures are also located outside of Moretown Village and the Rural-Agriculture Historic District, especially in the vicinity of Moretown Common. Generally, these sites reflect the agricultural history of the community and include farmhouses and associated farm buildings, including barns. A recent survey of historic barns in the Mad River watershed, conducted by the Mad River Valley Rural Resource Commission, identified 37 barns built before 1950 that are 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 are no longer used for agriculture. Incentives for their upkeep include adaptive re-use provisions recently enacted in the town's zoning bylaw.

- ***Open Space/Scenic Resources***. Despite the lack of public lands and aggressive land conservation efforts, Moretown is fortunate to have retained much of its rural character and

scenic landscape. This good fortune is tenuous, however, as land which was considered “undevelopable” a generation ago is now considered developable and highly desirable.

Moretown, unlike all of its neighboring towns, lacks large areas of protected open space. This leaves the Town vulnerable to future development pressure which has the potential of harming the community’s rural character, scenic landscape and environmental well being. In the future, it will be more important for the town to take positive steps to preserve those landscape features that define Moretown’s character. Those features generally include:

- open farmland and meadows, which often serve as the foreground for expansive views;
- forested knolls, steep mountain-sides and ridgelines which provide the unbroken background for most distant views;
- riparian areas along the Winooski and Mad River and larger tributary streams;
- scenic roads, especially those of a scale and character that discourage high speed travel while offering a pleasant walking and recreational environment;
- historic settlement patterns, including village centers and small clusters of buildings arranged around a common focal point, such as a road intersection or adjacent meadow;
- individual buildings which, because of their scale, character or historic significance, such as a large barn, serve as a visual and cultural focal point in the landscape; and
- publicly owned parcels which provide one or more open space value (e.g., habitat, recreation – see *Chapter 6. Community Facilities & Services*).

Two areas, in particular, are of critical importance to the town’s rural character and scenic landscape. These are:

- **Route 100B/Mad River Corridor:** The drive along the length of Route 100B is among the most beautiful in Vermont. The meandering river, broad flood plains, rolling hills and deep gorges combine to create a stunning landscape. Route 100B was recently (2007) recognized as an official Scenic Byway by the Federal Highway Administration. A volunteer citizen committee (100B Byway Committee) developed a detailed Byway plan outlining goals and objectives for the byway, and ideas on how to enhance and improve it.

The Planning Commission studied this route in 1999-2000 and concluded that most of its defining features are located within a broad corridor defined by a distance of 300 feet east and west of the 100 year floodplain. As a result of their analysis, the Commission prepared draft zoning provisions which would subject all development within the corridor to review by the Development Review Board to ensure that the development did not harm the historic and scenic character of the landscape. The Commission opted not to submit the zoning provisions to town voters, however, in order to solicit additional comments from affected landowners and town residents regarding the draft standards.

- **Northfield Range/Cobb Hill:** At the same time the Planning Commission was studying the Route 100B/Mad River Corridor, they undertook an analysis of Moretown’s high elevation lands. The Commission examined a number of physical features, including:
 - the location of areas characterized by steep slopes;

- the location of soils categorized as being unsuitable for on-site septic disposal;
- the location of existing residential development;
- the location of maintained Town roads and private driveways;
- visibility from distant vantage points;
- the location of large tracts of productive forest land; and
- the size and location of existing parcels.

Based upon these features, the Commission concluded that, with very few exceptions, above an elevation of 1,400' in the Northfield Range and 1,100' on Cob Hill existing development does not exist, parcels are relatively large and under forest management, Town roads and services also are very limited, land is generally characterized by poor soils and steep slopes, and is highly visible (with the 1,400' elevation corresponding with the very tops of several intermittent knolls west of the Northfield Range).

As was the case with the Route 100B/Mad River Corridor, the Commission prepared draft zoning provisions to protect these fragile areas from inappropriate development activities. And, as was the case with the other zoning provisions, the Commission opted not to submit the proposal to the voters until additional public outreach could occur.

- ***Protection Techniques.*** Both regulatory and non-regulatory tools are available to assist the Town with preserving its landscape, character and natural resources. The mix of such tools that are used, however, must be the result of an informed debate among the Town's residents and landowners. This is especially true with regard to regulatory tools, such as zoning provisions to protect farmland, fragile features and historic settlement patterns.

Non-regulatory and incentive based programs are generally more widely supported, and are an important supplement to land use and development regulations. This is especially true with the passage of Act 60 in 1997, which eliminated the relationship between a community's property wealth (grand list) and its ability to fund local education. There are several regional and state organizations working to protect open space and productive farm and forest land, such as the Vermont Housing & Conservation Board, Vermont Land Trust, and Mad River Watershed Conservation Partnership. Supporting the efforts of these – and other – organizations through membership and active participation, can go a long way in maintaining Moretown's character.

- ***Scenic Roads.*** Moretown's road network provides a popular vantage from which local residents can enjoy the Town's scenic landscape. In many instances, the road itself contributes to the quality of that landscape. Such features as tree canopies, stone walls and narrow, unpaved travel lanes contribute to the Town's rural character. Many of these same features serve to reduce vehicle speed, making them safer for automobile travel as well as other forms of transportation and recreation.

Scenic roads are identified on Map 5-8. Route 100B was recently (2007) recognized as an official Scenic Byway by the Federal Highway Administration. To maintain the features that contribute to the scenic qualities of these roads, those features should be identified and appropriate management strategies put in place to ensure that necessary maintenance may occur in a manner that does not harm those scenic features. The publication *Designating*

Scenic Roads: a Vermont Field Guide, provides a useful methodology to undertake such an inventory, as well as recommendations for developing maintenance strategies.

Planning Considerations

- Moretown is fortunate to have retained much of its rural character, which is highly prized by local residents and landowners. Careful planning can ensure that future development occurs in a manner that does not diminish the physical features that contribute to that character.
- The working landscape, defined by both commercial and noncommercial farm land and managed forest, is among the most important landscape elements that contribute to Moretown's rural character.
- Much of Moretown is characterized by one or more development constraints, including steep slopes, floodplain and limited soils capacity for on-site septic disposal. Recent and anticipated changes in technology and regulatory standards, however, will allow development in areas where such activity was either not possible or prohibitively expensive.
- Significant primary agricultural soils are found in town, generally associated with farming activities. Such soils are an important resource upon which future agricultural activity may depend.
- A diversity of wildlife lives in Moretown, although information is lacking with regard to the location, value and health of certain types of habitat (e.g., travel corridors); other habitat types are well documented (e.g., deeryards). Habitat can be degraded or lost as a result of scattered development and fragmentation through subdivision and associated development.
- A variety of rivers and streams – ranging from small headwater tributaries to the Dog and Mad Rivers to the main stem of the Mad and Winooski Rivers – flow through Moretown. The water quality in these water bodies may be harmed by a variety of land use activities.
- Groundwater resources, including three identified water supply source protection areas, are located in town. It is important that these areas be protected from contamination resulting from inappropriate land use activities.
- Historic and archaeological resources – such as Moretown Village – are important to the Town's character and cultural heritage and should be celebrated and protected.
- Very little protected open space and/or public land exists relative to neighboring towns, placing Moretown residents at a disadvantage regarding future access to open space.
- Both regulatory and non-regulatory tools are available to protect open space. With regard to regulatory tools, additional discussion is needed to identify public and landowners attitudes.
- The scenic nature of several public roads are a resource that should be safe guarded.
- The new State septic suitability classification system (adopted in 2003) increased the amount of land considered generally suitable for on-site septic systems. It increased from 25%

(6,336 acres out of 25,740 acres) of Moretown's land area under the old classification system to 64% (16,554 acres out of 25,740) under the new classification system.

Natural Resource & Cultural Resource Goals

- 1) *The responsible stewardship and sustainable use of Moretown's natural resources in a manner that protects and enhances the Town's environmental well-being for the benefit of future generations.*
- 2) *The preservation of Moretown's natural environment, rural character and historic working landscape.*

Natural Resource & Cultural Resource Policies

- 1) Prevent the fragmentation and/or destruction of fragile natural resources, including wetlands, and floodplain.
- 2) Prevent the further degradation of water resources and improve the quality of groundwater and rivers and streams.
- 3) New development should be accommodated in a manner that maintains and enhances the town's scenic resources and working landscape.
- 4) Encourage land uses and related activities which support the continued economic viability of local agricultural and forestry enterprises.
- 5) Support the efforts of local, regional and statewide conservation organizations to protect open space in the Town through voluntary programs (e.g., purchase of development rights).
- 6) Minimize land subdivision and associated development that results in the loss of productive farm and forest land.
- 7) Provide for the responsible extraction of renewable and finite natural resources for municipal and commercial purposes.
- 8) Maintain and upgrade Moretown's historic built environment and promote greater appreciation of the Town's heritage.
- 9) Protect fragile natural features through local and state land use and development regulations. At a minimum, such regulations shall allow development on slopes of 15 to 25% only in accordance with strict standards to limit site disturbance and avoid erosion and sedimentation of area surface waters.
- 10) Support the goals and objectives identified in the Route 100B Scenic Byway Plan.

Natural & Cultural Resources Tasks & Strategies

- 1) Protect and enhance the ecological health of local streams and rivers through:
 - ongoing administration and enforcement of the Moretown on-site sewage disposal ordinance;
 - continue to require, through local zoning bylaws, the maintenance of undisturbed riparian buffers sufficient to protect water quality and fisheries habitat in rivers and streams;
 - requiring that runoff and erosion are adequately controlled during all stages of development and road maintenance;
 - limiting development in 100 year floodplains to farming, recreation and other non-commercial and non-residential land uses, with the exception of those activities related to the maintenance and continued use of existing structures; and
 - supporting such organizations as the Friends of the Mad River, Friends of the Winooski River, the Natural Resource Conservation Service and other organizations in their efforts to restore degraded riparian areas (e.g., unstable, unvegetated streambanks), restore water quality and improve fishery habitat.
- 2) The Planning Commission should prepare amendments to the zoning regulations to protect groundwater resources by requiring consideration of potential impacts of development on source protection areas as part of the conditional use review process.
- 3) The Planning Commission should explore options for protecting natural and scenic resources through the following:
 - consideration, including discussion with affected landowners, of creating an Uplands Overlay Zoning District similar to the draft prepared by the Planning Commission in 2000;
 - consideration, including discussion with affected landowners, of creating a Route 100B/Mad River Corridor Overlay Zoning District similar to the draft prepared by the Planning Commission in 2000; and
 - the preparation of subdivision regulations to be submitted to town voters (similar to the draft prepared in 2006).
- 4) The Planning Commission should work with private conservation organizations and the Vermont Department of Fish & Wildlife to inventory critical wildlife habitat in town, including wildlife travel corridors, and to develop strategies for the preservation of that habitat.
- 5) The Planning Commission, in conjunction with the Historical Society and Village landowners, should explore the possibility of nominating Moretown Village as a historic district on the National Register of Historic Places.
- 6) The town should solicit the assistance of the Vermont Division for Historic Preservation to update the historic sites and structures survey of the town.
- 7) The Planning Commission, in conjunction with the Selectboard and Road Commissioner, should conduct an inventory of scenic roads and prepare management guidelines to maintain the scenic features of the roads while allowing for needed maintenance and upgrade.

- 8) The Development Review Board shall, through the conditional use review process, ensure that the extraction of gravel and other mineral resources does not permanently scar the landscape, adversely impact ground or surface waters, or unreasonably impact adjacent neighbors.
- 9) The Planning Commission should support, through technical assistance and advice, the efforts of local, state and regional conservation organizations to protect open space and scenic land described above. In addition, the Planning Commission and Selectboard should consider the creation of an open space fund to leverage other private, state and federal conservation funds and support local conservation projects.
- 10) The town should consider joining the Mad River Watershed Conservation Partnership via membership in the Mad River Valley Planning District.
- 11) Town voters should be asked to establish a reserve fund, funded with revenues from the host town agreement with MLI Landfill, for the purpose of acquiring property or interests in property for conservation, open space, recreation, and support of local agricultural activities. Whenever practical, such funds should be used to leverage private, state and or federal conservation dollars.
- 12) The Town should evaluate opportunities for community water supplies and waste water treatment facilities within the Village to protect public health and water quality.

CHAPTER 5. TRANSPORTATION

Trends

The major road through Moretown is Route 100B. It connects Route 100 south of Moretown Village with the Route 2 corridor and Middlesex Village (see Map 5-1). Route 100B is functionally classified as a major collector, however, in some respects it operates as an arterial as it provides a connection to Interstate 89 south for Route 100 motorists. Route 100B was recently (2007) recognized as an official Scenic Byway by the Federal Highway Administration. A volunteer citizen committee (100B Byway Committee) developed a detailed Byway plan outlining goals and objectives for the byway, and ideas on how to enhance and improve it. Small segments of Route 100 and Route 2 also are a part of Moretown's main road network and serve its commercial center at the Waterbury/Duxbury/Moretown town lines.

Traffic volumes (Average Annual Daily Traffic – AADT) have been monitored in Moretown by the Vermont Agency of Transportation (VTrans) since 1975. Data collection has been sporadic, but counts clearly show a steady increase in traffic over the past 25 years. In 1998, on Route 100B through the Village Center averaged 3,100 vehicles per day – an increase of 48% since 1977. The 2006 data indicates that it has increased to 3,600 vehicles per day. At the other end of Route 100B – immediately before its intersection with Route 2 in Middlesex Village – traffic volumes during the same period have increased 87% – from 1,500 trips in 1977 to 2,800 trips in 1998. The 2006 data indicates that it has increased to 3,000 vehicles per day. This same trend is evident on Route 100. There has been a 44% increase in average traffic volumes at the intersection of Route 100 and Route 2 since 1990, from 3,410 trips to 4,900 trips per day in 1998.

Traffic data for town roads is not as readily available as for state highways, although the limited information which is available indicates similar trends. For example, the average traffic volume on Town Highway 1 (Moretown Mountain Road), approximately 0.2 miles east of Route 100B, was 720 trips per day in 1999, up 200% from the 1975 average of 240 trips per day. Despite these increases, the cost of operating and maintaining the town's road network has remained relatively stable in recent years (see Figure 5.1). In fact, if adjusted for inflation, the annual costs have actually declined over the six-year period. These figures do not, however, include capital costs, such as new maintenance equipment or road, bridge or culvert reconstruction.

Table 5.1
Road Maintenance and Operation Costs 1995-2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Salaries & Benefits	\$ 85,734	\$ 92,217	\$ 98,410	\$101,975	\$101,445	\$105,947	\$119,070	\$120,945	\$124,195	\$137,824	\$118,310
Contracted Services	\$ 7,998	\$ 11,838	\$ 10,042	\$ 13,211	\$ 13,860	\$12,978	\$13,615	\$12,107	\$11,174	\$12,438	\$12,298
Road Work	\$ 28,845	\$ 30,296	\$ 27,697	\$ 16,237	\$ 33,622	\$25,112	\$32,295	\$21,904	\$14,559	\$12,314	\$28,398
Supplies (sand, gravel)	\$ 72,297	\$ 79,697	\$ 85,704	\$ 90,959	\$ 76,018	\$100,304	\$93,342	\$76,813	\$96,377	\$86,864	\$80,359
Town Garage	\$ 4,485	\$ 10,651	\$ 5,544	\$ 5,157	\$ 5,260	\$6,532	\$5,598	\$11,561	\$6,102	\$12,246	\$14,424
Vehicle. Maintenance	\$ 36,852	\$ 32,839	\$ 40,601	\$ 30,862	\$ 35,830	\$40,919	\$49,260	\$49,549	\$71,238	\$59,473	\$89,748
Equipment & Tools	\$ 4,476	\$ 3,320	\$ 5,917	\$ 5,351	\$ 2,336	\$2,490	\$15,046	\$13,353	\$8,329	\$6,949	\$6,268
Total Town Costs	\$240,687	\$260,858	\$273,915	\$263,752	\$268,371	294,281	\$328,226	\$306,231	\$331,974	\$328,108	\$349,805

Source: Town Reports 1996-2006

Road Network

Beyond the state network, the town maintains an extensive network of collector and local roads. These roads are designated as Class 2, 3, 4, or legal trail. Class 2 and 3 roads are defined for purposes of determining state aid and must be negotiable year-round, under normal conditions, by a standard passenger car. A Class 4 road is generally little traveled and used on a seasonal basis. Class 4 roads are usually the most marginal town highways, frequently narrower and more poorly drained than other highways in town. According to 19 V.S.A. 302, Class 4 roads and legal trails are defined as all highways not defined as Class 1, Class 2 and Class 3.

The state designates Class 2 roads, which typically provide access to neighboring towns; the town select board designates Class 3 and 4 roads. State aid per mile decreases from Class 2 to Class 3; total aid depends on the number of highway miles a town has in each class. No aid is provided for Class 4 roads and legal trails.

Moretown owns and maintains approximately 35.47 miles of road (see Table 5.2). They vary from heavily used regional collectors like the Mountain, Pony Farm and River roads, to lightly used roads serving primarily residents, to roads that no longer serve automobile traffic. Old Route 100, the beginning of River Road (Middlesex), and the beginning of the Mountain Road are the only town-maintained roads that are partially paved. The other 34 miles of road maintained by the town are gravel. In addition to town roads, the state maintains 12.24 miles of state highway (portions of Route 100, Route 2 and nearly the entire distance of Route 100B), and 14 miles of roads are Class 4 or privately owned and maintained.

Table 5.2 Moretown Road Classifications				
Road(s)	Mileage	Class	Function	Aid
Route 100B, 2, 100	12.24	State	Major Collector (Rte 100: minor arterial)	Federal, primary
Town Highways	10.73	Class 2	Minor Collector	Federal, secondary
Town Highways	24.74	Class 3	Local Access	Local, State
Remaining Roads	14.27	Class 4	Access	None
Total Miles	47.71			

Source: Moretown Mileage Certification 2000

There are three critical road intersections that warrant the town's attention. These include Route 100 and 100B, Mountain Road and Route 100B and Route 100 and Route 2. VTrans has identified a problem at the junction of Route 100 and Route 100B. In addition to the dangers associated with this intersection, VTrans has recommended shoulder widening and new paving. This intersection was repaved in 2007, however, visibility for motorists approaching the intersection on 100 southbound has not improved.

Another dangerous intersection is located at the north end of the Village where the Mountain Road meets Route 100B. Its steep slope, difficult angle and poor sight distance combine to create an engineering challenge. This section of the Mountain Road was paved in 2005 and repaved in 2007 to eliminate gravel running into Route 100B, however, this did nothing to improve site visibility or overall safety.

The intersection of Route 100 and Route 2 in North Moretown is another area of concern. The January 2002 Crossett Brook Middle School Conceptual Alignment Analysis for Pedestrian and Bicycle Connections concludes that there are wait times at the intersection during morning and afternoon rush hours but the wait time does not meet the threshold to warrant improvements. However, increased traffic volumes since 2002 may have tipped the scale. The analysis provided three options for improving the intersection when it is deemed necessary. The options are 1) left and right turn lanes; 2) signalization; or 3) round about.

The town has worked with the Central Vermont Regional Planning Commission since 2001 to create and maintain a culvert inventory. The inventory documents the location, measurements, type and condition of every culvert in town. The Town Road Commissioner provided the evaluation/condition of each culvert. The inventory has helped with maintenance planning as well as prioritization of culvert reconstruction. Similarly the Town has created a road inventory by capturing the classification and surface condition of every town road. The data has been entered into a Road Surface Management System (RSMS) for long-term management and prioritization of road improvements.

Bridges

The transportation network includes a number of major bridges across the Mad River as well as the 3-span Pratt truss bridge over the Winooski River. This Route 2 bridge built in 1928 is on the National Register of Historic Sites and Structures. Sufficiency ratings prepared by VTrans indicate the need for its reconstruction or replacement, which is in the later planning stages (as of

2007). Additionally, Moretown has five bridges in need of either significant repair or replacement:

- The Lovers Lane bridge over the Mad River is closed;
- The South Village bridge over the Mad River (Rte 100B, a minor collector, south of Village);
- Two crossings of Mountain Road over Cox Brook (a minor collector);
- The Fletcher Road bridge over the Mad River; and
- Munn's bridge (needs extensive work and re-painting).

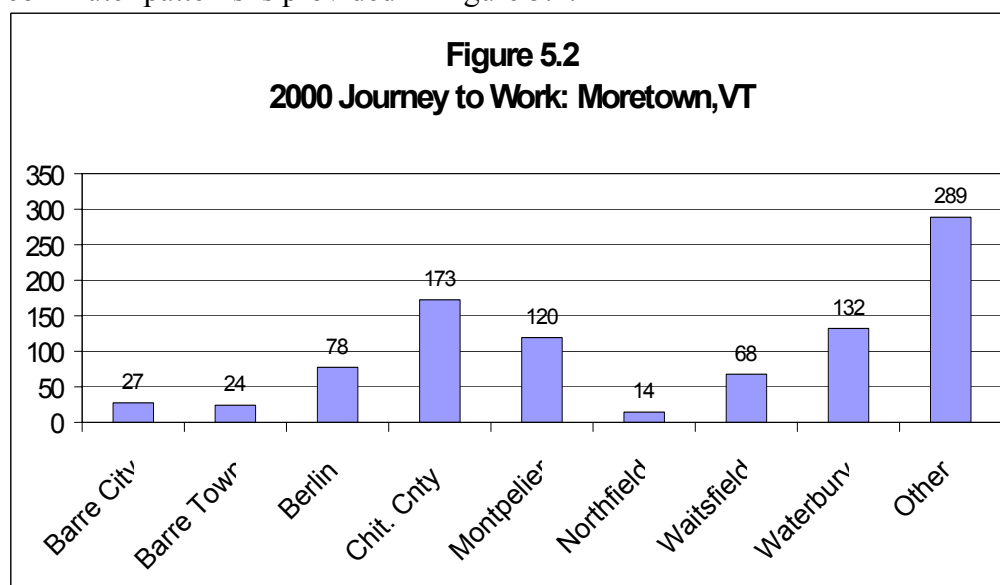
According to the Central Vermont Regional Transportation Plan (April 1996), the South Village bridge - the Route 100B bridge over the Mad River at the south end of the Village - should be repaired or replaced based on low AOT bridge sufficiency ratings for structural deficiencies. Because of its importance as a gateway to the historic Village – and the traffic calming function it plays in slowing traffic heading north into the Village – the replacement or reconstruction of this bridge should be carefully considered

VTrans releases periodic updates to its bridge inspection reports. The Town Road Foreman and Select Board should carefully review the report and stay involved with CVRPCs Transportation Advisory Committee.

Special Considerations

Commuting Patterns

In 2000, the vast majority of Moretown residents traveled to work alone in an automobile (76%, up 6% since 1990). In 1990, the most popular destination for local commuters was Montpelier, followed by Waterbury, Waitsfield and locations in Chittenden County. A breakdown of commuter patterns is provided in Figure 5.2.



Public Transit

Bus and other public transit services are limited in Moretown. Regional bus, rideshare and carpool/vanpool services are available through the Wheels Transportation Services, which also provides transportation services for eligible elderly and disabled clients. There is a Valley commuter service that links Montpelier to Warren with a designated bus stop at the Moretown General Store. The bus will stop at other locations on Route 100 and Route 100B upon request. Unfortunately, there is no designated area to park a vehicle and ride the bus or van. Wheels also provides a door-to-door service within the Mad River Valley for the elderly and disabled. Independent of Wheels, the App-Gap van has been providing van service for commuters from Bristol along Route 17 to Route 100 through the Mad River Valley, over Duxbury hill to Route 2 south to Montpelier for more than 15 years. The nearest Vermont Transit line stops, for intercity and interstate service, are located in Waterbury and Montpelier.

Amtrak passenger rail service to several New England cities, New York City and Washington D.C. is available in Waterbury Village and Montpelier. The nearest air passenger and freight services are located at the Burlington International Airport in South Burlington, and the state-owned E.F. Knapp Airport in Berlin. Interstate 89 provides relatively easy access to both airports.

Pedestrian and Bicycle Travel

Currently there are marginal sidewalks in the Village. A conceptual design has been prepared to improve this situation but funding needs to be obtained to construct the sidewalks. There are no crosswalks or other official pedestrian paths or recreation paths within the Village or town, with the exception of the trail network located within Moretown's Town Forest (located behind the school). A bicycle and pedestrian path network could be established to connect Hardwood Union High School to Moretown Village and to tie into the Mad River Path Association (MRPA) trail network in Waitsfield, Fayston and Warren. The goal of the MRPA is to create a non-motorized path from Moretown to Warren.

A network should also be developed to connect the sidewalk at the Route 100/Route 2 intersection with the Crossett Brook Middle School in Duxbury. As noted previously, the intersection has been studied (see the January 2002 Crossett Brook Middle School Conceptual Alignment Analysis for Pedestrian and Bicycle Connections). An alignment has been proposed that is located on the west side of Route 100 and includes a combination bike and pedestrian sidewalk to the crest of the hill at the south end of the cemetery and crosses Route 100 to travel cross-country to the school. Sidewalks should also be included with any new development or re-development of the commercial/industrial sites in that area on both sides of Route 2.

Cyclists use the existing road network. Route 100B, outside the Village to Murphy Road and north of Stevens Brook, does have very wide shoulders for cycling but with the wide shoulders comes the greater propensity for speeding vehicles. Four to six foot shoulders for cycling should be considered when preparing any state highway improvements. The Cross-Vermont Trail which currently ends in Montpelier would like to pass through Moretown continuing along the River Road to Route 100B to Lovers Lane then onto Route 2 to Duxbury's River Road. The Town supports the efforts by the Cross-Vermont Trail Association as well as the Mad River Path

Association to connect paths and provide alternatives to automobile use and more recreation opportunities.

Trucks and Movement of Goods

Route 100B corridor is used by trucks as a means of delivering goods to and from the commercial development along the corridor. The current truck proportion of the total traffic stream is relatively high (between 5 and 7 percent in Moretown). The recent reconstruction of the Middlesex bridge may facilitate additional movement of goods via truck. While truck traffic is important to local and regional commerce – such as the importance of maintaining convenient access to MLI landfill from I-89 and from the highway to Mad River Valley resort destinations – it has deleterious impact on the peace and quality of life in Moretown.

To address the impacts of truck – and increasing automobile – traffic on the Village, the town has for the past 25 years advocated for a bypass to be located west of Route 100B and the Mad River. VTrans, however, has steadily resisted taking on such projects for the past decade and it appears very unlikely that such a bypass will be constructed in the foreseeable future. As a result the town should explore short-term means by which to reduce the impact of high traffic volumes within the Village.

Access Management

The efficiency and safety of all town roads are directly affected by the frequency and location of points of access or curb cuts. The design of curb cuts also is important with regard to drainage and road maintenance. Some access management methods are appropriate to residential development, some to non-residential development, some equally to both. Some specific standards cited in the Central Vermont Regional Transportation Plan (April 1996) for improving access include:

- minimum sight distance at a driveway or street intersection;
- maximum number of driveways per lot;
- mandatory shared driveways;
- minimum and maximum driveway lengths;
- corner turning radius;
- driveway turnaround area (for small existing lots fronting the corridor);
- minimum or maximum on-site parking, shared-parking, and parking design;
- minimum area for loading and unloading; and
- landscaping and buffers to visually define and enhance access points.

To date, Moretown has not experienced uncontrolled or excessive highway accesses or numerous oversized curb-cuts. Their future proliferation may be avoided by establishing standards in zoning and subdivision bylaws as well as curb cut permits. With consistent and comprehensive access management policies, the town can ensure that motorists, pedestrians, bicyclists, and other users of the road network may travel in safety and with sufficient mobility.

The central Vermont Regional Planning Commission supports a Transportation Advisory Committee (TAC). Each town in the region is encouraged to send a representative to TAC meetings. Over the last 5 years or more, Moretown has had few volunteers for this position and

is not well represented at the regional level. The result is less than ideal communication between Moretown, neighboring towns and regional planners.

Planning Considerations

- The intersection of the Mountain Road and Route 100B is dangerous due to the steep slope, difficult angle and poor sight distance.
- The Route 100 and 100B intersection is a High Accident Location.
- The *January 2002 Crossett Brook Middle School Conceptual Alignment Analysis for Pedestrian and Bicycle Connections* is available for use by all town boards.
- Rehabilitation or reconstruction of the historic, 3-span iron truss bridge along Route 2 is under consideration by VTrans.
- The South Village Bridge - which crosses the Mad River at the south end of the Village on Route 100B - is scheduled to be repaired or replaced.
- Sidewalks, curbing and crosswalks are options for slowing traffic in the Village.
- A bicycle and pedestrian path network could connect Harwood Union High School to Moretown Village, the MRPA Greenway Path in Waitsfield, and the recreational trails located on Moretown's Town Forest (behind the school).
- A park-and-ride lot in Moretown would offer an alternative to single-occupancy trips to work centers such as Montpelier and Chittenden County.
- Sidewalks from North Moretown to Crossett Brook School would improve safety and traffic problems on Route 100 and at the intersection of Route 100 and Route 2.

Transportation Goal

- 1) *To provide a safe, efficient and cost effective transportation network that provides for the needs of the community, including pedestrians, bicyclists, motorists and the homebound.*

Transportation Policies

- 1) Manage roads and bridges to meet community safety needs and the preservation of the roads' rural character.
- 2) Retain the current scale, rural quality and capacity of town roads while conducting improvements and maintaining roads.
- 3) Support the efforts of local, regional and state organizations, including the Mad River Path Association and the Cross Vermont Trail Association, to provide safe alternative transportation opportunities.

- 4) Support the recommendations of the *January 2002 Crossett Brook Middle School Conceptual Alignment Analysis for Pedestrian and Bicycle Connections*.
- 5) Coordinate with local, regional and state entities – including the Central Vermont Regional Planning Commission’s Transportation Advisory Committee – to plan for Moretown’s transportation needs in a comprehensive manner.
- 6) Ensure safe and efficient traffic movement along principal highways by controlling access, concentrating development within designated centers and avoiding strip development.
- 7) Consider establishing a park-and-ride lot in Moretown.
- 8) Maintain the public’s interest in Class 4 roads and access to legal trails.
- 9) The Moretown Selectboard and Road Crew should follow the maintenance practices recommended in Appendix C of *Designating Scenic Roads - A Vermont Field Guide* for scenic roads as designated on the Transportation Map (Map 5-8).
- 10) The town shall discourage extension of existing town roads to accommodate new residential development and shall not take over new or existing private roads (also refer to Section 4.1 Access and Frontage Requirements – in the Moretown Zoning Regulation).
- 11) Paving of gravel roads should be discouraged. The Selectboard will consider paving when it becomes a matter of maintenance or public safety needs.
- 12) Guarantee that the rehabilitation and/or reconstruction of the South Village bridge will enhance the southern entrance to Moretown Village and continue to slow traffic as it enters this compact settlement. Because of its importance as a gateway to the historic Village and the traffic calming function it plays in slowing traffic, the replacement or reconstruction of this bridge should be carefully considered. The town supports the replacement or reconstruction of the bridge, however, the traffic calming characteristics should be maintained to the greatest degree possible.

Transportation Tasks & Strategies

- 1) The Select Board should continue to designate a representative to the Central Vermont Regional Planning Commission’s Transportation Advisory Committee, and be active in transportation proposals.
- 2) Seek transportation funds to help make the village safer for residents, pedestrians and elementary school children.
- 3) The Planning Commission should encourage the Selectboard to adopt the *Vermont State Standards for the Design of Transportation Construction, Reconstruction and Rehabilitation on Freeways, Roads and Streets, October 1997*.

- 4) The Planning Commission, through zoning or subdivision regulations, should consider adopting the *Vermont State Standards for the Design of Transportation Construction, Reconstruction and Rehabilitation on Freeways, Roads and Streets, October 1997* to address private roads.
- 5) The Select Board shall work with VTrans to explore opportunities to improve the safety of the intersections at Route 100B and Moretown Mountain Road. For example, the removal of the large white pine at the intersection would improve visibility significantly.
- 6) The Selectboard, Planning Commission and Development Review Board should be actively involved in all VTrans proposals to improve roads and bridges to ensure that any road or bridge proposal enhances Moretown's rural character and in no way detracts from it.
- 7) The Select Board should develop a long-term road management policy and plan.
- 8) Work with the Towns of Waterbury, Duxbury, CVRPC and VTrans to implement the recommendations of the *January 2002 Crossett Brook Middle School Conceptual Alignment Analysis for Pedestrian and Bicycle Connections*.
- 9) Work with the Mad River Path Association and others to develop a path system which connects Moretown to the network of paths in the Mad River Valley.
- 10) Work with the Cross-Vermont Trail Association to facilitate the continuation of the Cross-Vermont Trail from Montpelier through Moretown to Duxbury.

CHAPTER 6. Facilities and Services

Overview

Community facilities and services are provided to meet the needs and desires of present and future Moretown residents. The municipality is responsible for providing some essential services, such as road maintenance and elementary education, while others are provided in partnership with regional or state agencies, volunteer organizations, and private corporations.

Each facility or service addresses a particular public need, which is partly determined by population and economic conditions. Depending on the type of facility and its capacity, changes in the composition or size of the local population can affect the ability of the service provider to meet local needs. In addition, geographic conditions significantly influence the delivery of services and location and capacity of public facilities in Moretown.

This chapter briefly describes existing facilities and services and their respective capacities. It also describes their costs and some of the factors underlying the Town's ability to fund them. Together they provide a foundation for shaping growth so that desired levels of service are maintained or enhanced without placing an undue financial burden on taxpayers.

Town Government

Like most small Vermont communities, Moretown is governed by volunteer citizens with limited staff support. Current staff includes (as of 2007):

- full time town clerk & treasurer (elected position);
- 2 part time assistant clerks,
- 3 full time road crew,
- a part time zoning administrator, and
- part time selectboard recording secretary.

With so few employees, the participation of local residents who serve in a variety of elected and appointed positions, on a largely volunteer basis, is critical to maintaining a functioning local government. The town is currently administered by an elected five-member select board who are compensated with a small annual stipend (\$500 in 2007). Other elected positions, which have been in place for much of Moretown's existence, include:

- a moderator
- a town clerk/treasurer
- 2 constables,
- 3 listers
- 3 auditors
- 3 cemetery commissioners
- 5 library trustees
- 5 school directors, and
- 7 justices of the peace

In addition, a 5 member planning commission, 5 member development review board and various other local positions and representatives to regional organizations are appointed by the select board. Given current services provided by the town, which are generally limited to those required of municipalities by state statute, the cost of providing administrative services is not anticipated to increase significantly in the near term. The willingness of citizens to serve in the many volunteer positions, however, is a perennial concern among Vermont's small towns. Moretown's population growth may place future strains on its government. At the present time – and for the foreseeable future, however – it appears as though current staffing levels, supported by the willingness of local residents to participate in municipal government, is adequate.

Town Properties

Moretown owns and/or maintains several properties (see Map 6-1), including:

- 5 cemeteries (totaling 61 acres of land)
- Moretown School (discussed under Education, below)
- 175 acre school parcel
- 0.1 acres Moretown Library
- 0.8 acre parcel used for sand/gravel storage
- 2 small vacant parcels totaling 5.21 acres
- 0.2 acres parcel occupied by the Fire Station
- 0.2 acres occupied by Town Office
- 0.3 acres occupied by Town Hall
- 1.2 acres occupied by Town Garage

With the exception of the 2 vacant parcels and 4 of the 5 cemeteries, all the properties are located in Moretown Village. Several of these parcels have been upgraded in recent years, while others have grown increasingly deficient and likely require major upgrade or replacement.

Town Office ~~Town Office~~: The Clerk's office, located in the center of the Village, houses the Town's property records (vault), administrative records, the office of the Town Clerk and assistant clerk, and a small meeting space for Town boards. The most recent improvement to the Town Office was the parking and access improvements completed in 1996 in conjunction with the school. Although relatively small, the office is adequate to meet current administrative and small meeting needs of the Town, some reconfiguration of the interior would result in a more efficient use of space. A fireproof vault was added in 2005. The building was painted in 2006, and the roof was re-shingled as well.

Town Hall: The Town Hall is the principle large meeting facility in the Town, housing Town Meeting and other community events. The hall is also available for rent for private functions. The most recent improvements to the Town Hall, including the installation of an elevator to comply with Americans with Disabilities Act (ADA) requirements, were completed in 1999. Other than normal maintenance (e.g. interior and exterior painting) no space or structural deficiencies have been identified, although there is need to improve drainage on the northern side of the building and repair the bathroom. The town hired an architect and initiated a plan to renovate the structure in 2007.

Town Garage: The existing town garage, located on a 1.2 acre parcel in the Village, is approximately 2,900 square feet and houses the Town's highway equipment and provides space for the highway crew. The site is immediately across Route 100B from the town-owned 0.8 acre parcel used for sand and gravel storage. Although the storage site is convenient to the town garage, its location adjacent to the Mad River and at the entrance to the village is less than desirable.

The highway garage has not been adequate to meet the town's needs for some time. In addition to a shortage of storage space for highway equipment, the garage lacks office space, heat, and bathroom facilities. To address space deficiencies, the highway department has identified the need for an approximately 5,600 square feet facility on 3 contiguous acres to accommodate 4 trucks, grader, excavator, loader and culvert thawer, in addition to office and bathroom facilities. Concerns have also been raised regarding the safety of the driveway and the lack of good landscaping. A citizen committee, appointed by the Selectboard, is working on solutions to garage problems.

Fire Station: A citizen committee concluded in January 2002 that the fire station was "structurally unsound, very tight inside with little space or headroom for trucks and for fire personnel to work in, has no functioning bathroom, inadequate meeting and training space, and no capacity for storage of additional equipment." In February 2002, a request for proposals was distributed to architects and design-build firms for a two-story fire station with a scale and style compatible with the Village and designed to meet the town's future needs. In 2004 the town built a new fire station on the site of the old fire station.

Library: The Moretown Memorial Library offers full library services to area residents. This includes interlibrary loan, internet access, preschool story time and a summer reading program. The library is open 17 hours per week with the town paying a professional librarian for ten hours and the other 7 hours being staffed by volunteers. We hope to expand the hours to 24 per week.

The collection of 3,823 books is a current collection with 621 new books added in 2007 alone. The library has expressed a need to expand the limited juvenile and adult audio and DVD collections. The library serves 219 registered borrowers - 77 adults and 142 children. In 2007 over 1,500 patrons visited the library and over 2,500 items were checked out. However, the library's trustees have identified a number of deficiencies:

- X inadequate space to serve current user demands;
- X insufficient shelving to house a growing collection; and
- X no handicap access or restrooms.

The library's trustees would like to eventually expand the structure to what the building looked like prior to the 1927 flood, which would triple the current space.

The **Moretown Historical Society** is active in documenting and celebrating Moretown's history. The society meets monthly at the library building, and sponsors a variety of events and gatherings focused on the town's heritage. Renovation of the library building would assist the Historical Society with their efforts.

Town/School Parcel: While the Moretown School and associated school facilities are discussed

below, it is useful to address the parcel adjacent to the school, which is co-owned by the town and school. This land was acquired in the 1950s for public and school use. In 1997, drainage improvements were made immediately behind the school and recreation fields developed for both school and public use. Access to the fields was improved with the construction of a paved driveway and parking area for 40 cars shared between the school and town offices. Tennis courts and a basketball court were added in 2004.

In 1990 the Moretown Recreation Committee worked with Washington County's Forester (Russ Barrett) to draft a Forest Stewardship Plan for the parcel. The plan resulted in some limited timber harvesting.

In 2004 the Moretown Planning Commission, in collaboration with the Recreation Committee and the Elementary School, applied for a grant from the *Community Mapping Program* (CMP - www.communitymap.org) to map and inventory the town property. This grant was combined with funds obtained by the Moretown Recreation Committee from MLI/ANR to pay a Naturalist to conduct a detailed inventory. The goal was to identify important features including: 1) trails; 2) springs; 3) vernal pools; 4) cultural resources (old cellar holes, stone walls); 4) forest stands; 5) and other miscellaneous features.

In 2007 the Moretown Select Board and School Board established an 81 acre deeryard conservation easement on the land. The easement is held by the Vermont Land Trust (VLT), and endorsed by the Vermont Agency of Natural Resources (ANR). The primary driver behind the establishment of the deeryard easement was the requirement that Moretown Landfill Inc. (MLI) mitigate for anticipated deeryard habitat disturbance relating to their proposed Cell 4 expansion. A detailed Town Forest Land Management Plan is currently (fall 2007) under development by the Planning Commission, with input from the Select Board, School Board, VLT, ANR, and the citizens of Moretown. The Plan will articulate specific goals and policies related to the management of the Town Forest for recreation, wildlife habitat protection (deeryard specifically), education, hunting, and timber production.

Emergency Services

Fire: The Moretown Volunteer Fire Department is the Town's principal emergency response provider, serving the entire community and, under an agreement with the Town of Duxbury, portions of that town. The Town also has entered into agreements with the Waterbury Fire Department for first response service to portions of Moretown adjacent to that community, as well as mutual aid agreements with several nearby fire departments. The Fire Department responded to 33 calls in 2000.

In addition to the need for an expanded fire station (discussed above), the department acquired a new Navistar pumper in 2000. Other equipment includes a 1979 Ford pumper, 1988 International Tanker, 1990 Ford rescue van and miscellaneous fire-fighters equipment. No additional capital needs, other than the fire station improvements, are anticipated in the near future.

There are 24 volunteers who provide an exceptional level of service to the community. The current availability of volunteers is adequate to meet anticipated needs, although, as with any

volunteer organization, there is always the potential for a shortage of committed volunteers. Ongoing communication with the fire department should help avoid an unexpected shortage of volunteers in the future.

Ambulance: The town contracts with the Montpelier Ambulance Service on an annual basis to provide rescue service to a portion of town. The Mad River Valley Ambulance Service provides coverage for much of the remainder of town under a subscription/user fee program. Waterbury Fire & Rescue also serves a portion of town under the contracted agreement to provide first response fire and rescue protection. With the continuation of these agreements with adjacent communities and private, not-for-profit rescue services, the Town's rescue and ambulance needs should be met for the foreseeable future.

Police: Law enforcement services are provided by the Washington County Sheriff's Department and the Vermont State Police, whose regional barracks are located in on Route 2 in Middlesex. Current police services are generally limited to highway patrol primarily along state highways (Route 2, Route 100B and Route 100) and normal court duties. The Town contracts with the County Sheriff's Department for limited additional highway patrol on town roads. Heightened public concern regarding speeding traffic, which will likely increase as the Town's population grows and roads are upgraded and paved, has prompted the Selectboard to expand the contracted coverage.

Solid Waste

Moretown is a member of the Mad River Valley Solid Waste Alliance. The Alliance is a six-town district that includes Duxbury, Fayston, Waitsfield, Warren and Waterbury. A representative and alternate from each town serves on the Alliance Board. The Board meets bi-monthly to set policy, determine programs and oversee the District Administrator. The Alliance holds two household hazardous waste events annually, produces a newsletter twice a year, and hosts an annual composter truckload sale.

Presently, solid waste is trucked by private hauler to Waste Systems International (MLI) Landfill in Moretown. Because of Moretown's "host town" status, the Town has negotiated a host town agreement with MLI. This agreement provides the Town with \$3.11 per ton of solid waste disposed in the landfill, which in 2006 amounted to \$258,683. These funds have been used to offset municipal taxes. In addition to the surcharge, MLI reimburses the Town for its dues to the Alliance, and provides Moretown residents with access to the landfill for waste disposal, including access to used oil recycling tanks and an oil filter crushing machine.

In the future MLI landfill may become a source of local power by tapping the significant quantities of methane within the landfill to produce electricity.

Energy

Moretown is characterized by long winters, cloudy and snowy weather, and a relatively dispersed population. It is a rural community comprised of approximately 730 homes, nearly 90% of which are occupied on a year-round basis. Consequently, access to affordable, and sustainable, energy supplies is of concern to local residents and businesses.

Historically, the town assumed a significant role in providing local energy supplies. The Moretown/Middlesex hydro-electric facility – owned and operated by Green Mountain Power Corporation – was once owned by the town. In addition to that facility, a second hydro-electric facility, located on the Mad River, is located entirely in Moretown and was initially supported through a tax abatement agreement with the town. Today, however, factors influencing the cost and availability of energy are largely beyond the community's control.

Changing technologies, and evolving national and state energy policies – which include utility deregulation, demand side management, and the promotion of cleaner, more efficient and renewable energy sources – all have an affect on local energy supplies. There are, however, several things Moretown can do to influence its energy future, particularly with respect to energy conservation, ensuring the efficiency of proposed development, and to encourage a diversity of energy sources. Specific topics related to Moretown's energy use are described below.

Trends. There is little information available on local energy use, but given available data, local use likely reflects state and national trends. According to information provided in *Fueling Vermont's Future*, the state's 1998 comprehensive energy plan, energy use continues to escalate statewide. This is largely due to growth in fuel consumption for transportation, which has increased dramatically with increases in car numbers and vehicle miles traveled. Commercial and industrial energy use has also increased dramatically, reflecting recent periods of strong economic growth. Residential use, on the other hand, has increased more slowly, in part due to more energy-efficient residential construction and appliances.

Energy Conservation. Since 1990 energy conservation programs have been actively pursued by the state to increase energy efficiency, reduce use, and thereby increase available supply. In the 1990s, under order of the Public Service Board, Green Mountain Power and other electric utilities developed a variety of demand side management (DSM) programs for their customers, which have since been consolidated into one statewide energy efficiency utility. Over the last decade the state also passed energy standards for residential and commercial construction, which are administered through the Department of Labor and Industry. Net-metering to encourage the use of renewables went into effect in 1998, and legislation is now pending to promote their greater use though tax credits and other state support programs.

The Vermont Legislature and the Vermont Public Service Board created the not-for-profit *Efficiency Vermont* in 2000 to help Vermonters save energy, reduce energy costs and protect the environment. The program consolidates programs formerly offered by individual utilities into one statewide utility. The utility continues to be supported financially by the state's twenty-two electric utilities through an "energy efficiency charge (EEC)" that is passed on to customers (1.798% for GMP customers.) Efficiency Vermont operates independently of the electric utilities, and offers energy savings programs, technical support and some financial incentives. Brief descriptions of current programs are provided in Table 6.1.

Table 6.1 Efficiency Vermont Programs	
Program	Services
Efficient Products	Information, coupons and rebates for energy efficient products for homes and small businesses
Energy Star Homes Program	Technical assistance, rebates to homebuilders and buyers for new home construction

Commercial Energy Opportunities	Technical assistance, financial incentives for energy efficient equipment, systems and design; assistance with Act 250 compliance
Residential Energy Efficiency Program (REEP)	Free technical assistance, energy audits, and financial assistance for new and existing low-income multi-family housing
Services for Income-Eligible Vermonters	Assistance for low-income households who are participating in the state's weatherization program, including assistance with the conversion of space heating systems, and the installation of energy-efficient products
Emerging Market Initiatives	Evaluation and testing of innovative efficiency technologies and practices to promote their use within targeted market sectors.

Renewable Energy. Several potential renewable energy resources are available in Moretown, but the extent to which they can be harnessed and replace other sources of energy is not clear. The availability since 1998 of “net metering” – which allows utility customers to use small scale renewable energy systems to generate power, and sell excess power back to the utilities – is intended to support the use of renewable energy.

- **Wood.** Moretown has an abundant supply of firewood for home heating. According to the 2000 U.S. Census, over 16% of town households were heated with wood. Implementing the policies of this plan related to the preservation of local forest resources and maintenance of the working landscape (see Chapter 4) can help achieve a degree of energy independence for Moretown.
- **Hydro-power.** As mentioned above, two hydro-electric dams are located in Moretown. Hydro-power – which has historically powered local industry – was long considered a clean source of renewable energy. The environmental impacts of dams – including the effects of changing water levels on river flow, temperature and aeration, and fisheries and adjoining riparian and shoreland areas – are now given much more weight in state and federal dam licensing procedures. There are also few available sites for new utility-scaled hydro-power plants; but there may be opportunities to upgrade existing systems, and to develop smaller “microhydro” systems that supply individual users.
- **Solar.** Solar energy is one of few energy sources that are not depleted from use. Advances in solar technology have made it easier, and increasingly affordable, to use solar energy to heat water, homes, and furnish electricity. Although the local use of solar energy is limited, the town has many south-facing slopes that could provide access for both passive solar heating and for solar power. The use of photovoltaic cells, which convert sunlight directly to electricity, may become more viable in the future with advances in technology.
- **Wind.** Wind is another source of renewable energy that, with improving turbine technologies, is receiving increasing interest statewide. In the late 1990s the U.S. Department of Energy, National Renewable Energy Laboratory, identified areas most favorable to wind energy in Vermont. In Moretown, those areas just west of the ridge of the Northfield Range were identified as having good to excellent potential. A number of homeowners have installed wind turbines to serve household energy needs. Wind is now considered one of Vermont's most promising renewable resources – the technology is well developed and continuing to improve, and costs are decreasing rapidly for small scale residential applications. Despite its promise, esthetic and environmental impacts are a consideration that will likely become more widespread as technology becomes more widely used.

- **Methane.** In the future MLI landfill may become a source of local power by tapping the significant quantities of methane within the landfill to produce electricity.

Transportation. American society has an increasing reliance upon the automobile as the primary mode of transportation, and Moretown residents are no exception. This has strong implications for fuel demand and the impact of fuel emissions on the environment. In 2000, over 76% of Moretown's labor force commuted to work in a single-occupancy vehicle (i.e., drove alone). Support for compact settlement patterns, transit services, bicycle and pedestrian facilities and encouragement of home occupations can lessen the demand for automobile use.

Community Services

Health Care: Moretown residents are reliant on health care facilities in neighboring communities. At present, physician's offices are located in Waitsfield, Montpelier and Waterbury. In addition to private medical services, public agencies also offer specific services to Moretown residents. Those currently available, which may be modified at any time, are as follows:

- **Visiting Nurse Service.** Home health care which includes therapy (physical, speech, occupational) and counseling, consoling the elderly; homemaker service (meals, shopping, housekeeping); Hospice consoling and counseling the terminally ill and their families; and child birthing classes.
- **Vermont Department of Health.** Well Child Clinic (preschool immunization), WIC Programs (prenatal and preschool nutritional programs).
- **Washington County Mental Health.** 24-hour emergency service, outpatient clinic, substance abuse programs, job placement, day programs, day hospital and resident programs.

Child Care. Ensuring accessible, affordable, quality child care is integral to sound social and economic policy. Most families lead lives that require full or at least part-time child care outside of their homes. Moretown's Town Plan recognizes child care as a critical community need.

Although the Town is not involved in providing day care for local children, the Moretown Elementary School offers an after school program for grades 1 through 6. The Moretown Elementary School also offers pre-school and kindergarten programs.

There are a number of small, private day care facilities in Moretown. The Vermont Department of Social and Rehabilitation Services requires any person who provides care for children from more than two families, other than their own, to be registered or licensed. Family day care home registration is for a care giver seeking to operate out of his/her private home. A care giver wishing to care for children in a building other than his/her home requires a state license.

A registered care giver may provide care in his/her home to six children, including up to two children under the age of two at any one time. In addition to the six, he or she may care for up to four school-age children for not more than four hours daily per child. Children who reside in the

home are not counted in these limits, unless they are under the age of two.

In 2001 there were four registered home-care providers in Moretown, in addition to a licenced nursery school and the Moretown Elementary School pre-school program. In addition to local facilities, Moretown's large commuter population makes use of day care facilities in neighboring communities.

Recreation and Cultural Activities

As with several other community services, Moretown's geography results in greater dependence on adjacent communities for recreational and cultural activities than most neighboring towns. The recreation fields, facilities, and trails located behind the school are the Town's primary recreation resource. The facilities support a number of recreational activities, including baseball, basketball, soccer, tennis, hiking, skiing, and skateboarding. The Town does support a **recreation fund** which is primarily used to maintain the community recreation fields in Moretown Village.

As noted earlier in this chapter, a detailed Town Forest Land Management Plan is currently (fall 2007) under development by the Planning Commission. The Plan will articulate specific goals and policies related to the management of the Town Forest for recreation, wildlife habitat protection (deeryard specifically), education, hunting, and timber production.

Other possible recreation opportunities which should be explored include the establishment of a formal trail system, and the creation of recreation paths linking the Moretown School to the network of trails in the Mad River Valley.

The establishment of the Route 100B Scenic Byway reinforces the unique recreational opportunities presented by this valuable resource. The Route 100B Byway is especially popular among bikers. The Mad River itself is popular for canoeing and kayaking.

Cemeteries

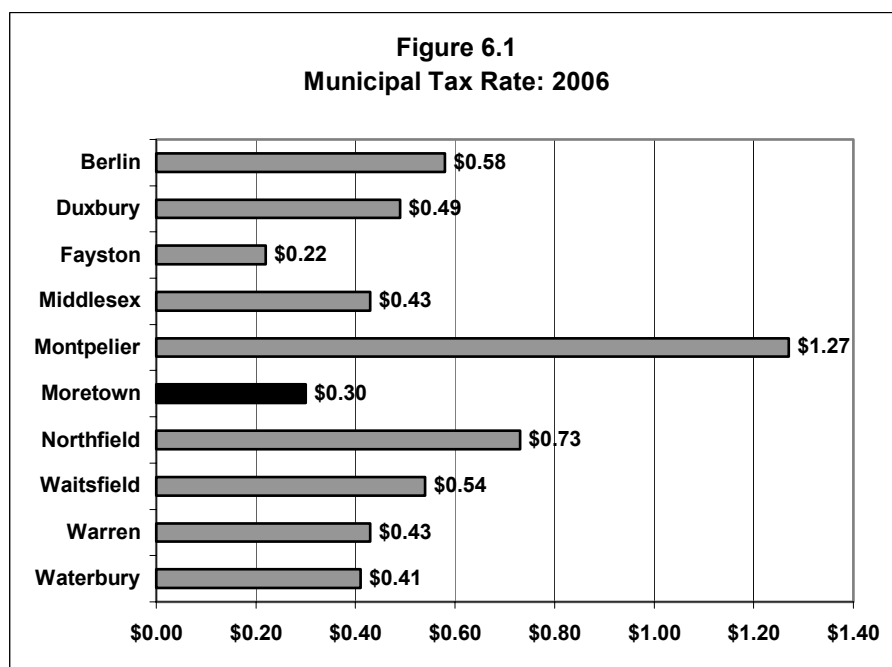
As mentioned previously, the Moretown Cemetery Commission is responsible for the oversight and maintenance of five cemeteries. The Commission also administers two funds (perpetual care and lot funds) to support maintenance activities.

Cost of Government

Due to revenues from the host town agreement with Moretown Landfill Inc. (MLI), Moretown's municipal tax rate is extremely low. The 2006 effective (equalized) tax rate for Moretown and neighboring communities is shown in Figure 6.1.

The host town agreement with MLI – which is anticipated to provide revenues for at least another eight years (based on Cell 3 as of 2007) – contributes significantly to the Town's low municipal tax rate. In addition, municipal services in Moretown are limited in comparison with several neighboring communities, many of which fund a variety of cultural facilities, recreation programs, open space conservation and related discretionary programs and facilities. Finally, the Town has staggered large capital expenditures in recent years, thereby avoiding sharp

fluctuations in annual expenditures.



Planning for capital expenditures could be formalized through the preparation of a capital budget and program. A capital program involves projecting capital expenditures (one-time, non-recurring major costs for equipment or land purchase or construction) over a six-year period. This allows scheduling such expenditures and structuring their financing to avoid a sudden, unanticipated "shock" to the tax rate. Assuming that growth in operating expenditures is spread out, either through timing, financing, or withdrawals from accumulated reserve accounts, the year-to-year fluctuation in expenditures should not be extreme. Such planning may become especially important once the MLI landfill is closed and revenues from the host town agreement become no longer available.

Local Education

Moretown is a designated part of the Washington West Supervisory Union, together with the towns of Duxbury, Fayston, Waitsfield, Warren and Waterbury. Moretown students (pre-K through grade six) attend the Moretown Elementary School in Moretown Village. Grades seven through twelve receive their education at Harwood Middle School and Harwood Union High School in Duxbury.

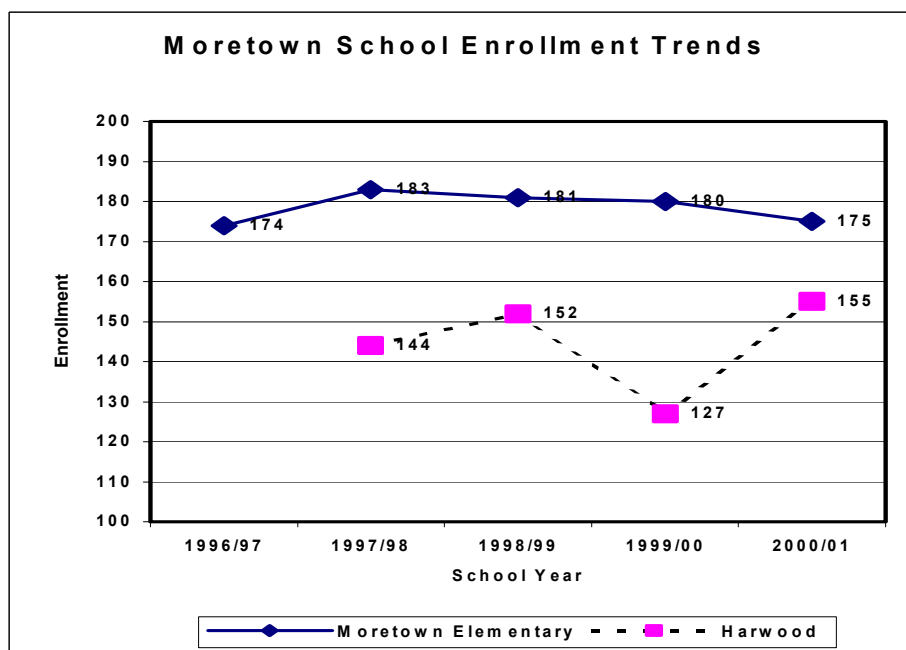
The **Moretown Elementary School**, located in the center of Moretown Village, has a student capacity of approximately 200 students. The school was renovated and expanded during 1996 and 1997. The Moretown School has become an important source of community pride.

The school presently houses ten classrooms, eight with a 25 student capacity and two rooms with a capacity of approximately 15 students each; one for pre-kindergarten and the other for kindergarten. A multi-purpose room, gymnasium, library, art/music room, French room and associated office, stage and special services space, also are located within the complex.

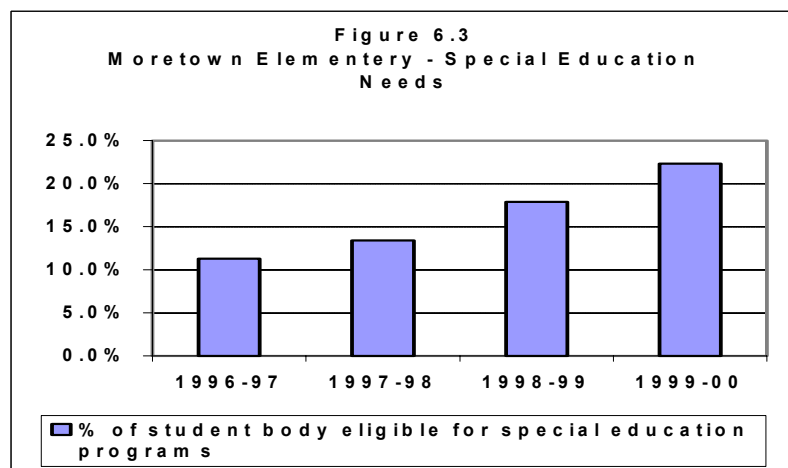
As the school enters its 11th year after the initial renovation, the School Board anticipates the need for capital improvements over the next three to five years. Potential projects, subject to approval by the Board and voters of Moretown, include upgrading the electrical system; repaving the parking lot; installing a new roof; repairing insulation and eaves in the original building; replacing carpets with tile in hallways and classrooms, painting the outside of the building; and restoring chip base on both playgrounds.

There has been a Moretown Preschool Program since 1986. The program has evolved to meet the current Town needs and is offered to all four-year old children residing in Moretown. Four-year olds are able to attend the program for four half-day sessions per week either in the morning or afternoon. Each session has up to 12 students and three-year olds are invited (by eldest date of birth) whenever space allows. The enrollment has been approximately 24 children per year.

Enrollment at the elementary school has generally remained stable. The enrollment for the 2007-2008 school year is 147. Although there has been some up and down variance during the last few years, the enrollment is not expected to reach, much less exceed, the schools capacity within the next five years.



One area of local education funding that is particularly relevant to Moretown is special education. In Moretown, the growing number of elementary school students eligible for federally mandated special education programs has increased the cost of local education. In 2006, 21 percent of elementary school students were eligible for special education programs, compared with 14.3 percent of the state's student population. The percentage of students eligible for special education in 2006 is almost double the percentage that was eligible in 1997.



In 2006, Moretown sent 142 students to **Harwood Union Middle School/High School**. Total enrollment at Harwood is 828, with Moretown students comprising nearly 18% of the total. The core facility of the building (cafeteria, gymnasium, auditorium, etc.) is designed for 1,000 students. With the construction of Crosset Brook Middle School in 1997, which serves 7th and 8th graders from Waterbury and Duxbury, additional capacity became available at Harwood. In 2007, Harwood is in year two of a \$75,000 per year for capital improvements and is installing a wood chip furnace to heat the high school. Other items to be considered by HUHS in the next 5 years are athletic fields, electrical efficiency and cafeteria changes.

The state currently provides vocational education opportunities through a system of sixteen vocational centers serving local high schools around the state. The nearest vocational center to Harwood is in Barre. Presently, transportation opportunities are available for Harwood students to attend vocational programs at that facility. Harwood does, however, provide limited vocational opportunities on site.

Currently (2007), school funding is based on Act 68, which the legislature passed in 2003. Annually, the Moretown school board proposes a budget that reflects the funds necessary to operate the school. At town meeting, the voters review the Board proposal and decide on a budget.

Moretown funds education primarily with money sent to the school district from the State's Education Fund and from state and federal categorical grants. To raise state funds, the legislature establishes a statewide property tax rate. This rate can vary annually and taxes are established with two different rates: one for Homesteads (primary residence and the land that surrounds it) and the other non-homesteads (second homes, apartment buildings, businesses, and land). These tax rates are adjusted, if necessary, by a correction factor called the common level of appraisal (CLA) so that property owner's tax bill results in payment of fair market value. In addition, Act 68 allows for a tax adjustment for a household when the household income is below a threshold established in the law.

Planning Considerations**Town Government/Properties**

- As long as citizens continue to volunteer, the town government seems to provide adequate services.
- The Town Garage has not been adequate to meet Moretown's needs for some time. There are space deficiencies to accommodate equipment as well as a need for bathrooms and an office.
- The appearance of the town garage and sand pit could be improved through landscaping and screening.
- A management plan which identifies desirable uses and or improvements, would enhance the public use and enjoyment of the property.
- Moretown has not pursued alternative means of funding for town facilities and services (such as impact fees.) Other sources of revenue might alleviate some of the economic pressures on the town.
- Moretown should consider hiring a full time Zoning Administrator to help accommodate growth in the community.

Emergency Services

- The town's principal emergency response provider is the Moretown Volunteer Fire Department. The Town also has mutual aid agreements with the Waterbury Fire Department and several other nearby fire departments.
- The town contracts with the Montpelier Ambulance Service on an annual basis for a portion of the town. The Waterbury Fire and Rescue also serves part of the town under a contractual agreement with the rest of the town receiving service under a subscription/user fee program with the Mad River Valley Ambulance Service.
- Police protection is provided by the Washington County Sheriff's Department and the Vermont State Police on a contractual basis with the town.

Solid Waste

- Moretown is a member of the six-town district called the Mad River Valley Solid Waste Alliance. The Alliance has a state approved solid waste plan. Solid waste is privately hauled to MLI Landfill in Moretown.

Energy

- Energy use continues to escalate statewide. This is largely due to growth in fuel consumption as a result of the increase in car numbers, large vehicles and vehicle miles

traveled. Commercial and industrial energy use also has increased dramatically. Residential use, on the other hand, has increased more slowly, in part due to more energy-efficient residential construction and appliances.

Community Services

- Moretown residents rely on health care facilities in neighboring communities.
- There are four registered day care providers in town, in addition to a licensed nursery school and the Moretown Elementary School pre-school program.

Recreation and Cultural Activities

- Moretown supports a recreation fund which is primarily used to maintain the community recreation fields in Moretown Village. These fields are the town's only developed recreation facility. The only public access to the Mad River is at Ward Access.
- The Route 100B Byway is a recreational asset to the citizens of Moretown and the Mad River Valley.

Cost of Government

- Due to revenues from the host town agreement with Moretown Landfill Inc., Moretown's municipal tax rate is extremely low.

Education

- Enrollment projections would be useful in predicting enrollment trends beyond the five-year horizon.

Community Facilities & Services Goals

- 1) *The provision of community services, facilities and utilities to meet present and future demands of Moretown residents in a cost efficient and environmentally sound manner.*
- 2) *The provision of excellent educational programs and facilities to all school-age Moretown children.*

Community Facilities & Services Policies

- 1) Maintain and enhance existing town properties to meet the needs of the community.
- 2) Through town bylaws require new development to accommodate emergency service needs, including adequate access, pull-outs, turn-around space and the provision of fire protection facilities (such as reservoirs, standpipes, hydrants, etc.) as deemed necessary.
- 3) Continue to support the Mad River Valley Ambulance Service, the Waterbury Fire and

- Rescue Squad as well as the Montpelier Ambulance Service.
- 4) Continue to support the Mad River Valley Solid Waste Alliance.
 - 5) Establish a strong commitment to energy efficiency and alternative energy supplies.
 - 6) Conserve forest lands as a renewable energy resource. Tree harvesting should be conducted in a sustainable manner.
 - 7) Streetlights shall not be allowed in areas outside the Village or growth center because of concern for rural character and the night sky. If streetlights are installed in the Village or growth center then they shall be down casting and shielded to minimize their impact.
 - 8) Continue to support regional and not-for-profit organizations that provide important community services that are not provided by the town, county or state governments.
 - 9) Maintain and seek additional public access to the Mad and Winooski River and other recreation areas.
 - 10) Maintain and seek additional land resources for recreational opportunities.
 - 11) New development should not overburden the town's ability to provide services and facilities in a cost effective manner.
 - 12) Control the pace and the scale of development to insure the adequacy of facilities and services.
 - 13) Developers should pay for the infrastructure needs (roads, power, water, septic, etc.) their development creates.
 - 14) Low-tech solutions to meet infrastructure needs (e.g., traffic calming) should be considered before new infrastructure (e.g., new roads) is developed.
 - 15) Continue to provide adequate facilities and space to meet current and projected educational needs. Continue to support our schools.
 - 16) Ensure the availability of safe and affordable child care in Moretown and the surrounding area. Support the use of Average Daily Membership (ADM) funds to enhance the affordability of child care services*¹.

Community Facilities & Services Tasks & Strategies

- 1) Develop a Capital Budget and Program that forecasts needs for fire and police protection, ambulance service, recreation, land purchase, roads, schools and general governmental costs.

¹ For more information on this program, contact the supervisory union office or the Early Education Coordinator at the Vermont Department of Education.

- 2) Establish a procedure to evaluate new development proposals for demands on municipal facilities and services and the local road network, and for assessing development exactions to ensure that the public costs associated with new development are funded by the developer. Consider developing appropriate impact fees in accordance with 24 VSA Chapter 131 and such similar mechanisms that may be deemed appropriate.
- 3) Explore the feasibility of a village water and/or wastewater system to allow for more concentrated development of the village and growth center and to improve water quality.
- 4) Provide information about the testing of water quality from private wells and the maintenance of septic systems.
- 5) Monitor firefighting, rescue services and police protection needs working in conjunction with surrounding towns.
- 6) Implement, in conjunction with other Alliance towns, the Mad River Valley Solid Waste Alliance Management Plan which complies with all state statutes.
- 7) Explore alternative funding mechanisms for local facilities, services and education to reduce the dependence on the property tax.
- 8) Seek creative financing to help control the increasing costs of education.
- 9) Inventory the resources found on the Town/School parcel and create a management plan which identifies desirable uses, improvements and maintenance needs.
- 10) Study the issue of property taxes, and municipal and school costs in relation to: new development, costs of services, Act 60 its amendments, special education needs and the MLI Landfill revenue.
- 11) Review zoning in light of supporting energy efficiency and alternative energy supplies.
- 12) Ensure the availability of safe and affordable child care by integrating child care issues into the planning process.
 - Work with the regional planning commission to conduct a child care needs assessment.
 - Address barriers to increasing child care capacity created by zoning bylaws.
 - Provide opportunities for child care providers to enhance their programs through collaboration with the school and library.

CHAPTER 7. LAND USE

Overview

Among the most important issues in community planning is understanding and managing development patterns and uses of the land. In the past, Moretown's compact village center surrounded by scattered farms and forest was created and preserved by individual landowners. Recent growth in population and its ensuing impacts have required the community to more actively guide Moretown's development. This presents the challenge of balancing the interests of the community with those of the individual landowner.

Moretown has a unique location adjacent to the State's major transportation corridor, an attractive landscape with an abundance of natural and cultural resources, and a reputation for good schools. In combination, these features create an appealing place to live. Population figures show a significant increase during the past decade, and forecasts predict continued growth. Such growth will place increasing pressure on the town's natural resources, scenic landscape and ability to strike a balance between community and individual interests.

Presently, Moretown guides land use and development through its zoning ordinance. The zoning ordinance is intended to implement the goals and policies of this plan, especially those related to land use and development. As of 2007 the town does not have subdivision regulations, nor does it have a capital improvements program. This chapter – which serves as the culmination and integration of the previous chapters – describes Moretown's current land use and patterns, recent development trends and, finally, describes desirable future settlement patterns and land uses.

Existing Land Use and Trends

As discussed in Chapter 4, more than 85 percent of Moretown is forested. The few remaining commercial farms keep open approximately 8% of the town's best agricultural soils. Scrub/shrub land and surface waters make up a little more than 2% of Moretown's land cover. The remaining acreage consists of houses, commercial and industrial uses, municipal buildings, gravel operations, roads and parking lots (See Map 7.1 Land Use/Land Cover).

Land cover represents a broad look at the town. More detailed information can be gleaned from other sources. For instance, according to the town's 2000 grand list there are 826 parcels of land. A little more than a third (286) are parcels less than 6 acres and occupied by year-round houses. The greatest increase in developed land has been in residential properties with more than 6 acres (R2 category). In 1995 there were 145 parcels in the R2 category. Five years later, in 2000, there were 177 parcels. Table 7.1 shows the building permit activity for the past ten plus years.

Table 7.1 Building Permit Activity by Type 1990 - 2006							
	Single Family	Mobile Home	Camp	Additions/ Renovation	Commercial	Subdivision	TOTAL
1990	7	4					11
1991	9	3					12

1992	4	2					6
1993	12	6					18
1994	3	4					7
1995	14	2	2				18
1996	6	3				2	9
1997	4	1				3	5
1998	12						12
1999	6		2				8
2000	11		2			1	13
2001	10		1	11	8	6	36
2002	7		2	34		3	46
2003	8	1		23	2	4	38
2004	4		1	29		7	41
2005	12	2	2	15	4	10	45
2006	15	2	1	24	5	9	56

Source: Moretown Zoning Office & Town Reports

Note: The lack of “additions/renovations”, “commercial”, “subdivision” permitting between 1990 and 2000 may be a permit tracking issue, meaning that there may or may not have been any activity during that time period.

To further understand existing land use and development patterns in Moretown, it is useful to look at the distinct neighborhoods defined by historic settlement patterns and the mountains and river valleys. Each area, described below, has its own set of land use issues.

- Moretown Village
- Mad River Valley outside of the village
- Moretown Mountain Road (Northfield)
- Jones Brook/River Road (Montpelier)
- North Moretown (Cobb Hill/Route 2 Corridor including Route 2/100 Intersection)

The past ten years has been a period of revitalization for **Moretown Village**. There have been a number of large-scale renovations including the elementary school, fire station, the recreation area and associated parking, and the general store. Several homes also have been renovated. There has been a “sprucing up” of other village properties and a very few new residential units built in the Village. The lack of community water, sewage disposal facilities and undeveloped land appear to be limiting factors.

Most of the houses built in the last two years have been built outside of Moretown Village in the **Mad River Valley**. As noted in Table 7.2, the majority of new units are located along the Route 100B corridor and in the vicinity of Moretown Common and South Hill. These areas, outside of the Village, afford some of Moretown’s most spectacular views as well as large lots.

Table 7.2
Building Permit Activity by Region 1995 - 2001

	1995	1996	1997	1998	1999	2000	2001	TOTAL
Moretown Village					1			1
Mad River Valley								
<i>Common/South Hill</i>	4		5	3	1	3	3	19
<i>Route 100/100B Corridor</i>	4	4		5	2	8	3	26
Moretown Mtn (east of Gap)			1	2			1	4
Jones Brook/River Road	5	1		1	2	2		11
North Moretown								
<i>Cobb Hill</i>	2							2
<i>Route 2</i>				1				1
TOTAL	15	5	6	12	6	13	7	64
<i>Source: Moretown Zoning Office (permit activity includes single family homes, camps & mobile homes)</i>								

The **Moretown Mountain Road**, east of the Gap, is primarily residential and is more oriented toward Northfield than the rest of Moretown. This section of the Mountain Road is unpaved, as are the roads that feed into it. Most development occurs within 500 feet of either side of the main road.

Northfield has experienced a much slower rate of growth than other neighboring towns. Consequently, little residential development has occurred east of Moretown Gap in recent years. If that road is upgraded, or if development pressure increases in the Dog River Valley, more development could be expected in this area.

Jones Brook/River Road area, also known as the Montpelier side of town, is predominantly residential. Floodplains have limited development adjacent to the river. Several houses were recently constructed on the River Road. The height of River Road was raised in 2007.

The Jones Brook area enjoys isolation and solitude afforded by the mountains and brooks. These same mountains have separated the area from the other parts of Moretown. Geography has limited development to date but new technologies and means of transportation may create new development pressure. In past years the town has discussed the high costs associated with providing services to remote portions of town. With these costs in mind, it may be wise to limit future development until some mutually acceptable arrangement could be made to provide adequate town services including plowing, school busing, etc.

North Moretown has three sub areas. Cobb Hill is an almost entirely residential area characterized by homes on relatively large lots. The Route 2/100 intersection is a mix of commercial and industrial uses with a few homes scattered amidst the mixed commercial and industrial buildings. There has been recent commercial activity on the south side of Route 2.

Land surrounding the intersection of Route 100 and Route 2 is undergoing a transition, with several commercial properties having recently expanded, and new industrial uses are presently involved in the permitting process. These uses are consistent with much of the recent development in this area, characterized by poorly integrated site planning, automobile orientation, single-story, pre-fabricated metal buildings, and limited landscaping or screening. The result is a less than desirable gateway to Moretown. This is unfortunate, in that this area could function as a compact center occupied by an attractive mix of commercial and residential uses. To achieve this, however, appropriate regulatory standards regarding site design, architecture and access are needed, and a master plan coordinating facility improvements developed. The town may also want to consider designating North Moretown as a regional “village growth center”.

To the east of this intersection stretches the Route 2 corridor which runs parallel to the Winooski River. Route 2 provides access to several small, low density service businesses, as well as the MLI landfill. As at the intersection, residential development is dispersed along the highway. With the exception of the occasional addition of a garage and a house or two, the most significant development activity has been the extension of the landfill’s Act 250 permit to include Cell 3 (a Cell 4 has been proposed by MLI, which would extend the life of the landfill beyond 2020).

Zoning Bylaws and Future Land Use

Regardless of the unique geography, or perhaps because of it, Moretown has created and implemented a zoning bylaw that overlays these four unique geographic areas with four zoning district designations. Map 7.2 shows the current zoning districts. The upper elevations in all of the regions are known as the Preserve District. The majority of the properties in the Jones Brook, Moretown Mountain Road and Mad River Corridor are part of the Agriculture-Residential District. The commercial area along Route 2 and at the intersection with Route 100 is the Commercial/Industrial District, while the Village and some adjacent land designated as the Village District.

For more than twenty-five years, Moretown residents have chosen to regulate development using zoning. The existing zoning bylaw was designed to maintain the historic Village, concentrate commercial and/or industrial development in identified areas adjacent to the interstate, allow additional residential throughout the most accessible parts of town and limit residential development in areas that are most difficult to access and environmentally sensitive. The following section describes land use and patterns by district and offers ways to better achieve the town’s vision of development concentrated in the Village surrounded by countryside with low residential development and a working landscape of farms and forests.

Preserve District

The district purpose as defined in the Zoning Bylaws (Table 2.4) is “to protect significant forest resources and water supply watersheds at higher elevations and to limit development in areas with steep slopes, shallow soils, unique or fragile resources, and poor access to town roads and community facilities and services.” Features characteristic of the district are steep slopes, large tracts of forest, headwater streams, highly visible hillsides, poor soils and extensive wildlife habitat. Chapter 4 discusses the importance of these features. The district is largely forested, with scattered clearing for residential development. Within the district, houses are permitted on five acre parcels. Examples of other land uses include single family dwellings and associated accessory uses, outdoor recreation, sawmills, telecommunication facilities and cottage industries (up to 8 non-resident employees). A complete list of allowed uses can be found in Moretown’s Zoning Bylaws (Table 2.4).

Previous Town Plans and individuals at public meetings spoke of the importance of preserving these relatively untouched areas. The Preserve District encompasses the highest elevations in Moretown, including the area which was studied by the Commission as part of the draft Uplands Conservation Overlay District considered in 1999 (see Chapter 5). If the town should choose to more actively protect the elements of the Preserve District, through the overlay district or other regulatory measures, it will be essential to work with the landowners before anything too aggressive is proposed.

Agricultural-Residential District

A majority of the town is designated as agricultural-residential. Most of the building permit activity for the past decade has occurred in this district. It has seen primarily residential development, although a golf course surrounding Moretown Commons was permitted by the town in 1999. Single-family homes are permitted on one acre parcels. Other land uses allowed include farming, home businesses, schools and light industry. A complete list of allowed uses can be found in Moretown’s Zoning Bylaws (Table 2.3).

The Agricultural-Residential District is the location of much of the town’s historic and existing farming activity. Despite a decline in large-scale dairy farming, much of the Mad River corridor (see Chapter 4), Moretown Common, South Hill and land adjacent to the Winooski River east of Middlesex Village, retain an open, agrarian character. In some instances, large scale farming has been replaced with smaller scale operations (e.g., riding

We Have Zoning – Do We Need Subdivision Regulations?

“Subdivision” is typically defined as the division of a lot or parcel of land into two or more lots or parcels for the purpose of sale or development. It seems like a relatively simple concept – draw a few lines here and there, and make sure the new lots meet zoning requirements. It really isn’t so simple. Subdivision regulations, unlike zoning regulations, control the pattern of settlement. About one third of Vermont communities with zoning have yet to adopt subdivision regulations. Many of those with regulations adopted outdated models from the 1970s and 1980s, or regulations developed elsewhere in the country that do not reflect northern New England settlement patterns. Considerable growth and development has occurred since then, and development patterns have been changing.

Most of us do not equate these changes with the manner in which subdivisions are regulated. It’s through the subdivision of land, however, that we dictate settlement patterns within our communities – which in turn affects our future transportation network, demand for public facilities and services, and quality of life.

stables) and non-commercial activities associated with residential land uses.

As defined in the Zoning Bylaws (Table 2.3), the district is intended to provide “for medium density residential development, to permit the continuance of agricultural operations, to encourage clustered housing units, to preserve open space, and to preserve the significant resources of the District.” The overall goal of the district remains largely rural with the continuation of farming and preservation of open spaces. Regulatory options to achieve these goals, including subdivision regulations, should be seriously considered. The Planning Commission developed draft subdivision regulations in 2006. The Planning Commission chose not to forward the draft to the Select Board for adoption based on concerns by the Development Review Board, Select Board, and zoning administrator suggesting that it could not be administered properly with available resources. In addition, it is important that non-agricultural and non-residential uses, such as light industry, do not adversely impact neighboring properties. Non-regulatory means, such as the donation or purchase of development rights, should also be considered (see Chapter 4).

In 2007 the Moretown Select Board and School Board established an 81 acre deeryard conservation easement on Moretown’s Town Forest (a ~175 acre parcel of town own landed behind the elementary school). The easement is held by the Vermont Land Trust (VLT), and endorsed by the Vermont Agency of Natural Resources (ANR). A detailed Town Forest Land Management Plan is currently (fall 2007) under development by the Planning Commission and the parties noted above. The Plan will articulate specific goals and policies related to the management of the Town Forest for recreation, wildlife habitat protection (deeryard specifically), education, hunting, and timber production.

Village District

The Village has been and continues to be the residential, municipal, commercial and educational center for the community. All of Moretown’s municipal buildings are located in the Village. Geographically, the Village is bordered by the Mad River to the west and hilly town-owned property to the east. The north and south borders of the Village are defined by bridges over the Mad River.

As defined in the Zoning Bylaws the purpose of the Village district is to encourage a concentration of residential, commercial and municipal activities within the Village in a manner that respects its small scale, historic character and residential uses. Participants at the 2001 Public Forum spoke of the importance of a vital village with its historic attributes with the suggestion that the town seek to add the Village to the National Register of Historic Places (it should be noted, however, that placement of a property or district on the national register does not restrict a landowner’s right to renovate or alter their property -- See Chapter 5).

Presently, on-site septic limits the possibilities for expanding the Village. Technology will no doubt soon provide more affordable opportunities. Investment in a municipal treatment facility may allow for more concentrated development in the Village. Research and experience have revealed that what planners want and what Village property owners, renters and business people want may be very different. Communication and a good public process will be critical ingredients for a vital village that can accommodate growth.

Commercial District

Moretown does not have a significant non-resident tax base, and has historically promoted commercial and industrial development along the Route 2 corridor to expand that base. However, Act 60 and its amendments have attempted to equalize the tax impact of educational funding among towns. Support for town industries continues at developing existing commercial/industrial zones such as the Route 2 and Route 100 intersection.

The Route 2 Corridor represents the commercial and industrial sector of town. It also includes a number of residential units. It is the north-western entrance to Moretown, bordered by the floodplains of the Winooski River. A commercially-operated landfill is the greatest financial contributor to the town's coffers (in 2000 more than \$200,000 was provided to the town in accordance with the host-town agreement with the landfill's owners).

The purpose of this district is to allow for the location and expansion of commercial uses in appropriate locations in a manner that is compatible with residential uses and the town's rural character. To date, balancing commercial/industrial uses with residential uses has posed some challenges.

As noted earlier, this is the gateway to North Moretown from the northwest. It may be appropriate to develop standards or guidelines for the area to improve the function and appearance of the intersection. Landscaping, sidewalks, attractive street lights are a few examples of what can be incorporated in guidelines. In order to resolve these challenges and balance these concerns, the town should conduct a study to determine how the Commercial district can be modified to enhance the nature, location, and type of growth within the district. The town should also work with Waterbury and Duxbury to develop a clear and collaborative vision for the North Moretown area.

Planning Considerations

- The Village has retained its traditional settlement pattern of a compact center surrounded by open countryside.
- Current land use trends, especially scattered residential development, diminish the town's rural character and working landscape.
- Moretown is especially reliant on neighboring municipalities, including Northfield Village, Montpelier, Waterbury Village and Waitsfield (Irasville), for many commercial services. In effect, these commercial centers serve as the "downtowns" for Moretown residents.
- Much of the recent residential development has consisted of single family homes on large (greater than 6 acre) lots within the Mad River watershed.
- The area east of the Gap on the Moretown Mountain Road has experienced a much slower rate of growth than the rest of Moretown.

- The Jones Brook area is separated by mountains from other parts of Moretown and consequently, it is more challenging to provide adequate services to area residents.
- Land surrounding the intersection of Route 100 and Route 2 is undergoing a transition, characterized by poorly integrated site planning, automobile orientation, single-story, pre-fabricated metal buildings with limited landscaping or screening.
- It is important to Moretown residents that the Preserve District remain relatively undeveloped and its special features protected. These features include steep slopes, large tracts of forest, headwater streams, highly visible hillsides, poor soils and extensive wildlife habitat.
- In addition to the features listed above, two areas of special concern regarding the impact of new development on the town's natural and scenic resources are upland areas and the Route 100B/Mad River corridor (see Chapter 5).

Land Use Goals

- 1) *To maintain the town's historic pattern of development with its traditional Vermont village surrounded by rural countryside.*
- 2) *To regulate land development in order to protect the town's important natural, cultural and scenic resources while allowing diverse land uses in appropriate locations and strike a balance between community, commercial, and individual interests.*

Land Use Policies

- 1) Retain the rural qualities of the town by discouraging sprawl and by maintaining the historic patterns of development.
- 2) Maintain Moretown Village as the residential, commercial and community center.
- 3) Maintain existing town land and town forest as a common resource for all citizens.
- 4) Promote the preservation of scenic vistas by maintaining open land.
- 5) Development within the Route 100B corridor should be compatible with the existing character of that area, as defined by the open, agrarian landscape with scattered residential and agricultural buildings.
- 6) Development at high elevations (above 1,100' west of the Mad River and 1,400' east of the Mad River) should be designed to minimize the visual impact of the project as viewed from town roads. Erosion and stormwater shall be carefully managed at these elevations.
- 7) Development on slopes in excess of 25% shall be prohibited.

- 8) Designate the Route 2/ Route 100 intersection area a growth center and encourage a mix of compatible commercial, residential and industrial uses, providing such uses are designed in a manner that reflects high quality of site design characterized by the following features:
- parking located to the side and rear of buildings;
 - shared parking and driveway access wherever possible;
 - buildings located close to roads, with entrances and facades oriented toward the road, to create a defined streetscape;
 - two - three story buildings designed to include varied roof forms and traditional building materials;
 - integrated network of sidewalks; and
 - a pedestrian scale of building development.

Land Use Tasks and Strategies

- 1) The Planning Commission shall seek public input and prepare amendments to the zoning bylaws to accomplish the goals of this Town Plan. Specific provisions that the Commission should review and consider amending include:
 - whether light industry is an appropriate use outside of the Commercial District and, if so, are current standards adequate to address potential impacts;
 - adopting standards for the protection of water supply source protection areas;
 - whether the Commercial District should be revised;
 - whether a variation of the two draft overlay districts (Mad River and Highlands) described in Chapter 4 should be considered; and
 - whether the town should adopt subdivision regulations.
- 2) The Development Review Board shall carefully consider applications for development approval for consistency with the policies set forth in this plan.
- 3) The Planning Commission shall explore regulatory and non-regulatory options that support and enhance the working landscape by:
 - support compatible rural land uses in the preserve and agriculture-residential districts (eg: residential, farming, forestry, extraction of earth resources);
 - encouraging continued use of existing forest and farm land for sustainable forestry and agriculture;
 - avoiding fragmentation of resource lands and maintaining large tracts of open land to maintain both rural character and productive open land;
 - providing incentives for the preservation of the Mad River Corridor and disincentives for the development of the corridor; and
 - providing incentives for the preservation of high elevation lands and disincentives for development at high elevations.
- 4) The town shall seek to preserve or assist with the preservation of important conservation lands by purchasing the land or development rights with the assistance of local, state, federal, and private funding.

- 5) The Planning Commission shall consider developing subdivision regulations to ensure local control of the pattern of future development. To this end, the subdivision regulations would, at a minimum:
 - include standards to address the unique characteristics of each zoning district;
 -
 - require designation of public access where appropriate and standards for the designation of open space;
 - require natural resource protection standards including erosion control and stormwater management;
 - require a provision that stipulates that the cost of special studies required by a proposal will be paid for by the applicant unless otherwise determined by the town; and
 - Require that the applicant address the impact on town facilities and services.
- 6) The town should consider limiting new development in remote areas, far from town services.
- 7) The town shall actively participate in Act 250, VTrans, and other state level development review processes to ensure that all new proposals meet the policies of the plan.
- 8) The Planning Commission shall review and take into consideration the recommendations outlined in the “CVRPC Northwest Growth Study and Buildout Analysis: Moretown, VT”

CHAPTER 8. IMPLEMENTATION

A community changes and evolves in response to a multitude of individual and collective decisions and actions of citizens and public officials. When those decisions and actions are based on a shared vision of the future, a community can achieve that vision. Previous chapters of this plan set forth the planning background, and the goals for each plan element which, taken together, constitute a vision for Moretown's future. Achieving those goals will require the cooperation of many people and public and private agencies, using a variety of mechanisms over the next five, ten and twenty years. This section briefly describes the different tools and programs available to implement the plan.

Plan Adoption

Adoption by the Moretown Selectboard, pursuant to the procedures established in 24 V.S.A. Chapter 117 §4384 and §4385, is the first step in putting the plan into action. Through adoption, the Selectboard accepts this document as the guide for future physical growth and change in the Town.

CVRPC Approval

Approval by the CVRPC allows for greater regional planning and cooperation among towns in addressing mutual problems and challenges, maintains the town's eligibility for municipal planning funds as well as its authority to enact certain programs (e.g., impact fees). Once the plan is approved by the Selectboard, it should be submitted to CVRPC for regional approval.

Ongoing Planning

Ongoing planning is one of the most important elements of the process of keeping a town plan up to date and relevant. The Planning Commission and Selectboard should use the plan on an ongoing basis to ensure that its goals and policies are integrated in day-to-day decisions concerning public facilities and services, transportation, land use, and development in the town.

The Planning Commission is responsible for the maintenance and amendment of the plan. As conditions change and new information becomes available, amendments may be needed to keep the plan current. Special studies, public forums to consider specific issues, and regular meetings between local boards are effective ways to sustain an ongoing planning process. The plan automatically expires five years from adoption. Before the Plan expires, it should be thoroughly reviewed, and information on which the plan is based should be updated.

Municipal Land Use & Development Regulations

Zoning Regulations. This plan should serve as the blueprint and policy guide for future revisions to the Moretown Zoning Regulations. Several suggestions for revisions, or for additional study, are described in the previous chapters. In addition, certain provisions of the existing zoning, such as conditional use review, require that projects be consistent with the policies of this plan. To ensure future development's consistency with the plan, the Development Review Board will need to refer to it during the review process.

Subdivision Regulations. Described in Chapter 7, subdivision regulations are an effective tool for guiding the settlement patterns of the community, coordinating the provision of utilities and roads, and protecting natural resources. Subdivision regulations are adopted by a vote of the town, in accordance with the same procedures for adopting zoning.

Other Municipal Policies & Programs

Local land use regulations are not the only means with which Moretown can implement various sections of this plan. Other ordinances and policies can also serve to carry out policies and strategies described in previous chapters. For example, a road ordinance or policy can further many of the policies included in chapter 5.

State Permit Procedures

Presently, any commercial development involving one or more acres of land, and any residential development or subdivision resulting in the creation of 6 or more dwelling units or lots, requires Act 250 approval. Should the town enact subdivision regulations, in addition to having zoning and a town plan in place, the threshold triggering Act 250 review would increase to 10 acres and 10 dwelling units, respectively.

One of the 10 criteria that projects must meet to comply with Act 250 is that the development be in conformance with the town plan. In the case of Moretown, conformance shall be determined by whether the proposed development is consistent with specific policies listed at the end of chapters 2-7. If a project is not consistent with a specific policy, it shall be determined to be not in conformance with the plan.

Both the Planning Commission and Selectboard have party status to participate in all Act 250 review processes. Both bodies should monitor project applications, which are reported to the town by the District 5 Environmental Commission, and participate in those processes whenever appropriate. Other state and federal regulatory processes, for example Section 248 (related to public energy facilities) and the National Environmental Protection Act (related to federally funded projects) also provide opportunity for local participation and review against the policies set forth in this plan.

Public Spending

Like most small, rural towns, Moretown has a limited capacity to raise and spend tax dollars on local government initiatives. The town does have access to one relatively uncommon revenue source, however, through the host town agreement with MLI landfill. This provides some opportunity, over the coming years, to invest in important capital facilities. The preparation of a capital budget – described in chapter 6 – should help the town balance competing demands for facilities and maintain a stable tax rate.

In addition, many communities are successful in securing assistance for specific projects through public and private grant sources. The development of this plan, for example, was funded through the Vermont Municipal Planning Grant Program, and the recreation and parking facilities adjacent to the school were funded through a VTrans Enhancements Grant. Staying aware of grant programs as they become available, and being prepared to submit applications that further

the policies of this plan, should be a priority for all local boards.

Open Space Conservation

Land conservation, using the tools described in chapter 4, has become a common mechanism for implementing a variety of local policies related to farmland and forest preservation, natural resource protection, economic development and land use planning. One reason for the growing use of these tools is the availability of statewide funding sources – such as the Vermont Housing & Conservation Fund and several private foundations – and the presence of active land conservation organizations. In the Mad River Valley, there is, in addition to statewide resources, a partnership between the Vermont Land Trust (VLT) and the Mad River Valley Planning District (MRVPD) called the Mad River Watershed Conservation Partnership (MRWCP). MRWCP is dedicated to protecting natural resources and open space within the Mad River watershed. Coordination with these efforts could help the town achieve many of the policies described in the plan, especially in chapter 4 and chapter 7.

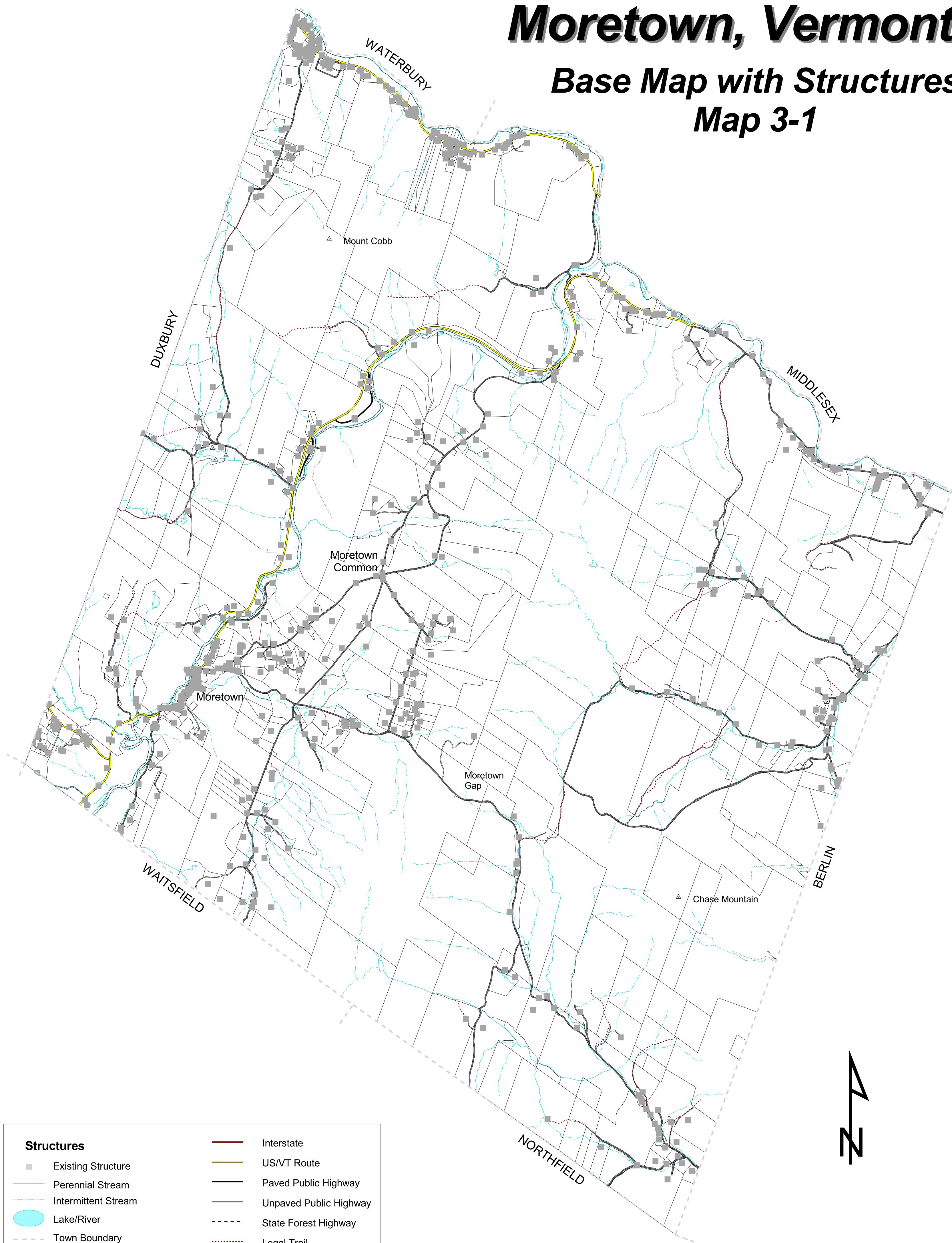
Implementation Strategies

Most of the tools summarized above are described in greater detail elsewhere in the plan. At the end of each preceding chapter, planning considerations are identified relative to the topic of the chapter, and goals and policies are presented respective of those considerations. In addition, implementation strategies – specific actions that can be undertaken by one or more specified body – are also listed. These strategies form the basis of the Planning Commission's action plan in the coming years, and should be periodically reviewed as a measure of the Commission's success implementing the plan.

Moretown, Vermont

Base Map with Structures

Map 3-1



Structures

- | | |
|---------------------|---------------------------|
| Existing Structure | Interstate |
| Perennial Stream | US/VT Route |
| Intermittent Stream | Paved Public Highway |
| Lake/River | Unpaved Public Highway |
| Town Boundary | State Forest Highway |
| Mountain Summit | Legal Trail |
| | Paved Private Road |
| | Unpaved Private Road |
| | Discontinued, Untravelled |

1:28,000

1/4 0 1/4 1/2 3/4 1 Mile

1/2 0 1/2 1 Kilometer

Data Sets:
Roads - 1:5,000 VGIS/ E911 Roads 1996-7
Surface Waters - 1:5,000 CVRPC Surface Water Data
Town Boundary - 1:5,000 Parcel Data
Structures - 1:5,000 E-911 data, 2000.

Map Created 4/7/02 by K. Fuller, CVRPC

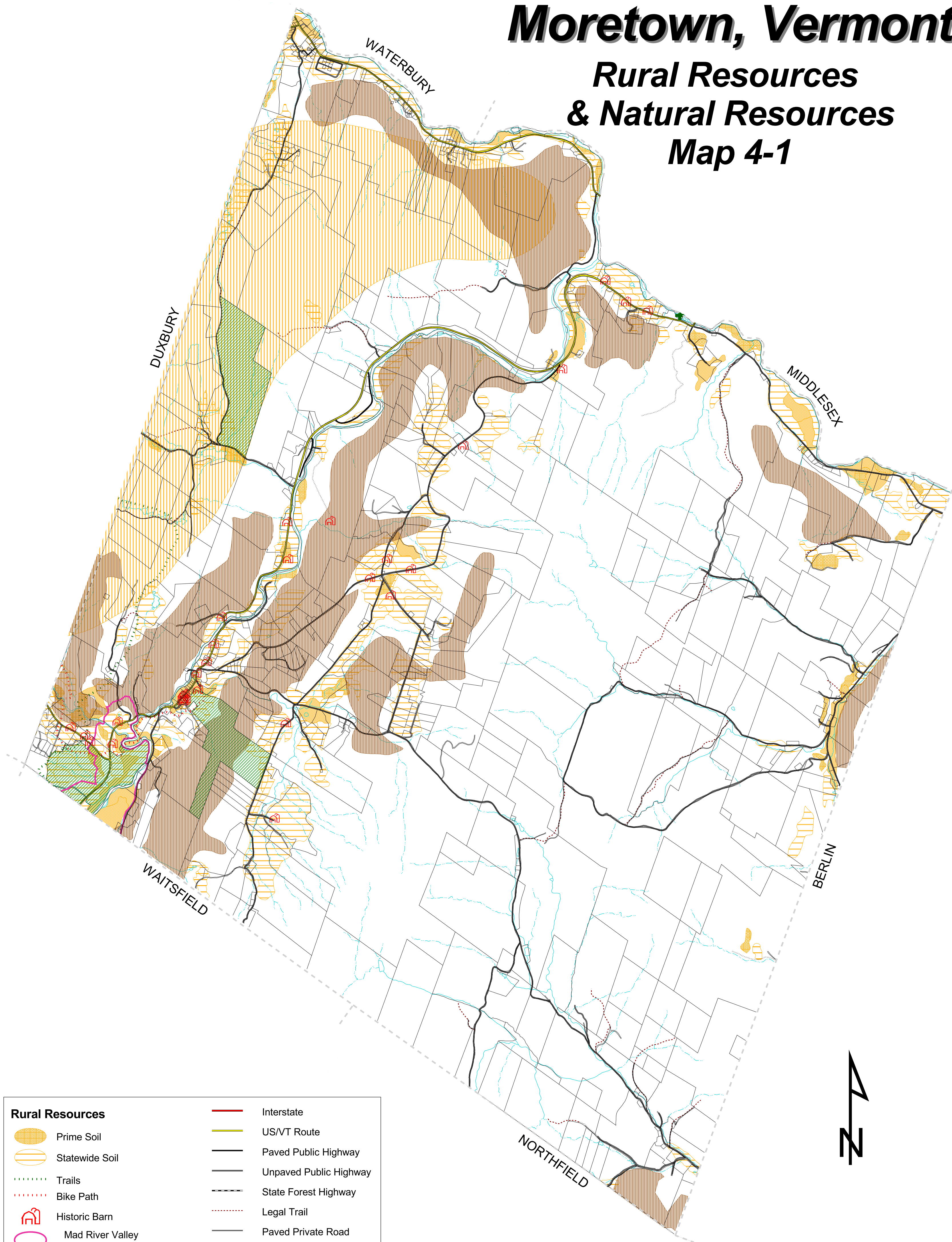
Data is only as accurate as the original source materials.
This map is for planning purposes.
This map may contain errors and omissions.



Moretown, Vermont

Rural Resources & Natural Resources

Map 4-1



Rural Resources

- Prime Soil
- Statewide Soil
- Trails
- Bike Path
- Historic Barn
- Mad River Valley Rural Historic District
- Endangered Species Site
- Deer Wintering Yard
- Protected Land (Easement)
- Parcel
- Perennial Stream
- Intermittent Stream
- Lake/River
- Town Boundary

- Interstate
- US/VT Route
- Paved Public Highway
- Unpaved Public Highway
- State Forest Highway
- Legal Trail
- Paved Private Road
- Unpaved Private Road
- Discontinued, Untraveled

1:28,000

1/4 0 1/4 1/2 3/4 1 Mile

1/2 0 1/2 1 Kilometer

Data Sets:
Roads - 1:5,000 VGIS/ E911 Roads 1996-7
Surface Waters - 1:5,000 CVRPC Surface Water Data
Town Boundary - 1:5,000 Parcel Data
Soils - Optically scanned from 1:20,000 USDA-NRCS soils maps, 1981.
Trail/Bike Path Data: Various Sources, 1994-2000.
Historic District: Digitized from paper maps, 2001.
Barn data: Derived from Parcel data, 2001.
Deer Wintering Yards: 1:24,000 and 1:25,000, VANR, 1994.
Rare Plant/Animal Sites - 1:24,000 Vermont Nongame and Natural Heritage Program, VANR, 1997.
Protected Resources - Derived from 1:5,000 Moretown Parcel data, 2001.

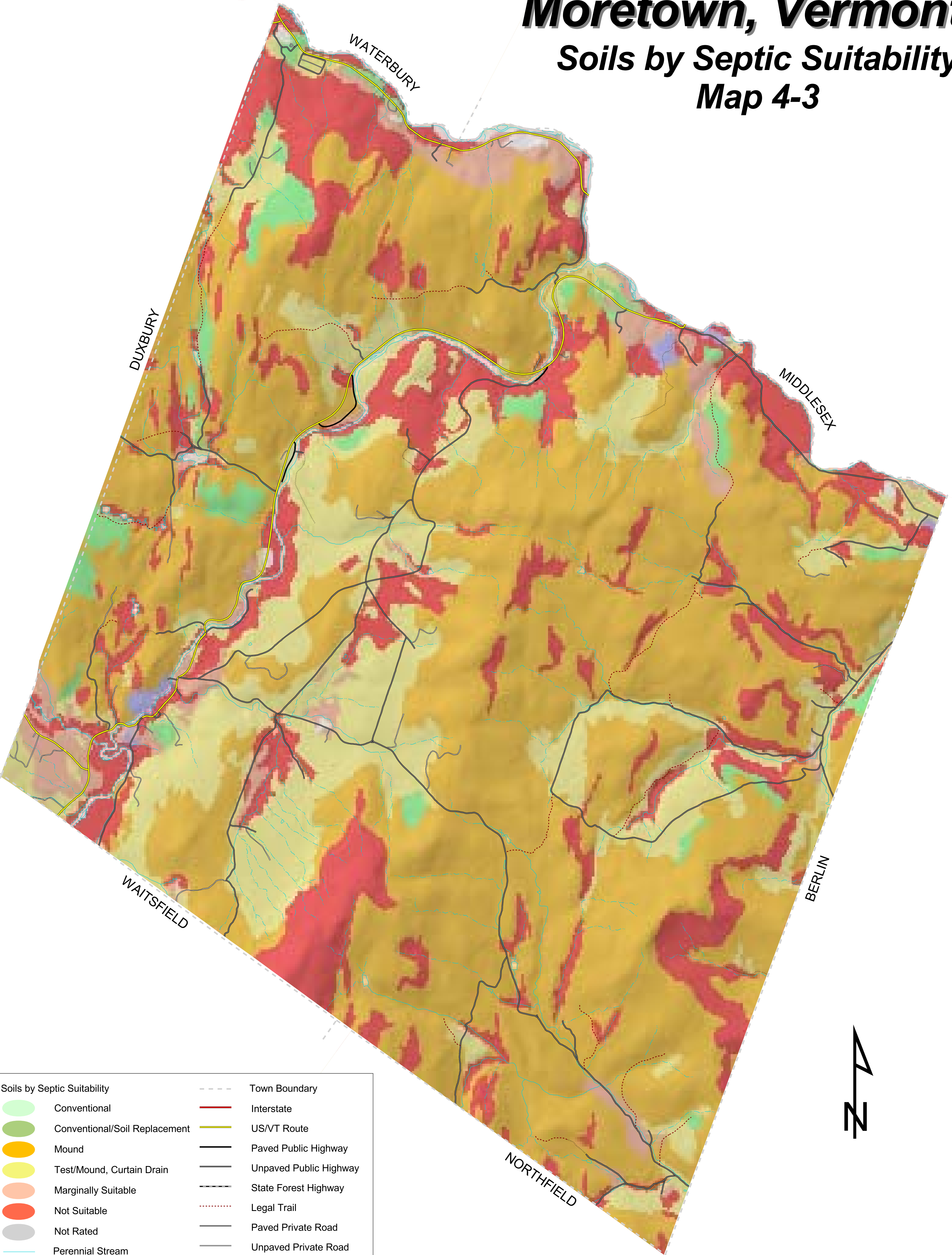
Data is only as accurate as the original source materials.
This map is for planning purposes.
This map may contain errors and omissions.
Map Created 4/7/02 by K. Fuller, CVRPC



Moretown, Vermont

Soils by Septic Suitability

Map 4-3



Soils by Septic Suitability

Conventional

Conventional/Soil Replacement

Mound

Test/Mound, Curtain Drain

Marginally Suitable

Not Suitable

Not Rated

Perennial Stream

Intermittent Stream

Lake/River

Town Boundary

Interstate

US/VT Route

Paved Public Highway

Unpaved Public Highway

State Forest Highway

Legal Trail

Paved Private Road

Unpaved Private Road

Discontinued, Untravelled

1:28,000

1/4 0 1/4 1/2 3/4 1 Mile

1/2 0 1/2 1 Kilometer

Data Sets:

Roads - 1:5,000 VGIS/ E911 Roads 1996-7

Surface Waters - 1:5,000 CVRPC Surface Water Data

Town Boundary - 1:5,000 Parcel Data

Septic Suitability- 1:20,000 NRCS Soils Data and On-Site Database, 1980.

Contours - 7.5 Minute USGS DEM data processed by VCGI, 1996

Map Created 4/1/99 by J. Osborne, CVRPC

Updated by 4/7/02 by K. Fuller

Data is only as accurate as the original source materials.

This map is for planning purposes.

This map may contain errors and omissions.

GIS

CENTRAL VERMONT

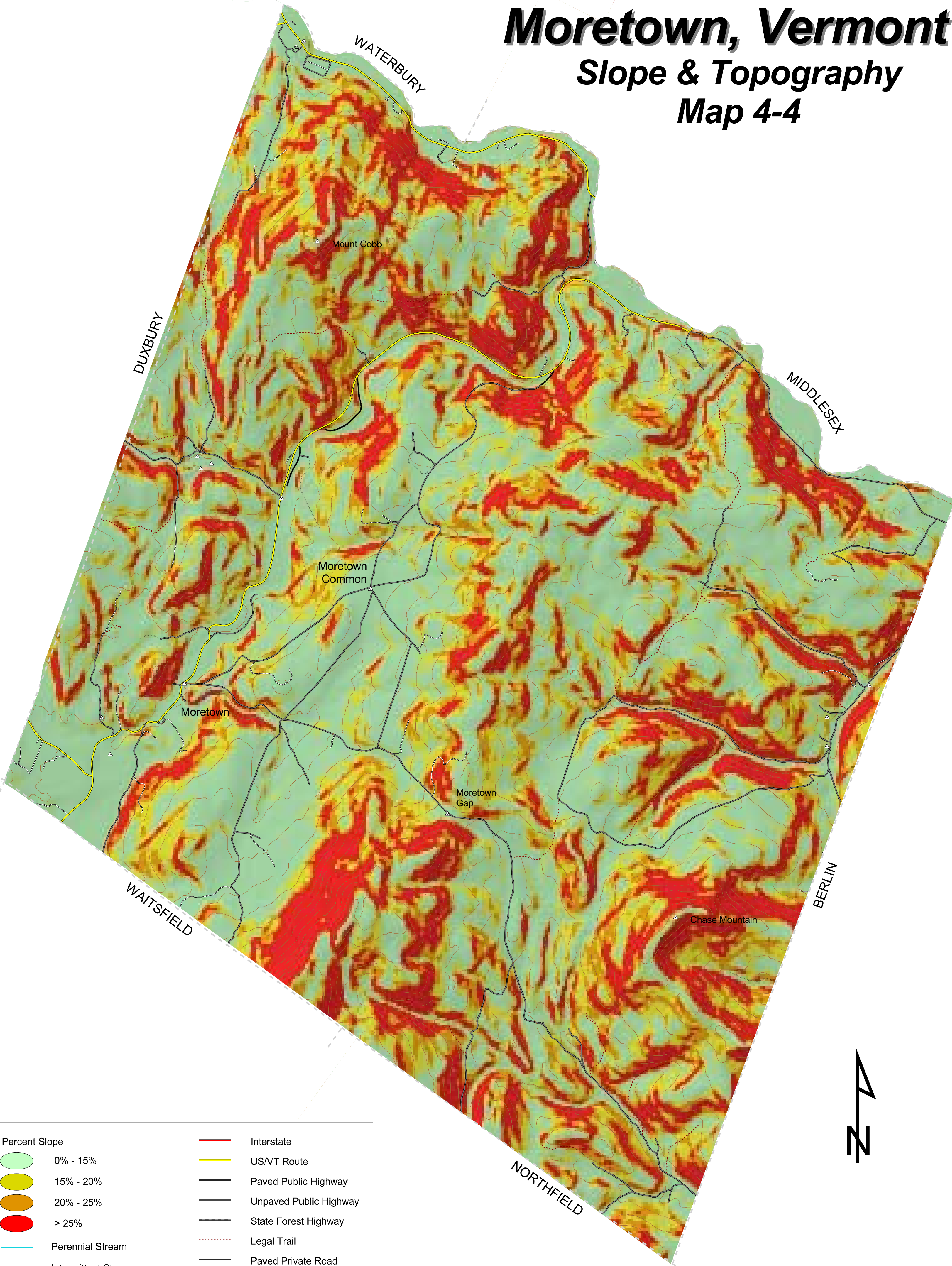
REGIONAL PLANNING

COMMISSION

Moretown, Vermont

Slope & Topography

Map 4-4



Percent Slope

- 0% - 15%
- 15% - 20%
- 20% - 25%
- > 25%
- Perennial Stream
- Intermittent Stream
- Lake/River
- 100' Index Contour
- Town Boundary
- Mountain Summit

- Interstate
- US/VT Route
- Paved Public Highway
- Unpaved Public Highway
- State Forest Highway
- Legal Trail
- Paved Private Road
- Unpaved Private Road
- Discontinued, Untraveled

1:28,000

1/4 0 1/4 1/2 3/4 1 Mile

1/2 0 1/2 1 Kilometer

Data Sets:
Roads - 1:5,000 VGIS/ E911 Roads 1996-7
Surface Waters - 1:5,000 CVRPC Surface Water Data
Town Boundary - 1:5,000 Parcel Data
Slope - created from 7.5 minute USGS DEM data
Contours - 7.5 Minute USGS DEM data processed by VCGI, 1996
Map Created 4/1/99 by J. Osborne, CVRPC

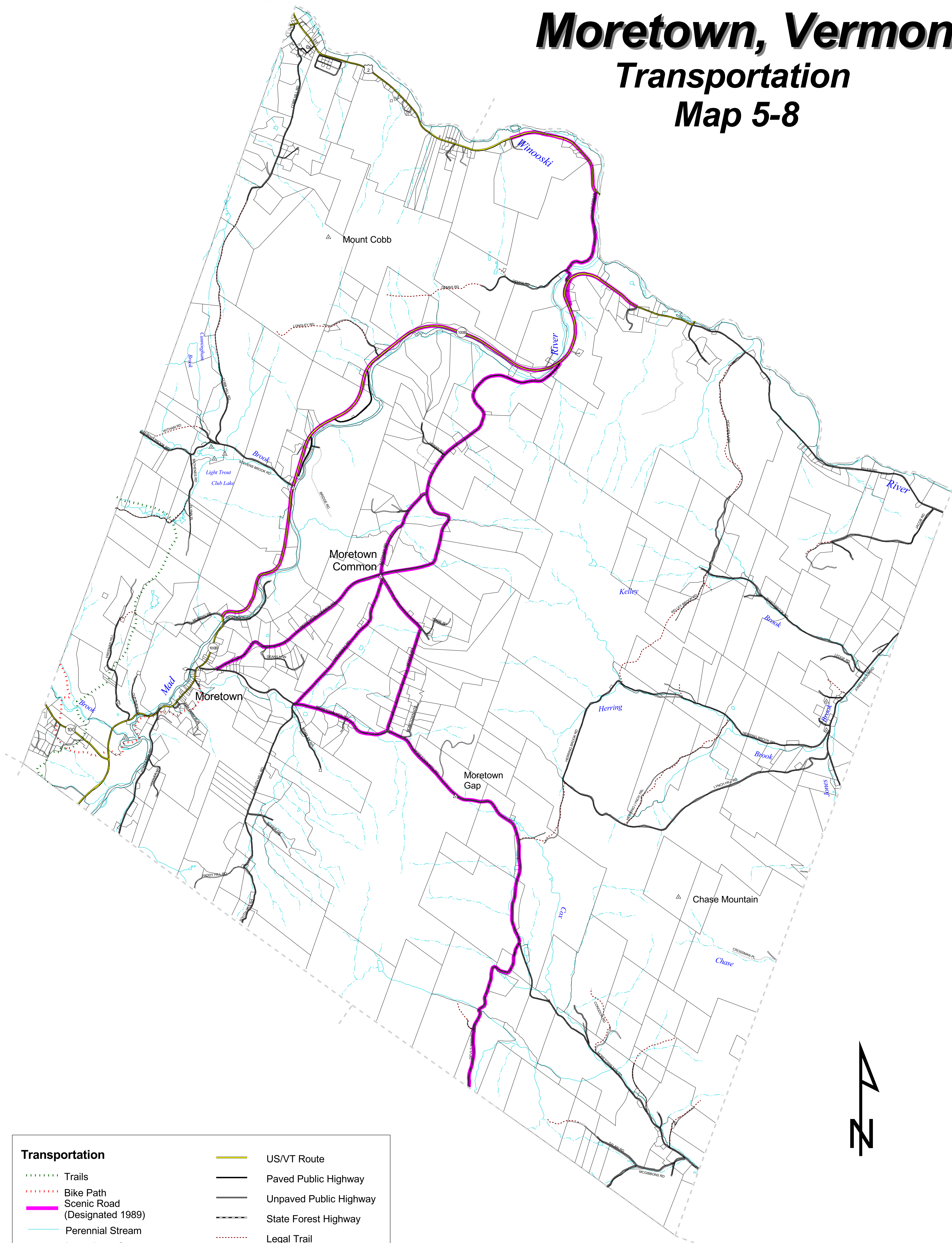
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This map is for planning purposes.
This map may contain errors and omissions.



Moretown, Vermont

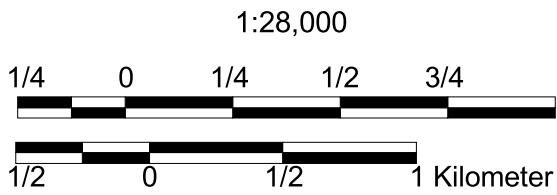
Transportation

Map 5-8



Transportation

- | | |
|-------------------------------|---------------------------|
| Trails | US/VT Route |
| Bike Path | Paved Public Highway |
| Scenic Road (Designated 1989) | Unpaved Public Highway |
| Perennial Stream | State Forest Highway |
| Intermittent Stream | Legal Trail |
| Lake/River | Paved Private Road |
| Town Boundary | Unpaved Private Road |
| Mountain Summit | Discontinued, Untravelled |



Data Sets:
Roads - 1:5,000 VGIS/ E911 Roads 1996-7
Surface Waters - 1:5,000 CVRPC Surface Water Data
Town Boundary - 1:5,000 Parcel Data
Structures - 1:5,000 E-911 data, 2000.
Trail/Bike Path Data: Various Sources, 1994-2000.
Map Created 8/1/01 by K. Fuller, CVRPC

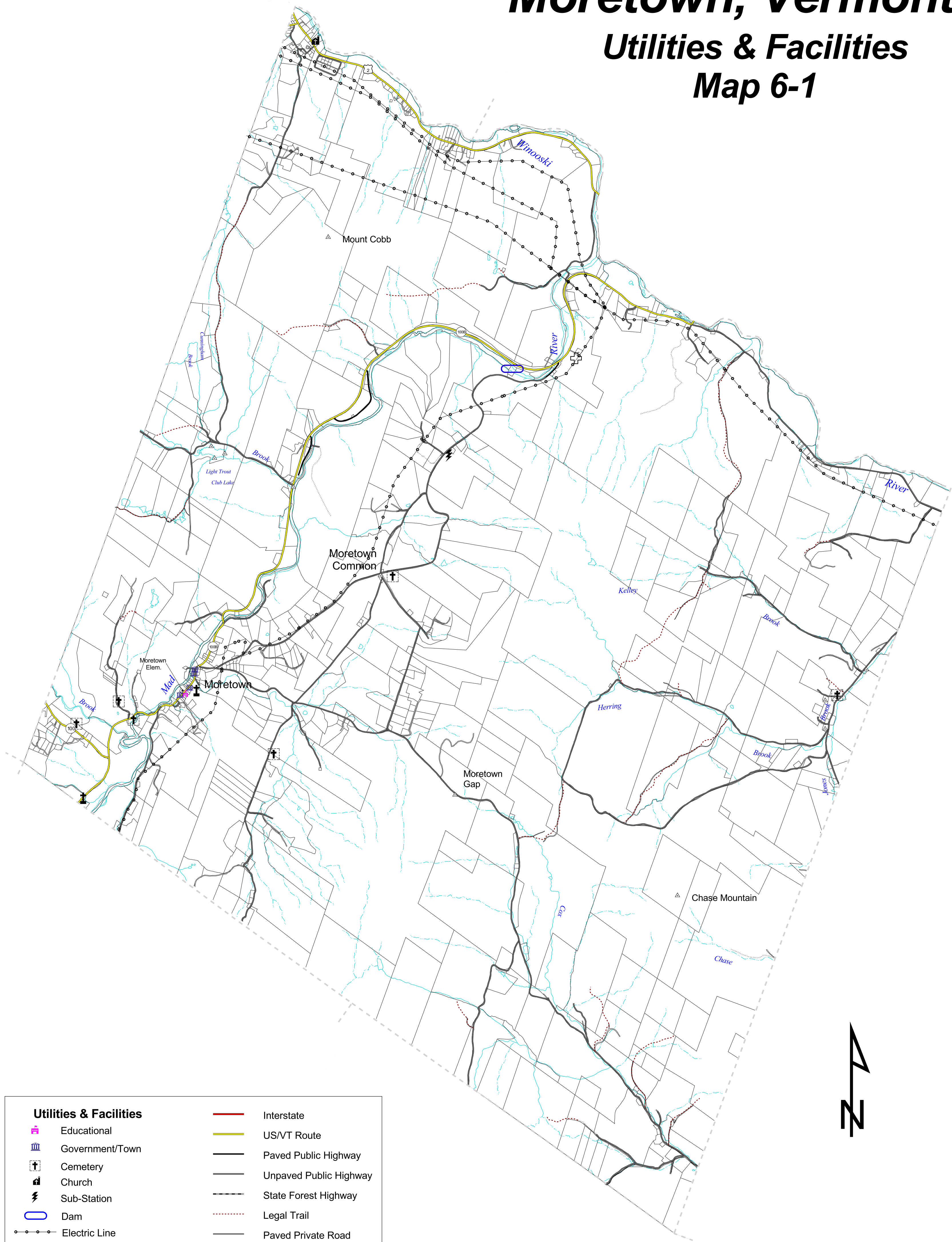
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This map may contain errors and omissions.



Moretown, Vermont

Utilities & Facilities

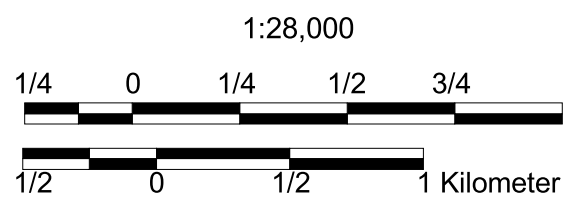
Map 6-1



Utilities & Facilities

- Educational
- Government/Town
- Cemetery
- Church
- Sub-Station
- Dam
- Electric Line
- Perennial Stream
- Intermittent Stream
- Lake/River
- Town Boundary
- Mountain Summit

- Interstate
- US/VT Route
- Paved Public Highway
- Unpaved Public Highway
- State Forest Highway
- Legal Trail
- Paved Private Road
- Unpaved Private Road
- Discontinued, Untravelled



Data Sets:
Roads - 1:5,000 VGIS/ E911 Roads 1996-7
Surface Waters - 1:5,000 CVRPC Surface Water Data
Town Boundary - 1:5,000 Parcel Data
Structures - 1:5,000 E-911 data, 2000.

Map Created 4/07/02 by K. Fuller, CVRPC

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This map is for planning purposes.
This map may contain errors and omissions.



Moretown, Vermont

Land Use/Land Cover

Map 7-1



Land Use/Land Cover

	AGRICULTURE & OPEN LAND
	CEMETERY
	COMMERCIAL/SERVICE
	FOREST LAND
	GOVERNMENT
	INDUSTRIAL
	INSTITUTIONAL
	RESIDENTIAL
	ROADS & PARKING LOTS
	SAND & GRAVEL PITS
	SCHOOLS
	SCRUB/SHRUB
	SURFACE WATERS
	WETLANDS

	Perennial Stream
	Intermittent Stream
	Lake/River
	Town Boundary
	Interstate
	US/VT Route
	Paved Public Highway
	Unpaved Public Highway
	State Forest Highway
	Legal Trail
	Paved Private Road
	Unpaved Private Road
	Discontinued, Untravelled

1:28,000

1/4 0 1/4 1/2 3/4 1 Mile

1/2 0 1/2 1 Kilometer



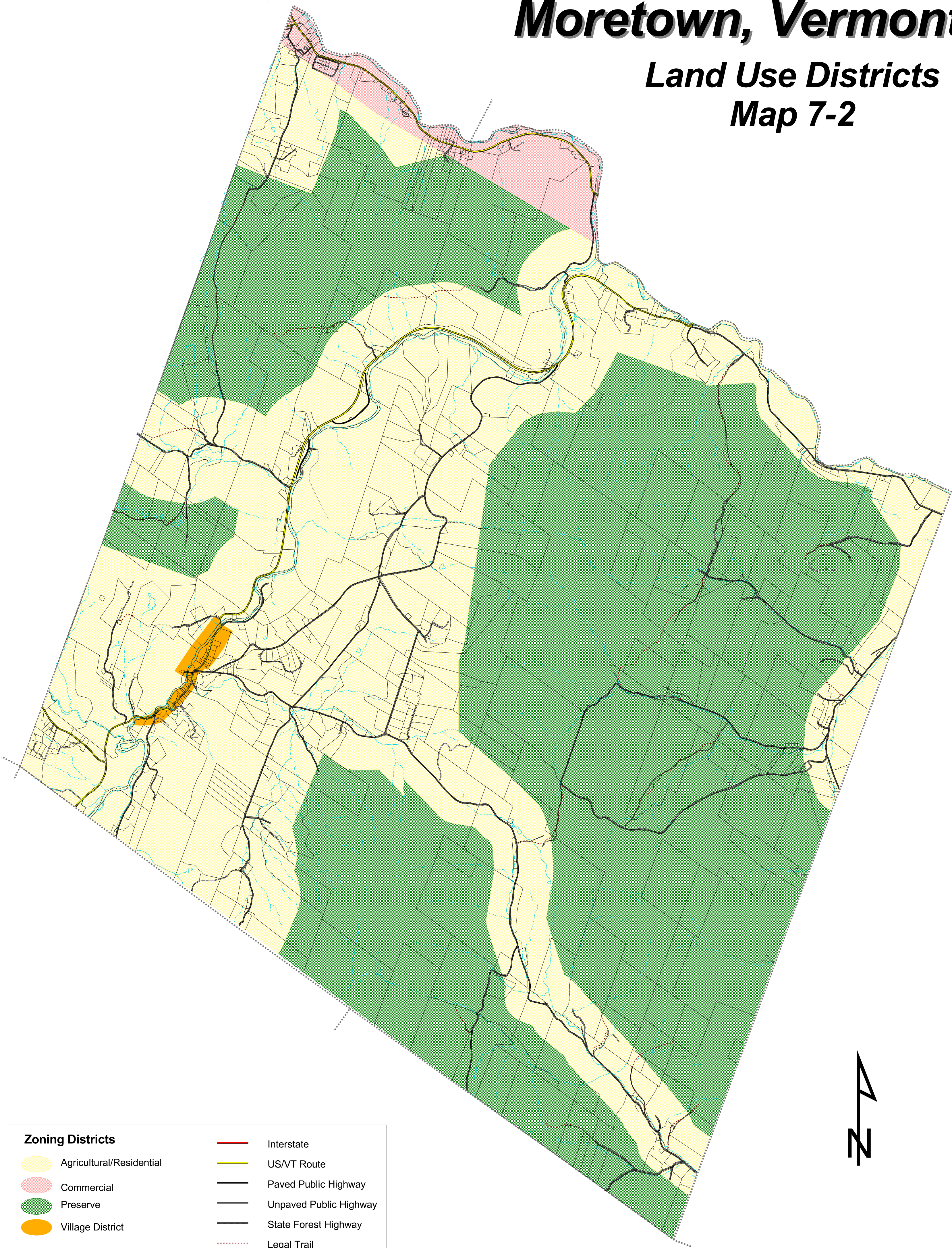
Data Sets:
Roads - 1:5,000 VGIS/ E911 Roads 1996-7
Surface Waters - 1:5,000 CVRPC Surface Water Data
Town Boundary - 1:5,000 Parcel Data
Land Use/Land Cover - 1:5,000 CVRPC data from 1978-89 orthophotographs and 1992-93 1:80,000 satellite imagery.
Contours - 7.5 Minute USGS DEM data processed by VCGI, 1996
Map Created 4/1/99 by J. Osborne, CVRPC.
Updated by K. Fuller, CVRPC 4/7/02

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Moretown, Vermont

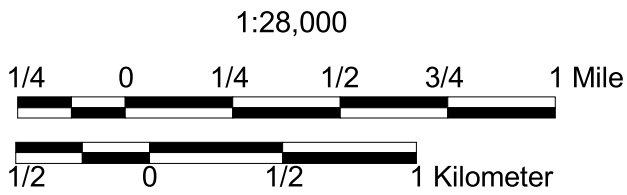
Land Use Districts Map 7-2



Zoning Districts

- Agricultural/Residential
- Commercial
- Preserve
- Village District
- Parcel
- Perennial Stream
- Intermittent Stream
- Lake/River
- Town Boundary

- Interstate
- US/VT Route
- Paved Public Highway
- Unpaved Public Highway
- State Forest Highway
- Legal Trail
- Paved Private Road
- Unpaved Private Road
- Discontinued, Untravelled



Data Sets:
Roads - 1:5,000 VGIS/ E911 Roads 1996-7
Surface Waters - 1:5,000 CVRPC Surface Water Data
Town Boundary - 1:5,000 Parcel Data
Parcels - Moretown Parcel Data, 1994.
Zoning - Moretown Zoning Data, 1994.
Map Created 8/6/01 by K. Fuller CVRPC

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