

Town of Richmond 2012 Town Plan



**Approved by the Richmond Selectboard
on March 5, 2012**

February 16, 2012

Wendy Tudor
VDEHCA
National Life Building, 6th Floor
One National Life Drive
Montpelier, VT 05620

Dear Ms. Tudor:

I am writing to confirm that on February 15, 2012 the Chittenden County Regional Planning Commission re-approved The Town of Richmond's 2007 Comprehensive Plan and confirmed their planning process. The approval procedure started with the CCRPC staff review of the plan and a public hearing which was duly warned and heard on February 9, 2012. At the hearing the Comprehensive Plan was reviewed for consistency with the planning goals of 24 V.S.A. Section 4302, compliance with 24 V.S.A 4382, and for compatibility with other approved municipal plans and with the *2006 Chittenden County Regional Plan*. At the closure of the public hearing the review committee recommended approval of the Plan and planning process to the full Commission; subsequently the full Commission approved Richmond's Town Plan and planning process.

Please let me know if you are in need of any other information or have any questions.

Sincerely,



Regina Mahony
Senior Planner

Cc: Cathleen Gent, Town Planner, Town of Richmond

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Photos contained in this Plan were submitted by
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Cover photo submitted by Lou Borie

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Section 1 – Introduction

The Richmond Town Plan is the principal policy statement for the Town of Richmond. It presents a snapshot of existing conditions in Richmond, a vision for the future of the Town and the means to achieve this vision. The Plan attempts to address areas of concern for the future of Richmond and ways to deal with, study or monitor these areas. The Plan is organized into nine major planning topics, each topic then divided into four subsections: Inventory and Trends, Key Observations, Objectives and Implementation. Within each subsection, items are not prioritized but merely listed. Prioritization will be left to the implementing bodies and public review.

The enforcement or regulatory power of this Plan is found in the Richmond Zoning Regulations, the Richmond Subdivision Ordinance and other town bylaws. These documents also undergo a process of extensive citizen review and public hearings prior to adoption, and are updated periodically. The Planning Commission will strive to involve all residents, and especially directly affected landowners, in the process of reviewing zoning ordinances and other bylaws.

Purpose

Recognition of the importance of economy, environment and sense of place, and a respect for the rights and property of individual citizens builds the quality of life that characterizes strong communities. The nurture of these core values requires careful assessment and planning on a continuing basis. Without a strong plan, control over our lives, livelihoods and landscape is surrendered to the highest bidder. Local control by working together within the framework of a strong plan is the best way to assure Richmond will remain a place in which we all wish to live. The authority to prepare and implement the Plan is granted through Vermont Statutes Annotated (VSA) Title 24, Chapter 117, Municipal and Regional Planning and Development, Section 4302.

Process

Richmond's previous Town Plan was adopted in March 2002. The process undertaken for the 2002 Town Plan represented a major, ambitious plan including many implementation steps involving numerous public boards and private groups. The Planning Commission decided that, because the 2002 Town Plan provided an excellent framework, the 2007 update would focus on updating technical information, revising goals as needed, and establishing new implementation goals to reflect Town-based actions needed in the next five years.

On May 17, 2006, The Planning Commission held a "Town Plan Kick-Off" to begin public discussion of the Town Plan. At that meeting, many Town residents stated that the Objectives of 2002 Town Plan seemed to still reflect their desires for the Town, but that the Town had not completed many of the implementation steps suggested by the 2002 Plan. With this in mind, the Planning Commission spent the summer of 2006 reviewing and updating each section and prioritizing the numerous implementation items for each section. At the end of that summer, the Planning Commission held three meetings to discuss Land Use and Future Land Use issues. Changes to the Land Use and Future Land Use Sections were made based on comments from these meetings.

Once the revisions were complete, Planning Commission and Selectboard public hearings were held throughout the fall and early winter of 2006 to prepare the Town Plan for adoption by australian ballot on Town Meeting Day 2007. The Chittenden County Regional Planning Commission (CCRPC) will be asked to review and approve the Town Plan so that Richmond retains confirmation of its planning process (See 24 V.S.A Section 4350).

This Plan is based on current conditions in the Town and the region. As specific local conditions change, public attitudes evolve and more data become available, the Plan will be updated and revised. At a minimum, the Plan will be updated every five years, as required under state statute.

Note on Terminology

Previous Richmond Town Plans have used numerous terms to describe the village and Jonesville areas. Unfortunately, it has not always been clear what areas of town are being discussed. In order to clarify the discussions contained in the Town Plan, the following place names are defined and used throughout this document:

Incorporated Village of Richmond – the former Village of Richmond which is now the Municipal Water and Sewer Service Area

Designated Village Center – the area on Bridge Street and Main Street approved for certain tax credits by the State of Vermont

Village Areas – The areas designated as village areas on the Future Land Use Map (Figure 11), including both the village and Jonesville.

village – The main village, as defined by the Future Land Use Map, not including Jonesville.

A Brief History of Richmond

Landscape

The natural diversity of the 22,022 acres (34.41 sq. miles) that comprise Richmond's landscape is a reflection of the town's location astride the boundary of two of Vermont's physiographic regions: the Northern Green Mountains and the Champlain Lowlands. The landscape is dominated by foothills, which reach 1,640 feet at the town's highest elevation, and is bisected by the Winooski River, which carves out the town's lowest point at 250 feet where it flows through the lowlands into Jericho. With the exception of the extreme southwest corner of the town (which eventually drains into the LaPlatte River), the Richmond landscape is contained within the Winooski River Watershed.



Mountains in Fall (submitted by Lou Borie)

The foothills are given their shape by the underlying metamorphic bedrock, which has slowly been eroding since its formation over 500 million years ago. The bedrock is part of the Mansville Complex, and is composed primarily of the Pinnacle Formation (mainly metawackes) and the Underhill Formation (mainly chlorite schist). Although the bedrock can be seen outcropping in numerous locations throughout the town, it is largely mantled by sediments left behind as the Laurentide ice sheet retreated from the landscape 10,000 years ago. Glacial till, a mix of particles ranging in size from clay to boulders, is the dominant surficial material above 600 feet, whereas gravels, sands and silts are common in the valleys where ancient river terraces and deltas are exposed. Clay deposits can also be found in the lowlands, evidence that Lake Vermont (a precursor to Lake Champlain) once inundated the major river valleys with glacial meltwater for a period about 12,000 years ago.

The 74 different types of soil found in Richmond are a manifestation of the underlying geological diversity. The youngest (and most fertile) soils are found in the Winooski River floodplain, where frequent high-water events deposit fresh alluvial material on a regular basis. The soils in the higher elevations that formed in glacial till are rocky and of moderate fertility and most were abandoned agriculturally over 100 years ago.

The Richmond landscape, which is approximately 80% forested, supports a diversity of natural communities. Northern hardwoods, with major components of sugar maple, red oak, white pine, and hemlock, dominate the uplands. The lowland areas that are not developed or in active agriculture are composed primarily of silver maple-dominated floodplain forests.

Culture

The first inhabitants of Richmond were indigenous people, who utilized the natural resources and topographic features important for travel, hunting, and food. Paleo-Indians are believed to be the first Vermonters and undoubtedly traveled through and hunted in Richmond. They were hunters and gatherers and lived in the Champlain Lowlands between 12,000 and 9,500 years ago. Archaic Indians lived here during the Archaic period from 9,500 to 3,000 years ago. The Winooski River was also a common highway for the Abenaki Indians after 1,000 A.D. between Lake Champlain and the Connecticut River.^{1, 2}

An important archaeological site was discovered in 1809 in Jonesville, with arrowheads and stone utensils discovered in an area off Wes White Hill Road. In 1995, a nearby site was excavated as part of the engineering project to replace the bridge over the Huntington River. At that site, new findings showed the site was used on a seasonal basis by Abenaki Indians beginning around 1400 A.D., who developed a small camp or residential base for gathering food and hunting for a wide variety of fur-bearing mammals. Excavation showed that at least 11 different species of mammals were brought back to the site, including bear, deer, beaver, cottontail rabbit, chipmunk, red squirrel, muskrat, porcupine, fisher, mink, and skunk. The seasonal residents hunted within the Winooski River Valley and more upland areas, particularly the Green Mountains and area around Gillett Pond and its surrounding wetlands. Artifacts at the site also showed evidence that the Abenaki Indians had some contact with St. Lawrence Iroquois and perhaps with areas of New York near the Hudson River.

Throughout the 17th and well into the 18th century, Vermont served as a passageway for the French and Indian raiding parties harassing English settlers to the south and east, and also served as a slave corridor where captured whites were driven north to Canada. European settlement of Vermont did not begin until the Treaty of Paris ended the French and Indian War in 1763. While surrounding townships were being granted by Governor Wentworth of New Hampshire and being settled and organized, there was not one dwelling in the area destined to become Richmond. In 1775, Amos Brownson and John Chamberlain established homesteads in the area known as "the flats" which was at that time a part of the Williston Township. This early settlement coincided with the advent of the American Revolution when Vermont settlements on the borders of civilization were vulnerable to Indian attack. A man and a child were killed at the Chamberlain homestead before Richmond's settlers, along with nearly all the other families in Chittenden County, abandoned their new homes and fled to the south for safety.

After the Revolutionary War in 1784, Brownson and Chamberlain returned, other settlers arrived, and settlements were built in areas which were then portions of Huntington, Bolton, Jericho and Williston. Portions of these settlements formed what became Richmond. After petitioning the State, Richmond was granted township status in 1794, and has the distinction of being the first town chartered by the newly formed State of Vermont. By the time the census

was taken in 1800, Richmond had grown to a population of 718. Formal community responsibility began with the first Town Meeting in March 1795.

Two forms of commerce were visible in early Richmond: agriculture and trading. The latter was secondary to farming, dependent primarily upon the produce raised by local farmers. Wool and grain, the chief commodities in the early years gave way to milk and dairy products in the mid-1800's. Cheese and butter were made in local factories and shipped to market. Business activity was enhanced by Richmond's proximity to the Turnpike Road (US Route 2). Travelers on the difficult 60-mile trip between Burlington and Montpelier found Richmond a natural over-night stop.

The farmer, needing the cash to pay for the products and services offered in town, found his woodland could bring him some revenue. Lumber was in demand, and ships sailed daily from Burlington carrying away much of the wealth of Vermont's forests. Hardwood not sold as lumber was burned to make potash. Smoke spiraling upward behind many farm homes told of the stripping of forestland. Within 100 years after the first settlers arrived, the valleys and hillsides were denuded of their ancient cover. The loss of this resource paved the way for the devastating floods of the twentieth century. As the community grew to a population of 1,453 in 1850 transportation and communication became important. The turnpike was improved in 1849, the same year that the railroad was completed. Richmond's business district began to shift to the north of the river to be nearer to the turnpike and the railroad. Telegraph service linked Richmond with the rest of the country also in 1849.

With new and expanded markets available, it became profitable to operate factories and businesses in Richmond. H.C. Gleason opened a creamery in 1885, the Borden Company established a milk processing plant, and a cooperative creamery began to operate. At that time, Richmond was the second largest shipper of butter and cheese in the State of Vermont. Other industries in this thriving community of the 1800's were: a carriage manufacturing steam sawmill, furniture factory, paper mill, spool factory, woolen mill, spoke factory, cider mill, several grist mills, and a steam mechanics shop. Businesses dealing in drugs, furniture, dry goods, groceries, hardware, tinware, harness making, jewelry, millinery, blacksmithing, confections, boots and shoes, marble and woodenware were available to the Richmond resident.

One of the items of business transacted at Town Meeting on December 6, 1796 was the decision to obtain a site for a meetinghouse. Isaac Gleason and Thomas Whitcomb donated land on which to erect a structure that could serve as a combined meeting house and house of worship. Construction was begun in 1812 on what was to become Richmond's most famous building, the Round Church. Money to pay for the building was raised by selling pews, with no preference given to anyone because of religious creed. Because of the several religious denominations contributing time and money toward building the church, and holding services there, it has been referred to as the first "community church."



The Round Church ceased to be used for religious services in 1879 but continued to serve the town as a meetinghouse until 1973 when State regulations declared the church unsafe for public use. In 1976 the town deeded the church to the Richmond Historical Society for forty years so that restoration could proceed with federal assistance.

Education has deep roots in Richmond. One of the first examples of community responsibility occurring at the June 5, 1795 Town Meeting was the division of Richmond into six school

districts. Each of the six schools was then supported by voluntary taxation until 1826 when taxes were levied to cover school expenditures. In 1903, three young women formed the first class to graduate from the newly built Richmond High School.

At the turn of the century, Richmond began to acquire some of the hallmarks of twentieth century living. In the early 1900's R. J. Robinson opened the first electric light plant on Dugway Road at the Huntington Gorge, which was subsequently purchased by Green Mountain Power. Western Telephone and Telegraph offered their service from an office in the old Jonesville Hotel. Later, a movie theater on Bridge Street, advertised "good clean pictures for young and old" on Wednesday and Saturday evenings. This theater building was later converted to a shirt factory, and now houses Toscano Café Bristo restaurant.

Several companies in the early 1900's provided jobs for those seeking employment off the numerous farms in Richmond. The Layfield Underwear Factory employed 150 women in the building, which later became the Cellucord Factory and is now the Goodwin Baker Building. Borden Milk Products Company bought and expanded the Vermont Condensed Milk Company and provided work for 125 men. Other employers were the Richmond Cooperative Creamery and Harrington's smokehouse, and Plant & Griffith Lumber Company and Lane's Woodturning Plant.

A catastrophic fire blazed in the Incorporated Village of Richmond on the night of April 23, 1908. Flames destroyed much of the business section of the town including: two hotels, a drug store, a meat market, fruit store, hardware store, town offices, library, dentist's office and several residences. In just a few hours the whole Masonic block and more was blackened and useless. Showing a true spirit of resiliency, the people soon began rebuilding, but much of what was lost could not be replaced.

Another disaster, a devastating flood, overwhelmed Richmond in November 1927. Damage in Richmond alone was set at \$239,000. Losses included two large bridges and eight small ones (including two covered bridges), long stretches of highway and railroad tracks, Lane's Wood Turning IPant in Jonesville, and many houses, barns and livestock. Many businesses and the school suffered heavy damage, but were able to reopen.

As was the case with many small Vermont towns, Richmond's population began a steady decline during the Great Depression. This trend was reversed in the 1960s as a result of new regional employers coming into Chittenden County. Since then, Richmond's population has continued to grow. (See Figure 3.1, Demographics and Housing) In 1989, voters in the Incorporated Village of Richmond and the Town of Richmond voted to merge the two municipalities. Currently Richmond boasts a number of fine traditions as evidence of its community spirit. Examples include the annual July 4th Parade and the annual Pilgrimage at the Round Church. Additional community activities are centered around Volunteers' Green, home to a very active Little League, a growing youth soccer program, a summer concert series, and Richmond's Farmers Market. In 1999, the Town hosted the first State Veteran's Day Parade.

Present Day Pressures and a Vision for Richmond

Local and regional trends over the past ten years have presented challenges for Richmond as they have for many of the communities in Chittenden County. Though population growth in Richmond has not been as rapid as elsewhere in the County, regional growth is expected to continue, bringing between 20,000 and 50,000 additional persons to Chittenden County by 2020³. This increase in population will require significant efforts in regional transportation planning to address capacity, levels of service, and parking-related issues. Indeed, throughout the County between 1980 and 2000, aggregate travel time has increased four times faster than has population growth⁴. These numbers only include time to and from work, so the actual

increase may be even greater. According to the Vermont Forum on Sprawl's Annual Vermonter Poll, nearly 90% of Vermonters believe that new residential development should occur within or adjacent to existing villages and downtowns and in existing neighborhoods, yet nearly two-thirds want to live in larger homes in outlying areas. At public meetings throughout this Town Plan update process; Richmond residents expressed a desire to keep Richmond Rural. A concern raised by unplanned development in outlying areas is that infrastructure costs in suburban communities are often substantially higher than infrastructure costs in traditional centers.⁵

Richmond has experienced steady population growth. The last two decades have seen an increase in the amount of land devoted to housing. The percentage of land in Richmond devoted to housing has increased from 24% to 33% over the past fifteen years, a 37% increase⁶. It will be essential to understand the consequence of growth patterns, in order to maintain our quality of life while at the same time preserving the rights and values of individual property owners.

Growth pattern development also involves effectively locating industrial and commercial businesses that are an integral part of a healthy community. Essential infrastructure for today's businesses includes education, electricity, fuel, telecommunications, technology, transportation, water, wastewater treatment, and a skilled workforce. Richmond has limited land areas which contain all facets of infrastructure important to many of today's businesses. Many business sectors can, however, flourish in an environment without some of these investments. The challenge will be to identify these sectors and target necessary improvements to assist with their needs. In the same way, Richmond must identify the needs of existing businesses to enhance their ability to continue to compete in local, national and world markets.

In order to develop its economy, protect its environment, and preserve its sense of place, Richmond will continue to develop as dynamic village areas, including the village, an additional village center in Jonesville as well as smaller residential hamlets in other areas of town, and several outlying areas that have been designated "commercial" and/or "industrial" through the planning process, surrounded by a rural landscape. Development will be encouraged in existing village areas to maximize the efficiency of town services, to promote accessibility to existing services and resources, and to minimize the fragmentation of our rural areas. The Richmond village will serve as the social and economic hub of our community and efforts will be made to maintain the historical integrity of our growth center. The General Goals below further elaborate on this vision



Monitor Barn, before Adaptive Reuse

General Goals

The following goal statements are the result of public input and work by the Planning Commission, Selectboard and the various committees of volunteers. They are derived from previously adopted Town Plans; State guidance; forecasts of population and economic change; research related to urban form, land use management and governmental process; and public concerns and aspirations. These goals are elaborated upon further by the remainder of the Plan.

1. We shall preserve Richmond's character. Richmond's unique character centers on its vibrant, multi-use village. Surrounding the village are working rural landscapes, forests, water resources and natural areas that are also essential to Richmond's character. Richmond should remain a village and rural area. .
2. Future growth shall be managed to occur at a rate that will not overburden the Town's ability to provide needed public facilities and services in a fiscally responsible manner.
3. The Town's natural resources, in particular its two major rivers, forests and open landscape, help to make Richmond special. Efforts shall be made to protect the health and stability of the natural environment.
4. Smooth and efficient transportation and a range of transportation options are essential to improving the quality of life in Richmond and the region. Transportation improvements shall be made after a thorough consideration of all options. Alternate modes of transportation shall be encouraged including provisions for biking, walking, carpooling and public transportation.
5. Economic development shall be directed to areas that are designated as appropriate through the planning process and public review of the zoning ordinance. Locally owned and operated stores, farms, restaurants and other businesses are important to the Town, maintaining a vibrant village and contributing financially by broadening our tax base and providing employment opportunities for the Town's residents. Business shall be encouraged both centrally and in identified outlying areas Town regulations and actions should support the growth of agriculture and forestry activities.
6. Richmond shall encourage a mix of housing types in a pattern compatible with its rural character. Housing will allow persons of diverse economic backgrounds to reside in Richmond.
7. Preservation of Richmond's identity shall be accomplished by managing and promoting development consistent with its historic structures and settlement patterns.
8. High quality education is essential to the well being of Richmond's citizens. Richmond shall provide opportunities for a quality education to each of its citizens. Quality educational facilities are cornerstones for a healthy community and should be supported by all of its citizens including those without school-aged children.
9. School and municipal budgets should be managed so as to keep Richmond affordable to an economically diverse population.

¹ *The Preliminary Project Report for the Lower Winooski River Basin – An Inventory of Uses, Values and Goals, Agency of Natural Resources, State of Vermont (April 1992)*

² *Archaeological Site Identification, Evaluation, and Mitigation of VT-CH-619 for Richmond TH 2409, The University of Vermont (December 1995/revised June 1997)*

³ *Economic & Policy Resources, Inc., "Economic and Demographic Forecast Northwest Vermont and Chittenden County 2000 to 2035 and Beyond" (2000): 33.*

⁴ *US Census (, 1980, 1990, 2000).*

⁵ *Vermont Forum on Sprawl (2006).*

⁶ *Richmond Grandlist Data*

Section 2 – Existing Land Use

The purpose of the Land Use Section of the Town Plan is to document existing land uses in the Town of Richmond and to propose which areas of the Town are to be used in the future for residential, commercial, or industrial purposes, recreation, agriculture, conservation, open space, or other public uses.

INVENTORY AND TRENDS

Richmond is located near the eastern edge of Chittenden County in northwestern Vermont. The Town is strategically located 13 miles west of Burlington and 20 miles east of Montpelier, the state capital. The Town is bisected by a major east-west transportation corridor that includes Interstate 89 and the Central Vermont Railway line. The Town also serves as a crossroads for local and state roads. US Route 2 runs east-west through the Town and provides the primary gateway for residents and visitors. The Huntington and Jericho (Brown's Trace) Roads extend in a north-south direction. Residents of Huntington, Jericho, Bolton and other nearby towns travel through Richmond to get to places of employment, shopping and recreation.

Richmond has a land area of 34.41 square miles or 22,022 acres. The topography is generally hilly, with much of the Town over 1,000 feet in elevation. The Winooski and Huntington Rivers are two of the most significant natural features of the Town and much of the land located in the floodplain of these rivers is productive agricultural land. Historically, the settlement pattern in Richmond has been one of residential and commercial activity in the village surrounded by an open, rural landscape throughout the rest of Town, consisting mainly of family farms and outlying designated commercial and industrial areas.

With the completion of the interstate in the 1960s Richmond became more readily accessible from Burlington, Montpelier and other major centers of employment. This coincided with the development of the IBM facility in Essex Junction. Together, these two factors translated into a significant increase in residential development in Richmond in the 1970s and 1980s. Some of this newer development has followed the typical linear pattern along rural roadsides. However, several subdivisions of 20 lots or more have also been constructed in the last two decades. Generally, these subdivisions offer a more compact pattern of development, in some cases incorporating open space to be protected for the future.



Aerial View of Village (Submitted by Lou Borie)

Many land parcels in Richmond have been broken up into tracts of 5 acres and less. Large parcels still exist in town, principally in floodplain areas, where most of the land is devoted to agriculture or recreation, and in steep upland areas which are not suited to development. The upland parcels are most commonly managed for timber production. Land suitable for development has become scarce in Richmond and surrounding towns because of growth and topography, resulting in more pressure to subdivide large parcels. Looking to the future, the

commercial and residential growth that has taken place in neighboring towns is likely to put further pressure on land values in Richmond.

Due to the presence of excellent river valley soils and a relatively moderate climate, agriculture has always been an important land use in Richmond. Despite the development pressures of the last several decades and the decline of small family farms, Richmond still has an active agricultural community, with 21 parcels classified as “Farm” in the 2005 Grand List. These include dairy farms, beef farms, vegetable and fruit farms, and other agricultural operations. Several farm properties have more than one product. In addition, several landowners in Richmond harvest timber periodically from their land.

Richmond village has typical small town housing density with interspersed business and commercial units. Approximately 275 (or 18%) of the Town’s 1,500 dwelling units are located in the central village. This village has seen a revival of its commercial core in recent years, with the renovation of the Goodwin Baker Building for offices, several new businesses and restaurants along Bridge Street, new commercial and residential development in the Railroad Street area, and new residential development at the end of Church Street. Additionally, the old cheese factory lot on Jolina Court is slated for redevelopment. The Jonesville area has small village housing density with approximately 70 houses, two apartment buildings and a small group of commercial buildings. Riverview Commons, the Town’s largest mobile home community, has approximately 150 units.

Finally, Richmond has seen a significant increase in the amount of land devoted to recreation in the last 15 years. Volunteers’ Green has expanded to include approximately 22 acres of land for baseball, soccer and other recreational sports, as well as a playground and bandshell. The Richmond Land Trust has conserved parcels totaling approximately 660 acres, many of which are available for hiking, cross-country skiing, swimming, nature study and other recreational pursuits. Hunting and fishing continue to be popular both on public and private lands. The Town of Richmond Recreation Path Committee and the Richmond Land Trust have developed approximately 7 miles of recreation paths along the Winooski River, Old Jericho Road and upland parcels. These trails are used year round and have become an important recreational asset for the Town. Even though the Town and the Land Trust have made significant gains as noted above, there is still a shortage in the amount of land available for more developed facilities and programs, such as those needed for school sports and adult and youth league sports.

KEY OBSERVATIONS AND OBJECTIVES

This Land Use section provides a framework for integrating the uses and values mentioned in later sections of this plan. As such, the key observations and objectives specific to land use can be considered as a summary of the p key observations and objectives described with each of the following sections. Therefore, they will not be enumerated upon here.

IMPLEMENTATION

1. The Town will promote the preservation of its rural character by maintaining the historic settlement pattern of compact village centers and designated outlying commercial and industrial areas, separated by rural countryside. The Town will provide for residential and commercial growth consistent with this historic settlement pattern.
2. The Town will provide for the continued availability of agricultural and forest land by supporting and encouraging sustainable farming and forestry as viable economic enterprises. The Town will cooperate with farm and forest landowners who are pursuing

the permanent protection of their working land through local, state, and national programs.

3. Richmond village will continue to serve as the commercial and municipal center of the Town. Similarly, the Town will pursue residential development opportunities within Richmond village and new/other village areas, which are consistent with maintaining the character of Richmond's neighborhoods and within the constraints imposed by topography, and resource protection areas.
4. The Planning Commission will facilitate a community-wide discussion of Richmond's growth trends and vision for future growth so as not to over-burden the capability of the land. Future growth in Richmond shall be managed to occur at a pace that will not overburden the Town's school system, the police and fire departments, the water and sewer facilities, its transportation network, and its available recreation land.
5. The Town recognizes that conservation, outdoor recreation and open space lands are increasingly important to the well being of Town residents. In order to facilitate preservation of these lands while respecting the property rights of their owners, the Planning Commission will explore creative development techniques which may include building envelopes, planned unit and planned residential development, clustering, fixed area and sliding scale zoning, overlay districts, conservation subdivision design, and transfer of development rights. This process will include extensive public outreach as well as input from landowners in town.
6. Priority for use of existing infrastructure will be given to existing and future development in the village. However, this will not preclude extensions that are consistent with the goals of this plan.
7. Regulations shall protect the property values of private landowners by maintaining Richmond's small town character and the public safety and welfare of its residents.

Figure 2.1

Existing Land Use

2006

Prepared by CCRPC

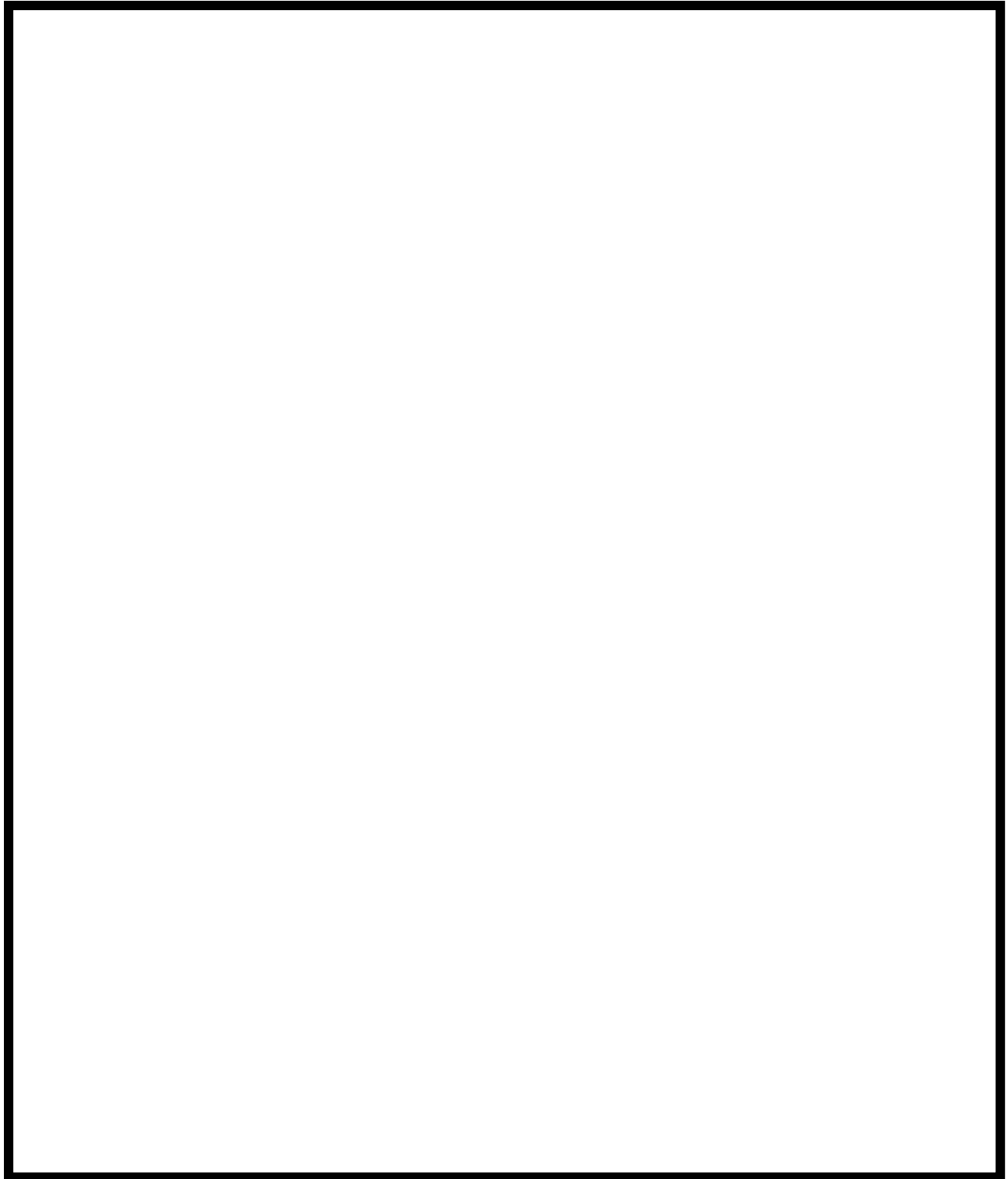
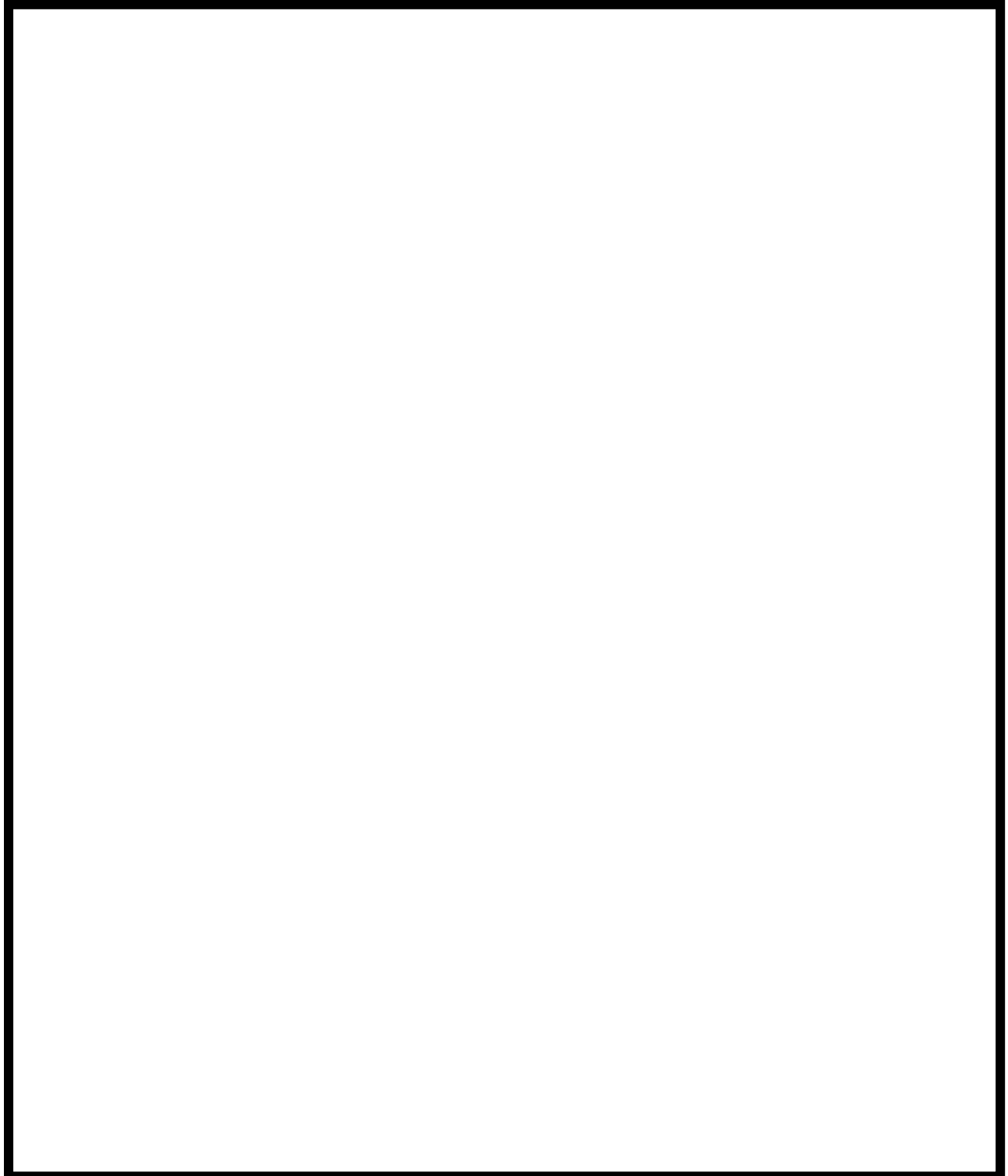


Figure 2.2

**Existing Land Use, Village Center Inset
2009**

Prepared by CCRPC



Section 3 – Demographics and Housing

INVENTORY AND TRENDS

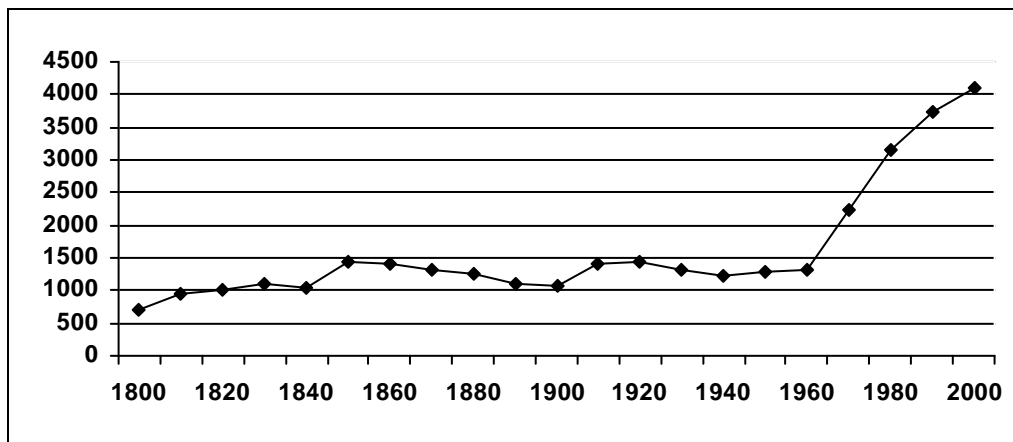
Population Trends

Figure 3.1 shows Richmond's population since 1800. Richmond follows a pattern similar to many Vermont towns. Population was relatively stable at between 1,000 and 1,500 from 1,810 to 1960. However in the 1960s the Town's population surged by nearly 1,000 people. Population growth has continued into the present, though the rate of growth has slowed in the last decade.



Richmond Terrace (Submitted by Lou Borie)

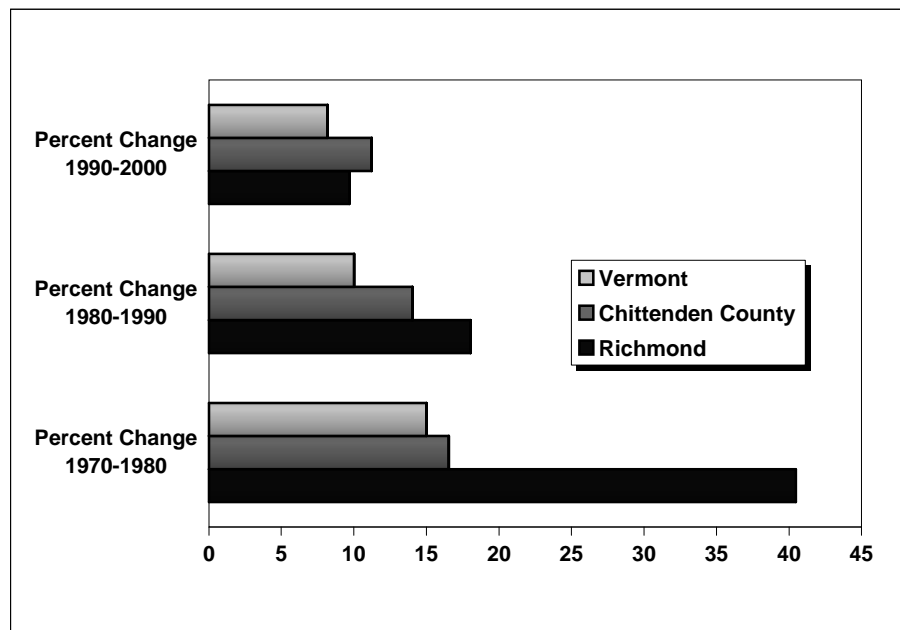
Figure 3.1 Historic Population Trends, 1800-2000



Source: 1800-2000 US Census

Figure 3.2 and Table 3.1 illustrate population trends in Richmond, Chittenden County, and the State of Vermont from 1970 to 2000. Richmond has experienced a higher rate of growth than the county as a whole in two of the past three decades. In the 1970s Richmond experienced a surge in population (40.5% increase). Richmond continued to grow in the 1980s and 1990s, but at slower rates (18% and 9.7% respectively).

Figure 3.2 Population: Percent Change for Richmond, Chittenden County, & Vermont



Source: 1970, 1980, 1990, 2000 US Census

Since 1950, Richmond's share of total county population has increased slightly. Table 3.1 below compares the population of Richmond and Chittenden County over the last 50 years. In 1950, Richmond made up 2.0% of the County's population. In 2000, Richmond made up 2.8% of county population.

Table 3.1 Richmond Population and % of Chittenden County Population, 1950-2000

	1950	1960	1970	1980	1990	2000
Richmond	1,278	1,303	2,249	3,159	3,729	4,090
Chittenden County	62,570	74,425	99,131	115,534	131,761	146,571
Richmond as a % of County	2.0	1.8	2.3	2.7	2.8	2.8

Source: US Census 1950, 1960, 1970, 1980, 1990, 2000

Table 3.2 shows the proportion of the county's total growth represented by Richmond and neighboring towns between 1970 and 2000. While Richmond's share of total county population has increased since 1950, Richmond's share of total county growth has declined over the past three decades; accounting for 2.4% of the county's total growth in the 1990s compared to 5.5% in the 1970s.

Table 3.2 Richmond Growth as Percentage of County Growth in Relation to Other Towns, 1970-1999

	1970-1980	1980-1990	1990-2000	1970-2000
Richmond	5.5	3.5	2.4	3.9
Hinesburg	5.6	6.7	3.8	5.4
Huntington	2.2	2.8	1.7	2.2
Bolton	1.8	1.6	0.0	1.1
Jericho	7.5	4.5	4.8	5.6
Williston	4.2	6.2	18.7	9.4

Source: 1970, 1980, 1990, 2000 US Census

Population Projections

In the fall of 2000, Economic and Policy Resources, Inc. (EPR) completed an economic and demographic forecast for Northwest Vermont and Chittenden County as commissioned by the Chittenden County Regional Planning Commission. Table 3.3 contains the results of this forecast for Richmond and Chittenden County through the year 2020. When considering population projections, it is important to note that it is very difficult to make accurate long-term, projections for small geographic areas with small populations such as Richmond, and that such projections are extremely susceptible to variations in general economic conditions within the surrounding region as well as in policy decisions made at the state, county or town level.

Table 3.3 Richmond and Chittenden County Population Forecast 2005-2020

	2000	2005	2010	2015	2020
Richmond	4,090	4,689	5,069	6,082	5,988
Richmond Census Estimate	4,055	4,110	--	--	--
Chittenden County	146,571	158,998	169,760	182,176	197,324

Source: Economic and Policy Resources Inc., 2000; 2000 US Census

Since the EPR study was completed, several other county population projections have been conducted. Unfortunately, these studies have not yet been broken down for individual municipalities (see Table 3.4). However, it is useful to note that these more recent projections developed after 9/11/01 and the economic downturn of the early 2000s show significantly less population growth than the EPR study.

Table 3.4 Chittenden County Population Forecasts, 2005-2025

Study Name:	2005	2010	2015	2020	2025
Woods&Pool	151,500	158,145	165,161	172,484	180,183
Louis Berger	152,846	157,471	163,168	171,114	180,037
MISER	152,846	157,471	161,491	165,813	—
Census Estimate	149,613	--	--	--	--

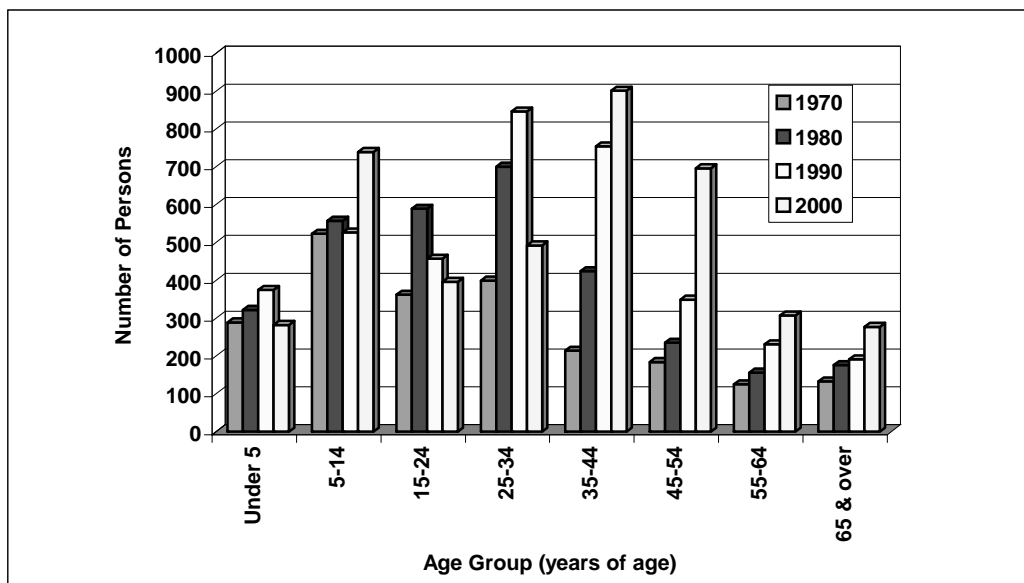
Source; Woods and Pool, 2005; Louis Berger, 2006; MISER, 2003; US Census, 2005

The EPR data suggests that, on average, Chittenden County will continue to see rates of growth similar to those experienced in the 1980s. However, the other studies show slower countywide population growth. This suggests that Chittenden County may experience less population growth than anticipated by the EPR data.

Population Characteristics

Figure 3.3 depicts the change in age group distribution for the Town of Richmond between 1970 and 2000. In 2000, the greatest number of persons fell within the 35-44 years of age category followed by the 5-14 years and 45-54 years of age categories. This representation is consistent with a national trend and is most likely due to the natural aging of the “baby boomer” generation and their children. Figure 3.3 shows a slight decrease in the number of preschool aged children between 1990 and 2000. Between 1980 and 1990 the number in this age category increased 16%, compared to an 11% increase between 1970 and 1980.

Figure 3.3 Age Distribution of Richmond Population, 1970-2000



Source: 1970, 1980, 1990, 2000 US Census

Table 3.5 depicts changes in average household size between 1990 and 2000 in Richmond, Chittenden County, and neighboring towns. Countywide, average household size decreased in the last decade. This decrease also occurred in all neighboring towns. However, average household size in Richmond actually increased between 1990 and 2000.

Table 3.5 Average Household Size, 1990-2000

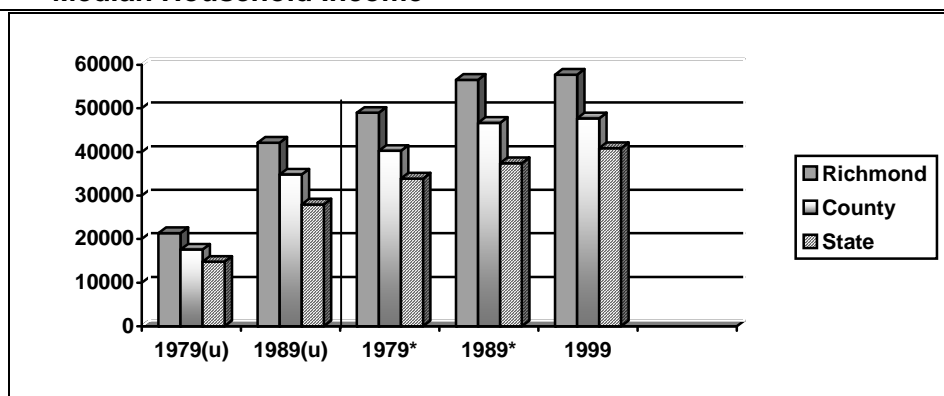
	1990	2000
Richmond	2.57	2.71
Hinesburg	2.81	2.72
Huntington	2.81	2.68
Bolton	2.65	2.64
Jericho	3.00	2.81
Williston	2.72	2.59
Chittenden County	2.57	2.47

Source 1990, 2000 US Census

Household Income

On average, Richmond residents benefit from a significantly higher income compared to Chittenden County and the state as a whole. As seen in Figure 3.4, since 1979, Richmond residents have a median income approximately \$10,000 greater than county median income and between \$15,000 and \$20,000 greater than statewide median income when adjusted for inflation.

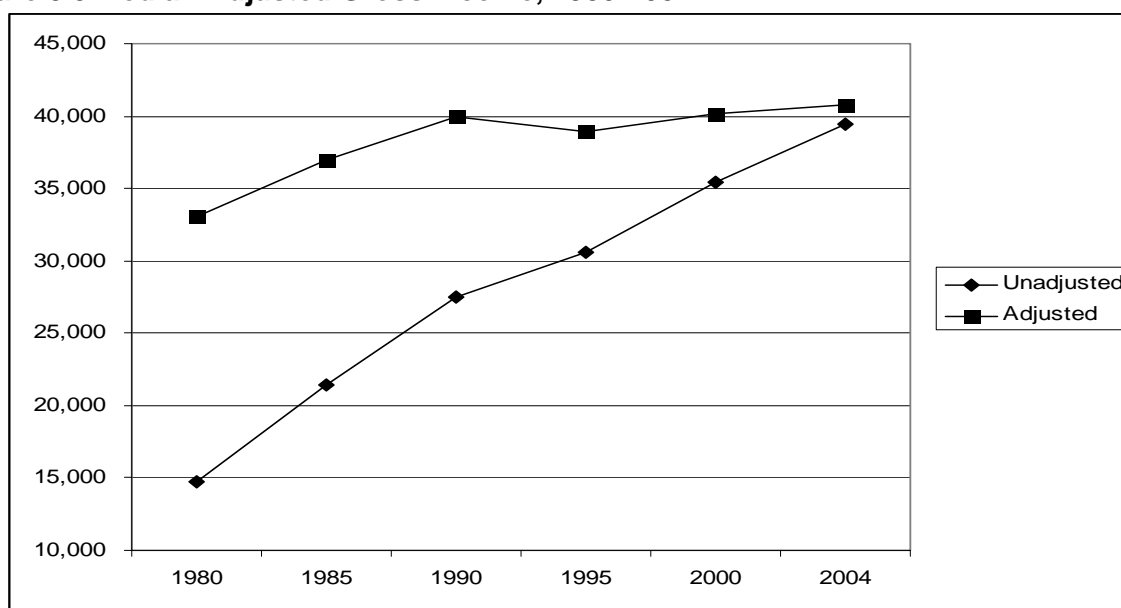
Figure 3.4 Median Household Income



Source: 1980, 1990, 2000 US Census; (u) unadjusted values *values adjusted for 1999 dollars using Consumer Price Index data from the Bureau of Labor Statistics.

Figure 3.5 shows Richmond's median adjusted gross income (AGI) collected from State tax returns between 1980 and 2004. AGI refers to income (including wages, interest, capital gains, income from retirement accounts, alimony) adjusted downward by specific deductions (including contributions to deductible retirement accounts, alimony paid), but *not* including standard and itemized deductions. This table shows that individual incomes have increased slightly during the past decade. Note that AGI data is not particularly useful for comparing incomes across towns as they each have a different make-up of couples and singles filling taxes.

Figure 3.5 Median Adjusted Gross Income, 1980-2004.



Source: Vermont Department of Taxes; Adjusted=Adjusted for inflation using Consumer Price Index data from the department of labor statistics, Unadjusted=not adjusted for inflation

Poverty

The 2000 US Census of Population and Housing indicated that 5.1% of Richmond's residents were living below the poverty level, compared with 8.8% countywide and 9.4% statewide. More specifically, 6.2% of children under the age of 18 and 5.8% of adults aged 65 or over lived below the poverty line. Almost 16% of families with female-headed households with no spouse present were living below the poverty line, and 48% percent of these families with children under five were living in poverty. According to the Vermont Agency of Human Services, in

2004, there were 14 families in Richmond in the Reach-Up Program (Vermont's welfare-to-work program), and 48 households receiving food stamps

Table 3.6 Richmond, County and VT Poverty Status (Percent below Poverty Level), 2000

	Richmond	Chittenden County	Vermont
Families	3.2	4.9	6.3
With related children under 18 years	4.2	7.3	9.7
With related children under 5 years	8.4	9.9	12.9
Families with female householder, no spouse present	15.9	21.0	24.1
With related children under 18	21.9	28.0	21
With related children under 5 years	47.8	45.8	49.4
Individuals	5.1	8.8	9.4
18 years and older	4.3	8.9	8.8
65 years and older	5.8	8.2	8.5
Related children under 18 years	6.2	8.0	10.7
Related children 5-17 years old	5.7	7.3	9.9
Unrelated individuals, 15 years and over	14.4	21.6	21.1

Source, 2000 US Census

Voter Registration

The change in the number of registered voters is another measure of change within Richmond. The number of voters registered for the general election increased 75%) between 1980 and 2006. The number of registered voters in 2000 may be inflated due to the process required to remove names from the checklist.

Table 3.7 Number of Registered Voters in Richmond,

Year	Number of Voters
1980	1,753
1990	2,700
2000*	3,047
2006	3,074

Source: Richmond Town Clerk, *figures for 2000 may be inflated due to the process required to remove names from the checklist.

Housing

Table 3.8 shows the total number of year-round dwelling units for Richmond and Chittenden County from 1970 to 2000. Dwelling units as defined by the US Census Bureau include single-family homes, duplexes, individual apartments, and mobile homes. Richmond's housing stock grew from 660 units in 1970 to over 1,500 in 2000, an average of 28 new units per year. From 1990-2000 Richmond's rate of new housing stock was 9.9%. In the 1980s, Richmond's rate of new housing stock was 29.0%, which outpaced the County rate of new housing stock of 22.6%. The data indicates an overall slowdown in the rate of housing starts and / or conversions in the past twenty years.

Table 3.8 Total Number of Dwelling Units in Richmond and Chittenden County 1970-2000

	1970	1980	1990	2000	Percent Change 1970-1980	Percent Change 1980-1990	Percent Change 1990-2000
Richmond	659	1,071	1,382	1,519	62.5	29.0	9.9
Chittenden County	30,668	41,347	50,687	57,573	34.8	22.6	13.6
Richmond % of Chittenden County	2.1	2.6	2.7	2.6			

Source: 1970, 1980, 1990, 2000 US Census.

While much of Richmond's owner-occupied housing stock is relatively new, its rental housing stock is aging. The majority of renters in Vermont live in units that are 50 years or older. Almost 40% of Richmond's rental housing stock is more than 50 years old, and more than 50% of the Town's rental stock is more than 40 years old. An aging rental stock coupled with extremely low vacancy rates raises concerns as to the quality of Richmond's rental housing supply. Health and safety codes applicable to rental housing are enforced by various state and local agencies including the Vermont Department of Labor and Industry, and the Town Health Officer. Generally, issues related to fire safety codes, electrical codes, plumbing rules and handicapped accessibility are referred to the state while issues involving sewage disposal, water supply, and rodent and insect control are handled at the local level.

Table 3.9 Age of Richmond's Housing Stock, 2000

	Owner Occupied Units		Renter Occupied Units	
	Number	%	Number	%
Built 1980-1999	529	43.8%	85	28.7%
Built 1960-1979	443	33.7%	53	17.9%
Built 1940-1959	22	1.8%	41	13.8%
Built 1939 or earlier	214	17.7%	117	39.5%

Source: 2000 US Census

Richmond's rental housing stock is older than the rental housing stock of neighboring towns and Chittenden County as a whole, while its owner occupied housing stock is generally of a similar age. Anecdotal evidence suggests that many of the rental units in the village have been renovated since they were first built, and this may not be born out in the data below. While Richmond's rental housing stock is older in comparison with the county and neighboring towns, it is newer in comparison with rental-occupied units state-wide.

Table 3.10 Median Year Structure Built, Vermont, Chittenden County, and Neighboring Towns

	All Units	Owner Occupied	Renter Occupied
Richmond	1976	1978	1958
Hinesburg	1980	1979	1961
Huntington	1978	1979	1961
Bolton	1982	1982	1978
Jericho	1976	1977	1961
Williston	1987	1987	1981
Chittenden County	1972	1975	1963
Vermont	1967	1971	1653

Source: 2000 US Census

Affordable Housing

Following is the definition of affordable housing as offered by the United States Department of Housing and Urban Development (HUD):

"Housing is affordable when households with incomes below an area's median income pay no more than 30% of their income on housing. Housing costs for renters are rent and utilities. Housing costs for homeowners are principal on mortgage payments, interest, property taxes, and insurance."

HUD further defines "Moderate Income" as a household earning between 100% and 80% of median household income adjusted for family size, "Low Income" as a household earning between 80% and 50% of median household income adjusted for family size, and "Very Low Income" as a household earning less than 50% of median household income adjusted for family size. Note that these classifications are relative to countywide median income, and differ greatly from the poverty rate discussed above.

Table 3.11 presents the typical house value and monthly rental costs deemed affordable based on estimated median incomes for the year 2006. The figures used below are based on HUD estimates used to establish eligibility for various federal housing programs. The Town figures are based on the Burlington/South Burlington Metropolitan Statistical Area (MSA), because Richmond is included in that MSA. The median sale price of a single family home in Richmond in 2005 was \$287,486.

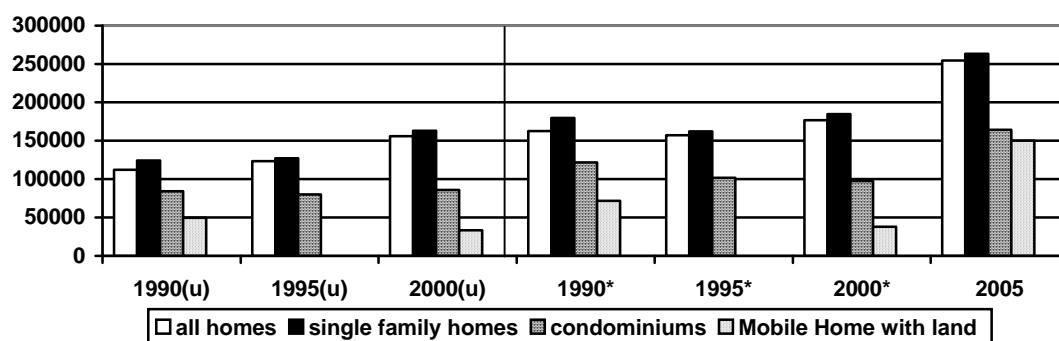
Table 3.11 Affordable Housing Costs in Burlington/South Burlington MSA, 2006, 2006

	Income for a family of four	Affordable Monthly Housing Expense	Affordable Housing Costs*
Median Income	\$70,500	\$1,762.50	\$176,250
80% of Median	\$56,400	\$1,410	\$141,100
50% of Median	\$35,250	\$881.25	\$88,125

Source: US Dept. of Housing and Urban Development, 2006; National Low Income Housing Coalition, 2000. Typical Housing Value calculated*

Figure 3.6 shows the median sales price of different types of residences based on property transfer tax records from the Vermont Department of Taxes. According to the Vermont Department of Taxes, in 2005, there were 56 single family homes sold in Richmond, seven condominiums, and three mobile homes with land. Based on the figures in Table 3.11, condominiums and mobile homes could be considered affordable to a median income household of four. However, these types of housing units made up only 15% of home sales in 2005.

Figure 3.6 Median Selling Price for Properties in Richmond, 1990-2005



Source: Vermont Department of Taxes, Statistics, Property Transfer Tax. 2000-2005; No data for Mobile Homes with land in 1995; (u) unadjusted values; *values are adjusted for 2005 dollars using Consumer Price Index data from the Bureau of Labor Statistics.

Rental Housing

According to the 2000 Census, 80% of Richmond's households owned homes and 20% were renting. This compares with 34% renter-occupants in Chittenden County and 29% for the state as a whole. Richmond's concentration of rental housing is similar to that in other surrounding communities in rural Chittenden County. Rental vacancies are extremely low. According to the 2000 Census, the vacancy rate for rental units in Richmond was 2%. This number mirrors the county's rental vacancy rate, which is lower than the statewide vacancy rate of 4%.

Table 3.12 Rental Housing Units, 2000

	% of Renter Occupied Housing Units	Rental Vacancy
Richmond	19.6%	2.0%
Chittenden County	33.9%	1.8%
Vermont	29%	4.2%

Source, 2000 US Census

Table 3.13 below compares rental costs for various sized apartments, and shows the income necessary to afford these rents. The Fair Market Rent (FMR) represents the dollar amount below which 40% of standard quality rental housing units are rented in the Burlington/South Burlington MSA. The Median Rent represents the dollar amount below which 50% of standard quality rental housing units are rented in the Burlington/South Burlington MSA. Both are gross rent estimates that include shelter rent and utilities except telephone. The data suggests that while rental units are generally affordable to a household of four at median income, some households with incomes less 80% of the median income may have difficulty affording rental housing in Chittenden County. Specific data for Richmond is not available.

Table 3.13 Rental Housing Costs in the Burlington/South Burlington MSA

Unit Type	Fair Market Rent (FMR)	Median Rent	Income Needed to Afford FMR Apartment
Efficiency	\$673	\$699	\$26,920
1-Bedroom	\$745	\$779	\$29,800
2-Bedroom	\$935	\$987	\$37,400
3-Bedroom	\$1,197	\$1,294	\$47,880
4-Bedroom	\$1,342	\$1,558	\$53,680

Source: US Department of Housing and Urban Development, 2006

Table 3.14 shows the distribution of publicly assisted affordable rental housing units in 2006. This includes mobile home parks owned by non-profit agencies. Richmond's portion of affordable rental units is slightly lower than its share of total occupied rental housing units. In addition, during 2006, the State of Vermont directly subsidized the rent of 12 families in Richmond.

Table 3.14 Publicly Assisted Affordable Rental Housing Units in 2006 for Richmond and Neighboring Towns (includes all state and federal assistance)

Town	Number of Assisted Units	Percent in County	Total Rental Units*	Percent in County
Richmond	31	0.73%	295	1.5%
Hinesburg	76	1.79%	294	1.5%
Huntington	NA	0.0%	75	0.4%
Bolton	78	1.84%	51	0.3%
Jericho	24	0.54%	200	1.0%
Williston	337	7.94%	446	2.3%
Chittenden County	4,240	100%	19,160	100

Source: Vermont Housing Data, 2006; US Census, 2000 *Total Rental Units does not include all mobile home park lots, while non-profit mobile home park lots are included in Number of Assisted Units. This may create slight discrepancies between the two fields.

Elderly Housing

According to the 2000 Census, 277 Richmond residents were age 65 or over, representing nearly 7% of the town's population. As mentioned in Table 3.6 above, of these 277 individuals 5.8% are living with incomes below poverty level. When compared with the distribution for Chittenden County and the State of Vermont, the proportion of elderly living in Richmond is modest. Many elderly in town live in private residences. The two areas of town with the largest concentration of elderly are the village and Riverview Commons Mobile Home Park. The town of Richmond has 15 subsidized elderly housing units, which are included in the total number of Richmond's assisted rental units listed in Table 3.14 above.

Housing Targets

A report entitled "Recommended Housing Targets" was prepared by the Housing Targets Task Force and endorsed by the Chittenden County Regional Planning Commission in 2004. This report developed a recommended number of housing units to be added in each Chittenden County between 2000 and 2010, including moderate income housing (housing units that are affordable to households earning between 80% and 120% of the Burlington MSA's median household income), and affordable housing (housing units that are affordable to households earning less than 80% of the Burlington MSA's median household income). These targets are not quotas of the minimum number of housing units each municipality must meet, nor are the targets the maximum ceiling on the number of units that should be built in the community.

The recommended target for Richmond was 280 units, including 28 "moderate" units and 28 "affordable" units. This amounts to 28 new units each year over the ten-year time frame. Since 2000, an average of 20.3 new housing units have been permitted per year in Richmond. Table 3.15 shows the number and type of permits issued for new housing units from 2000-2005.

Table 3.15 Housing Permits Issued, 2000-2005

	2000	2001	2002	2003	2004	2005
Single Family	11	17	18	13	24	20
Multifamily	0	0	0	2	8	0
Mobile home	N/A	N/A	N/A	5	2	2
Total	11	17	18	20	34	22

Source: Richmond Town Reports, 1999/2000, 2000/2001, 20001/2002, 2002/2003, 2003/2004, 2004/2005

After reviewing the factors used to develop the targets, and in light of the information in Table 3.15 above, it appears that the Richmond targets are higher than warranted. A major factor used to develop the targets was the 2002 Regional Build-out Analysis, in which Richmond had one of the highest potential residential build-out capacities in the county, primarily because current zoning allows minimum lot sizes significantly smaller than neighboring towns. However factors such as infrastructure and development costs, private deed restrictions, landowner desires, and potential regulatory changes may reduce the actual development capacity for Richmond's outlying areas.

Even if the Build-Out figures were fully accurate, many landowners with buildable land may not choose to develop their land in future years. Furthermore, the type and cost of new housing is determined by a host of factors, many of which are beyond the Town's control. It is therefore difficult if not impossible to guarantee that all targets can be reached, nor is it certain that the demand for housing will meet projections. Additionally, recent changes to the Vermont Municipal and Regional Planning and Development Act (Title 24 VSA Chapter 117) have greatly expanded the allowed use of accessory dwellings, and it is currently too soon to evaluate what effect this change may have on future housing development.

Therefore a target of 20 new residential units, including new accessory dwellings, per year is adopted for this Town Plan. This reflects the current rate of development.

The Town is currently encouraging the provision of housing in several ways. The Town is more permissive of accessory dwellings than required by state law, allowing the owner of a single family home with an accessory dwelling to occupy the accessory dwelling while renting the primary residence. This provision allows residents to stay in their own home while creating additional multi-bedroom rental housing. Richmond's Zoning Regulations treat duplexes as single family homes for the purpose of calculating lot sizes and density, allowing the creation of more units in the same area in every zoning district. Similarly, housing units in three zoning districts are allowed with smaller lot sizes if they are connected to municipal sewer and water.

In addition to these regulatory provisions, Richmond has also actively encouraged the development of affordable housing. Through a grant from the VERMONT Agency of Commerce and Community Development, Richmond provided a \$300,000 loan to Lake Champlain Housing Development Corporation (LCHDC, renamed the Champlain Housing Trust, Inc. in 2006) to create 16 units of affordable rental housing on Borden Street in 1999. Starting in 2014, LCHDC will begin repaying Richmond for 75% of the original loan plus interest, with the remaining 25% being used for upkeep of the units. The repaid funds will then be used to establish a revolving loan fund for affordable housing and job creation. These voluntary efforts demonstrate that while Richmond may not reach CCRPCs housing targets, the Town is still working to fill the region's housing needs.

As part of the 2007 Town Plan Update, the Richmond Planning Commission began to explore options for new growth center(s) in Richmond that will provide greater density potential for housing development.

KEY OBSERVATIONS

1. Richmond is projected to experience rates of growth over the next 20 years similar to those experienced in the 1980s. This net increase in population and the associated housing needs of individuals can have a significant impact on Richmond's rural character as well as its ability to provide facilities and services in a fiscally responsible manner.
2. Richmond's population is aging and affordable housing opportunities for these individuals are limited.
3. Trends in recent housing prices coupled with a low vacancy rate and an aging housing stock indicate that the demand for housing in Chittenden County will continue into the near future. However, increased interest rates may cause a leveling off of housing prices.

OBJECTIVES

1. Encourage adequate housing for the elderly with alternatives, which will enable the elderly living in their own homes to remain there as long as they wish.
2. Assure a rate and pattern of residential growth compatible with Richmond's rural character and topography. This Plan suggests a target of 20 units per year through the next 5 year planning window.
3. Plan residential development such that it coincides with planned infrastructure improvements and allows for the adequate provision of services.
4. Protect the architectural integrity of village-area homes and other historic structures.
5. Promote a mix of residential and commercial uses in the village areas.
6. Promote opportunities for individuals and families of diverse economic backgrounds to live together in Richmond neighborhoods.

IMPLEMENTATION

1. Residential development should be largely concentrated within the village areas and other designated areas to ensure implementation of this plan and to conserve the Town's rural character.
2. The Planning Commission and the Development Review Board should encourage planned residential developments to conserve land and promote the most efficient use of space.
3. The Planning Commission, Development Review Board and Selectboard will assess the current zoning regulations for compatibility with traditional village patterns and/or alternative design standards. Zoning will be amended if necessary to promote village-scale development.
4. The Planning Commission and Selectboard will work to ensure that residential growth will coincide with the ability of the Town to provide necessary services without imposing an unfair tax burden on existing residents, through the use of tools such as the Capital Budget and Program and Impact Fee Ordinance.
5. The Planning Commission will explore the use of zoning and subdivision tools, such as inclusionary zoning, to encourage the provision of affordable housing.

Section 4 – Economic Development

INVENTORY AND TRENDS

Grand List Distribution

A review of Richmond's tax use classifications shows an increase in the value of parcels classified as residential within the last 25 years from 75.9% to 84.5% of the grand list. There has also been an increase in those properties listed as commercial, including industrial businesses, typical commercial entities and apartment buildings with three or more units. Table 4.1 shows a decrease in the value of parcels dedicated to farming practices with the greatest decrease occurring within the last 15 years (6.1% to 1.2%). This is likely the result of the new classification of homes and two acres as residences per Act 60 and Act 68, which may also contribute to the increase in value of residential properties.

Table 4.1 Land Use as a Percentage of Total Grand List Value, 1980- 2005

	1980	1990	2000	2005
Year Round Residential	75.9	76.9	86.2	84.5
Vacation	0.6	0.9	0.3	0.7
Commercial	8.7	6.9	6.5	5.7
Farm	7.6	6.1	2.4	1.2
Woodland	2.4	2.4	0.9	2.3
Utility	1.4	1.5	1.2	0.2
Miscellaneous	4.4	6.1	1.8	5.1

Source: 1980, 1990, 2000, 2005 Richmond Grand List

Table 4.2 shows the percentage of properties in each land use from 1990 to 2005. The percentage of parcels dedicated to year round residential uses has increased since 1990, though at a slightly slower rate than the value of these parcels. Similarly, the percentage of parcels dedicated to farming and woodlots has remained more constant than the change in value may suggest. In fact, the decline in the percentage of parcels in these uses is attributable more to the increase in the number of parcels dedicated to other uses than a decrease in the number of parcels being used for farming or woodlands.

Table 4.2 Land Use as a Percentage of Total Grand List Properties, 1990- 2005

	1990		2000		2005	
	Number	Percent	Number	Percent	Number	Percent
Year Round Residential	1164	79.3	1319	83.5	1384	85.5
Vacation	12	0.8	11	0.7	12	0.7
Commercial	59	4.0	60	3.8	62	3.8
Farm	23	1.6	21	1.3	21	1.3
Woodland	47	3.2	47	3.0	42	2.3
Utility	2	0.13	4	0.3	4	0.2
Miscellaneous	161	11.0	118	7.5	93	5.7

Source: 1990, 2000, 2005 Richmond Grand List

Existing Commercial and Industrial Districts

There are approximately 375 acres in areas designated as primarily for commercial or industrial uses. These areas include the Industrial, Commercial, Village Commercial and Gateway Commercial Zoning Districts. This represents 1.7% of the total 22,022 acres in Richmond and does not include areas devoted to resource-based commercial activities such as farming and

forestry. Presently much of the land proposed for commercial and / or industrial purposes is used for residential purposes. In addition, development of some of these parcels may be constrained by problems such as proximity to the floodplain, access, topography and soils. See: *Future Land Use Map*.

Richmond's Workforce

Table 4.3 shows employment trends for Richmond back to 1980. Many of the occupational categories in the 2000 Census differ from those in the 1990 and 1980 Census, making detailed comparison difficult. Even so, the figure shows an ever-increasing portion of Richmond's workforce is employed in management or professional occupations. It should be noted that there are inherent inaccuracies with surveying small populations, and that some of these numbers (for example that only five individuals are employed in agriculture and forestry) conflict with local knowledge.

The 2000 Census also indicated the mean travel time to work for Richmond residents was approximately 23 minutes, indicating that many are employed in centers outside of Richmond, most likely located in Burlington, South Burlington, Essex, Waterbury and Montpelier.

Table 4.3 Occupational Workforce as Percentage of Total Workforce, 1980-2000

Occupation	1980	1990	2000	% Change 1980-2000
Management, professional, and related occupations*	17.9	29.0	53.3	+198
Sales and Office Occupations**	46.9	31.3	19.8	-58
Service	13.7	12.8	7.4	-46
Farming, forestry, and fishing	1.2	4.3	0.2	-83
Construction, extraction, and maintenance, Production, transportation, and material moving***	20.2	22.6	19.2	-5
Total Employed Over 16 Years of Age	100	100	100	

Source: 1980, 1990, 2000 US Census. *management and professional specialty from 1980 and 1990 Census.

technical, sales, and administrative support from 1980 and 1990 Census. *precision products, craft and repair, operators, fabricators, and laborers from 1980 and 1990 Census.

Richmond Businesses

Table 4.4 illustrates the trends in types of employment located within the Town of Richmond between 1980 and 2005. Data was not published for all industries throughout the 20-year period; however, most trends are typical of the region as a whole. This data shows that an increasing number of people employed within Richmond are engaged in either government positions including teaching and other educational services, or in the service sector, including personal, automotive, business and legal services. This growth in the service sector mirrors state and national trends.

Many Richmond businesses are home-based businesses. Home businesses provide local employment and services, and can help to improve the Town's grand list. When located appropriately, home businesses can also help to reduce commuting outside of Richmond. Between 1990 and 2005, 46 permits were issued for new home occupations. In addition to private businesses, Richmond is also home to many non-profit organizations, including the Northeast Organic Farm Association, the Farm Bureau of Vermont, Cochran's Ski Area and the Vermont Youth Conservation Corps. Like home businesses, these organizations provide employment to many people in Richmond and also bring services and distinction to the town.

Table 4.4 Town of Richmond Employment Trends, 1980-2005

	1980		1990		1999*		2005	
	Annual Ave. Employ	% of Total	Annual Ave. Employ	% of Total	Annual Ave. Employ	% of Total	Annual Ave. Employ	% of Total
Agriculture, Forestry, and hunting	np	np	np	np	39	4.1	np	np
Construction	33	8	np	np	77	8.2	128	11.8
Manufacturing	np	np	81	10.4	147	15.6	np	np
Wholesale and retail trade	109	26.3	139	17.9	180	19.1	142	13.1
FIRE	np	np	94	12.2	21	2.2	49	4.5
Services	19	4.6	110	14.2	167	17.7	304	28.1
Government	149	36	256	32.9	305	32.3	375	34.6
TOTAL@	414	--	777		944	--	1083	--

np = not published, @ = Data not available for all industries, FIRE – Finance, Insurance, Real Estate. *2000 data unavailable Source: VT Dept. Labor, ES-202 Employment and Wages Program, 2005.

Results of the 1999 and 2000 community survey produced mixed results when it came to economic development issues within the Town of Richmond. Generally, Richmond residents are in favor of development that is similar in scale to current businesses. Moreover, residents expressed concerns over services that could benefit Richmond's current business clientele including downtown parking and traffic at the Bridge Street / Main Street intersection

Despite these challenges, Richmond has several attributes that can help to attract and encourage business. Broadband Internet access provided by Champlain Valley Telecom is available throughout Town. This infrastructure is particularly important to home-based businesses which rely on internet access which is often lacking in other small Vermont towns. Similarly, while many other towns struggle with insufficient sewer and water supplies in their villages and town centers, Richmond enjoys a surplus of both sewer and water capacity, making new growth and redevelopment in the village a viable option. Richmond business owners may also be eligible for certain state tax credits as discussed below.

Village Center Designation

In the spring of 2005, Richmond received Village Center Designation from the Vermont Downtown Development Board. Richmond's designated area includes portions of the Village Commercial and Residential Commercial Zoning District in the village, as well as a portion of the old cheese factory lot on Jolina Court. Property owners in this designated area are eligible to receive the following tax credits for upgrades to their properties. Since the program's inception, the Vermont State Legislature has expanded the number of tax credits available to properties owners in



Village Commercial Block (Submitted Lou Borie)

Designated Village Centers and increased the total value of the tax credits. As of July 1, 2006 these tax credits include:

- ❖ 10% State Historic Rehabilitation Tax Credit – This credit applies to the costs for substantially rehabilitating a certified historic building, and can piggyback onto the 20% Federal Rehabilitation Tax Credit. This credit applies to all costs in rehabilitating a building, including exterior and interior improvements and code compliance. There is no maximum award, however no more than \$450,000 can go to projects in any one municipality
- ❖ 25% Façade Improvement Tax Credit – This credit applies to the rehabilitation of a building façade. The maximum award is \$25,000. However, the credit cannot be used for a building that is eligible under the 10% historic credit above.
- ❖ 50% Code Improvement Tax Credit – This credit applies to the cost of bringing a building into compliance with state building codes, to abate hazardous materials, or to redevelop a contaminated property. It includes a maximum award of \$12,000 for a platform lift, \$50,000 for sprinkler systems, \$50,000 for elevators, and \$25,000 for the combined costs of all other qualified code improvements, including hazardous material abatement and contaminated sites redevelopment. This credit can be used in conjunction with the other credits, as long as the applicant does not request credits more than once on an eligible expenditure.

Property owners who do not have the tax liability to use a tax credit directly may sell the credit to a bank in exchange for cash or for adjustments to a mortgage. Only buildings built before 1983 and in the Designated Village Center areas may apply for tax credits. Government facilities, religious buildings, and single family homes are not eligible for these tax credits.

Adaptive Reuse of Historic Structures

While tax credits are available to buildings in the Designated Village Center, there are many historic buildings throughout Richmond that could benefit from repairs and investment. Richmond's zoning allows for the adaptive reuse of certain historic structures for commercial, industrial, and residential uses. Adaptive reuse has allowed at least two employers, Birdseye Building Company and the Vermont Youth Conservation Corps, to locate in Richmond. In the future, adaptive reuse may allow other employers to move into town while protecting the integrity of Richmond's rural landscape.

KEY OBSERVATIONS

1. Richmond residents prefer commercial development that is compatible with existing businesses in size and scale. Zoning, state regulations and physical constraints may affect Richmond's ability to attract compatible businesses.
2. Richmond residents are in favor of the continued operations of Richmond's working farms and forests and enjoy the rural atmosphere of the town.
3. Richmond has many resources available for industrial and commercial users including municipal water and sewer service, access to a high-speed cable network and an established business association. The town lacks an inventory of existing commercial and industrial properties and their associated resources that could aid in marketing Richmond to specific business sectors.
4. Existing commercial and industrial zoning districts may lack specific features that would encourage businesses to locate within their boundaries.

OBJECTIVES

1. Encourage businesses to provide goods and services that are valuable to the community and the region.
2. Encourage home occupations.
3. Encourage a diversity of economic opportunities in Richmond.
4. Establish land use regulations that accommodate commercial and industrial growth; promote multiple uses in the village; and preserve residential areas, farms and natural areas.
5. Improve communication by the Town with businesses and state and regional entities.
6. Improve the availability of parking in the village.
7. Utilize existing resources (interstate, rail, telecommunications, water & sewer, natural resources) when planning for future business development and expansion.
8. Explore ways to promote the continued operation of Richmond's working farms and forestlands. Avoid inhibiting existing farm and forestry operations.
9. Continue to allow for the adaptive reuse of appropriate historic structures to create business spaces throughout town. The "character of the neighborhood" must be respected when considering such conversions in area neighborhoods.

IMPLEMENTATION

1. The Town Administrator, Town Planner and Richmond Economic Development Committee will work with existing businesses to develop an inventory of their municipal needs, and will work with the Town to meet those needs.
2. The Town Administrator, Town Planner and the Richmond Economic Development Committee will conduct an inventory of existing commercial and industrial properties, their infrastructure resources, and current and future needs. The Town will use this information in marketing Richmond to specific business sectors.
3. The Richmond Economic Development Committee will advise the Planning Commission and Selectboard on infrastructure needs in the village. The Town will work to secure resources to address these needs.
4. The Planning Commission will review current regulations to determine their impact on farm based value-added endeavors. The Planning Commission and Development Review Board will consider options to ensure that new residential development does not inhibit new and traditional agricultural and forestry operations.
5. The Planning Commission shall review and determine whether to continue Village Center Designation, assuming the program is continued by the State.
6. The Town should encourage residents to shop locally to support the local economy and local farms and so that residents drive less.

Section 5 – Natural Resources

INVENTORY AND TRENDS

Richmond is a town with many and varied natural resources, among them diverse wildlife habitats, working farms and forests, unique shoreline environments and outstanding natural beauty. Our town's location in the eastern uplands of Chittenden County places us in an area noted for some of the richest habitat diversity in all of Vermont. The Winooski River and its wide, fertile floodplain provide many ecological, economic and aesthetic benefits of their own.

As reflected in figures from the Vermont Forum on Sprawl, land is now being consumed in Chittenden County nearly three times faster than the population is growing¹. All told, the quality of life Richmond residents enjoy and have stated they want to protect is closely tied to the quality of the town's rural character and natural resources. In 2005, Richmond voters approved the creation of a conservation reserve fund to be funded by town taxpayers for five years.

Richmond has also adopted outdoor lighting standards in its zoning regulations. These standards are based on a Chittenden County Regional Planning Commission study conducted in the 1990s. The State of Vermont is in the process of adopting voluntary outdoor lighting standards which may be useful in updating these regulations.

Drainage Basins

Richmond is located within three watersheds, the Winooski River watershed, the Huntington River watershed and the LaPlatte River watershed. The Winooski watershed (excluding the Huntington River portion) encompasses roughly two-thirds of the town and receives drainage from those areas of town generally north of Bryant Hill (above Cochran's Ski Area) and Owls Head. The Huntington River watershed collects water from uplands surrounding the Huntington River, and the LaPlatte River watershed contains a small portion of Richmond in the vicinity of Lake Iroquois.

Surface Waters

Two of Vermont's major rivers flow through Richmond, a portion of Lake Iroquois is located in Richmond, and there are also a number of ponds, streams, brooks and unnamed tributaries (see Figure 5.1). The quality of these waters is essential to Richmond in many ways. They serve as a source of recreation, provide visual amenities that enhance the rural character of the town, and support a wide variety of fish, wildlife and plant species, greatly contributing to the natural diversity in Richmond.

State professionals have identified a number of significant shorelines in Richmond that warrant a higher degree of protection based on their abilities to provide the above mentioned functions.

Surface waters with a designated shoreline as identified by the State of Vermont include:

- Gillett Pond
- Richmond Pond
- Huntington River
- Winooski River
- The Oxbows
- Lake Iroquois.

¹ Vermont Forum on Sprawl, *Exploring Sprawl*, 6th Issue, 1999, <http://www.vtsprawl.org/Initiatives/research/Exploring%20Sprawl/Newsletter6/CompleteRpt.html>

Other prominent surface waters include Donohue Brook, Johnnie Brook, Snipe Island Brook and Mill Brook.

Since 2002, the Huntington Conservation Commission has coordinated regular water quality testing at approximately 20 sites along the Huntington River in Huntington, with funding from the Vermont Agency of Natural Resources. The tests have shown high levels of *E. coli* that often exceed the State's stringent limit for swimming of 77 organisms/100 ml, and the US Environmental Protection Agency's (EPA's) less stringent limit of 235 organisms/100 ml (lab tests based on the Most Probable Number method). Due to these water quality issues, the EPA is in the process of assigning an "impaired" status to portions of the Huntington River from East Road in Huntington to the Richmond town line.

In winter of 2005, Richmond and Huntington began a collaborative public outreach effort to educate residents in the Huntington River Watershed of potential threats to the watershed and positive steps they could take to address these threats. To better understand and monitor the condition of the Huntington River, the Richmond Conservation Commission began coordinating regular water quality testing along the Richmond portion of the river in the summer of 2006.



Huntington Rivser (Submitted by Lou Borie)

Floodplains

A floodplain is the area bordering a lake or river that is subject to flooding. Floodplain borders are usually determined by the 100- or 500-year flood levels. A 100-year flood has a 1 in 100 chance of occurring in any given year. Floodplain boundaries are determined by the Federal Emergency Management Agency (FEMA), and are determined based on topography and estimated flood flows. (See Figure 5.1.) Severe flooding can also have long term effects on stream banks. In 2006, Richmond began identifying waterways susceptible to erosion through a Fluvial Geomorphology study conducted by the Chittenden County Regional Planning Commission.

Floodplains not only protect property and life by reducing the severity of flooding but also provide wildlife habitat and serve as corridors for animal movement. They also represent some of the richest and most viable agricultural land in Richmond because of a concentration of alluvial deposits left by past floods.

Riparian Areas

Riparian areas are strips of land on either side of a stream, river, pond, lake or wetland, which are of special value due to the many important functions they provide. Trees, shrubs and other vegetation growing in these areas serve a vital function in maintaining water quality and protecting soils. Acting as buffers, riparian areas effectively treat silt, fertilizers, pesticides and animal wastes before these pollutants reach surface waters. Roots in the banks bind the soil, reduce erosion and protect human property. Riparian areas also give floodwaters room to spread out, slowing down their flow and reducing erosion and property damage.

Shade provided by a forested canopy keeps stream water temperatures cool during hot summer months. This is particularly important because as water temperature rises, the oxygen it can

hold declines. Trout and other aquatic organisms require cool water with high oxygen levels to survive. Leaf litter and insects falling from overhanging vegetation are major sources of food and form the base of the food chain in many stream systems. Trees and branches which enter the water are important habitat components for fish and aquatic organisms, as are undercut banks maintained by root systems.

Naturally vegetated riparian areas provide important habitat and travel corridors for a wide variety of birds, mammals, amphibians and other terrestrial flora and fauna. For example, in May of 2000, a specialist from the Vermont Audubon Society identified more than 40 different species of birds during a 45-minute walk through a section of riparian woodland along the Winooski River.

To serve these protective functions, riparian zones should be vegetated for an adequate width, which varies depending on the physical and biological nature of the surface water and surrounding land. Addressing water quality issues alone, recommendations from the Vermont Agency of Natural Resource call for protecting 50-100 feet or more of streamside and lakeshore vegetation, as measured from the top of the bank or slope. The ANR makes general recommendations for buffer widths based on evaluations of the three main attributes in Table 5.1 below.

Table 5.1 Summary of Key Stream Riparian Buffer Functions and Typical Recommendations

Function	50' Buffer Recommendation	100' Buffer Recommendation
Protection of channel and floodplain stability	Small to moderate sized streams at low risk for lateral or vertical channel adjustments with small floodplain requirements	Small to moderate sized streams with potential for significant lateral or vertical channel adjustment. Streams with large belt width and floodplain requirements (most large streams).
Protection of aquatic and terrestrial wildlife habitats	Aquatic populations dependent upon stream habitat and/or water quality, directly associated with or in close proximity to the project site. Project sites without significant wildlife travel corridor and/or riparian dependent species and/or significant communities identified on or in close proximity to the project site.	Sites with significant wildlife travel corridor and/or identified riparian dependent species (e.g., riparian breeding birds), and/or significant natural communities either directly associated with or in close proximity to the project site.
Protection of water quality	Site soils and slope indicate low risk of erosion; proximity of project to receiving water and amount of resulting impervious cover indicate low potential for overland flow of pollutants.	Site characteristics indicate increased risk of erosion and/or potential for overland flow of pollutants.

Source: Vermont Agency of natural Resources, Riparian Buffer Guidance, December 9, 2005

Wetlands and Vernal Pools

Wetlands are areas that are inundated by surface or ground water with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands perform several important ecological functions: they contribute to protection of surface and ground water quality, recharge ground water aquifers, and control erosion by binding and stabilizing soil. In addition, wetlands provide necessary fish and wildlife habitat, may contain rare and endangered flora and/or fauna, may represent a rare or outstanding wetland community type, and provide opportunities for recreation, education, research, and aesthetic enjoyment.

Vernal pools are small, open-water wetlands that are filled by rain and snowmelt in spring or fall and are typically dry during the summer months. Vernal pools are usually contained within a small forested basin with no permanent inlet or outlet, and supporting no fish that prey on other

species. Years of filling and drying result in a unique set of conditions that support a variety of wildlife specialized to take advantage of these conditions. Vernal pools are known as important breeding habitats for amphibians such as several salamander species and wood frogs. In Vermont, information regarding the distribution of vernal pools is limited and further study is needed to better understand this natural resource.²

The Vermont Water Resources Panel uses a three-tier system to classify wetlands for protection. Class One and Class Two wetlands are considered “significant” as determined by the degree to which they carry out the above described functions, and are protected by the Vermont Wetlands Rules. The locations of Class One and Class Two wetlands are shown on Figure 5.1, and were based initially on wetlands identified on the National Wetlands Inventory (NWI) maps³. Class Three wetlands are those wetlands that have not yet been evaluated or those not considered significant under the Vermont Wetland Rules.. Although the most comprehensive source of information on wetlands is the NWI, this information should be used with caution. The maps were prepared using aerial photography rather than field inventory, so wetlands that are hard to see on aerial photos are not mapped. Many forested wetlands, for example, are not on NWI maps. Understanding the functions and values of each wetland requires field inventory and assessment by a natural resource professional⁴.

Groundwater

Clean and plentiful groundwater is a critical resource for the health and well being of Richmond's residents. Statewide, 66% of Vermonters depend on groundwater for their primary water supply⁵. This number is significantly higher in Richmond, where nearly all residents obtain their water from public and private wells and springs. The most significant quantities of groundwater are found in aquifers, which are geologic formations that have the capability to store, transmit and yield useful quantities of water to a well or spring. Land through which water percolates to become groundwater is called a recharge area. Recharge areas and the groundwater they supply can become contaminated by many sources, including failing septic systems, animal waste, leaking underground storage tanks, improper disposal of household and industrial waste, inappropriate use of pesticides and fertilizers, and excessive road salting. Groundwater can also be contaminated by naturally occurring substances including radioactivity in deep layers of bedrock and decaying plant and animal matter in areas closer to or on the surface. Similarly, over-development can deplete groundwater resources by increasing the amount of impervious cover and preventing infiltration of water underground.

In Richmond, the importance of groundwater to the health of Town residents, present and future, makes protection of groundwater resources a top priority. Higher quality water is also less expensive to treat. The VERMONT Department of Environmental Conservation (DEC) has published a groundwater protection handbook⁶, which is an excellent source of information about groundwater resources, threats to groundwater and tools local governments can use to protect groundwater. The DEC also has a model Groundwater Protection Ordinance that can be used as a guide for regulations protecting groundwater⁷.

² *Conserving Vermont's Natural Heritage* (Waterbury: Vermont Fish and Wildlife Department and Agency of Natural Resources, 2004), pp.74-75.

³ For information on NWI maps contact the ANR or see http://www.usgsquads.com/prod_nwi_data.htm.

⁴ *Conserving Vermont's Natural Heritage* (Waterbury: Vermont Fish and Wildlife Department and Agency of Natural Resources, 2004), p.64.

⁵ Reported by Larry Becker, State Geologist, to the U. S. Senate Committee on Energy & Natural Resources, Water and Power Subcommittee Hearing, 3/30/2006.

⁶ *An Ounce of Prevention, a Groundwater Protection Handbook for Local Officials*, September 2005, <http://www.anr.state.vt.us/dec/watersup/GWPRS/VTOuncePrevention2005.pdf>.

⁷ <http://www.anr.state.vt.us/dec/watersup/GWPRS/GroundwaterProtectionModelOrdance.doc>.

The State's Agency of Natural Resources has mapped all Source Protection Areas, which are the recharge areas for public community water supplies (those serving 25 or more full-time users). There are five public water systems active in Richmond at this time:

- One well comprising the Richmond Municipal System serving the village
- Two wells comprising the Riverview Commons System serving the mobile home park located off River Road
- The Larned System serving portions of Jonesville; the well is actually located in Bolton
- Fire District #1 serving the Robbins Mountain development located off Wes White Hill
- Two wells comprising the system serving the Orchard Lane Development off Dugway Road.

In 1996, the Town adopted a Water Supply Source Protection Ordinance setting forth protective regulations for the municipal water supply.

Soils

Soils in Richmond are comprised of two types:

- those formed from water-deposited material in the Champlain valley
- those formed in the Green Mountains and the foothills.

Table 5.2 contains general descriptions of soil units found within Richmond. For more detailed information, the reader is referred to *The Soil Survey of Chittenden County, Vermont*⁸, which contains maps that show the extent and location of the different soil types.

Table 5.2 Characteristics of General Soil Units

Soil Associations	Suitability for Development
Munson Raynham-Scantic Association	Limited due to seasonal high water table
Hartland-Belgrade Association	Limited due to seasonal high water table, steepness, and poor permeability
Limerick-Hadley-Winooski Association	Limited due to high water table and flooding
Adams-Windsor Association	Suitable except in areas limited by slope
Colton-Stetson Association	Suitable except in areas limited by slope
Lyman-Marlow Association	Unsuitable due to steepness, shallowness to bedrock and poor permeability
Peru-Marlow Association	Limited due to steepness and poor permeability
Peru-Cabot Association	Unsuitable due to excessive wetness

Source: US Dept. of Agriculture, Natural Resources Conservation Service, 1988.

Steep Slopes and Regional Features

Richmond's geological features, including hills and ridgelines, are an important part of the town's heritage that provide recreational and aesthetic enjoyment, educational and research opportunities, and protection of immediate and surrounding natural resources. Some of these hills and ridgelines are characterized by steep slopes, which are generally defined as slopes in excess of 15 percent. Disturbance of steep slopes can result in soil instability, slumping and erosion, conditions that can degrade surface waters and threaten human life and property.

Wildlife Habitat

Richmond offers a diverse array of wildlife habitats. Many parts of Richmond still see relatively little human use, allowing flora and fauna to exist and interact in naturally functioning, complex communities. In particular, the town is home to black bear, bobcat, otter, fisher, mink, and moose – animals high on the food chain that require large and varied areas to survive and which therefore are indicators of the overall health of the local ecosystem.

⁸ Natural Resources Conservation Service, U. S. Department of Agriculture.

Black bear production and seasonal habitat consists of extensive, remote forestland with special areas, such as mast production areas (stands of nut-producing trees), wetlands and travel corridors. Perhaps more than any other species known to occur in Richmond, the black bear stands as a symbol of wilderness. Large, unbroken tracts of forest connected by forested travel corridors are favored to accommodate this wide-ranging species.

Deer wintering habitat consists of areas with pure softwood or mixed softwood and hardwood cover at low or middle elevations with south or west facing slopes and lacking human disturbance. These areas are critical to deer during the winter months because they provide relief from harsh winter conditions.

Certain Richmond streams support populations of native trout, which are excellent indicators of a healthy aquatic environment. Native trout are extremely sensitive to increases in sedimentation and temperature that may result from incompatible land use activities. Some local streams are also home to stocked fish.

Flora, Fauna and Natural Communities

Richmond is also home to certain rare species and natural communities -- species or communities that are restricted in occurrence relative to other species or communities, or that may have declined significantly due to natural or human-induced causes. Rare or uncommon species found in Richmond include certain plant species associated with rich northern hardwood forests or floodplain forests. Among them are 200-year-old hemlocks near Gillett Pond, locally rare pitch pines on Chamberlain Hill, the rare broad beech fern by the Snipe Island Cliffs, and another rare fern, the slender cliffbrake, growing along the East Cliffs near Dugway Road. In addition, Richmond is home to at least one rare insect and one rare reptile as identified by the Non-game and Natural Heritage Program (see Figure 5.2).

Natural Areas

Natural areas are areas of land or water that are or contain unique resources. These areas are irreplaceable sites with their own special character, permanence, vulnerability and management considerations. They include wetlands, ponds, critical wildlife habitat, rare or vanishing flora and fauna, outstanding natural communities, and geological formations. In 1990, the Planning Commission completed an inventory of Richmond's significant natural areas (Figure 5.2). These included areas of statewide as well as local significance



Richmond Pond (Submitted by Lou Borie)

More recently, the high quality of wildlife habitats, working timberland and other resources in the northeastern part of Richmond and beyond led to that part of town being included in the Chittenden County Uplands Conservation Project. This public and private initiative is aimed at working with willing landowners to conserve ecologically significant areas and productive timberlands linking Mount Mansfield State Forest with Camels Hump State Park. Three key parcels

in Richmond have been conserved as part of this project. Richmond will benefit from the project through protection of important water sources, local employment in forest-related enterprises, secure wildlife habitat and movement corridors, and recreational opportunities for residents and visitors alike.

Working Farms and Forests

As stewards of their land, generations of Richmond farmers, foresters and loggers have provided and protected the open space that, for many, defines our town's rural landscape. Today, their hard work continues to provide fresh foods, local employment, revenues for other local businesses and a safeguard against sprawl.

Meanwhile, farms and forestland have little impact on the cost of Town services. Managed properly, farms and timberlands help safeguard streams and water quality, often producing less pollution per acre than developed land. Farms can serve as important buffers between developed areas and wildlife habitat, and forests provide key habitat to many species and protection of clean water supplies.

Richmond farms serve as a source for fresh, local foods. Currently, most acreage is devoted to growing corn and hay for local dairy farms. Other farms in town supply local customers with fresh vegetables, fruit, beef, pork, lamb, poultry, maple syrup and other foods. The town is home to at least two horse-riding schools and one tree nursery. A thriving farmers market is held at Volunteers Green throughout the warmer months, serving as a popular weekly gathering place for the community as well.

Through the State's voluntary Current Use Program, owners of farm and forest land can reduce their property taxes as long as they keep their land in production. Despite the opportunities, though, economic pressures and other reasons continue to cause farmers to sell off parts of their land to development.

Economically healthy, environmentally responsible farms and forests have benefited Richmond residents since our town was founded. They remain a vital resource for our community, helping us become more self-sufficient in producing food, fuel and construction materials, providing customers for local businesses and protecting many critical natural resources, including prime agricultural soils and wildlife habitat that are disappearing elsewhere.



Conant Farm (Submitted by Lou Borie)

Trends in transportation costs and fuel prices could make Richmond's farms and forests even more valuable, as more people turn to local sources for food, and more homes and businesses switch to burning wood to save on heating costs. However, other trends in our global economy make it more difficult than ever for small farms and forestry operations to make a profit. Reversing these trends will take not only innovative public initiatives but also the conscious effort of residents to buy locally produced foods whenever possible.

Sand and Gravel Deposits

Sand and gravel deposits are important natural resources. Utilization of these resources is often hindered by land use regulations and by public attitudes toward sand and gravel extraction. Identification of the highest quality sand and gravel deposits as part of the town planning process should help to avoid conflicts in the utilization of these resources in the future.

Extraction of sand and gravel can pollute surface and groundwater resources while also having adverse effects on other resources and adjoining land use. Erosion and runoff controls combined with restoration of sites after operations can minimize the damage that is caused.

A preliminary inventory of the town's sand and gravel deposits was performed as part of the report "Geology for Environmental Planning in the Burlington-Middlebury Region, Vermont", by David Stewart, 1973. Contacting local and state sources such as landowners, engineers, geologists and site contractors may further refine this inventory. Field reconnaissance should also be used when possible to verify information.

Scenic Views

Two major features dominate Richmond's landscape: the foothills of the Green Mountains and the Winooski River Valley. Much of Richmond's rural character and appeal results from the scenic vistas that can be observed in many parts of the town and that include an interplay of villages, mountains, forested hills, unbroken ridgelines, farms, fields, rivers, streams, ponds and woodlands.

Richmond is also fortunate to have many tree-lined streets in its village and along its outlying roads. Trees provide shade, beauty and habitat; can serve as food sources, and reduce air and noise pollution. Properly sited street trees can also have important traffic calming effects and improve pedestrian safety. In addition to these benefits, street trees can improve neighborhood property values. Species in Richmond include the stately sugar maple and at least one rare American elm.

Air Quality

Air pollution can cause a number of serious illnesses such as chronic bronchitis, asthma, emphysema, cancer or damage to the kidneys, liver and central nervous system. There are a number of significant sources of air pollution in Vermont, the largest being the automobile. Each year motor vehicles in Vermont emit about 1,000 tons of toxic and carcinogenic compounds into the air⁹. Various steps have been taken over the last several decades to improve the emissions from automobiles nationwide. However, while the controls have reduced the amount of pollution from each vehicle, the number of vehicles on Vermont roads and the number of miles they travel have increased dramatically. Motor vehicles now travel over 6 billion miles annually in Vermont, double the amount traveled in 1972¹⁰. Fuel-efficient vehicles are in popular use. The increase in vehicles and road miles is a trend that is expected to continue into the foreseeable future.

Another source of air pollution once common in Vermont is trash burning. Thankfully, as air pollution has become better understood, fewer and fewer people are burning trash. Unfortunately, some still believe burning trash is a viable alternative to paying for land filling. Household burn barrels produce low temperature fires which release many toxic chemicals close to the ground.

⁹ Agency of Natural Resources, Air Pollution Control Division flyer, *Air Pollution from Motor Vehicles in Vermont*, 1998.

¹⁰ Ibid.

The US Environmental Protection Agency has required each state to measure its ambient air for six “criteria” pollutants since 1970. Ambient air refers to air that is not directly at the source of pollution, but the air we breathe in neighborhoods, on farms and in the marketplace. These six pollutants are particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone and lead. These pollutants are by no means the only harmful ones. In fact the Vermont Air Pollution Control Division monitors the ambient air for several hundred pollutants, but the six “criteria” pollutants are considered the most common.

With energy costs increasing, many people are returning to heating their homes with wood. While wood is a cost effective, renewable resource, older wood stoves may actually emit more pollutants, particularly particulate matter, than the sources they replace. Since 1988, the US Environmental Protection Agency has required all new stoves to be equipped with catalytic converters or other technologies which reduce air pollution emissions by 50% to 60%. Newer woodstoves are also more efficient, requiring a third less wood to produce the same amount of heat¹¹.

However, as with automobile travel, increases in usage may offset the improvements in the technologies. Another concern is the growing popularity of outdoor, wood-fired boilers, which, unlike wood stoves, are not required to have pollution controls and which often must burn wood year-round to provide hot water to the home. A study in 2006 by the northeastern states notes that wood-fired boilers “emit significantly more particulate matter than other residential wood burning devices and short term particulate matter spikes can be extremely high.”¹²

KEY OBSERVATIONS

1. As reflected in figures from the Vermont Forum on Sprawl, land is now being consumed in Chittenden County nearly three times faster than the population is growing¹³. A key natural resources issue confronting Richmond is the pace at which open land is being converted into large, widely distributed, multi-acre lots.
2. State septic regulations passed in 2002 will allow use of advanced septic technologies at any site for which they are suited. These new regulations could open more parcels for development and lead to a greater loss of open land (See also Private Sewage Disposal in Utilities and Facilities).
3. Greater affluence enables more people to consider clearing land and building houses on hillsides, ridgelines and other remote parcels once assumed to be safe from development.
4. Economic pressures threaten sustainable farm and forest industries. We cannot assume that farmers, other large landowners or their heirs will continue to keep their properties intact; despite the many natural, aesthetic, economic and other benefits those properties give to our town.
5. Development and fragmentation of open lands is likely to increase pollutants, decrease water quality and impact wildlife habitat.
6. Threats to the quality of Richmond's groundwater include: disposal of household and industrial waste, inappropriate use of pesticides and fertilizers, excessive road salting and runoff from hard surfaces like roads and parking areas. In addition, groundwater resources

¹¹ Robert Varney, US Environmental Protection Agency Region 1, *Green and Clean Heating Tips*, November 15, 2005.

¹² Northeast States for Coordinated Air Use Management, *Assessment of Outdoor Wood-fired Boilers*, June 2006, p.vii.

¹³ Vermont Forum on Sprawl, *Exploring Sprawl*, 6th Issue, 1999, <http://www.vtsprawl.org/Initiatives/research/Exploring%20Sprawl/Newsletter6/CompleteRpt.html>

may be depleted where over-development increases impervious cover and decreases filtration.

7. Development of open land may reduce outdoor recreation opportunities.
8. It's becoming more expensive to purchase and maintain open land.
9. Richmond does not have a plan to protect its ridgelines from development.
10. Scenic views are extremely important to the town's residents, but they are increasingly threatened by factors ranging from increasing residential development pressures to the potential construction of wireless communications towers.
11. Richmond contributes to air pollution through car emissions, wood and trash burning, and other activities.
12. The US Environmental Protection Agency is in the process of designating the Huntington River as an "impaired" waterway, due to *E. Coli* contamination.
13. Conserving natural resources in isolation is not enough. To ensure the proper functioning of the abundant resources cataloged above, including providing habitat for the rich array of wildlife species that live in our town, Richmond must seek ways to conserve and foster the stewardship of large, interconnected areas of undeveloped land along with their component species, habitats and natural communities. This will simultaneously protect multiple species and natural community elements while also addressing many of the public interests associated with the natural environments, ranging from maintaining water quality to hiking, hunting, fishing and wildlife watching.

OBJECTIVES

1. Encourage the conservation of land for protecting water quality, wildlife, natural resource functions, and for forestry, farming, recreation and educational opportunities.
2. Promote a viable agricultural sector as a way to maintain open spaces and natural resources on private lands.
3. Promote appropriate regulations, as needed, to protect and improve the quality of Richmond's surface and ground waters.
4. Educate residents as to the effect of human activities on Richmond's natural environment and human health and provide Richmond residents with opportunities to experience natural resources and to use the land.
5. Focus development in suitable areas and promote rates of development and methods that minimize impacts on Richmond's natural resources.
6. Maintain high air quality standards for current and future residential, commercial and industrial development.

IMPLEMENTATION

1. The Conservation Commission and Town Planner will determine the current and potential status of land use, identify threats to Richmond's natural resources and develop plans for the preservation of these resources. This process must seek extensive public involvement in the creation of inventory maps to identify natural resources and potential sites of development and explore the development of an open space plan.

2. The Conservation Commission, Zoning Administrator and Town Planner will provide guidance to applicants, architects, builders, landscapers and other interested parties on development methods that protect Richmond's natural resources.
3. The Conservation Commission, Selectboard, Town Administrator and Zoning Administrator will collaborate with local conservation and state agencies, and Richmond property owners, on the promotion, enforcement and adherence to environmental regulations that protect water quality, wildlife and other natural resources and to conserve agricultural and natural areas. Efforts should be made to obtain funding and support for these purposes, including reauthorization of the Conservation Reserve Fund, as needed, to provide seed money for conservation efforts.
4. The Planning Commission will design zoning and subdivision regulations in accordance with state and federal laws to protect croplands, floodplains, water resources, scenic sites, wildlife habitat and to promote compact development patterns that promote the efficient use of land and the protection of important natural resources and open space. These revisions may include modification of district uses and lot dimensional requirements, expanding the use of Planned Unit Developments, offering of density bonuses in exchange for resource conservation, and the creation of provisions for the Transfer of Development Rights. The process of reviewing and modifying these regulations will include extensive public input.
5. The Conservation Commission will assimilate the comments and suggestions from the public meetings held to discuss a proposed Riparian Buffer Overlay Zone, as well as new information on riparian conservation and water quality protection. The Commission will present its responses and recommendations to the Planning Commission.
6. The Planning Commission will research the need for local regulations to protect the quality of Richmond's groundwater, and will implement such regulations as needed.
7. The Conservation Commission, Town Administrator and Road Foreman will demonstrate "best practices" for Town-owned and controlled property by developing and applying conservation measures, such as using native species for landscaping, controlling roadside erosion, and assuring that the use of Town-owned land will not damage natural resources.
8. The Planning Commission shall review the ecological, scenic and other functions of undeveloped ridgelines and consider establishing appropriate protections for those sensitive areas.
9. The Planning Commission will monitor the status of septic regulations, analyze (through "build-outs", mapping, and consultation with owners of potentially affected property) the effects of changes on potential development patterns, and recommend changes in zoning or subdivision regulations where appropriate to retain the rural character of the Town.
10. The Planning Commission shall ensure, through zoning and other Town regulations, that new development and land use activities do not create undue adverse impacts, directly or indirectly, on air quality, as measured by applicable air quality regulations.

Figure 5.1

Floodplain and Wetlands

2006

Prepared by CCRPC

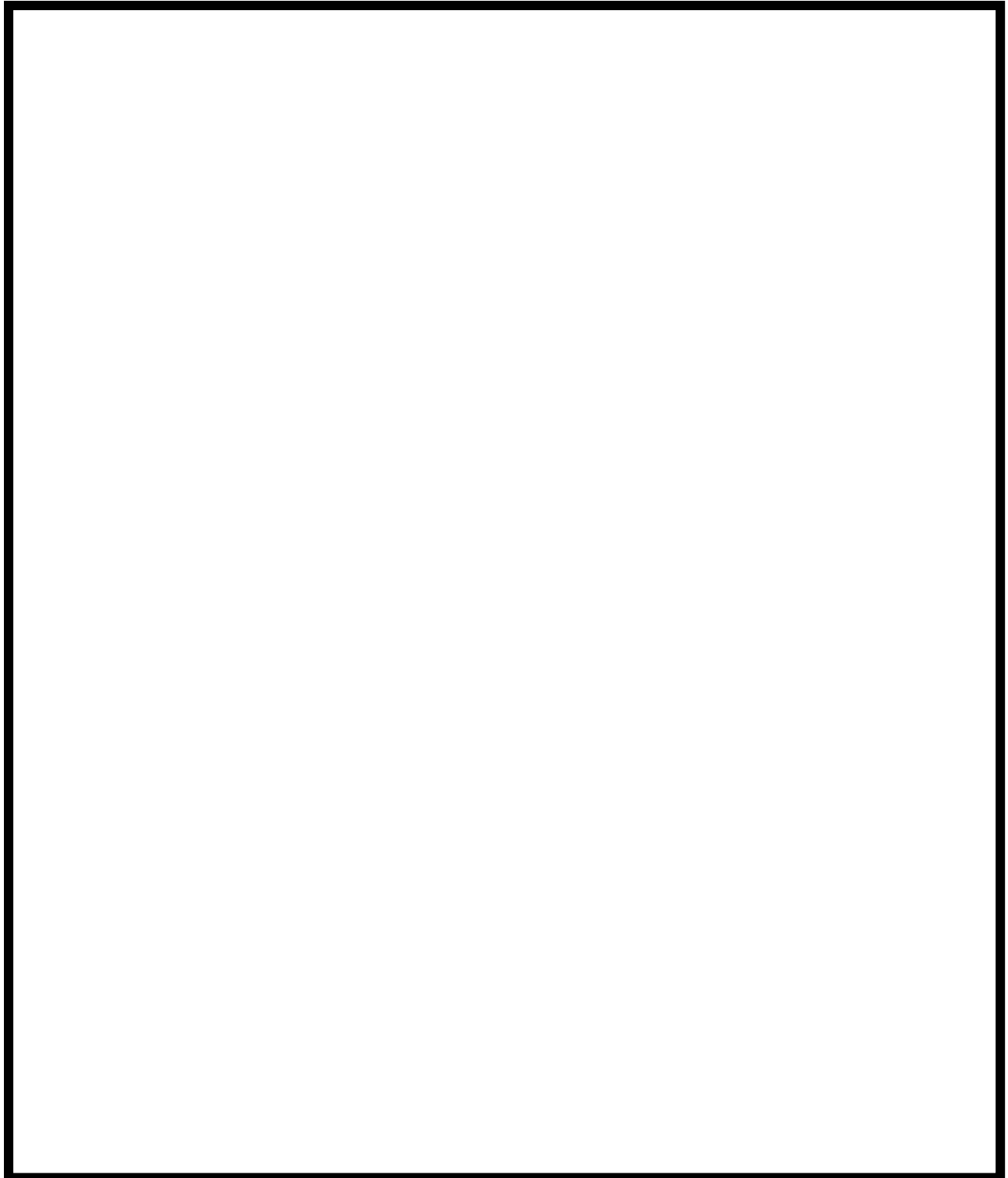


Figure 5.2

Natural Resources
2006

Prepared by CCRPC

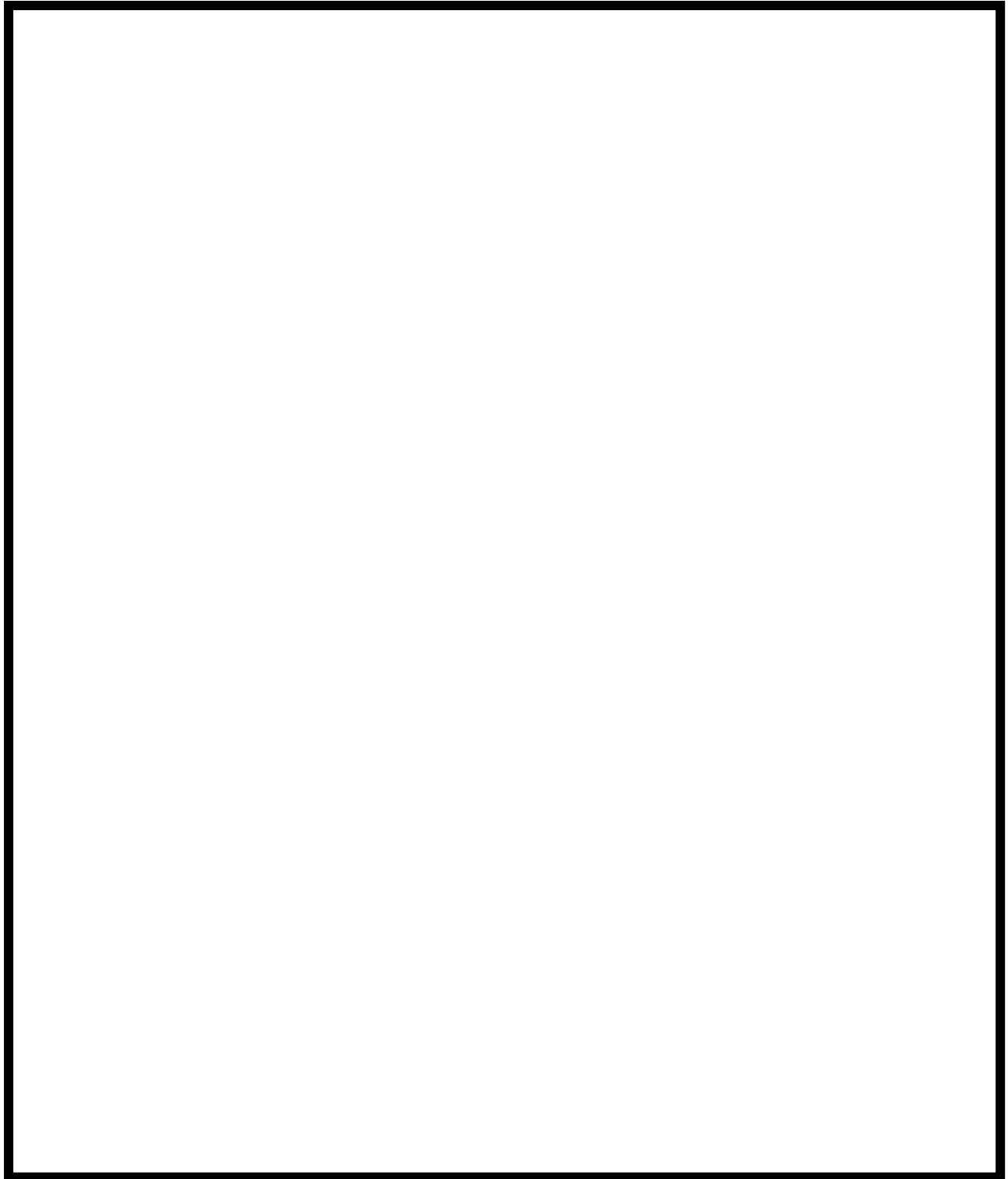


Figure 5.3

Primary Agricultural Soils
2006

Prepared by CCRPC

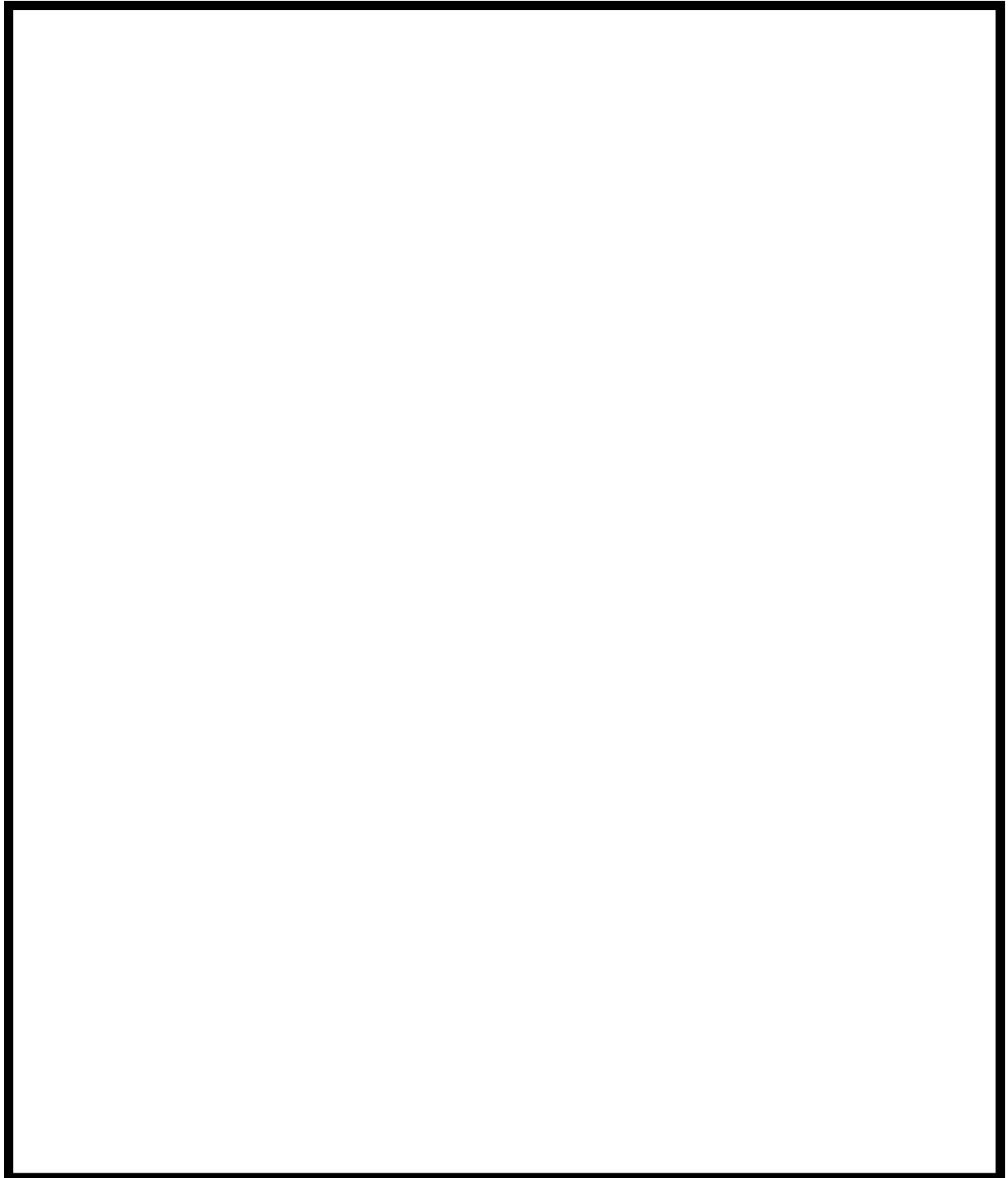
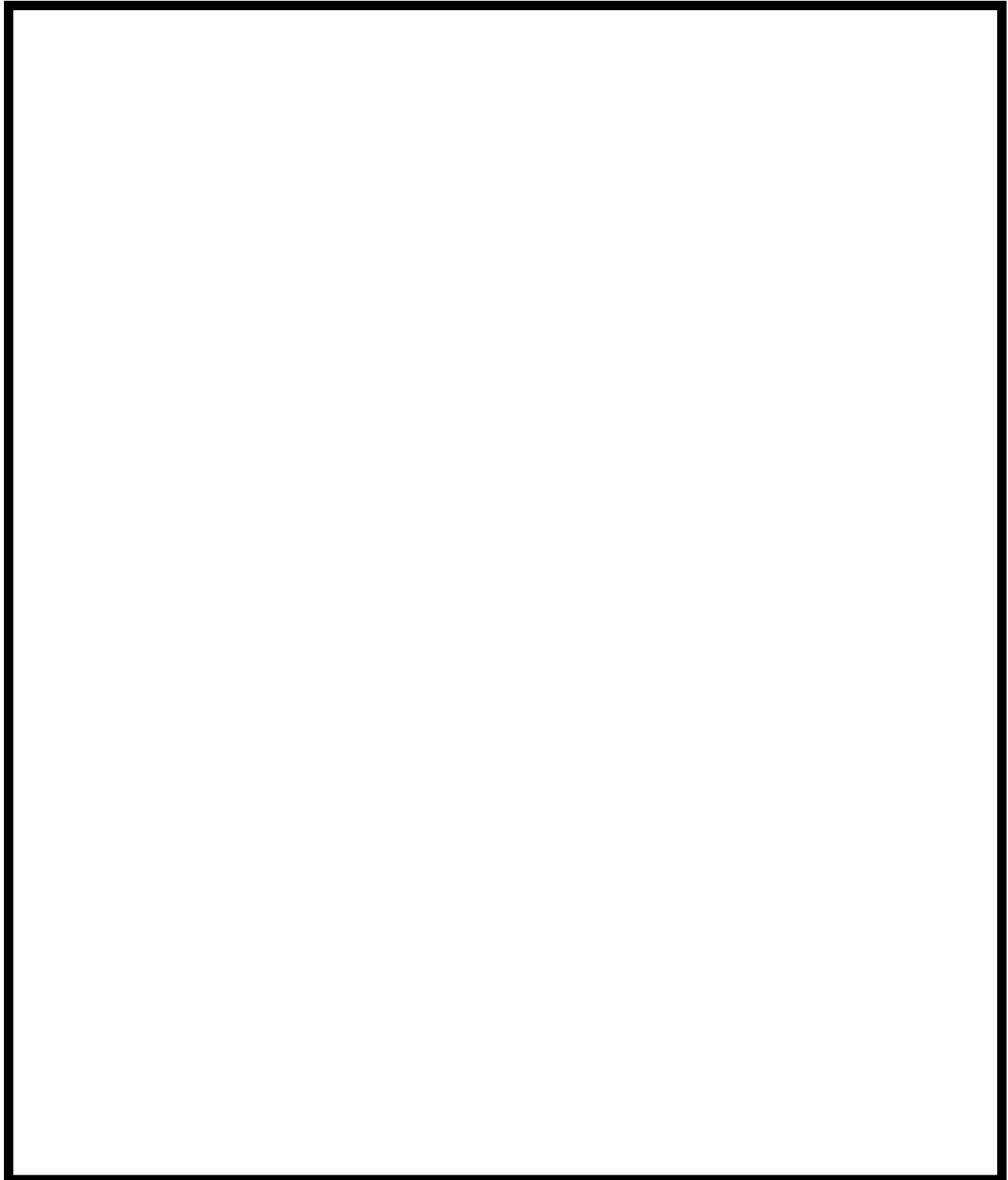


Figure 5.4
Steep Slopes
Existing Land Use
2006
Prepared by CCRPC



Section 6 – Historic Resources

INVENTORY AND TRENDS

The Town is fortunate to have many architecturally and historically significant buildings, including the Richmond Round Church, a National Historic Landmark. Many of the historic properties are inventoried in the Vermont Historic Sites and Structures Survey, on file at the Vermont Division for Historic Preservation and the Richmond Free Library. Based on the survey, the Town and the Vermont Division for Historic Preservation could determine whether or not a National Register historic district should be designated in Richmond.

Village Center

The Town of Richmond promotes a real sense of neighborliness and a strong village core around the post office, library and town hall (located in a rehabilitated school and church). South of the Winooski River, the Round Church and green create important focal points for this more rural area of the village. In addition, the town offers a variety of community experiences, such as a weekly farmers market during the summer and fall, concerts in the park, Town Meeting Day, community gatherings at the Round Church and at the Library Community Room, and a 4th of July parade.

In 2005, portions of Richmond's village became an official "Designated Village Center" through the Vermont Downtown Program. Through this designation, building owners in the designated area are eligible for certain tax credits to restore and improve historic buildings. In addition to these benefits to land owners, Village Center Designation will also improve Richmond's competitiveness when applying for a host of state and federal grants.

Farms, Agricultural Lands, and Barns

Richmond's rural landscape remains in sharp contrast to the suburbanization of towns closer to Burlington. Our farms provide a quality of life shared by all Richmond residents, yet the burden of maintenance falls on the few residents who operate farms in Richmond. Increasingly it is difficult to meet the many challenges facing agriculture. Currently more than 2,300 acres are dedicated to traditional operating farms (dairy, equestrian). In addition to these working lands, Richmond contains numerous other properties dedicated to smaller scale farming operations like the Owls Head Berry Farm.

Bridges

Richmond's historic truss bridges provide economic, aesthetic, "traffic calming" and transportation benefits to the Town. The Checkered House Bridge, crossing the Winooski River near the Conant farm, is listed on the National Register of Historic Places. It has been designated of exceptional historic significance, and is identified to be preserved for limited highway use in a Bridge Programmatic Agreement between the Federal Highway Administration, State Historic Preservation Office, Agency of Transportation, Agency of Natural Resources, and Agency of Commerce and Community Development.



Bridge Street Bridge (Submitted by Jeanne Adams)

The truss bridge in the center of the village is designated in the Bridge Programmatic Agreement to be preserved for limited highway use. The bridge is historically significant and serves an important aesthetic benefit to the Town. In addition, the “traffic calming” function of the bridge must be emphasized, because the bridge forces traffic to slow down.

In 2006, the Bridge Street truss bridge was found to contain significant structural deficits and traffic was restricted to one lane. Although some funding was obtained to make temporary repairs, the reduction to one lane highlights the challenges of maintaining and preserving these types of historical resources:-

Land Use

Richmond is a centralized compact village surrounded by open agricultural and forested land. Much of the land immediately surrounding the village continues to be farmed, providing a natural barrier to sprawl development and the town’s hilly terrain has been less conducive to suburban housing sprawl, with its aesthetic and economic consequences.

Adaptive Reuse of Historic Structures

Richmond contains many structures which have outlived their original intended use, but remain vital reminders of Richmond’s past. These include old barns and outbuildings which dot the landscape, as well as old mill and manufacturing buildings in the village. Sadly, many of these buildings have fallen into disrepair and will be lost if nothing is done to maintain or restore them.



BirdsEye Building Co. (Submitted by Carol Mader)

Richmond residents and local businesses and organizations have worked to bring life back to these buildings. In 1987, The BirdsEye Building Company converted an historic, but dilapidated barn on Huntington Road to house an architectural design studio, general contracting offices and cabinetry shop. After its restoration, this barn became the first agricultural building in Vermont listed on the National Register of Historic Places. In 2005, the Vermont Youth Conservation Corps (VYCC) and Richmond Land Trust completed restoration and renovations of the historic West Monitor Barn, which will now serve as the VYCC headquarters. The old Cheese Factory buildings may also be restored and redeveloped to add new commercial and residential uses in Richmond’s village. These endeavors have saved important historic resources while at the same time created new jobs and strengthened the Town’s tax base.

KEY OBSERVATIONS

1. The historic village pattern, essential to the quality of life in Richmond, is threatened by suburbanization and auto dependence.
2. With a growing population and changes in development patterns, traditions that encourage small town neighborliness and civic involvement are threatened.
3. Although the community benefits from the aesthetic value of historic buildings in Richmond, the expense of maintaining them falls to private landowners.
4. Although Richmond’s residents enjoy the benefits of open lands and farms and forests, the financial burden to maintain these lands rests almost solely with the individual landowner.

5. Richmond's historic truss bridges add to the aesthetic and historic character of the town and provide traffic calming benefits. It is expensive for the town to maintain these bridges.
6. Richmond's archeological sites are important cultural resources that are threatened by increased development.
7. There is no designated group responsible for preserving all of Richmond's historic resources.

OBJECTIVES

1. Preserve Richmond's historic places, including; the village, open and working landscape, known and unknown archaeological sites, cemeteries, and historic bridges, by providing education, and incentives to, and through collaboration with willing landowners and through community action.
2. Provide technical and financial tools that will enable private property owners to maintain and rehabilitate their historic buildings.
3. Continue Town traditions such as Town Meetings, parades, the farmers' market, and the Old Round Church pilgrimage.

IMPLEMENTATION

1. The Planning Commission, Development Review Board and Selectboard will enact zoning and subdivision regulations and endorse transportation and utility infrastructure improvements which will foster the preservation of an historic village pattern surrounded by open land. The process of reviewing and modifying these regulations must seek extensive public input.
2. The Planning Commission shall review and determine whether to continue Village Center Designation, assuming the program is continued by the State.
3. The Town, through the Vermont Division of Historic Preservation, will update the Richmond Historic Sites and Structures Survey. Data from this survey may be used to create a National Register Historic District
4. The Town shall continue to support Richmond traditions such as Town Meetings, the Old Round Church activities, parades, concerts and the farmers market.
5. The adaptive reuse of historic structures to appropriate new uses shall be encouraged where appropriate. The "character of the neighborhood" must be respected when considering such conversions in area neighborhoods.

Section 7 – Transportation

INVENTORY AND TRENDS

Roads

Figure 7.1 below depicts the transportation routes and facilities existing in Richmond today. Of Richmond's approximately 85 miles of roadway, 56% are town maintained, 23% are state maintained and the remaining 21% are maintained privately. The town maintains 24 miles of paved roads and 26 miles of gravel roads. Each town highway is classified as a major collector identified as a Class 2 town highway (15.5 miles) or a minor collector/local road identified as Class 3 town highways (25.5 miles.)

The functional classifications of Richmond's roads include a principal arterial, I-89; a minor arterial, Vermont Route 117; five major collectors including US Route 2, Huntington Road, Hinesburg Road, Jericho Road, and Bridge Street; three minor collectors including Cochran Road, Duxbury Road, and Governor Peck Road; and the remainder classified as local roads. Generally, arterial roads serve primarily to move traffic between principal traffic generators, collectors serve internal traffic movements within a town and connect it with the arterial system, and local roads provide access to adjacent land as their primary function. Table 7.1 contains traffic count information for key segments of roadway collected over the past 20 years. These data were compiled from Vermont Agency of Transportation data sources as well as from a report prepared by Resource Systems Group Inc. for the Town of Richmond in 1992⁶.

Table 7.1 Adjusted Average Daily Traffic (AADT), 1980-2003/2004

Road Name	Location (between)	1980(E)	1990/1991	1995/1998	2003/2004
Huntington Rd.	Huntington TL / Dugway Rd.	1400	2100	2200	2700
Hinesburg Rd.	Hinesburg TL / Kenyon Rd.	760	2400	1440	1600
Bridge St.	Cochran Rd. / US2	4970	5900	4050(E)	5600
US2	Williston TL / 117	2080	2840(E)	4000	3800
US2	I89 Ramp / Baker St.	4400	7680	7600(E)	8000
US2	Lemroy Ct. / Stage Rd.	2110	2530(E)	3200(E)	3000(E)
US2	Stage Rd. / Bolton TL	1720	2295(E)	2600	2700(E)
Jericho Rd.	US2 / Jericho TL	2000	1400	1500	2000
Rte. 117	Jericho TL / US2	2010	3900(E)	4900(E)	5500(E)

Source: VAOT, 2000; Resource Systems Group Inc., 1992; VTrans 2004 (Route Log AADTs, 2005, CCMPO Traffic Counts, 2003 E = estimate.



October Coin Drop (Submitted by Carol Mader)

Due to increases in population and pedestrian mobility, Richmond's location within commuting distance of Burlington and Montpelier, and increased commercial growth in neighboring Williston, the Town has experienced significant increases in traffic along key commuting routes. In addition to Richmond's growing number of residents, commuters from Bolton, Hinesburg, Huntington, Jericho and Williston travel through Richmond en route to and from Interstate 89. As a result, levels of service, which are used to measure the effect on capacity of current roadway conditions, are likely to decline at major

intersections within the Town. Table 7.2 describes

some of the results of a traffic network analysis prepared by the previously mentioned Resource Systems Group Inc. (RSG). RSG developed a model that used 10-year land use projections to estimate the 2000 levels of service at various intersections. These data represent the results of the poorest intersections within Richmond as relates to levels of service.

Table 7.2 Base and Future Levels of Service at Key Intersections

Intersection	Critical Movement	1991AM	1991PM	2000PM*
Rte 117 / Gov. Peck Rd.	Gov. Peck (lf/rt)	D	C	D
Rte 2 / Rte 117	Rte 117 (lf)	E	E	ND
Bridge St / Rte 2	Signalized	B	B	C

* - Estimated ND=No data Level of service 'A' equates to a ≤ 5 second stopped delay at a given intersection, level of service 'B' to a 5-15 second delay, level of service 'C' to a 15-25 second delay, level of service 'D' to a 25-40 second delay, level of service 'E' to a 40-60 second delay, and level of service 'F' to a >60 second delay. Source: Resource Systems Group Inc., 1992.

Although a follow up study has not been commissioned to verify the 2000 projections, "field" verifications by commuters of Richmond confirm these results.

As growth in Richmond and surrounding towns continues, Richmond's road infrastructure will be put under additional stress and may need to be upgraded. East Hill Road, a major route to shopping centers in Williston, may soon be upgraded from a Class 3 road to a Class 2 road. Not only has volume increased on this road, so too, it appears, has speed.

In June, 2006, the Vermont Agency of Transportation completed the final designs for a roundabout to replace the intersection of US Route 2 and VT117 and the intersection of VT117 and Governor Peck Road. As seen in Table 7.2, Richmond residents have long been plagued by traffic jams and back ups in this area where three collectors and the on and off ramps for I-89 come together. Construction of the roundabout is expected to begin in 2009.

Bridges

There are more than 30 highway bridges in the Town of Richmond. The Vermont Agency of Transportation (VAOT) routinely inspects the bridges and rates them according to their condition. A Bridge Sufficiency Rating of 100 is given to a bridge in perfect condition. Bridges with ratings below 50 are considered marginal and in need of repair. The VAOT is currently working to replace or rehabilitate all bridges that have a rating below 50 as State and Federal money is available. Table 7.3 lists all bridges in Richmond for which data from VAOT is available, and notes which bridges are considered functionally or structurally deficient. It is important to bear in mind that sufficiency ratings are determined using many factors in addition to the structural integrity of the bridge. For example, a steep slope, intersection or railroad crossing near a bridge can significantly reduce its sufficiency rating, even if the bridge itself is in good repair.

Table 7.3 VAOT Rated Bridges in Richmond

Location	Year Built	Year Reconst.	VAOT Rating	Comments
I89 over Stage Rd.	1964	NA	55	Functionally Deficient
I89N over Jericho Rd.	1964	NA	57.9	Functionally Deficient
I89S over Jericho Rd.	1964	NA	67	Functionally Deficient
I89N over NECRR and Brook	1964	NA	44	Structurally Deficient
I86S over NECRR and Brook	1964	NA	60	Not Deficient
I89 under US2	1964	NA	44	Structurally Deficient

I89N over US2	1964	NA	48	Structurally Deficient
I89S over US 2	1964	NA	48	Structurally Deficient
Huntington Rd. over Huntington River	1946	1980	58	Functionally Deficient
I89N over Winooski River and Johnnie Brook	1962	NA	69	Not Deficient
I89S over Winooski River and Johnnie Brook	1962	NA	58	Not Deficient
I89N over Kenyon Road	1962	1994	57	Functionally Deficient
I89S over Kenyon Road	1962	1994	70	Functionally Deficient
US2 over Winooski River (Checkered House Bridge)	1929	1970	11	Structurally Deficient
US2 over Snipe Island Brook	1929	NA	43	Structurally Deficient
US2 over NECRR	1938	1993	72	Not Deficient
Cochran Rd. over Winooski River (Jonesville Bridge)	2002	NA	82	Not Deficient
Bridge St. over Winooski River	1928	1977	36	Structurally Deficient
Southview Drive over Donahue Brook	1934	NA	62.2	Not Deficient
Cochran Road over Huntington River	1937	1994	80	Not Deficient

Source: VAOT, Summary Bridge Inspection Reports, 2006 . NA – Not Applicable,

Two Winooski River bridges listed are narrow steel bridges that were built to replace those destroyed in the 1927 flood. Both serve as reminders of Richmond's past and also provide important traffic calming functions along Richmond's roadways. However, both are also in need of significant repairs, and residents are concerned that they limit safe shared passage of pedestrians, bicycles and motor traffic. The Checkered House Bridge is slated for improvements and widening in 2009. The Bridge Street Bridge was downgraded from two lanes to one and given a weight limit of 38,000 lbs. in July of 2006 because of safety concerns.



*Flooding at Bridge Street Bridge
(Submitted by Kyle Austin)*

Railroad

Central Vermont Railroad owns a right-of-way that cuts across the Town and generally flanks the north shore of the Winooski River. Central Vermont Railroad leases its operating properties to the New England Central Railway. A recent property sale transferred ownership of buildings and land on both sides of Bridge Street to separate private ownership. The rail line itself was excluded from the sale. There is currently no passenger rail service to Richmond, with the closest stations in Waterbury and Essex Junction.

Bus Service

The Link Express, operated by the Chittenden County Transit Authority, provides commuter service from the Richmond Park-and-Ride to Burlington, Montpelier, and Waterbury. The Link Express operates two morning and two evening buses each weekday and midday run once a month. There is currently no weekend service and no connection to the village or Jonesville. Approximately 170 people board the Link at the Richmond Park-and-Ride per month. Figures on the number of people getting off the bus in Richmond are not available. The Link Express provides a valuable service to the community.

Parking

On April 3, 2006, the Richmond Selectboard adopted a Traffic Control Ordinance, effective June 3, 2006. In addition to setting speed limits and stop sign locations on Town roads, this ordinance re-adopted parking regulations for Town highways and municipal parking areas. Figure 7.2 depicts parking restrictions within the village. The Traffic Control Ordinance limited parking to two hours in the municipal lot located between the Corner Market (10 E. Main Street) and the Toscano Café Bristo (26 Bridge Street), 2) and along Depot Street. There are also several privately owned, unregulated spaces between Depot Street and the railroad tracts. In addition, it re-adopted 2-15 minute parking spaces located at the approximate halfway mark of the commercial block.

Many businesses and residents have identified the lack of parking in the village as a major impediment to future growth and activity in that area. In order to address this concern, the Town initiated a study to identify potential areas for additional parking within the village in 2006. This study is supported through a Technical Services Grant from the Chittenden County Metropolitan Planning Organization.

In 1996, a Park-and-Ride facility was developed on the north side of US Route 2 near Exit 11. This facility contains 105 spaces, including five handicapped spaces, and a shelter. Richmond's Park-and-Ride is used extensively by persons commuting to places of employment as well as recreational destinations. This facility is at maximum capacity during weekdays but has space available on weekends. In the summer of 2006, the Selectboard began researching placing a park and ride on State-owned land in Jonesville and Bolton off Rt. 2 near the 2001 stone removal site. This facility would be state-owned and managed.

Special Services Transportation Agency (SSTA)

In 1998, the Town of Richmond enrolled in the SSTA program that provides transportation for residents over the age of 60 or with a physical disability. Weekday service is between 7 a.m. and 5 p.m. and provides access to places in Burlington, South Burlington, Winooski, Essex, Williston and parts of Colchester and Shelburne.

Pedestrian Mobility

Richmond's sidewalk system currently serves the village and provides access to various popular destinations including the post office, the Richmond Free Library, Volunteers' Green, and the village commercial district. A *Transportation for Livable Communities Grant* In 2002 identified pedestrian routes. Sidewalks along West Main Street were improved and upgraded between 2002 and 2004 in order to facilitate pedestrian traffic to and from the village. In 2006, Richmond received a Transportation Enhancement Grant from the Vermont Agency of Transportation to study and develop preliminary designs for sidewalk and streetscape improvements for the main intersection of US Route 2 and Jericho Road/Bridge Street. This study will likely be merged with the Village Parking Study, and will help to develop a long term transportation plan for the village. Jericho Road is of particular concern in this study, as Richmond Residents have expressed concern about pedestrian safety from the village intersection to the School and the Southview entrance.

Providing safe pedestrian and bicycle access to Richmond's schools is a goal of the Town transportation system. Parent surveys conducted in 2004 – 2005 indicated that safety concerns were a major reason that students currently do not walk to school. Through a grant received in 2004 to participate in the *Vermont Safe Routes to School* pilot program, several infrastructure and safety support system changes were identified that would implement this goal. These infrastructure changes would be supported by programming within the schools, the district and the state educational system to support and encourage safe walking and bicycling as part of a healthy, physically active student wellness program (see *Schools section*). Additional benefits

include potential traffic congestion mitigation and air quality improvement from reduced parent delivery of student commuters.

In addition to sidewalks, Richmond has been working on creating a trail network to provide alternative means of transportation between and among its neighborhoods and popular destinations. Richmond's current trail network includes the Ruth and Warren Beeken Rivershore Trail located on the south side of the Winooski River adjacent to Cochran Road, the Safford Preserve Trail located off Dugway Road, the Volunteers' Green Trail located along the northerly bank of the Winooski River in Volunteers' Green and the Old Jericho Road Trail running between Southview Drive and Jericho Road. These trails cross lands owned by the Town,



Rivershore Trail (Submitted by Lou Borie)

Richmond Land Trust, or private land owners who have granted permission for trail use. They are maintained by the Richmond Recreation Path Committee and the Richmond Land Trust.

In 1999, the Recreation Path Committee completed a study of potential routes for Richmond's section of the Cross Vermont Trail. This trail is envisioned as being an east-to-west corridor that will traverse the state. Richmond has designated Duxbury Road and Cochran Road for the Trail, and it is likely to designate Huntington Road to Johnnie Brook when the Johnnie Brook bridge and trail upgrade are finished, with the Trail then continuing to US 2 into Williston.

There is currently only one parking area available for Richmond's trail network. More will be needed as additional areas are added and use of the network increases.

Bicycle Travel

Richmond residents have expressed an increasing interest in safe routes for bicycles. Currently, several roads, most notably Huntington Road and Cochran Road, are popular routes for recreational biking. Recently, the Recreation Path Committee has been working to improve a Class 4 road off Johnnie Brook Road for recreational biking. Many residents also desire a safe link between the Park and Ride to the village and Jonesville along US Route 2. While such an undertaking would require widening the shoulder and would need funding and cooperation from the Vermont Agency of Transportation, the town has taken some steps to encourage safe bicycle travel along this route. In 1997, the Recreation Path Committee applied for a grant to place bicycle lockers at the Park-and-Ride. Unfortunately, this application was turned down. Smaller bike racks are currently available at the Park-and-Ride.

KEY OBSERVATIONS

1. The most obvious function of Richmond's roadways is vehicular traffic movement. With the exception of Interstate 89, however, these roadways also serve pedestrian, recreational and agricultural machinery uses. It is a challenge to assure the compatibility of our roads for different uses that sometimes conflict.
2. Richmond's historic truss bridges add to the aesthetic and historic character of the town. They also serve as important traffic calming devices particularly at the Bridge Street location. These bridges are nonetheless expensive to maintain and have also raised concerns as relates to safety.

3. Maintenance of Town roads is the second most expensive item (following school costs) in the annual Richmond budget. Substandard design and development of roads can create ongoing maintenance issues. The construction or improvement of roads, however, can adversely affect development patterns and the quality of life.
4. The private automobile is and will continue to be the preferred mode of transportation for most. Many would consider alternative modes of transportation if they could be safe, convenient and cost-effective. Currently there is limited opportunity for Richmond residents to use mass transportation or for safe bicycle and pedestrian travel. However, planning which allows for a substantial number of potential employees and customers to live within safe and easy walking/biking distance of commercial destinations can alleviate their need for daily automobile transportation.
5. The commercial success of the village is vital to the economic and cultural health of the Town. A key to the viability of the downtown center is the easy access to parking for patrons. Our businesses will lose customers if they cannot find convenient parking.
6. Making vehicular traffic flow faster, whether through modifications to existing roads or construction of new roads, can sometimes cause adverse consequences. These include increased development pressure and impacts on other road uses from speeding cars and more traffic.
7. The burden placed on roads passing through Richmond when I-89 and other regional roads are shut down is substantial, in terms of convenience and safety.

OBJECTIVES

1. Alleviate traffic congestion and its impacts in the village, while maintaining the dynamic commercial, civic and residential character of the village.
2. Make dangerous roads and intersections safer while retaining the rural and unique character of the community.
3. Minimize the traffic impact generated by new development originating either in Richmond or in neighboring towns.
4. Create a safe and inviting environment for pedestrian traffic, and to expand the network of pedestrian sidewalks and trails. Encourage linking together Richmond's neighborhoods and connecting our pedestrian system with the regional system.
5. Provide adequate parking in the village to support the commercial center by regulating the use of existing spaces
6. Encourage the courteous sharing of transportation infrastructure by motor vehicles, bicyclists, pedestrians and other users.
7. Cooperate with regional entities in developing regional mass transportation systems that support the character of our community, decrease traffic congestion and improve transportation opportunities for all sectors of the community.

IMPLEMENTATION

1. The Town shall concentrate investments in transportation on maintaining existing roads and bridges, as opposed to building new roads, or paving existing dirt roads. The Town shall examine the development of new roads in a broader context to include impacts on traffic flow, non-automotive user safety, existing infrastructure, development patterns, the village and rural areas.
2. The Richmond Economic Development Committee, Police Department and Road Foreman shall provide adequate, convenient and safe short-term (up to 2 hours) and long-term (all day) parking in the village, for both patrons and employees through the following measures:
 - The most convenient spaces should be reserved for short-term parking. Otherwise, customers will take their business elsewhere. Thus, the Town shall enforce the two-hour time limit for spaces on Bridge Street and in the municipal lot between the Corner Market and Toscano Café Bristo. Employees, residents and other long-term users in the village shall be encouraged to park in other spaces, such as near the Railroad tracks on Depot Street or at the Town Center.
 - The Town shall maintain striping for the spaces in all Town owned lots.
 - The Town shall install signs directing vehicles to available short-term and long-term parking.
 - The Town shall work with local owners of private parking lots, to arrange cooperative agreements for use of available parking when not needed by the private owner.
 - The Town shall work with the Agency of Transportation to paint available parking spaces on US Route 2 near the intersection of US Route 2 / Bridge Street and Jericho Road.
 - The Town shall oppose any efforts to eliminate the existing diagonal parking spaces on Bridge Street.
 - The Town will consider a “Yield to Backing Cars” sign on the southwest corner of Bridge Street.

The Economic Development Committee shall review the effectiveness of these measures after implementation and recommend additional steps, if needed.

3. The Selectboard and the School Board should encourage parents of Richmond students to use the school bus system and to walk to school. The Town should coordinate with the School District to make the bus system as user friendly as possible. The Town and School District should consider the development of central drop-off points to shorten school bus routes. The Town should investigate the possibility of a second access to the Elementary / Middle School to divert traffic and increase safety.
4. The Planning Commission, Development Review Board, and Recreation Path Committee shall, in appropriate cases, continue to require provisions for sidewalks, trails and user amenities for new development in and near the village and higher density residential districts. This will encourage pedestrian links between and among Richmond's neighborhoods, public spaces and commercial areas.
5. The Recreation Path Committee and Planning Commission shall support and encourage walking in the village with a continued commitment to improving and increasing the number of streets served by the sidewalk system. The Planning Commission and Selectboard shall develop and maintain a sidewalk plan. As part of this plan the following projects shall be considered:

- Establish a sidewalk at the intersection between Railroad Street and Bridge Street in order to connect the sidewalks on the west side of Bridge Street between Depot Street and Railroad Street and make a safe and inviting crossing over the railroad tracks.
 - Repair and re-establish the sidewalk on the north side of Esplanade. Connect Volunteers' Green with Esplanade through the bakery lot.
 - Establish a sidewalk along Cochran Road from the Round Church to at least across from the cemetery.
 - Establish a sidewalk between the driveway to the Richmond Elementary School and the road leading into Southview on the west side of Jericho Road.
 - Establish a sidewalk on the west side of Thompson Road from Richmond Terrace down to the intersection of Huntington Road.
 - Explore the feasibility of establishing a sidewalk between Riverview Commons and the Lucky Spot along Route 117, and encourage the development of pedestrian facilities within the development.
6. The Recreational Path Committee shall continue to develop a trail plan. The Planning Commission shall work with the Committee on this plan and related issues. As part of this plan the following projects shall be considered:
- Richmond's portion of the Cross Vermont Trail. The scoping study will be utilized and discussions will continue with involved landowners.
 - A trail network within Southview and Hidden Pines
 - A ridgeline trail on the south side of Cochran Road
 - A pathway connecting Church Street to Borden Street and the village.
7. The Town shall assess the feasibility of establishing non-automotive travel when reconstructing or resurfacing roads, giving consideration to the impact of widened and improved roads on driver speed.
8. The Planning Commission, Selectboard and Economic Development Committee shall encourage securing, through the MPO, additional countywide public transportation alternatives. Possibilities include an AM and PM peak hour commuter bus service from Richmond to Burlington, ride-sharing with guaranteed ride home, car-sharing, and van-pooling.
9. The Planning Commission, Selectboard and Economic Development Committee shall attempt to identify a second Park and Ride site within Richmond. If possible, this site should be coordinated with Richmond's need for full day or longer parking in the village and Jonesville.
10. The Selectboard shall consider passing an ordinance regulating the use of truck engine brakes.

Figure 7.1

Transportation Resources

2006

Prepared by CCRPC

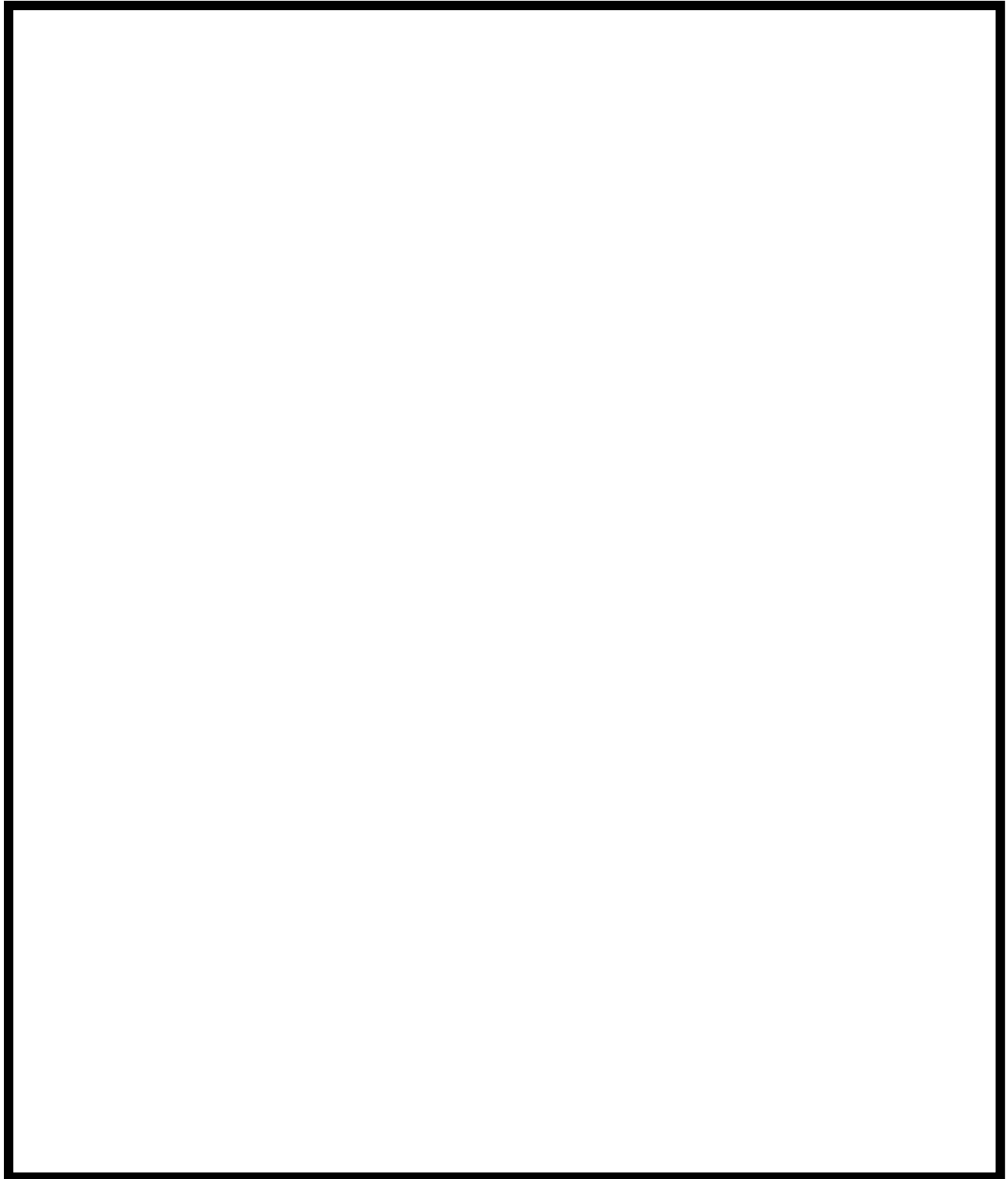
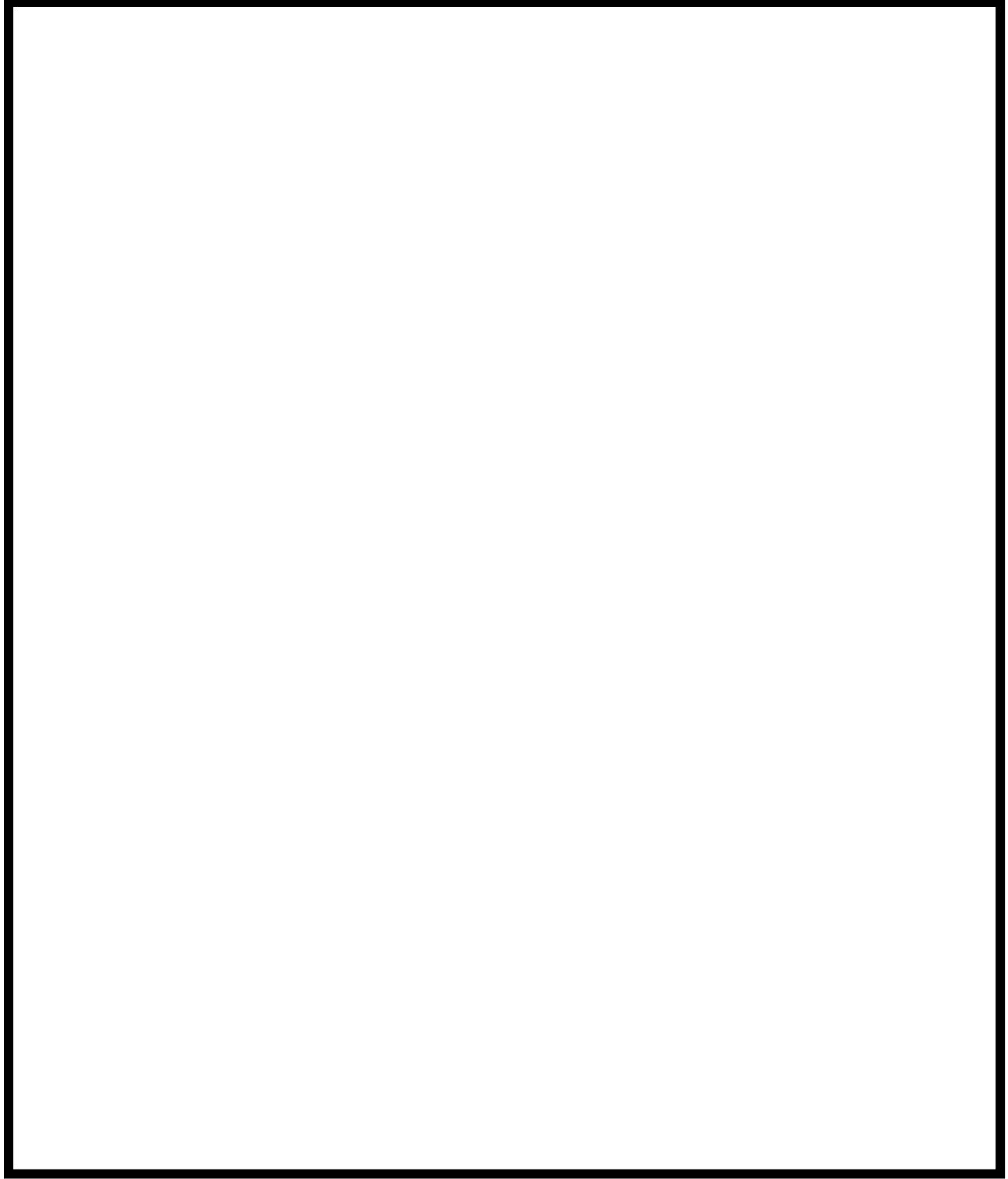


Figure 7.2

Richmond Downtown Area Parking
2006



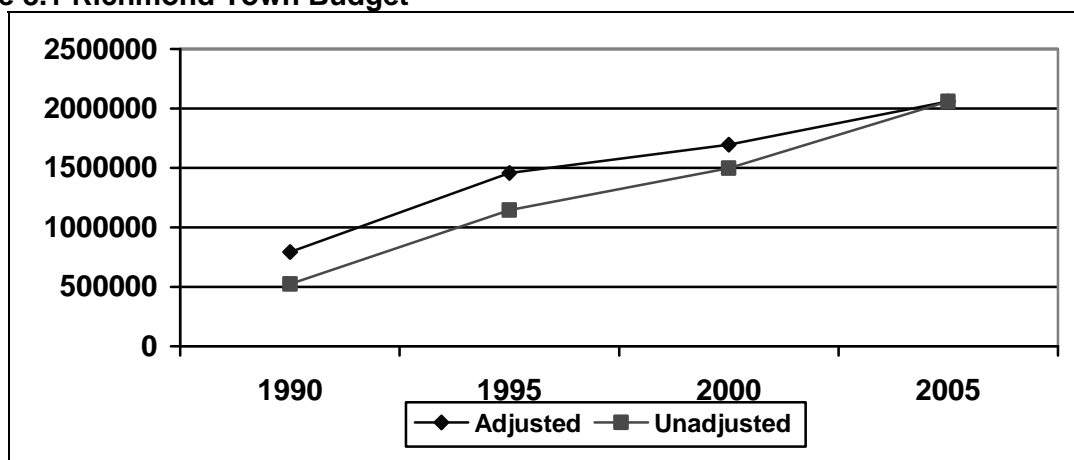
Section 8 – Utilities and Facilities

INVENTORY AND TRENDS

Local Government

Richmond is a chartered community with a Selectboard form of government. It is classified (by Vermont Statute) as an urban municipality because it has a population over 2,500. The legislative body, the Selectboard, consists of five members elected for a term of either two or three years and paid a token amount. Since the merger of the Incorporated Village of Richmond and Town (1989), the Selectboard has been the legislative body for the entire municipality. Figure 8.1 below shows change in the Richmond's Town budget since 1990. All numbers are adjusted to 2005 values dollars.

Figure 8.1 Richmond Town Budget



Source: Richmond Town Reports, 1989/1990, 1994/1995, 1999/2000, 2004/2005. Figures adjusted for inflation using Consumer Price Index Data from the US Department of Labor Statistics

Some administrative positions are paid positions, but most committee positions are filled by volunteers (see Tables 8.1 and 8.2). At the present time, paid appointed administrative staff includes a financial director, Town Administrator, two Administrative Assistants, Zoning Administrator, and Town Planner along with an elected Town Clerk and elected Town Treasurer. At times, the Town has struggled to fill all volunteer positions.

Table 8.1 Richmond Town Officials and Officers

Administrative / Financial Officials	Term
Listers (3)	Elected for three years, part-time, paid
Town Clerk (1)	Elected for three years, paid
Selectboard (5)	Elected for two or three years, volunteer
Town Treasurer (1)	Elected for three years, paid
School Directors (5)	Elected for three years, volunteer
Union School Directors (4)	Elected for three years, volunteer
Financial Director	Hired by Selectboard, full-time, paid
Delinquent Tax Collector (1)	Elected for one year, paid from fees
Zoning Administrator (1)	Appointed by Selectboard for three years, part-time, paid
Town Planner (1)	Hired by Selectboard, part time, paid
Town Administrator (1)	Hired by Selectboard, full-time, paid; Serves as staff to Selectboard
Administrative Assistant (2)	Hired by Selectboard, part-time, paid

Other Town Officials	Term, Volunteer Positions
Constable (1)	Elected for one year
Library Trustee (5)	Elected for five years
Cemetery Trustee (5)	Elected for five years
Justice of the Peace (12)	Elected for two years
Trustee of Public Money (1)	Elected for one year
/ Moderator (1)	Elected for one year
Fire Warden (1)	Appointed for one year
Tree Warden (1)	Appointed for one year
Health Officer (1)	Appointed for three years
Fence Viewers (3)	Appointed for one year
Energy Coordinator (1)	Appointed for one year
Town Service Officer (1)	Appointed for one year
Animal Control Agent (1)	Appointed for one year
Inspector of Wood&Coal (1)	Appointed for one year

In 1989 the Town offices were moved to the former Richmond Elementary School on Bridge Street, now known as the Town Center. All available finished space is occupied at the Town Center building. The basement has not been finished and is currently used primarily for storage, though there is room for expansion into this area.

Table 8.2 Volunteer Groups appointed by the Selectboard

Group (# of members)	Term
Planning Commission (7)	Four year terms
Development Review Board (7)	Three year terms
Recreation Committee(7)	Three year terms
Conservation Commission (7)	Four year terms
Economic Development Committee (9)	Three year terms
Recreation Path Committee (9)	Three year terms
Police Advisory Committee (7)	Three year terms

Fire Department

The Richmond Fire Department is operated by volunteers under the direction of a chief and assistant chief who are both appointed by the Selectboard. Training is done in-house and under the direction of the Vermont State Firefighters Training Council. New firefighters must attend an Essentials Of Firefighting course and then attend State and County courses to maintain their skills. The Town of Richmond pays for registration and a maximum of 2 hours of in house training per month. The Department is housed in a 2,400 square foot building which was built in 1971, expanded in 1977 to include five bays plus a meeting room and expanded again in 1998 to include one additional bay. The Fire Station is located at 357 East Main Street on US Route 2. Capital equipment used by the Fire Department includes three Engines, one Utility Truck, and one Brush Truck. The Brush truck is owned by the State of Vermont Forest and Parks and is on loan to Richmond. A hydrant system serves the village. The Fire Underwriters (Insurance Service Organization) set the standards for the amount of equipment Richmond must have. Periodic inspections by the ISO are done to ensure that Richmond meets these standards for a town of its size. Current dispatch is done by the Shelburne Police Department.

In 2005, the Town amended its impact fee schedule to include a fire impact fee. The new impact fees, which range from \$153.09 to \$218.70 for residential units and \$0.11 per square foot for non-residential structures, are earmarked and spent for fire services exclusively.

Enhanced 911 (E911)

During 1997 and 1998 the Town renamed and renumbered all roads, public and private, which accommodate more than 3 structures. This process was undertaken following guidelines established in the Richmond Road Naming and Numbering Ordinance. A committee comprised of fire, police, rescue, postal service and Town staff acted as the E911 coordinators with the support of the State of Vermont E911 Board. In May of 1999 the statewide system was operational. By the end of 1999, the E911 information was fully incorporated into the Town's database for Town records and parcel information. At present, maintenance of the local numbering system is the responsibility of the Zoning Administrator with new road names being approved by the Selectboard.

By dialing 911 in an emergency situation (to stop a crime, to save a life or to report a fire) a connection is made with an emergency dispatcher who will then verify the address the call is being made from. Once verification is received and the emergency specified, the dispatcher will contact the emergency response squad to respond. Calling 911 is for emergency situations only. If the call is not an emergency situation, non-emergency service numbers listed in the local directory should be dialed.

Highway Department



Highway Garage (Submitted by Lou Borie)

A road foreman, three full-time equipment operators and two part-time operators staff the Highway Department. In the fall of 1996, a new highway garage facility was completed on the same site as the old garage on Thompson Road. The department maintains approximately 45 miles of streets and highways with its current staffing levels. . The highway crew presently maintains all town highways (summer and winter

maintenance) and municipal properties such as Volunteers Green, the Fire Station and Town Center/Library lawns and all sidewalks. The Selectboard adopted a retreatment program in 1998, which addresses all Town paved roads and places them on a schedule for reconstruction and repaving. A similar schedule for the upkeep of gravel roads was adopted in 2004 . These plans are updated regularly and then printed in the Town's Annual Report. These policies should, in effect, eliminate the need for the Town to bond routine maintenance of its highway system and to perform major upgrades of its gravel and paved roads. .

Police Department

The Richmond Police Department is staffed by a full-time chief, appointed by the Selectboard, , four full time patrol officers, two part-time members, and a part-time administrative assistant. The Police Department is housed in the Town Center Building. The department has three marked vehicles and a school resource officer vehicle at its disposal. In the fall of 1999, a study was completed by members of the Police Advisory Committee, the Selectboard and the Richmond Police Department to examine issues related to police officer retention. The following were identified as factors contributing to the lack of long-term officers in Richmond: below-average salaries, insufficient staffing (four full-time patrol officers, five recommended based on national standards and current population), extended work hours, and minimal benefits. As a result of this study, the Town approved as part of the 2000-01 budget an increase in "on call" pay from 10% to 25% of the officers' hourly rate and an increase in the starting wage for officers to better reflect county averages. The department received a grant from the Department of

Justice in September 2001 for the hiring of a school resources officer under the Cops in School grant program. This 100% grant, which covered all wages and benefits for the fourth patrol officer ended in fiscal year 2005. The school resource officer has been retained, with the School District contributing 50% of the salary and benefit costs.

Richmond Rescue Inc.

Richmond Rescue Inc. is a non-municipal, mostly volunteer emergency services organization serving Richmond as well as Bolton, Huntington and the southern part of Jericho. It is staffed by 32 certified members with varying degrees of certification. Richmond Rescue is funded by donations, individual membership fees, revenues from service charges and towns in the service area. Richmond's FY07 contribution was \$22,200 of the total \$263,007 budget. The garage and office are located in a building constructed in 1996 on Railroad Street. As of 2006, Richmond Rescue responds to an average of 530 calls annually.

Recreation

Recreational activities and facilities within the Town of Richmond are organized and maintained by the nine-member Recreation Path Committee and the nine-member Recreation Committee. The Recreation Path Committee, as its name implies, focuses its efforts on trails and related amenities within Richmond. There are approximately seven miles of trails currently open to public use. These include the trails at Volunteers' Green, the Rivershore Path, the Safford Preserve Trail, and the Old Jericho Road trail.

The Recreation Committee coordinates recreational programs and oversees maintenance of Volunteers' Green. Several improvements were made to the Town's recreational facilities at Volunteers' Green, including the addition of permanent dugouts and baseline fencing on two of the ball fields, construction of a restroom / concession building, and the installation of new playground equipment. Each of these projects was funded largely through private donations and constructed with volunteer labor. Current and future projects include construction of an ice rink behind the bandshell at Volunteers' Green, the addition of a "dog park" at the Green, planning for a tennis court at the Brown's Court recreation area, and planning for suitable open spaces (ballfields, playgrounds) in higher density residential areas. The bandshell is used for movies and concerts during the summer.

Table 8.3 below lists sites currently utilized for recreation. In addition to the variety of publicly owned areas, there are many privately owned



Fishing in Winooski River (Submitted by Lou Borie)

amenities available to Richmond residents. The Richmond Land Trust (RLT), a nonprofit group, allows for public access to many of its owned parcels including areas along the Winooski River (Warren and Ruth Beeken Rivershore Preserve), the Safford Preserve, and the Rochford-delBianco Preserve. Other private facilities require fees for their usage or have established easements related to certain uses (e.g. VERMONT Association of Snow Travelers. [VAST] trails). Richmond also exhibits an active hunting and fishing community that enjoys the quality of publicly accessible forests and streams, as well as the generosity of private landowners allowing use of their lands. Hunting and fishing are traditions for many residents, and can serve as an integral part of wildlife management. These activities also attract a number of visitors to the town.

Table 8.3 Currently Utilized Recreation Sites

Publicly owned sites	Amenities offered
Richmond Elementary School	Ballfield, playground, gym
Camels Hump Middle	Ballfield, gym, presentation center, outdoor basketball court
Mt. Mansfield Union High (Jericho)	Ballfield, track, nature trail
Volunteers Green	Ballfields, playground, picnic area, canoe access, bandshell, primitive paths, restrooms, snowshoeing
Brown's Court	Ballfield
Old Round Church Green	Benches
Old Jericho Road Path	Recreation path
Lake Iroquois	Public beach, fishing, bathhouse and concession stand
Robbins Mountain Wildlife Area	Hiking
Privately owned sites	Activities*
Gillett Pond	<i>Canoeing, skating, picnicking, bird watching, fishing</i>
Safford Preserve, Rochford-	<i>Canoeing, hiking, nature study, swimming, picnicking,</i>
delBianco Preserve, Huntington	<i>hiking, mountain biking, snowshoeing, fishing</i>
River Lower Gorge	
Warren and Ruth Beeken	
Rivershore Preserve/Canoe Access	
(RLT properties)	
Huntington River, Upper Gorge	<i>Swimming, picnicking, photography</i>
Twin Hills Girl Scout Camp	<i>Camping, hiking</i>
Long Trail	<i>Hiking</i>
Vermont Association of Snow	<i>Snowmobiling</i>
Travelers Trails	
Trail under power lines to Pinnacle	<i>Hiking</i>
Chittenden County Fish and Game	<i>Fishing, camping, picnicking, archery, snowshoeing,</i>
Club	<i>hiking, shooting range</i>
Cochran Ski Area	<i>Skiing</i>
Vermont Youth Conservation Corps	<i>Outdoor Education</i>
Monitor Barn Property	
Prelco Property	<i>Hiking only</i>

**Access and allowed uses vary from property to property. Use of some properties may be restricted based on organizational membership or fees. Inclusion in this table does not necessarily signify public access.*



Library

The Richmond Free Library was established in 1888 and is currently housed in the renovated Universalist Church, now owned by the Town. The staff includes a full-time and three part-time librarians, who are paid by the town, and a number of volunteers. Since 1979, the library has met Vermont Public Library standards. Circulation as of 2006 is 47,126 with 20,000 volumes owned. Inter-library loans facilitated by the On-Line Resource Sharing Network continue to increase steadily. In 1999 we received 589 books from other libraries and we sent 326. The library now has public access to the Internet. During 1989, the Friends of the Library group was formed and it remains active today.

Major renovations designed to make use of the entire three story building were completed in 2003. New music rooms on the third floor can now be used for music lessons, tutoring, and small group meetings, while the new community room on the second floor

is available for larger meetings and assemblies. These renovations have created greatly needed community space in the heart of the village.

In recent years, the library has become a multi-media center, which now requires equipment and space in addition to that required for traditional book storage. Even with the recent renovations, the Library continues to need additional floor space for new shelving, computers and multi-media storage. In order to meet these needs, additional expansion of the library will be necessary in the not-too-distant future.

Municipal Water and Sewer Systems

Areas within the former boundaries of Incorporated Village of Richmond are served by municipal water and sewer. There are no current plans to expand the water and sewer service areas.

The village is served by a municipal water system (see Figure 8.2). It is a treated, gravel-packed well and tanks with a 250,000-gallon storage capacity which serves approximately 300 structures comprising 720 individual units. Waterhouse upgrades were completed in 1999 adding an aeration system to reduce lead and copper levels for improved water quality. Approximately 70,000 gallons are consumed daily, equaling less than 30% of the total capacity.

The village is also served by a municipal wastewater treatment facility (see Figure 8.3), located on Esplanade. The wastewater collection system was expanded in 1999 along Cochran road to cover the remainder of the homes in the service area. The plant was upgraded in 2005, when a \$3.9 million project to reduce phosphorous discharged to 0.8 mg/l was completed.

The system lost its largest customer in 1999 with the closing of the Saputo Cheese Plant on Jolina Court. The plant provided 67% of the system revenue. Since that time, no significant new customer has connected to fill that void. Approximately 79,000 gallons are treated per day, equaling 35% of the plant's capacity. The uncommitted reserve capacity as of February, 2006 was 138,269 gallons per day. Due to this reserve capacity, operations now include aggressive septage receiving from septic tank pumping companies. Septage receiving does not preclude potential customers from buying additional uncommitted capacity, but does generate revenue for wastewater operations

Water and sewer system capital improvement funds are in place funded by new allocations and the annual water and sewer budget. These funds are used for maintenance, acquisition of capital assets and capital debt payments. A fund target amount has been established of \$300,000 for water and \$1,000,000 for sewer. As of June 30, 2006, the capital reserve fund for water contained \$4,564, and the sewer reserve fund contained \$131,699.

An ordinance governing the water/sewer district of the Incorporated Village of Richmond went into effect in 1972 and is on file in Town Clerk's office. It specifies required uses in the service area, the requirements for hookups, states that all expenses are the responsibility of the users and states the power and authority vested in the inspectors. In 1993 an ordinance was adopted for the allocation of future hookups depending on use, consumption and other criteria. Transfer of the ownership and management of the Incorporated Village of Richmond sewer/water system to the Town of Richmond accompanied the merger of the Town and Village in 1989. Transfer was subjected to all indebtedness and liabilities and placed the District under control of the Selectboard. The Selectboard has the authority to appoint three to five water and sewer commissioners or to constitute themselves as the board of commissioners. In either case, they have the responsibility of overseeing the operation of the system and of establishing rates and charges. At present, the Selectboard has chosen to serve as board of commissioners. The 2006 Town Charter change allows up to two customers to serve on the board of commissioners. Day to day operation is the responsibility of the full-time paid superintendent and his two full-

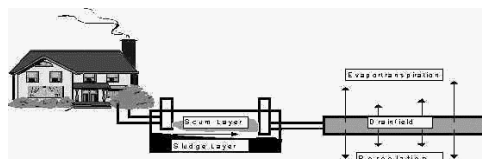
time staff. The Selectboard also has the authority to designate areas of the Town as special water and sewer system districts if approved by a majority of all voters residing in the proposed district at a special meeting. The Water and Sewer Commission has the authority to specify an annual service tax to cover all expenses related to the system. These moneys cannot be used for any other purpose. The municipal water and sewer systems are an asset to the village not available in many surrounding communities. At the same time they may become a financial burden to current users if the excess capacity is not reduced.

Other Public Water Supplies

In addition to the municipal water supply, there are five public water supply wells in Richmond, each serving at least fifteen full-time hookups or 25 individuals. These five public water systems are maintained privately by either a homeowners association or by individual owners of wells. The State of Vermont Water Supply Division requires routine inspection of existing community systems. These systems are listed in the Natural Resources Section of the Town Plan under "Groundwater."

Private Sewage Disposal

All development outside of the municipal sewer system relies on sub-surface waste disposal systems: i.e. septic systems. In 2001, Richmond updated its ordinance, which sets local standards for septic system design, construction and maintenance. A failed septic system is a health hazard, as untreated sewage may flow onto the ground and pollute surface water or wells. Failures can be estimated by subtracting the total number of new residential construction permits from the number of septic system permits. Using this formula, Richmond residents have replaced an average of 10 systems a year since 1992, with a range of three to 18 per year. Many replacements occur when properties are being sold, as many buyers are more aware of potential problems or are advised by their Realtors to have a septic system inspection prior to purchase. As a rule, a properly designed and installed disposal system generally lasts about 15 to 20 years. However, a properly maintained system in a well-drained soil could last decades. Failed systems are predominantly caused by 1) deterioration of materials used in the original construction: 2) improper construction techniques: 3) expansion of the use beyond the capabilities of the original wastewater disposal system: and 4) lack of maintenance. Lack of understanding of the chemistry and mechanics of septic systems by owners and tenants is also a contributing factor to premature failure of systems. Prime candidates for failures are systems built on lots that do not meet the minimum standards for on-site wastewater disposal. These include lots created before 1969 and lots that did not require a wastewater permit (lots over 10 acres or built prior to permit requirement). A cursory analysis of the data suggest that more systems fail and are replaced during wet years than dry ones, implying that the potential number of failures could be significant and many marginal systems are still operating.



In 2002, Vermont amended the laws governing the regulation of on-site septic systems. These laws no longer always allow development on a parcel that exceeds 10 acres in area, regardless of the suitability of its soils for a septic system. To offset the elimination of this exception, the State revised the rules related to the construction of septic systems on "marginally suited" soils and instituted rules that would allow property owners to propose innovative approaches for on-site wastewater treatment. The allowance of innovative and alternative approaches and the construction of systems on "marginally suited soils" may allow additional development in certain areas of town. However, new treatment techniques may also allow clustering of units to preserve more sensitive surrounding areas

Solid Waste

Richmond is a member of the Chittenden Solid Waste District (CSWD), which operates a drop off site located on Rogers Lane in Richmond. The major issue facing the District at this time involves sighting of a new regional landfill. In addition to individual trash removal and recycling by local residents, many of Richmond's residents employ private haulers to remove household refuse and recyclables.

Post Office

The United States Postal Service occupies 4,000 square feet of the Town Center building on Bridge Street. A satellite post office of about 500 square feet is located in Jonesville.

In addition to the postmaster, the Richmond Post Office (05477) employs three clerks, three rural carriers, two substitute rural carrier associates and one highway contract carrier. There are three rural carrier routes originating from the Richmond Post Office and one highway contract serving 1,313 boxes. The Post Office has 1,015 post office boxes in the lobby, 725 of which are currently rented. The lobby is open for 64 hours a week, and window service is available 43 hours a week.

The Jonesville Post Office (05466) has one full-time Postmaster and a part-time relief clerk. The Post Office lobby is open for 50.5 hours per week and window service is available for 41.75 hours a week. There are no carrier routes originating from Jonesville. There are 196 post office boxes, about 150 of which are currently rented. The office serves a steady stream of customers from Richmond, West Bolton and Bolton. The office also serves hikers following the Long Trail, which passes by the door of the Post Office. During peak hiking season the office is piled high with boxes of supplies for hikers.

Cemeteries

There are five cemeteries in Richmond. Two are owned and managed by the Catholic Diocese of Burlington. One is located on Cochran Road (St. Mary's Cemetery) and the other is at the end of Tilden Avenue (Holy Rosary). The two town cemeteries include the cemetery in the center of town next to the library and the large cemetery (Riverview) on US Route 2 to the west of the village. A small, almost forgotten privately owned cemetery is located on Cemetery Road. The elected Cemetery Trustees manage all town cemeteries.

The town's Riverview Cemetery is active and still has two to three acres of available space

KEY OBSERVATIONS

1. Richmond's municipal water and sewer systems are under utilized, which drives up the cost for users. The sewage treatment plant is 30 years old, but underwent a major renovation to improve phosphorus reduction in 2005.
2. Limited funding hinders needed expansion of Richmond's recreational facilities.
3. It is difficult to attract volunteers for Town committees and emergency services.
4. The Richmond Free Library may not have enough additional space for future multi-media equipment needs.

OBJECTIVES

1. Maintain public records securely and efficiently, and in a manner that assures convenient access.
2. Provide adequate police and fire services throughout the town and in cooperation with neighboring communities as appropriate.
3. Provide and maintain safe recreational facilities and programs.
4. Provide an excellent library for Richmond's residents.
5. Provide and maintain adequate sewer and water services at reasonable rates for Richmond's village.
6. Provide adequate cemetery facilities for Richmond.
7. Continue to participate in the Chittenden Solid Waste District.
8. Assure that the Town has an up-to-date emergency management plan.
9. Ensure an effective and efficient Town government. Find ways to fill vacant voluntary town committees and positions.
10. Ensure that Richmond's Town Plan, Zoning and Subdivision Regulations, Public Works Specifications, and other local ordinances are up-to-date and compatible.

IMPLEMENTATION

1. The capital budget and program will be updated annually by the Planning Commission with input from each affected entity.
2. The Cemetery Trustees will monitor projected space needs, new site requirements, and the policy for selling plots to non-residents.
3. The Town Administrator will maintain up-to-date emergency response plans. The Town will cooperate with the school district to ensure that the elementary and middle schools are properly equipped to serve as emergency shelters for the Town.
4. The Selectboard will periodically review the roles and responsibilities of Town departments, boards and committees, and consider alternative models for Town government.
5. The Selectboard and Planning Commission will ensure that fire capital expenses are included in the Town Capital Budget and Program, such that impact fees can be levied. Monitor use of fire impact fees.
6. The Planning Commission will research and make recommendations to the Selectboard on a policy on limiting the use of Eminent Domain in light of the US Supreme Court decision in Kelo vs. New London, Connecticut.

Figure 8.2

Richmond Water Supply

2006

Prepared By CCRPC

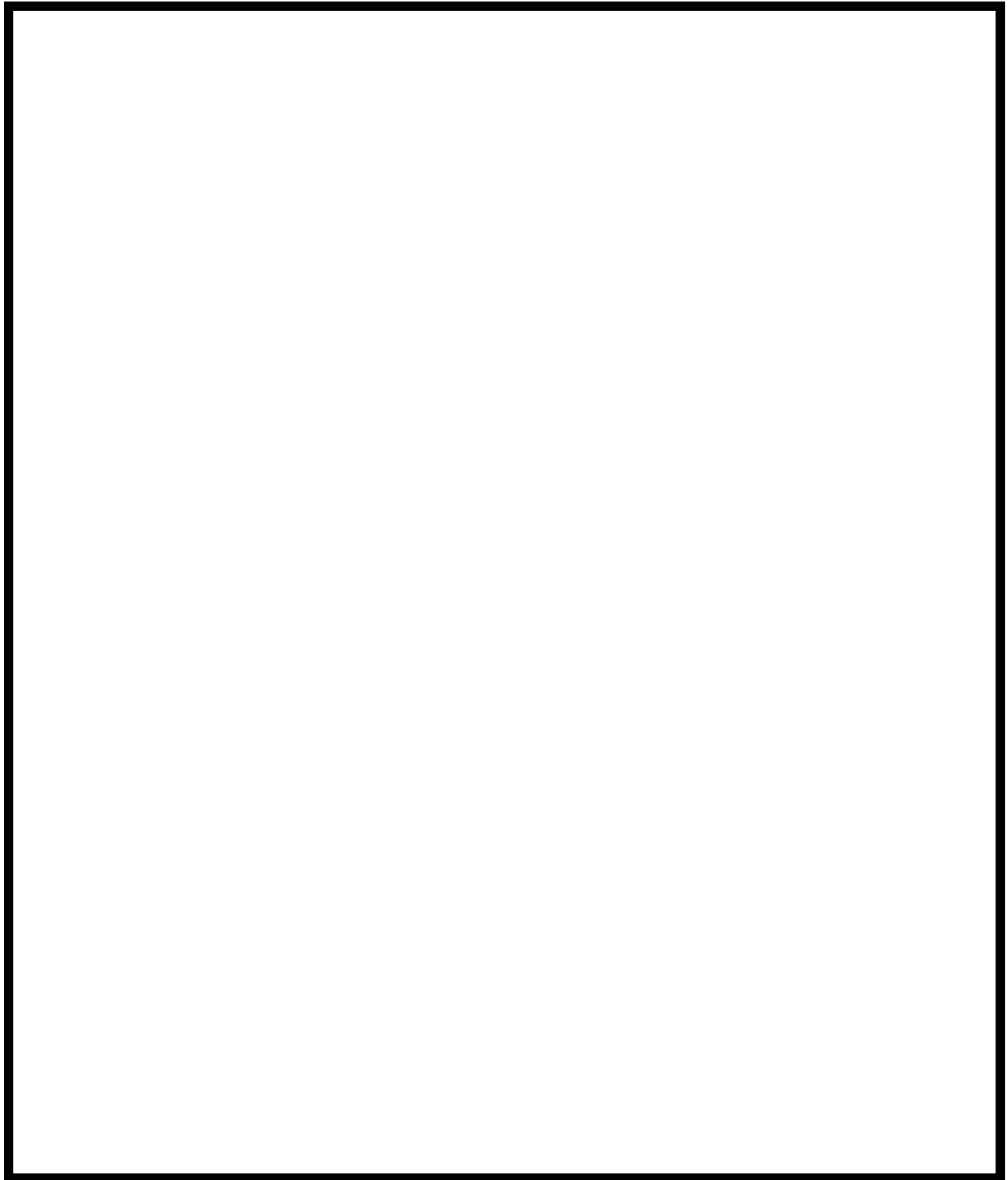


Figure 8.3

Utilities and Facilities
2006

Prepared By CCRPC

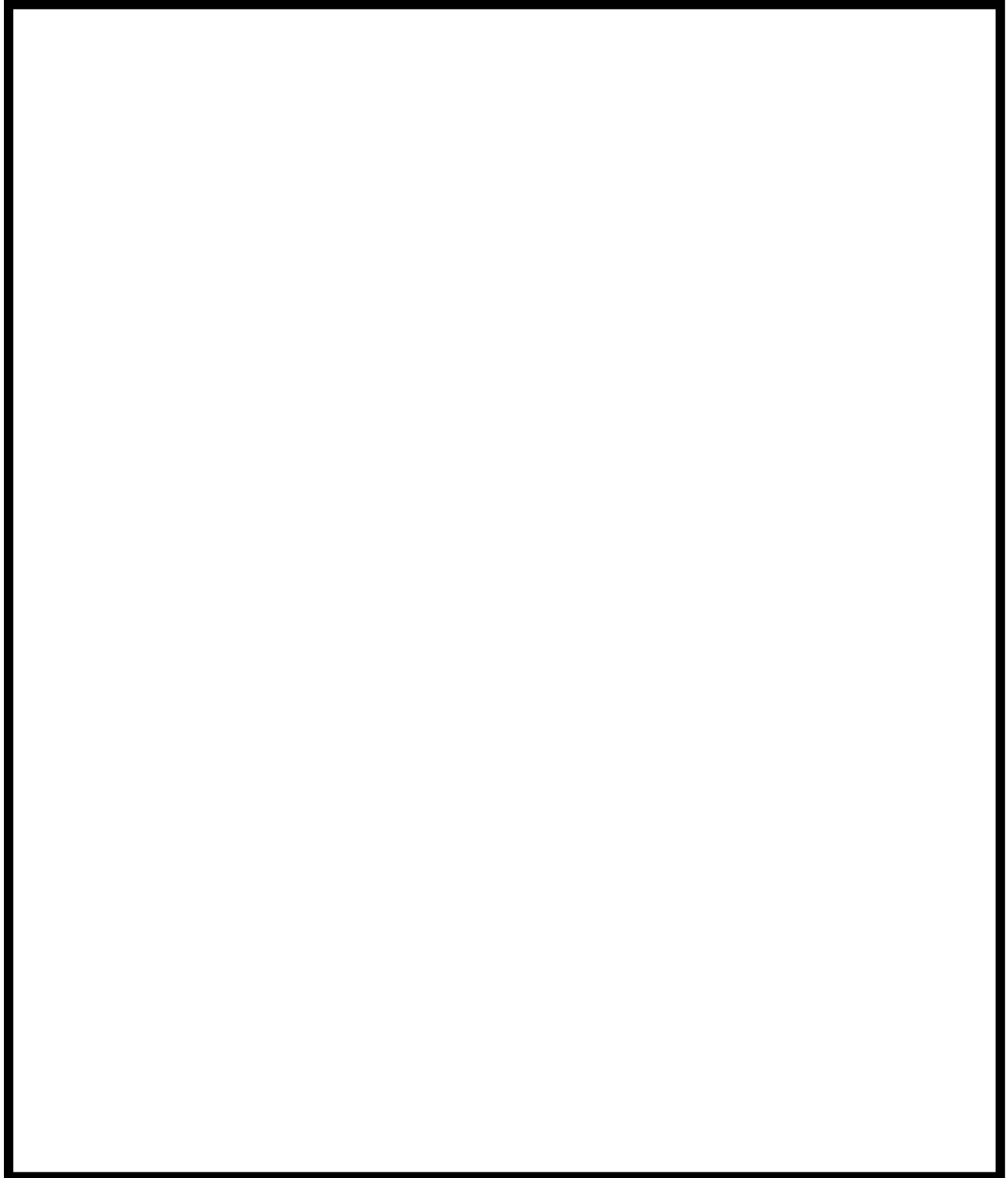
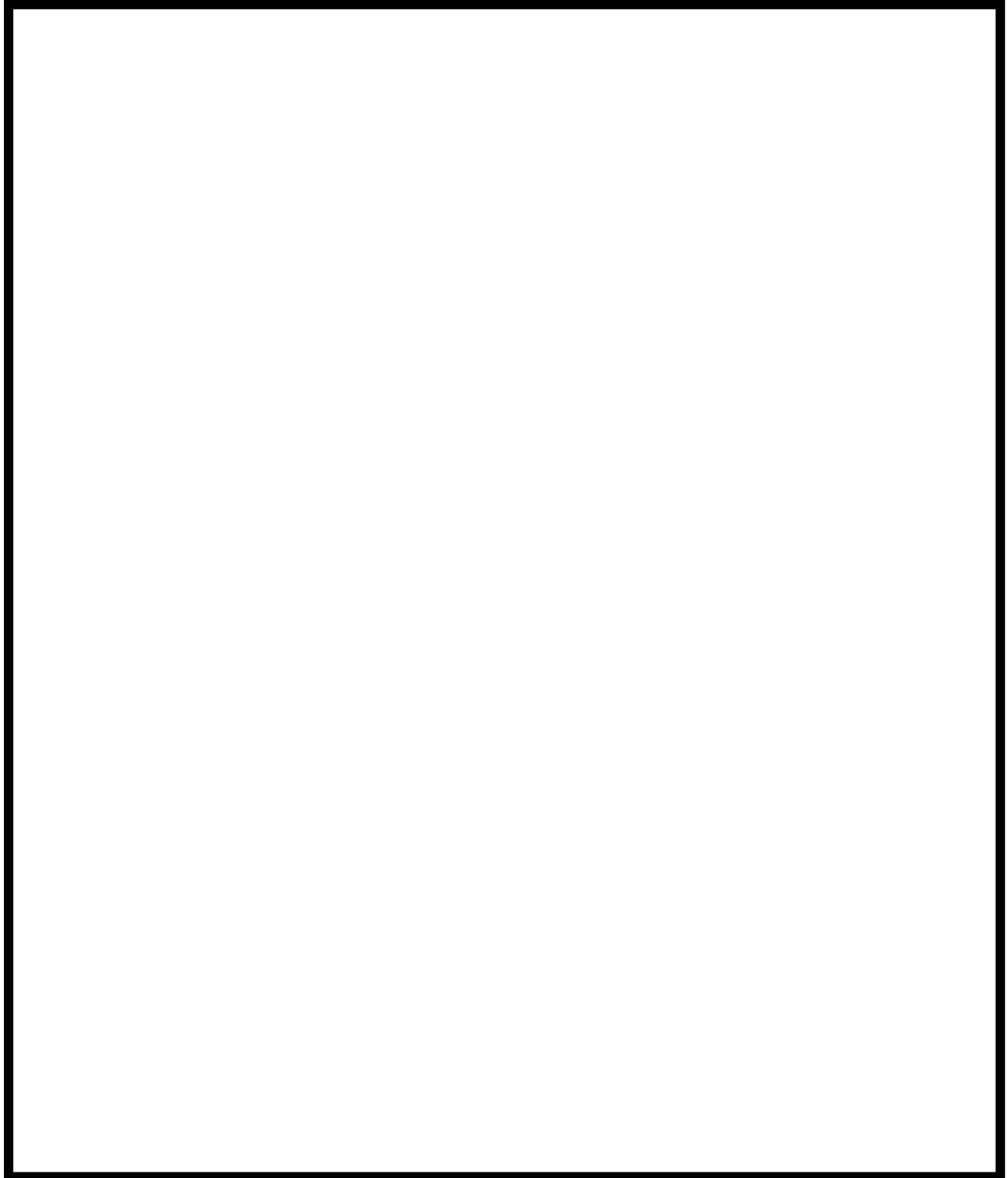


Figure 8.4

Conserved Land
2006

Prepared By CCRPC



Section 9 – Education and Child Care

INVENTORY AND TRENDS

Richmond belongs to the Chittenden East Supervisory Union. Over the years, the Richmond Elementary School, Camels Hump Middle School and Mount Mansfield Union High School have gained the reputation for providing a quality education. This is reflected in both State and National Awards. The excellent reputation of our schools continues to be due to the dedication and hard work of the teachers and support staff, the members of the School Boards, the school administrative staffs, the willingness of the residents of the Town to support their efforts, parent volunteers, and the students. Every effort must be made to maintain an excellent educational experience for all students.

Mission Statement (Chittenden East Supervisory Union)

The mission of the Chittenden East Supervisory Union is to provide learning opportunities that are relevant and meet high standards.

Facilities

The **Richmond Elementary School** (RES) was constructed in 1987, with an addition in 1995. There are 23 classrooms. The gym holds 144 individuals and the cafeteria 100. There is no auditorium.

In 2005-2006, RES had a classroom teaching staff of 14 plus an additional pre-K teacher, a student:teacher ratio of 11:1 and an average class size of 15.6. Pupil enrollment was 252, for a capacity of 47%.

Elementary school administrative expenses in 2005-2006 were 4% of the total school budget, which compares favorably with other like schools in the region. All instructional expenses, including special education, were 77% of the budget, reflecting the commitment to maximizing the placement of resources in the class room.

The **Camels Hump Middle School** (CHMS) was built in 1972, with an addition in 1994. It is one of two middle schools in the district, along with Brown's River Middle School. There are 25 classrooms, and a gym/auditorium that holds up to 175 individuals. The classroom teaching staff in 2005-2006 was 20, the student: teacher ratio 10.1 and average class size 20.1. Pupil enrollment for the 2005-2006 school year was 413, for a capacity of 75%. This includes 257 from Richmond, 102 from Huntington, 48 from Bolton, and 5 from Jericho.

Mount Mansfield Union High School (MMU) was constructed in 1967, with an addition in 1997. In the 2005-2006 school year it was 8.5% over capacity. There are 56 classrooms, a gym that holds 780 and an auditorium that holds 450.

In 2006-2007, the teaching staff includes 55.8 full time teachers, 11 special educators, 6 professional staff (counselors, nurse, librarian, etc.) and one alternative education teacher. The student: teacher ratio is 14:1 and the average class size is 18. Pupil enrollment for the 2006-2007 school year was 997, and includes 254 from Richmond. The balances are from the other Chittenden East Towns: Bolton, Huntington, Jericho and Underhill



New Building Facilities

Examination of recent area trends in population, birth rate and growth of housing (including bedrooms), taken together with current enrollments and school capacities, suggests that new building facilities will not be required over the next 5 years at RES, CHMS or MMU (See Table 9.1). The recent downward trend in the annual pre-school survey carried out by RES suggests the same. This will bear watching, however, given the recent increase in the rate of housing construction (see Table 3.15 in Housing and Demographics), program additions such as full-day kindergarten at RES and new classroom and facility configuration resulting from State and Federal mandates. Indeed, kindergarten enrollment for the 2006-07 school year increased from previous years.

Table 9.1 Recent Pupil Enrollments

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
RES	328	304	296	280	257	252
BRMS	504	505	465	469	470	474
CHMS	537	500	455	444	417	413
MMU	990	1007	1049	1071	1090	1046
Total	2359	2316	2265	2264	2234	2185

At the same time, given the three-year lead time needed to design, approve, construct and occupy new facilities (not counting the time to identify and purchase new land for a new school), evaluation of the need for new facilities should be made on an annual basis. Additionally, Town and school officials should review options for new school locations so that they are identified well in advance of need. Expansion at the current location of RES, CHMS and MMU is not feasible (as determined by the District Office).

Such review should be done mindful of methods for assessing the impact of population / student growth on school capacity, such as those developed in 1995 and 2000 by Superintendent Conley and documented in his letters to the Planning Commission regarding phased development. This assessment was based on recent patterns of growth in the number of bedrooms. The conclusion was that the school system could accommodate the addition of 15 housing units per year (equivalent to 9.5 new students per year). Recent increases in new housing have exceeded the rates recommended in that report.

Emergency Shelter

Consideration has been given over the past several years to equipping RES and other schools as emergency shelters. Little progress has been made, however. The current access on Jericho Road also presents a barrier to using the RES as an emergency shelter. A second access could help to alleviate these concerns.

School Recreation Facilities

Both the indoor and outdoor recreation facilities continue to be overtaxed and are an issue which needs to be addressed over the next five years. These facilities have provided an invaluable resource to the towns served by the supervisory union. The recent addition of an outdoor basketball court at CHMS and the active planning for use of recently donated field space near MMU represent initial steps to deal with this issue. Upgrade of fields at MMU also is a priority under current investigation by the MMU Facilities Committee

Home and Private Schooled Students

The enrollment data described above do not include those students going to private schools. Though some record is kept of those students who start at one of our public schools and then

go to a private school, there may be no information available at the District Office regarding students in private schools who never have entered our school system. A relatively small number of Richmond Students are in Home Study Programs. In 2005-06, 6 RES-aged students were being home educated, 7 middle school-aged students, and 3 high school-aged students.

School Taxes

Continuing to compare favorably with those of other Chittenden County Towns, Richmond's 2005 effective tax rate (\$1.22 per \$100 appraised value, corrected for unequal appraisal values between towns) was the 6th lowest of Chittenden County's 21 towns. Efficient operation, class size and staffing are major reasons for this favorable ranking.

Act 60, enacted in 1998 with passage of the Equal Education Act, was updated in 2003 by Act 68. Taxes on residential housing are based not on the number of students or total education spending but rather by per-pupil spending. The State assesses each property owner at a fixed rate using a grand list value corrected for disparities between towns based on fair market values. Act 60 and Act 68 also introduced the concept of "income sensitivity," and give many residents the option of paying school taxes based on income rather than property value. The State then reimburses each town a fixed amount per-student statewide. Additional costs per student can be levied by any town for costs over and above the State per student reimbursement. Details regarding the statewide tax, State reimbursement and the final total school tax are provided in Richmond's annual reports.

Act 68 requires each school to implement an action plan to improve student performance based on annual student test results that allow comparisons to academic standards/expectations set for each grade level. It also requires that teachers be trained to teach and understand the standard of achievement expected of students. To determine that educational opportunities are "substantially equal" in all Vermont schools, Act 68 requires that spending information and accounting systems, as well as student performance data, must be easily comparable from school district to school district. A consequence of Act 68 that must be recognized is that the required evaluation procedures place significant new burdens on the teaching staff and administration (also see below under ***Performance***).

Capital Budget and Program and Impact Fees

Impact fees first were levied in Richmond in 1990 and were revised in 2005. Their purpose is to cover capital costs attributable to new development. Such costs include any physical betterment or improvement, including furnishings, machinery, apparatus or equipment for such betterment or improvement. The Town should review its Capital Budget and Program on an annual basis, to plan for future public physical improvements. The revised, 2005 Impact Fee Ordinance sets a specific Impact Fee Schedule. A fire impact fee has been added and the school impact fee no longer is based on the number of bedrooms. The new school impact fees, which range from \$1,228 to \$2,828 depending on the type of unit created, are earmarked and spent for educational services exclusively.

A number of capital improvements to facilities in the Chittenden East School District have been made by necessity, for which part of the costs have been the responsibility of the towns. Examples include roof repairs and a new septic system for the high school. It is clear that additional capital expenses due to the ages of our buildings will come in over the next few years, for example the replacement of building transformers. In addition, there is a need for new recreational facilities as described above. The school district is in the process of developing a specific capital plan for each of its schools so that major capital expenses can be anticipated in

the future, and so plans can be developed to spread their costs over time to minimize the burden to Richmond taxpayers.

Performance

Kindergarten – The Richmond Elementary School has been expanded to full-day kindergarten in the 2006-2007 school year in response to increasing curricular demands by CESU and the Vermont Standards and Expectations. This expansion was, in part, in response to recommendations of the Kindergarten Study Committee.

The Kindergarten Study Committee also recommended that greater efforts be made by the RES to reach families of very young children to better prepare them for kindergarten. As a community we have made available programs to encourage reading, the social interactions of young children, and the love of learning. The "Welcome Baby" bag program is offered to Richmond families with newborns and provides a baby book and literature on the value of reading in the lives of young children. A weekly morning playgroup has met at RES to provide a meeting place for families with young children. In the fall of 2006, through the library, Mother Goose reading programs will be offered to introduce families with young children to books and reading. A month-long Cougars Cub Camp was offered this summer at RES to families of entering kindergartners to help get these children ready for school. In addition, the 2006-07 year will see all Richmond 4-year-old children being offered the opportunity for free preschool at the Lund Preschool housed in Richmond Elementary School. This program is funded through the state Education Block Grant program.

Elementary, Middle, and High School Grades – Performance on tests in mathematics, writing and reading (all 3 schools) and in science and on SATs (MMU) are above State averages. Also, the percentage of graduating high school seniors who continue their education within 6 months was 72%. The State average is not available. Average SAT scores for MMUHS were 557 for math and 561 for verbal. The state averages are 508 for math and 520 for verbal. These successes can most likely be attributed to the percentage of the school budget that is spent directly on instruction (77% for RES; 74% for Camels Hump and 73% for MMU), which is higher than average for the State.

Teaching Staff

The success of our schools depends more than anything else on the quality of their teaching staffs. District teachers continue to receive local and State awards for their outstanding performance. For example, the Vermont Business Round Table awarded the Silver Medallion to teachers at MMU in 2005. A major outcome of the most recent teacher negotiations was a complete restructuring of the salary scale to one that is very competitive with other districts in Chittenden County in terms of teacher salaries.

Transportation



(Submitted by Carol Mader)

Richmond faces a difficult problem in transporting students to their respective schools. In order to be accomplished efficiently, elementary, middle and high school students all need to share buses from their neighborhoods. This creates a system of bus runs that are planned by numbers of students, length of route and time spent picking up and discharging students guided by a strict schedule. The School District covers a large, elongated area and the logistics of transporting students are challenging. The current system,

according to the District Office, is at its maximum capacity. Though it is not mandated by the State, District School Boards always have supported the provision of transportation, especially given the spread-out nature of our District.

Several factors can have an immediate impact on the transportation schedules and create a need for expanded services:

- New housing developments approved by the Town will need to consider the transportation needs of the residents. If the system is at capacity, increased mileage will create route changes.
- Low unemployment in Chittenden County limits the numbers of competent employees to serve as drivers for students.
- Door-to-door transportation requests from individual homeowners are being watched for two reasons: they tax an already saturated system and the actual road may not reach state standards for access by bus. Litigation is often a quick response for requests that are denied by the school system.
- Winter road crews are under pressure to clear bus routes early in the morning and there just isn't enough equipment or personnel to do everything at once. Scheduling additional trucks or buses is an expensive solution.

Through the nationwide *Safe Routes to School* (SR2S) program, inclusion of safe walking and bicycling in student commuting is encouraged to improve student health. This program can also help to reduce pressure on the publicly-funded school busing system by encouraging walking/biking at the beginning, the end, or throughout the commute. The Richmond *Safe Routes to School Group* is currently working with the schools, the school district and the State education agency to identify ways that this program can be adapted to our community. Two key areas of the program include provision by the Town of safe walking infrastructure (see *Transportation* section of this Plan), and in-school support and encouragement activities. Grant funds from the State/Federal SR2S program will be utilized if possible.

Technology

The technology plans for the Richmond School District are progressing along an all too familiar path: technological advances outpace financial resources. In recent years, the schools concentrated on acquiring the hardware (computers, servers, wiring and cable) and software (programs for educational and administrative use). The CESU Technology Team, in its first year of full operation, seeks to maintain hardware and software in a cost-efficient, user-friendly manner.

- Keeping current to meet demands for use. Recent upgrades to local networks and hardware as well as increased use of Internet-based tools have improved the ability of students and staff to take advantage of technology. As teachers and students learn how to use technology, the load upon the system increases to the point of exceeding system capacity. Long range need and resource planning is underway to minimize this problem.
- Training personnel. District personnel, including a new Integration Specialist, are constantly training staff and challenging them to improve their understanding and use of technology to become more efficient and to better serve Richmond students.

Parental Involvement

Parental involvement in child education continues to be a very high priority for parents and our school system alike. Parent-child workshops occur each year and are planned by teachers and administrative staff. These workshops bring parents, teachers and administrative staff together

to explore and discuss how families can support the education of their children. Early literacy programs involving parents continue to be an important component of the overall RES educational program. These are parts of the School Action Plan, which has identified goals and objectives for these and other critical areas (see www.richmond.k12.vt.us). A further critical component of these efforts continues to be our very active PTO organization that deserves a great deal of credit for their work.

Camels Hump Middle School reinstated its Parent Group in the 2005-2006 school year. There are many avenues for parental involvement at Mount Mansfield Union High School including Academic Boosters, Athletic Boosters, Partners in Excellence, and the CESU Community Partnership Program.

Community Involvement

Community volunteerism also continues to be a vital part of our school system. This involves the extensive activities of Richmond residents individually and through the PTO, active community involvement in the several fund-raisers that take place annually, and the involvement and support of many local businesses. The Chittenden East Community Partnership sponsors many school-based and community events in the five towns with business, government, faith, parental and youth involvement, and funding through grants and volunteer efforts.

Services Provided to Richmond

The Schools provide a number of non-educational services to the Town. These include a location for Town meetings, rooms in which various local government and non-government groups meet, both indoor and outdoor recreation facilities, and emergency evacuation sites (CHMS and RES).

Camels Hump Middle School is typical of many school buildings within the state in terms of resources available during times of emergency, having a generator, an auditorium, parking, bathroom and shower facilities, a kitchen and smaller areas such as classrooms, which can be used for overnight accommodations. Richmond Elementary School has all of these with the exception of showers, auditorium, and generator capacity. A recent inspection of the generator capacity at CHMS, however, indicated that although it provides sufficient power for emergency lighting it does not have sufficient capacity to run a heating system, water supply or lighting for emergency use.

Child Care

In addition to education for school-aged children, child care is an important element of Richmond's educational infrastructure. Child care is especially important for families in which both parents work and single-parent headed households, particularly during the summer months and after school hours. In addition to their social benefits, childcare facilities provide local employment opportunities and can help to build the Town's grand list.

According to the 2000 US Census, 282 Richmond residents are under 5, and 739 are between 5 and 14. Nearly 70% of children under 6 live in households in which all parents are in the labor force. 8% of Richmond families with children under 5 live below the poverty line. However, 48% of families headed by a single female with children under 5 live below the poverty line (See Table 3.6 in Demographics and Housing). These numbers demonstrate that there is a need for child care which is both decent and affordable.

As of August, 2006, data from Child Care Resources of Chittenden County indicates that there are 10 family or home based child care programs located throughout Richmond. Together,

these programs have a total of 89 slots. Larger facilities in Richmond include the Beary Country School located in the Richmond Congregational Church and the Play Care Center located on Farr Road. These two facilities have a total capacity of 89 slots and were fully enrolled as of August, 2006.

As mentioned above, Lund Family Center also operates a part-day pre-school at Richmond Elementary School. The program is open Monday through Thursday and has the capacity to offer four part-day sessions. Currently, 2 sessions are fully enrolled and a third is 50% enrolled. A fourth session will be offered if enrollment is sufficient.

In addition to these private facilities, the YMCA also provides after school programs at Camels Hump Middle School and Richmond Elementary School. The RES program has a desired capacity of 35 children and is fully enrolled for the fall of 2006. The CHMS program has a desired capacity of 25 children and is also fully enrolled for the fall of 2006. The YMCA also provides summer care for school-aged children at Richmond Elementary School.

Richmond has already taken steps to allow and encourage the provision of child care throughout town through its zoning ordinance. As required by State law, Small Day Care Homes serving no more than six children are permitted wherever single family homes are permitted, and require no additional permit if occurring within an existing single family home. Larger Day Care Centers are allowed as permitted uses with DRB site plan review in the Village Commercial and Commercial Zoning Districts and as a conditional use in all other zoning districts except the Industrial/Commercial Zoning District. This additional review for larger facilities is necessary to address issues such as screening, parking and traffic that may have an impact on surrounding properties.

KEY OBSERVATIONS

It is the school systems themselves with their administrations and governing boards that bear the major responsibility for overseeing the well-being of our schools. Nonetheless, the Town itself also bears certain responsibilities. The issues list below is intended to focus on Town responsibilities.

1. Recreational facilities at RES and the District schools are inadequate for the intensity of current use by the schools and other parties.
2. Richmond faces a difficult problem in transporting students to their respective schools. Maximum route capacity has been reached and as a result bus rides are long. A large number of families transport their students to / from school, contributing to a significant traffic hazard and volume.
3. District schools may not be equipped to provide shelter in times of widespread emergencies.
4. Recent demographics indicate limited school-age population growth in Richmond. Facility development in schools will need to reflect that growth.
5. Recent changes in Chapter 117 will likely assist in the provision of child care resources

OBJECTIVES

1. Assure that the Town participates with the school systems in developing a long-range facilities plan that includes providing an adequate location(s).
2. Coordinate and develop a management plan for recreation facilities.
3. Ensure that school capital expenses are included in the Town Capital Budget and Program.
4. Establish a population growth rate such that the very high quality of Richmond schools is continued and the tax burden for doing so does not become excessive.
5. Support applications for external funding in support of school initiatives that compliment current activities.
6. Encourage use of buses and other modes of transit other than personal transport by car.
7. Ensure that our schools are equipped properly to handle Town and local emergencies (see the related implementation step under Utilities and Facilities).
8. Develop additional athletic and recreational facilities and renovate existing facilities in conjunction with the Mount Mansfield Union High School.

IMPLEMENTATION

1. The Selectboard and School Board will sponsor development of a long-range school facilities committee including members from the Selectboard, Planning Commission, Richmond Elementary School Board and from district school boards, the Chittenden East Administration and interested citizens. This committee over a defined time frame will:
 - A. Develop a plan to identify and acquire land and other resources necessary for new or expanded school facilities.
 - B. Develop a management plan for recreation facilities.
 - C. Ensure that School Capital expenses are included in the Town Capital Budget and Program, such that impact fees can be levied.
 - D. Analyze and prepare for reduced funding in light of reduced enrollment.
 - E. Develop and maintain a bussing plan that will minimize traffic impact and cost and maximize safety.
 - F. Assess and inform the Town and schools regarding opportunities for external funding that do not lead to undue burdens on the Town.

This committee will present their work to the appropriate school governing bodies for use in their decision-making process.

2. Support the work of the Safe Routes to School Group to facilitate safe walking routes to and from school facilities.
3. Review the Town's zoning and subdivision regulations for barriers to both center-based and home-based care facilities.

Section 10 – Energy

INVENTORY AND TRENDS

Current Energy Sources

The Vermont Electric Cooperative and the Green Mountain Power Corporation currently provide electric power to consumers in Richmond. There is no natural gas line serving the Town and no service is expected in the near future. Heating, hot water and cooking needs are also powered by oil, propane, wood and solar sources. Gasoline is by far the dominant energy source for transportation needs.

Energy Conservation and Energy Efficiency

Energy conservation and energy efficiency should play important roles in energy planning. Conservation improvements should attempt to maximize energy efficiency through existing systems, rather than looking to the purchase of new systems. Such conservation measures can include everything from the tune-up of the household automobile to improving home insulation and weather-stripping and caulking measures. Such measures can lead to an immediate reduction in costs. Weather-stripping and caulking, for example, have been estimated as reducing energy consumption at least 15% in the average home, and insulating at cost-effective levels can reduce consumption another 25%.

An excellent example of this idea is the conservation of electricity during peak load periods (those times when electricity use is highest). Electric utilities as well as individual consumers can practice this method, called load management. By shifting those activities that require large amounts of electricity to periods of less demand, one can save money by lowering the total capacity of electricity that must be paid for to be available to meet demand.

Reuse and recycling are two more important methods of conservation. Reuse consists of the development of second, third or more uses of primary (first-time) products. Recycling requires the collection and reproduction of products from the initial resources. The Richmond Miscellany Mart and other local businesses may be good resources for recycling clothing and housewares. Richmond is a member of the Chittenden Solid Waste District (CSWD.) CSWD provides waste collection and recycling services for a fee to all residents. The Town allows residents to choose private waste haulers as long as the haulers are permitted by the State of Vermont to conduct business in Richmond. Both methods, reuse and recycling, can serve two end uses as they help reduce a substantial portion of Richmond's solid waste flow and eliminate the need for the consumption of more natural resources and energy in the primary (first-time) production process. Reuse is very cost-effective and requires only a creative mind. As product prices rise with energy and natural resource prices, reuse will become more prevalent.



(Submitted by Carol Mader)

The main constraining factor to current recycling efforts is the low economical value for the recycled goods. The markets for recycled goods have been improving therefore businesses and individuals are encouraged to recycle, reuse and compost to keep the waste stream as slim as possible. Should the market value of recycled goods improve in the future, a coordinated, efficient recycling program would be in demand.

Land Use Planning

Land use planning can have a significant effect in reducing long-term energy costs. Through land use planning, energy can be saved that would otherwise be lost through inefficient development patterns and site design. Possibly the greatest energy planning value comes from directing development patterns. Concentrating development in central areas can serve a variety of purposes. It allows Richmond to preserve its rural character (and remaining agricultural lands), provides smoother and more efficient transportation, and minimizes energy usage.

Richmond is currently zoned primarily for one-acre residential growth. The Town has been examining ways of concentrating growth in central areas to maintain rural character of the outlying areas. Concentrating development can significantly reduce automobile travel by providing walking access to a variety of mixed uses, such as work and shopping, thereby significantly reducing the energy spent on transportation.

In addition to development patterns, site design can play a large role in bringing down energy costs. Southern exposure for home sites provides immediate energy contributions as well as the promise of potential future benefits. Designing building construction to provide large window areas on the southern side allows passive solar heating in the winter months. Properly designed, these windows can admit substantial sunlight, which, if captured correctly, can bring down fuel bills. In the same way, designing construction to allow large southern roof areas allows the homeowner to retain the opportunity for future solar development. The installation of solar systems can be much more effective and less costly if southern access is already available. This too should be considered in initial site design. Consideration of the natural surroundings is also important in site design. The use of existing or designed shelterbelts, or tree rows, can effectively further reduce energy costs. Designed properly, shelterbelts can act as buffers to the cold winter winds (if located on the north side) or provide cooling shade in the summer (if on the south).

Renewable Energy Resources

Renewable resources, if developed, can provide a range of energy opportunities. For years many renewable energy systems have been dismissed as unfeasible or as ideas whose time had not yet come. Yet as technologies advance and fuel costs rise, many of these systems are rapidly becoming feasible options. Richmond was determined in 1990 to have 21.7 square miles of forestlands. This figure comprises over 63% of the town's total area. With such a large natural resource base, wood can serve as a key source of heat. As an example, both Camels Hump Middle School and Mount Mansfield High School have converted their primary heating systems to wood chip-burning furnaces.

Many private homes use locally produced wood for heating. This is a renewable resource, avoids the burning of fossil fuels and also contributes to the local economy. Solar energy technologies also present a renewable energy alternative. When economically viable, both active and passive solar systems capture energy in a clean and inexpensive (after initial costs) manner. As mentioned above, land use site design is an important precursor to solar development, so development of this energy source is best planned out.

Several other renewable energy sources have become very real possibilities in recent years. The first of these, cogeneration, has become increasingly popular in Vermont. Faced with abundant wood supplies and the prospect of unstable future oil prices, small-scale wood fired cogeneration may become a feasible alternative for Richmond. Similarly, biomass energy production from solid waste sources and farm byproducts is rapidly gaining credibility and may be considered.

The use of wind energy is also expanding in Vermont. Recent proposals for large wind farms in several Vermont communities have sparked a statewide discussion regarding how best to site these facilities and balance the sometimes conflicting issues of renewable energy production, aesthetics and wildlife habitat. To date, no large projects have been proposed for Richmond. However, the Town should consider the impacts, both positive and negative, that such a project could have on Richmond.

Transportation

The oil embargoes of 1973-74 and 1980, the price spike in 2000-2001, and the aftereffects of Hurricane Katrina and unrest in the Middle East gave US citizens a clearer picture of the insecurities associated with reliance on oil as a source of energy. Over the last two years, 2005 and 2006, the ongoing war in the oil-producing areas of the Middle East, the devastation in the Gulf of Mexico area and other interruptions to the supply of this fuel source have driven up prices. This weighs heavily on all Richmond Residents, but may create extreme financial hardship for moderate and low-income citizens. Yet the United States continues to rely on this energy supplied by foreign sources. Petroleum is the largest transportation energy source, and transportation is currently the largest demand of energy for most parts of the Region. Biking and walking provide energy-efficient means of transportation. Given good roads and safe conditions, biking can alleviate some of the traffic load. Given mixed land use and work facilities near shopping, walking can also eliminate some of the need for automobile travel, especially within the village. To this end the town's existing sidewalk network can be improved and expanded, pedestrian trails can be expanded, and a coordinated trail system is being examined to link sidewalks, trails and destination points.



Rt. 2, I-89, and Winooski R. (Submitted by Lou Borie)

KEY OBSERVATIONS

1. Inefficient energy consumption is costly and threatens Richmond's environment.
2. The failure to conserve energy results in excessive use of energy resources.
3. Scattered development encourages excessive use of energy.
4. The failure to use renewable energy resources, some of which are in abundance locally (including Richmond), results in excessive use of non-renewable resources and exports dollars that otherwise could support local energy suppliers.
5. Excessive reliance on the automobile for transportation is costly and threatens Richmond's ability to maintain a village surrounded by a working rural countryside.

OBJECTIVES

1. Actively encourage efficient energy consumption.
2. Maximize energy conservation.
3. Utilize land use planning to influence development patterns and site design in an energy efficient manner.
4. Encourage the use of community renewable energy resources.
5. Actively consider energy efficiency in all future transportation planning.

IMPLEMENTATION

1. Encourage the use of energy efficient techniques for new residential construction by having the zoning administrator provide all applicants with any available information on energy efficiency from the State. Develop or obtain existing toolkit on energy efficient development. These same energy efficient techniques will be considered for Municipal Buildings.
2. Promote development patterns that concentrate growth in existing and new central areas and locate residential growth near work and shopping areas through Planning Commission proposed revisions to Town ordinances.
3. The Town should support carpooling, vanpooling, ride sharing and work to develop commuter lots in appropriate locations
4. The Recreation Committee and Recreation Path Committee should encourage walking and bicycling, instead of using the car, through education and.
5. The Town shall prepare an inventory of energy usage by the Town facilities. As part of its budgeting process, the Town shall propose cost effective energy efficiency measures, including capital investments that will offset expenses. Examples of such measures may include items such as energy efficient light bulbs, better insulation, fuel-efficient vehicles, and similar efficiency investments.
6. The Town will develop a policy related to net-metered renewable energy projects, including wind energy projects. The Planning Commission and the Selectboard will use this policy to determine whether to support or oppose proposed projects before the Public Services Board.

Section 11 – Future Land Use Map

Figure 11 is a map showing proposed future land uses. The areas shown on the map reflect some, but not all, of the characteristics of proposed future land uses. The zoning ordinance, not this Plan, defines zoning district boundaries. Changes in the zoning ordinance's districts will not be necessary in order to be consistent with this Plan, but may be considered to better implement this Plan.

Village Areas

The Village Areas encompass the historic municipal boundaries of the Incorporated Village of Richmond south of I-89 as well as the areas developed for schools, and the Jonesville area. These areas will continue to serve as the focal points for the Town's commercial and civic activities as well as provide a variety of housing opportunities. These uses reinforce a compact development pattern consistent with Vermont's village centers. The character of existing residential neighborhoods will be protected as new development occurs throughout the Village Areas. Priorities for these areas include restoration and reuse of existing structures, maximizing the use of public facilities and services, creating a pedestrian-friendly atmosphere, and fostering a vibrant commercial/residential center. The Village Areas may include multiple zoning districts to ensure a harmonious mix of uses.

New Village Areas may be identified as the village and Jonesville reach their capacity. Such areas would not seek to supplant the village as a community focal point, but would rather serve as secondary growth areas. The process for identifying these areas will require substantial public involvement.

Gateway Area

The purpose of the Gateway Area is to protect an area that has importance as a scenic entrance to the Town of Richmond, while providing for carefully planned mixed use development, including commercial and residential development. The size and shape of commercial buildings to be constructed in this area shall reflect those found in the village. Urban/suburban strip development and "big box" stores will be prohibited. Access to this area will be controlled by limiting curb cuts to US Route 2 and by providing an internal circulation road for new commercial development. Green space, landscaping to help screen parking from Route 2 and I-89, and other "character of the neighborhood" criteria must be met in order to retain the flavor of an entranceway to a rural and historic small town. As elsewhere in the Town, restoration and reuse of existing historic structures in this district is encouraged.

Commercial/Industrial Areas

The Commercial/Industrial areas provide for Commercial and Industrial uses in selected areas outside of the Gateway and Village Areas. The four locales which make up this area are located: 1) on the west side of Keynon Road near its intersection with US Route 2; 2) on the east side of Governor Peck Road near its intersection with VT 117; 3) on both sides of VT 117 north of US Route 2; and 4) portions of the Vermont Youth Conservation Corps and Farm Bureau properties on the north side of US Route 2 between the village and Jonesville. Allowed uses for these sites will accommodate the future industrial/commercial growth of the Town and allow a sufficient mixture of parcel sizes, ownership patterns, and locations to service a variety of commercial and industrial needs. Certain areas may not be appropriate for both commercial and industrial uses. Therefore, these areas may contain multiple zoning districts.

Development must occur in a manner that minimizes environmental and aesthetic impact. Planning standards will include provision for buffer areas to lessen any impact on adjacent areas. Any new development must not overburden the road network or utility capacity. Development will maintain the small town character of Richmond. It should be noted that

portions of the Commercial/Industrial Areas on VT 117 and Governor Peck Road are also within the wellhead protection area for the Riverview Commons. Commercial/industrial development shall be allowed in this area, but shall take into account the Riverview Commons water supply, and the Riverview Commons water supply shall be protected.

These four commercial/industrial areas should be carefully examined through the planning process to determine their ability to attract and retain businesses, with discussions of such issues as the restrictions to development in the zoning districts standards, the need for further infrastructure, the potential for municipal marketing and the demand for such parcels.

Resource Protection Area

The purpose of this area is to protect property and people from flooding associated with the two major rivers, the Winooski and the Huntington, to protect large community water supplies, and to protect and manage valuable natural resources and environmental processes. This area consists of the 100-year floodplain and a buffer area adjacent to other significant surface waters including Richmond Pond, Gillett Pond, Johnnie Brook, Donohue Brook, Snipe Island Brook and Mill Brook. The natural use of a floodplain is to retain floodwaters safely until such time as high water recedes back into its normal channel. This temporary water storage area also functions to protect life and lower water levels downstream. Floodplains also provide for riparian habitat that supports a variety of plant and animal life not found in upland habitats. Buffers maintain the integrity of stream channels and shorelines; reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and other chemicals; and supply food, cover, and thermal protection to fish and other wildlife. The resource protection area will accommodate the natural uses and benefits of the floodplain and other riparian corridors while restricting development, filling, and other incompatible uses. Certain resources, such as aquifers, ridgelines, steep slopes, natural areas, significant wildlife habitat, prime agricultural soils and wetlands may be protected by overlay districts.

The Resource Protection Area will also encompass wellhead protection areas surrounding public and community water supplies serving 25 or more full time residents. The purpose of this area will be to protect the health, safety and general welfare of public and community water supplies, by prohibiting certain uses and contaminants which are reasonably likely to reach and adversely affect water supply sources. Note that there is some overlap between these wellhead protection areas and the Commercial/Industrial Areas and Village Areas. While development is not prohibited in the wellhead protection areas, care shall be taken to insure that contamination of this water supply does not occur as a result of new development. Additional regulations governing water source protection areas which may go into effect in the five-year time frame of this Plan are currently being considered by the State of Vermont.



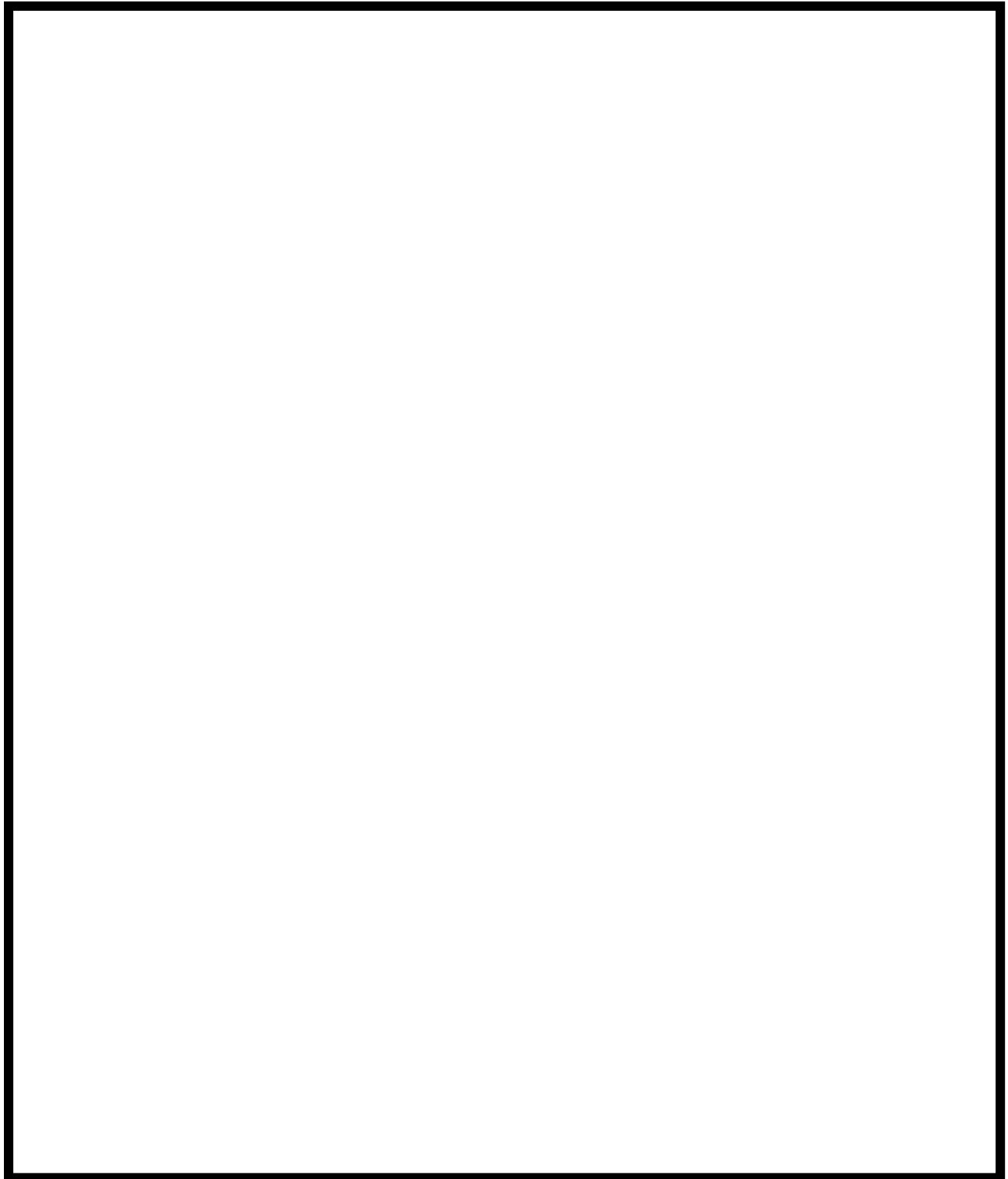
Gillett Pond (Submitted by Lou Borie)

Rural Area

The Rural Area encompasses the majority of the land area of the Town and includes all areas not covered by the other land use areas. Development within this area should be carefully sited and clustered in a manner that will allow preservation of significant open space parcels including neighborhood recreational areas, working agricultural and forestry land, and important natural amenities. Community wastewater disposal systems may be appropriate in order to achieve this goal. This area may include multiple zoning districts which utilize creative development techniques such as building envelopes, planned unit and planned residential development, clustering, fixed area and sliding scale zoning, overlay districts, conservation subdivision design, and transfer of development rights.

Figure 11

Future Land Use
2006
Prepared By CCRPC



RELATIONSHIP TO NEIGHBORING TOWNS AND REGIONAL PLAN

Chittenden County Regional Plan

The Regional Plan places the Gateway Area and village in the Village Planning Area. All other areas, including the Commercial/Industrial and Jonesville Village Area, are placed in the Rural Planning Area. The above mentioned areas may see more commercial development than other Rural Planning Areas in the Town and County, and have been identified through the local planning process for such development.

Bolton

The entire eastern border of Richmond is shared with the Town of Bolton. US Route 2, the Duxbury / River Road and the Northeast Central Railroad flank the Winooski River and connect the two towns. The lands abutting Richmond are designated as Conservation, Forest Rural I, or Rural II planning areas. These are compatible with Richmond's future land use areas.

Hinesburg

Richmond borders Hinesburg to the southwest in the vicinity of Lake Iroquois and the Swamp Road. Hinesburg has designated this area as Rural-Forest, Residential, and Shoreline Planning Areas. These areas are consistent with Richmond's future land use areas.

Huntington

The Town of Huntington encompasses the remainder of Richmond's southern border. This area includes the Huntington River Valley and its environs. Huntington has designated this area as Agricultural/Residential, which is harmonious with Richmond's future land use areas.

Jericho

North of Richmond lays the Town of Jericho. Two major transportation corridors connect Richmond to Jericho, Governor Peck Road and Jericho Road (Brown's Trace Road). Jericho has designated areas bordering Richmond as, Rural Residential, or Conservation. These areas should be compatible with Richmond's future land use areas. In an effort to ensure this compatibility, special attention will be given to the site design for areas in the vicinity of the I-89 interchange and the Governor Peck Road.

Williston

The western border of Richmond is shared with the Town of Williston. Williston has denoted areas along this border as Agricultural/Rural Residential and Floodplain. These uses are consistent with Richmond's future land use areas.