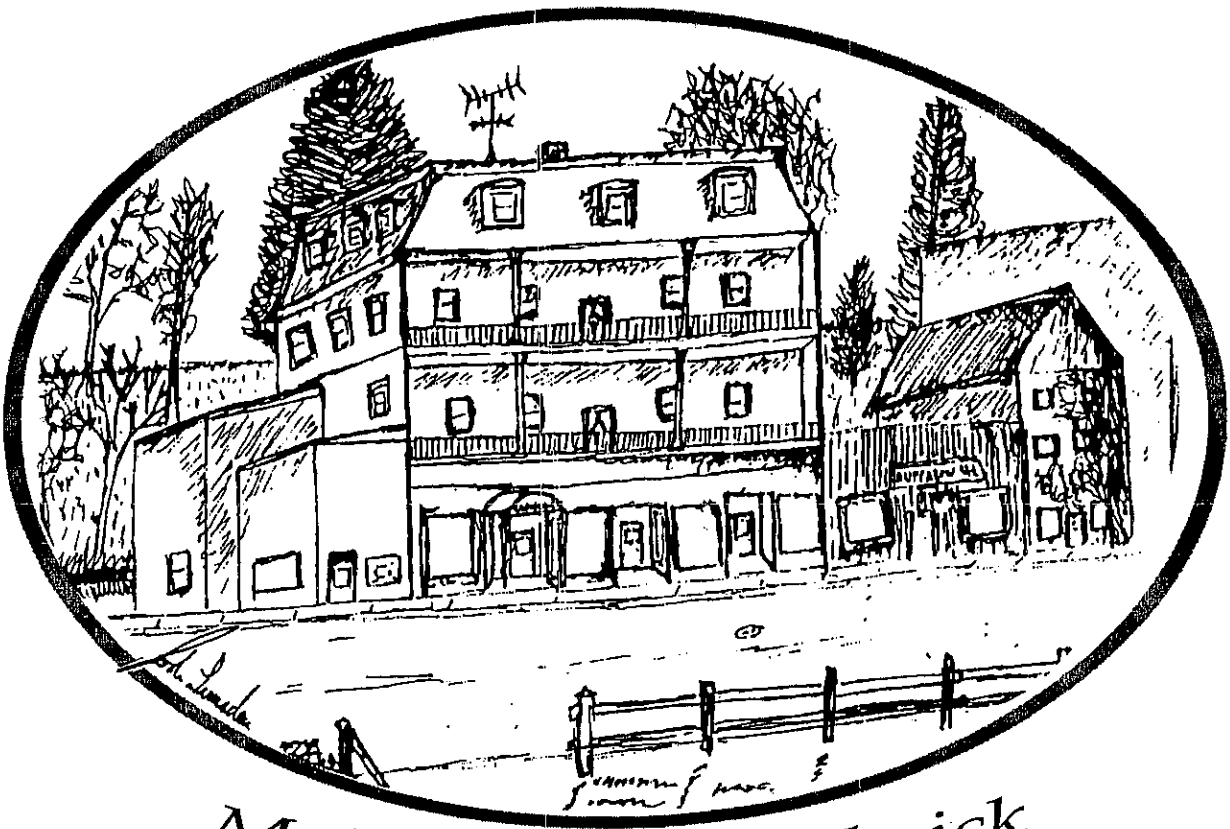


# Town Plan

Hardwick, Vermont



*Main Street, Hardwick*

**Adopted August 22, 2002**

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# INTRODUCTION

The Hardwick Town Plan states goals and objectives to guide the growth and development of land, public facilities and services, and identifies "Possible Actions" that may help us achieve those ends. It describes our present, our heritage from the past, and a vision of the future. The Plan is intended to support community development efforts already underway, and serve as a launching pad for new initiatives.

This Plan deals with much more than land use, but since land use is a difficult and controversial issue, it may be useful to clarify some points up front:

The Plan is **not** a set of regulations. Regulations, such as zoning bylaws, are only one tool that communities have available to them to achieve community goals. Zoning bylaws must, (by law), be consistent with the Plan, but this Plan does not mandate the specific content or forcefulness of future bylaws. The land use goals are quite general. The Plan suggests options to investigate, but defers the determination of a particular course or courses of action to a community dialogue that must take place after this Plan is adopted.

It is the goals and objectives that form the policy portion of this Plan. The "Possible Actions" are just that; a checklist of options; they are not mandates.

## Purpose

The aim of this Plan is to set goals, and put forward a vision, that we can reach substantial agreement on as a community, so that we can get on with the real work of moving toward them.

This Plan is only as important as the people of Hardwick make it.

Hardwick has not even scratched the surface of what can be accomplished if residents, town government, business, schools and other community organizations work together to combine local knowledge and energy with the best ideas and resources from outside.

Hardwick's problems and Hardwick's aspirations are not unique. The crisis in rural, agricultural economies has become nationwide in the last 10 years. Many rural areas have responded to this crisis with innovative programs and approaches that work from the local level up, rather than from the top down. We need to reach out and participate in this national dialogue on "bottom up" solutions, and benefit from it.

## Plan Format

The major chapters in this Plan begin with a discussion of the issue. Following this is a statement of the goal, objectives, and possible actions for addressing the subject covered in that chapter, such as Land Use, or Energy. After each "Possible Action" there is a list, in italics, of some of the players that could be involved in investigating that option.

Example:

- ◆ Encourage industries that add value to local products. [*Economic Development Commission if formed, Selectboard, Chamber of Commerce, Planning Commission.*]

## **Implementation of the Plan**

Hardwick's zoning by-laws will be reevaluated and rewritten to reflect the goals of this Plan, as soon as possible after its adoption. The Planning Commission has contracted with the consulting firm, Burnt Rock, Inc. to aid in the revision of the bylaws. This was made possible by a grant from the Vermont Department of Housing and Community Affairs.

Hardwick has received a grant from the Federal Housing and Urban Development Department to provide a revolving loan fund and to pay for infrastructure improvements. The revolving loan fund is for expansion or creation of businesses that will provide jobs to residents of the town. The infrastructure portion of the grant was used to expand the sewer lines to include the southern end of the village including a mobile home park and several private homes.

## **Acknowledgements**

The original plan was written in 1990. During the writing of this plan, many Hardwick residents contributed, some of them without even knowing it. Conversations on the street or in stores or farm kitchens shaped the content of this Plan as much as formal committee work or hearings. However, the people who went the extra mile to offer their time deserve a special thank you. The Hardwick Planning Commission offers its sincere thanks to the 17 citizens who served on the Land Use subcommittees, the 92 people who returned the planning survey distributed with the town report in 1990, and all those who attended the hearings on this Plan, or attended Planning Commission meetings, and shared their ideas and concerns with us. This Plan is a local product. An outside consultant did not assemble it. Most of the actual writing and research for the 1991 Plan was done by Planning Commission chair George Lisi, and was funded by State planning monies.

The Plan was updated in early 1997 by the Planning Commission for the sole purpose of making it a current document. The goals and intent were not altered.

The Plan was again updated in 2002 by the Planning Commission to reflect changes and growth within the town. Research was conducted to ensure service information was up-to-date and community needs were addressed. Current issues included plans for economic development, protecting agricultural lands and strategy for growth. The Planning Commission strongly recommends that a new community survey be conducted prior to the next update of the Town Plan.

## **Hardwick's History**

The Town of Hardwick is located in the far western section of Caledonia County. It is bordered on three sides by three different counties. The Lamoille River runs east to west through the Town. Vermont Route 15 and the Lamoille Valley Railroad follow the Lamoille River. Vermont Route 14 runs from north to south through the Town, as does Route 16.

The Town of Hardwick had its beginning in the part of town known as Hardwick Street.

The land was granted to Danforth Keyes and his associates in 1780 and chartered in 1781. Settlements were attempted, but it was not until 1792 that Mark Norris and his wife arrived from New Hampshire to become the first permanent settlers. In 1793 and 1794 the settlement grew to a sizable community.

The building of the Bayley-Hazen Road facilitated the growth of this area. General Bayley began this road in 1776 for the purpose of conveying troops and provisions into Canada. The project was abandoned but begun again in 1779.

The first town meeting was held at the home of Mark Norris in 1794. The Town was organized in 1795. In that year fifteen votes were cast for Governor of the state.

In 1798 Samuel Stevens came to the area. He chose for his location what is now East Hardwick, and built what is now known as "the Brick House". He named this village Stevensville. By 1885 Stevensville was a thriving community, boasting two general stores, two churches, a carriage factory, a saw mill, a grist mill and several dwellings.

The first Post Office was established at the Street, then called North Hardwick, in 1846.

The first settlement in South Hardwick or Lamoille, now Hardwick Village, was made by Captain John Bridgman in 1795. The town grew rapidly in population from 1790 to 1860. The St. Johnsbury and Lamoille County Railroad was officially opened in 1877. Hardwick was dependent on agriculture and its location as a trade center until the opening of the granite quarries nearby.

Henry Mack pioneered the granite industry in 1868. With the completion of the St. Johnsbury and Lamoille County Rail Road, Hardwick came prominently into the field as a shipping point. In 1897 the Hardwick and Woodbury railroad was completed, connecting the quarries with the Town.

The granite industry reached its peak in 1911. The decline was slow. Operations continued through the 1920's and until 1934 on a small scale. The tracks of the Hardwick to Woodbury railroad were taken up for scrap metal during World War II.

The Village of Hardwick was chartered in 1890. It merged with the Town in July, 1988.

In 1992 a fire destroying two buildings and damaging a third altered Hardwick's Historic Main Street. The buildings were reconstructed and the downtown area continues as the economic and historical center of Hardwick.

# STATISTICAL PROFILE OF HARDWICK, VERMONT

## General Planning

Year Town Incorporated or Chartered	1781
Town Plan	YES
Zoning Ordinance	YES
Flood Hazard Conditional Development	YES

Source: Vermont Indicators Online

## Population & Housing

Total Population, 2000	3174
Absolute Population Change, 1990-2000	210.0
Percent Population Change, 1990-2000	7.09%
Number of Families, 2000	855
Average Family Size, 2000	3.06
Unmarried Partner Households, 2000	118
Total Children in Single Parent Families, 1990	201.0
Total Households, 2000	1216
Total Housing Units, 2000	1407
Vacant Housing Units, 2000	191
Number of Owner Occupied Housing Units, 2000	883
Number of Renter Occupied Housing Units, 2000	333
Median Housing Unit Value, 1990	\$61,400.00
Median Contract Rent, 1990	\$297.00
Median Gross Rent as a % of Household Income, 1990	27.0%

Source: Vermont Indicators Online

## Economic

Annual Average Wage, 2000	\$19,003
Unemployment Rate %, 2000	5.3%
Total Civilian Labor Force, 2000	1540
Annual Average Employment, 2000 (No. of Jobs)	825
Percent Population Receiving Food Stamps, 1998	16.4%
Percent Population in ANFC Program, 1998	6.7%

Source: Vermont Indicators Online

## Transportation

Population which work in town of residence, 1990	598.0
Commuters who drive alone, 1990	788.0
Commuters who carpool, 1990	274.0
Commuters who use Public Transit, 1990	3.0

Source: Vermont Indicators Online

## Natural Resources

Area of Land, Sq. Miles	38.6
Area of Water, Sq. Miles	.4
Percent Private & Public Conserved Lands, 1999	7.5%
Total Private & Public Conserved Lands, Acres, 1999	1847
Federal Administered Conserved Lands, Acres, 1999	0
State Administered Conserved Lands, Acres, 1999	165
Change in Forest Land to Developed Land, Acres, 1970-1990	136.3
Change in Forest Land to Non-Forested Land, Acres, 1970-90	36.2
Change in Non-Forested Land to Developed Land, Acres, 1970-90	23.1

Source: Vermont Indicators Online

## Property Valuation & Taxation

Average Residential Value (1 Family on less than 6 ac.), 1998	\$57,161.00
Residential (R1), Equalized Value, 1999	\$37,131,119.00
Residential (R2), Equalized Value, 1999	\$19,800,774.00
Vacation (V1), Equalized Value, 1999	\$658,280.00
Vacation (V2), Equalized Value, 1999	\$2,547,670.00
Mobile Home (Landed), Equalized Value, 1999	\$4,714,615.00
Mobile Home (Unlanded), Equalized Value, 1999	\$1,454,657.00
Commercial, Equalized Value, 1999	\$11,357,007.00
Commercial-Apartments, Equalized Value, 1999	\$2,679,504.00
Industrial Manufacturing Plants, Equalized Value, 1999	\$529,569.00
Utilities, Electric, Equalized Value, 1999	\$400,211.00
Utilities, Other, Equalized Value, 1999	\$165,750.00
Farm, Equalized Value, 1999	\$4,413,221.00
Woodland, Equalized Value, 1999	\$1,418,457.00
Miscellaneous, Equalized Value, 1999	\$2,609,094.00
Effective Property Tax Rate (Rate per \$100), 2001	2.6362

Source: Vermont Indicators Online

**Grand List and Tax Rate Trends**

<b>Year</b>	<b>Grand List Total</b>	<b>Tax Rate</b>
2001-2002	\$906,852.00	2.7670
2000-2001	\$901,500.72	2.6356
1999-2000	\$891,207.04	2.4916
1998-1999	\$878,874.00	2.6212
1997-1998	\$881,820.98	2.7350
1996-1997	\$876,774.49	2.7110
1995-1996	\$917,411.22	2.5200

# NATURAL, SCENIC AND HISTORIC RESOURCES

## Fish and Wildlife, and Natural Resources

Fish and wildlife and their habitats are of interest to virtually all residents, either through hunting, fishing or trapping, or passive enjoyments such as bird feeding, sighting a moose, a walk in the woods, or even a Sunday drive along back roads. Wild game was crucial to the survival of Hardwick's first settlers, and it is still a significant part of the household economy of many families. The wildlife resource is an integral part of Hardwick's heritage and way of life.

Diverse and healthy wildlife habitats also contribute significantly to Hardwick's economy through dollars generated by hunting, fishing, and tourist activity. One of every four Vermonters has a license to hunt, fish, or trap.

Areas that are especially important to maintaining a healthy wildlife resource include the borders of rivers, lakes and streams, wetlands, deer wintering areas, and large, unbroken blocks of forest habitat such as the Town Forest.

At present Hardwick includes all these important elements as well as the diverse habitats provided by the typical Vermont patchwork of agricultural land and forest. The fish and wildlife resource in Hardwick is diverse and abundant, and can remain so if habitat needs are considered in land use decisions.

Hardwick's surface waters; rivers, ponds, streams and wetlands; and Hardwick's groundwater are precious and vulnerable natural resources. Improper logging, agricultural, or construction practices easily pollute surface waters. Failing septic systems, and industrial and commercial sources can contaminate both surface and groundwater.

The Lamoille River has suffered considerable degradation, due largely to bank erosion. The siltation and broadening of the river channel from this erosion have changed many parts of the river from a fast, cold trout stream, to a broader, warmer river with warm water fish predominating.

The Planning Commission convened a citizen subcommittee on Forestry and Natural Resources in 1990. Their report strongly influenced the content and goals of this section. One of their major recommendations was that Hardwick form a Conservation Commission to work on natural resource issues.

Vermont passed the enabling legislation to establish municipal Conservation Commissions in 1977. The major goal is to establish community responsibility for its natural resources. Conservation Commissions have no regulatory power, but may advise the Town, Planning Commission, and residents, and undertake diverse activities to foster wise use of the town's natural resources. By 2001, almost 70 towns had formed Conservation Commissions or similar commissions.

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**Goals:**

- ◆ Maintain the abundance and diversity of game and non-game fish and wildlife in Hardwick.
- ◆ Be good stewards of the town's other natural resources, including ground and surface waters, and unique natural features.
- ◆ Protect and enhance the Lamoille River, Mackville Pond and other natural areas.

**Objectives:**

- ◆ Maintain important fish and wildlife habitats such as wetlands, riparian zones, deeryards, and large blocks of forestland as shown on the Hardwick Significant Habitat Map produced 4/3/97 by the Department of Fish and Wildlife of the Vermont Agency of Natural Resources. (See Appendix B.)
- ◆ Foster awareness of the importance of natural resources to our quality of life.
- ◆ Improving public access to the important waters in Hardwick.
- ◆ Maintain natural areas within walking distance of the village.

**Possible Actions:**

- ◆ Consider zoning regulations requiring buffer strips around watercourses and wetlands. [*Planning Commission.*]
- ◆ Consider forming a Conservation Commission to advise the Town and residents on fish, wildlife, significant natural areas, and natural resource issues, and undertake related projects. [*Proposal by residents, approval by voters.*]
- ◆ Support the ELF program, (Environmental Learning for the Future), at Hardwick Elementary, and encourage schools to investigate Project Wild, Project Learning Tree, and other environmental education programs. [*Hardwick Schools, Superintendent's Office, parents, town residents, Conservation Commission if formed*]
- ◆ Support use and upkeep of town recreational areas. [*Hardwick Recreation Committee, Hardwick Schools, town residents, Kiwanis, Conservation Commission if formed*]

**Scenic Resources**

Hardwick is the "Gateway to the Northeast Kingdom". Its 38.6 square miles boast a varied landscape including open and wooded land, working farms and quaint village areas. Central to Hardwick's scenic offerings is Buffalo Mountain, which provides a colorful backdrop to the Village of Hardwick in every season. The Lamoille River and Mackville Pond also contribute to the beauty of the area. The natural splendors of the community attract tourists throughout the year who in turn provide an economic boost to the local economy. The combination of farmland and forest, as well as the hills, mountains and bodies of water should be valued and preserved as an integral part of Hardwick's assets.

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**Goals:**

- ◆ Protect the scenic resources in Hardwick for the enjoyment of the residents and the attraction of tourist business.

**Objectives:**

- ◆ Maintain diversity in land use to preserve the picturesque beauty created by a combination of open and wooded land. Foster awareness of the importance of natural resources to our quality of life.
- ◆ Encourage the preservation of the scenic value of mountains, hills, and ridgelines.

**Possible Actions:**

- ◆ Consider establishing incentive programs to maintain open land. [*Planning Commission, Select Board*]

## Historic Structures

Hardwick retains much of its historic heritage, with a number of structures listed in the National Register of Historic Places. Many homes, especially on Hardwick Street, date from the early 1800's, or the last years of the 1700's. Many homes and other structures in the Village date from the granite boom, with its concomitant growth in population, in the late 1800's.

The Jeudevine Memorial Library, designed by a student of early Victorian architect Henry R. Richardson, was built and donated to the town by Malvina Jeudevine in 1896, in memory of her husband and son. Other buildings of interest include the Memorial Building, built of local granite at the height of the granite boom in 1911 and housing the Town Offices, the Town House, the Centennial House and the old firehouse.

The Hardwick Railroad Depot is being restored as a permanent home for the Hardwick Historical Society. A museum and learning center will be open for students and the general public. A temperature-controlled storage space will also be maintained for the society's collections.

Due consideration should be given to preservation of the town's historic structures and character.

# LAND USE

## Introduction

How land is used in Hardwick affects everyone who lives here. Land use affects the economy, recreation, housing, the environment, public health, and simply what it feels like to live in a particular place.

This section will identify problems, set goals, and identify possible actions, but will not mandate solutions. Finding solutions that satisfy all interests will be difficult, and will require compromise.

While compromise is necessary, *there may be more options available than many people realize*. The "possible actions" in this section are intended to give a sample of options worth examining.

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### **Goal:**

Maintain Hardwick's present patterns of land use: dense residential and commercial uses concentrated in Hardwick Village and East Hardwick, and sparsely developed agricultural and forest land outside these village centers, with a rural and natural skyline.

### **Objective:**

As development occurs, find ways for landowners to develop their property that minimize impacts on agriculture, forestry, wildlife, and the rural character of the land.

### **Recommendations:**

- ◆ Initiate a community dialogue that looks at all options, regulatory and non-regulatory, for achieving these ends.
- ◆ Consider the adoption of performance standards that would establish acceptable standards for noise and lighting affecting adjacent properties and the surrounding area.

The above goal reflects conditions and public sentiment in 2002. If and when conditions, or changes in community goals require it, this Plan may be amended. While this Plan is active, we wish to retain the general pattern of land use now prevalent, as shown on the updated Hardwick Zoning Map. (See Appendix A) Future bylaw revisions may include further districting of the village area.

Some aspects of residential development are touched on here, but see the "Housing" section for more.

## Agriculture and Forestry

In 2001, agriculture was worth \$508 million to the Vermont economy in total cash receipts. Farming and forestry are at the heart of Hardwick's economy and way of life. Hardwick has at least 13 working dairy farms, far more than surrounding towns, as well as

several other types of farms including organic vegetable farms, horse farms & nurseries. Wood for fuel, pulp, or timber is harvested from almost all of Hardwick's forestland.

Hardwick village grew up as a service center for outlying farms, and farmers and loggers still account for a large part of the trade. The feeling of environmental harmony, diversity of wildlife habitats, and the scenic qualities of working farms and forests are attractive to tourists and sportsmen as well as residents.

Farm traditions of hard work and enterprise have benefited the community in other ways: people who learned these virtues as farm kids founded many of Hardwick's non-farm businesses. Despite a busy schedule, Hardwick farmers are also among the most active in community service.

Although farming and logging are an important part of our economy, landowners managing their land for its long-term productive potential face high costs of production and low or non-existent profit margins. With the passage of Act 60 in 1997, landowners with twenty-five or more contiguous acres are eligible to pay their property taxes based on the use value of their land rather than its fair market value. In 2002, 11,641.49 acres of Hardwick land were enrolled and assessed at use value. While wood production produces jobs and economic benefits to the community, significant economic returns to the landowner are only realized over the long term.

The conversion of productive farm or forestland has a cascading effect on the economy, the demand for services, and the tax rate. Removing these lands from production eliminates a primary source of economic activity. Residential development increases demand for services, and costs for education, far beyond the tax revenue it generates.

Most farmers and large landowners would like to keep most of their land undeveloped and in productive use. Many farms have been in families for generations, and most farmers would like to keep farming as long as it is economically viable. The Town needs to support this type of effort in any way it can.

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**Goal:**

Retain working farms and productive forests as essential elements of Hardwick's landscape and economy.

**Objectives:**

- ◆ Retain the scenic attributes, diversity of wildlife habitats and environmental harmony that are by-products of responsible farming and forestry.
- ◆ Encourage the profitability of Hardwick agriculture allowing it to remain viable and sustainable.

**Possible Actions:**

- ◆ Provide assistance and support to landowners, and groups of landowners, seeking ways to keep the majority of their land open while remaining economically viable. [*Planning Commission, Selectboard.*]
- ◆ Support continuation of the system of use value appraisal of land and encourage the exploration of policies that afford additional tax relief to productive lands. [*Selectboard,*

*Planning Commission.]*

- ◆ Investigate common sense zoning mechanisms, (such as cluster housing, agricultural/planned residential development, {PRD}, and planned unit development, {PUD}), that allow landowners to realize an economic return from development, while keeping most of their land open. [*Planning Commission.*]
- ◆ Encourage the preservation of the scenic natural skyline of Hardwick. [*Planning Commission*]
- ◆ Explore mechanisms that allow exchange of development rights. [*Planning Commission.*]
- ◆ Assist landowners wishing to work with the Vermont Land Trust, (or other land preservation groups), to keep their productive land open for future generations. [*Planning Commission, Conservation Commission if formed, Selectboard/Town Manager.*]
- ◆ Investigate the feasibility of forming a Community Land Trust. [*Planning Commission, residents.*]
- ◆ Loss of farms and productive land is a nationwide problem: keep in touch with innovative approaches being developed in other parts of the country. [*Planning Commission, farmers.*]
- ◆ Encourage long term, multiple use management of forestlands. [*Planning Commission, Conservation Commission if formed, Hazen Union forestry program, outside agencies.*]
- ◆ Encourage use of wood in bridge construction, retaining structures along roads, and other municipal uses. [*Selectboard*]

### **Current Zoning Regulations**

Hardwick's present zoning regulations were adopted in 1973. The Hardwick Planning Commission is working on new regulations that they anticipate the town will adopt in 2002. These regulations allow a variety of uses, some as permitted uses, some as conditional uses, in most parts of town. Lot sizes and setbacks are defined for different areas with the intention of encouraging greater or lesser density of development in accordance with the goals of the Town Plan.

The Zoning Administrator currently works half time to ensure compliance with the town's zoning regulations, to provide assistance to the Planning Commission and Zoning Board of Adjustment, and to provide information to citizens.

#### **Zoning Permits Issued**

<b>Year</b>	<b>New Residence Permits</b>	<b>Total Permits</b>
1997	17	82
1998	13	80
1999	12	71
2000	13	82
2001	13	92

## Flood Hazard Areas

There are flood hazard areas, mapped by the federal government, along the Lamoille River, Cooper Brook, and Alder Brook. Flood hazard areas *may* be regulated under local regulations, but are otherwise *not* separately regulated under state or federal regulations, except for projects requiring state or federal review (however for municipal participation in the National Flood Insurance Program, local flood hazard area regulations must meet federal requirements). The Town of Hardwick Zoning Bylaws include flood hazard area regulations that meet current federal requirements.

## ECONOMIC DEVELOPMENT

Economic development in Hardwick is an ongoing challenge. Due to our distance from major interstate routes and airports, it is unlikely that a large corporation will settle here and create a large employee base. It is more likely that healthy growth will come from existing businesses that grow locally, new endeavors created from a strong local sense of entrepreneurship and regional businesses that want to expand or move within Vermont.

It is essential that there is a partnership between the business community and the local schools to ensure that students can learn the skills needed to contribute to the local job market.

It is also essential that Hardwick be business friendly. Town Government, the Chamber of Commerce and community members must constantly promote the advantages of doing business here. We must be prepared to help with necessary permitting, site location of potential business, and financial incentives. We must also strive to create a variety of businesses so that the town is not dependent on only one industry controlling our future.

Hardwick must take charge and responsibility for building its own success. We must be pro-active in our approach and use all of the local resources as well as those from outside Hardwick to attract and retain economic development.

### Industry Statistics (2000)

Industry	Annual Average Units	Annual Average Employment	Annual Total Wages	Annual Average Wage
HARDWICK	116	825	\$ 15,679,090	\$ 19,003
<b>Private Total</b>	103	577	\$ 9,819,793	\$ 17,019
Agricultural, Forestry & Fishing	4	20	\$ 304,529	\$ 15,550
Contract Construction	16	68	\$ 1,106,848	\$ 16,198
Manufacturing	10	80	\$ 1,921,794	\$ 23,898
Wholesale	4	19	\$ 370,694	\$ 19,257
Retail	30	235	\$ 3,492,492	\$ 14,867
Finance, Insurance & Real Estate	Not publishable but included in subtotals			
Services	32	111	\$ 1,836,201	\$ 16,617
<b>Government Total</b>	13	248	\$ 5,859,297	\$ 23,618
Federal government (US Postal Service)	3	8	\$ 238,437	\$ 28,329
Local government	10	240	\$5,620,860	\$ 23,453
Contract Construction	2	21	\$757,914	\$36,380
Transportation	1	1	\$24,927	\$24,927
Services (recreation and educational)	4	158	\$ 3,635,050	\$ 23,019
Public Administration	3	60	\$ 1,202,969	\$ 20,077

Source: ES-202 Employment & Wages Program

## Hardwick Annual Average Unemployment Rates

Source: Vermont Indicators Online

1993	1994	1995	1996	1997	1998	1999	2000
9.7%	9.2%	8.0%	9.4%	7.6%	6.3%	3.4%	5.3%

## Hardwick's Strengths

The infrastructure and much of the labor force necessary for economic development are already in place. Hardwick has an industrial park that is equipped with municipal water, sewer, roads, and 3-phase power. We also have a sewage treatment plant with excess capacity to handle new growth. The park currently has three tenants and there are several lots left for expansion.

The Town has a revolving loan fund created expressly for business startups and expansions. It has over \$350,000.00 in the fund with approximately 15 loans currently outstanding with local businesses. As businesses repay their loans, the money is loaned out to new ventures. To date, this fund has helped to create and/or retain at least 60 jobs in Hardwick.

There is an active Chamber of Commerce in Hardwick. It has a membership approaching 75 members and holds a number of functions during each year to help promote local business. They also produce brochures and advertising to promote the Hardwick area.

The local Patch office is located on Main Street and serves as a clearinghouse for individuals with questions about social services and job possibilities. They provide a one-stop facility to assist residents of the area. They are active in community development with a number of events during the year.

Because of its location at the intersection of major east west and north south state highways, Hardwick acts as the hub for at least seven surrounding towns. The Town provides goods and services to many people beyond the borders of Hardwick.

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### **Goal:**

A diverse and resilient economy based on agriculture, small business, and light industry that is compatible with Hardwick's scenic landscape and will raise income levels and provide employment for Hardwick residents.

### **Objectives**

- ◆ Develop an economic strategy for Hardwick.
- ◆ "Plug the leaks" in Hardwick's economy; make it possible and attractive to Hardwick area residents to buy needed goods and services in town.
- ◆ Provide employment for residents, and support for entrepreneurs, without unduly increasing costs for municipal services and education.
- ◆ Make it easier for local entrepreneurs to start businesses in Hardwick.
- ◆ Attract businesses from outside that will employ and train local people.

- ◆ Encourage development of business that utilizes agricultural and forest products.
- ◆ Facilitate the acquisition of up-to-date business skills and knowledge by local entrepreneurs.
- ◆ Form a strong partnership between the local education system and the business community.
- ◆ Encourage recreational users to come to Hardwick: snowmobiling, fishing, hunting, bicycling, hiking, cross-country skiing.

### **Possible Actions**

- ◆ Look for ways to "plug the leaks". Analyze the money that is leaving Hardwick and develop strategies for recirculating that money in Hardwick. [*grant coordinators, residents, consultants.*]
- ◆ Support initiatives such as the Lamoille Business Education Trade Alliance. [*businesses, residents, Orleans Southwest Supervisory Union, Hardwick Elementary School, Hazen Union School, teachers*]
- ◆ Investigate the innovative revitalization programs developed across rural America in the last ten years. [*Planning Commission, Chamber of Commerce, residents.*]
- ◆ Encourage industries that add value to local products such as wood, milk, and other agricultural products. [*Economic Development Commission if formed, Selectboard, Chamber of Commerce, Planning Commission.*]
- ◆ Pursue funding for expanding recreational-income opportunities. [*Chamber of Commerce, Planning Commission, Recreation Committee.*]
- ◆ Apply to the Vermont Council for Rural Development to conduct a Community Visit. This process is dependent on intense local participation with assistance from experts at the State level to assess Hardwick and develop a plan to build a stronger community. [*Select Board, Chamber of Commerce, Patch, businesses, residents.*]
- ◆ Apply to the Vermont Community Development Program or other funding source to create an increased amount of money available in the revolving loan fund. [*Select Board, Grant Coordinators.*]
- ◆ Develop an Economic Development committee to research and create new strategies to attract new businesses. [*Chamber of Commerce, businesses, residents, NVDA..*]
- ◆ Locate funding for an incubator building to encourage entrepreneurs to grow their ideas. [*Select Board, Grant Coordinators, NVDA.*]
- ◆ Make educational courses available at the local schools during evening hours to provide computer courses including the internet, basic business topics, etc., to residents who are in business or want to improve their skills to acquire better employment. [*Orleans Southwest Supervisory Union, Hazen Union, Teachers, Vermont Community College.*]

## **TRANSPORTATION**

## ROADWAYS

There are a total of 80.9 miles of traveled roadways in Hardwick, excluding Class 4 mileage. The Town maintains 64.7 miles of these roads, and The State of Vermont 16.2 miles. The total breaks down as follows:

- ◆ 1.5 miles of Class 1 roads. Class 1 roads are those that connect state roads. In Hardwick this includes the portions of Routes 14 and 15 that run through the former Village.
- ◆ 10.4 miles of Class 2 roads. Class 2 roads connect village centers.
- ◆ 52.8 miles of Class 3 roads. This includes 8.2 miles of streets in the former Village. Class 3 are those roads whose primary function is providing immediate access to land and homes.
- ◆ 16.2 miles of State highways. Consisting of portions of Routes 14, 15 and 16.
- ◆ The North Main Street Bridge was replaced in 2000. The Mackville bridge was replaced and the Mackville Dam repair was completed in 2001.

## ROADWAY MAINTENANCE

A crew of six full time employees maintains roads.

Road maintenance equipment includes four dump trucks, primarily used for plowing and maintenance of rural roads; a one-ton dump truck for plowing of village streets; a "Bobcat" track skid steer for plowing the sidewalks; and a grader, backhoe, and bucket loader.

A pit on Town-owned land west of Bridgman Hill opened by the Town in 1991 provides high quality gravel, reducing a major cost of maintaining and upgrading Town roads. Sand for winter road maintenance is purchased from a private pit in the area.

## GENERAL CONSIDERATIONS

Hardwick's location at the junction of three river valleys has made it a transportation hub in the area, historically and in the present. Route 15 brings traffic from the St. Johnsbury area to the east and the Morrisville-Stowe area to the west. Route 14 accesses the Barre-Montpelier area to the south and the Newport region to the north. Route 16 enters Hardwick from the north and terminates at its junction with Route 15. Maintenance of rural roads to a standard sufficient to support access of heavy vehicles and equipment is essential to many industries in this area.

While a significant number of residents work out of town and need access to well-maintained roads and highways, approximately 60% of Hardwick residents live within walking and bicycling distance of the downtown business district.

## TRANSPORTATION SERVICES

Transportation is made available to Hardwick Senior Citizens and others with special needs from

a variety of sources. The American Cancer Society's Road to Recovery program has volunteer drivers who will transport cancer patients to their local hospital or the Norris Cotton Cancer Center (NCCC) in Lebanon, NH. The Disabled American Veterans (DAV) Transportation Network is a free van service to the Veteran's Administration Hospital in White River Junction, to Dartmouth Hitchcock Medical Center, and other destinations. The Ray of Hope Van provides transportation for North Country patients receiving radiation treatment at NCCC, Monday-Friday—one trip per day. Rural Community Transportation, Inc. (RCT) is a transportation brokerage, which uses all modes of transportation including commercial buses, cars, taxis, volunteer drivers, vanpools, and rideshare. RCT serves a wide range of passengers through several programs including medical trips for income-eligible residents, a Ride Referral/Ride Match Program for the general public, Rideshare and Vanpool Programs, and the Senior Shopper service. The Area Agency on Aging, in conjunction with RCT, provides transportation for seniors 60 or over who are not on Medicaid and have no other means of travel. They also provide transportation for disabled persons under 60 who do not have Medicaid and are referred through the Vermont Center for Independent Living in Montpelier, VT.

## **SCHEDULED PROJECTS**

In addition to routine maintenance and regular paving projects, plans are in place to upgrade sidewalks in several locations including Wolcott Street, Main Street, and East Hardwick. Repairs are scheduled for the Pumpkin Lane Bridge in 2002. The bridge on Wolcott Street that crosses Cooper Brook is scheduled to be rebuilt in 2004.

## **RAILROAD**

The Lamoille Valley Railroad tracks run from Swanton to St. Johnsbury, passing through Hardwick. The line is currently inactive and is in serious disrepair due to the flood of August, 1995. There are discussions being held at the State level to determine the future of the line. It may be returned to a rail line, or converted to a recreation path.

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### **Goals:**

- ◆ Provide safe and reliable year round access on roads presently maintained by the Town.
- ◆ Reduce the heavy reliance on individual automobiles.
- ◆ Provide safe and reliable pedestrian and bicycle access to the downtown business district from all areas of the village.

### **Objectives:**

- ◆ Maintain and gradually upgrade the existing infrastructure of town roads and bridges.
- ◆ Encourage carpooling and non-motorized transport.
- ◆ Maintain, expand and gradually upgrade village sidewalk system.

### **Possible Actions:**

- ◆ Consider implementing the Roads Surfaces Management System, a computer based inventory of the condition of town roads, used to calculate repair/maintenance costs and set scheduling priorities. [ *Selectboard.* ]
- ◆ Keep abreast of initiatives and policy affecting mass transit in the area and support viable, cost effective proposals. [ *Planning Commission, Selectboard.* ]
- ◆ Encourage in-town shopping. [ *Chamber of Commerce, Planning Commission.* ]
- ◆ Consider bicycle and pedestrian traffic in town road maintenance, and study possibilities for bike paths and making pedestrian travel safer and more convenient. [ *Town Manager, Planning Commission.* ]
- ◆ Monitor trends in traffic volume through the downtown and especially the intersection of Route 14 and 15 in the village. Consider possible effects of increased traffic in these areas when assessing development proposals. [ *Planning Commission, Zoning Board of Adjustment.* ]
- ◆ Encourage the use of wood and native materials in road maintenance, bridge building, cribbing and embankments, etc.. [ *Selectboard, Chamber of Commerce, Planning Commission.* ]
- ◆ Study parking options for future development in the village, and be alert to opportunities for parking alternatives as they arise. [ *Selectboard, Planning Commission.* ]
- ◆ Monitor future use of the rail bed for freight rail, scenic tour rides, or conversion to a multi-usage recreational trail. As options for the use of the rail bed are pursued, Hardwick may want to state their preference as to which option is most desirable. Several of these options have economic impacts. [ *Selectboard, Planning Commission, Chamber of Commerce, Town Office* ]

# EDUCATION

Hardwick is served by two public schools: Hardwick Elementary, grades K-6, and Hazen Union School, grades 7-12. High School students may also attend the Lamoille Area Vocational Center in Hyde Park.

## Enrollment Projections

In 2000-2001, there were 335 students enrolled at Hardwick Elementary, and 440 students at Hazen Union. Enrollment is projected to remain relatively stable for at least the next 3-4 years.

## Building Capacity

A 1990 facilities study found that space at Hardwick Elementary and Hazen Union adequately meets program needs. Renovations to Hazen Union to enclose middle school classrooms and update the auditorium were completed as of the fall of 1996. Renovation was completed for the school year 2001 for the return to Hazen of the community-based Connections program students.

## Community Use of Facilities

The buildings and athletic facilities of Hardwick Elementary and Hazen Union are used for a wide variety of activities and events by groups within the community and beyond. These include a Crafts Fair in the spring and fall at Hardwick Elementary, basketball and volleyball players using the gyms of both schools, a community chorus, a Tae-kwon Do class, and a diversity of occasional events, from a Fish and Wildlife boating safety course to candidates forums.

The Little League uses the athletic field at Hardwick Elementary. The fields at Hazen Union are used by a women's softball league, a men's softball league and for Babe Ruth baseball.

## Hardwick Elementary School

The present building opened its doors to students in 1961. A major addition housing eight classrooms, a multi-purpose room, and office complex was completed in 1988.

### **Facilities and Resources:**

The playing field, with a baseball diamond used by the Little League, is located just uphill from the school and is presently used for the school's soccer program. A new playground was constructed during the 1997 summer. The funding came from community donations, grants, and Hardwick voters approved an appropriation of \$7000 for this project.

The school library contains both print and audio-visual resources that are expanded annually. The school has a lab of 18 networked computers and 25 computers in use throughout the building. Each classroom and the library have access to the internet.

## **Hazen Union School**

Hazen Union opened its doors in 1970 and serves the communities of Hardwick, Greensboro, and Woodbury. Additionally, a few students from Stannard, Walden, Wolcott, and Wheelock attend on a tuition basis.

### **School Lands:**

Hazen Union is situated on 99 acres of land, and much of its biologically diverse woodland is managed by the school's Forestry Program for wildlife, recreation, timber and maple syrup production. About 85 of these acres are used on a regular basis by the Science Department and other school-wide programs including the ropes course that was built during the 1995-96 school year. Twenty-two acres are managed for maple syrup production, and one and a half acres have been clear-cut for planting Christmas trees. This is the site of a U.S.G.S. approved weather station. Six hundred taps produce about 110 gallons of maple syrup, boiled in the student-built sugarhouse. The cedar logs cut from the small clear-cut have been used in the construction of a Forestry Program cabin, built by students and staff. Revenue from the sale of syrup, and from cull wood sold as firewood is used to support the Maple Sugaring Program.

There are plans for building a nature trail that would connect to the Town Forest. The possibility of a small hydroelectric facility on the brook running through school property is being researched, as well as a cross-country path. There are nature trails and a low ropes course on the property.

### **Other Resources:**

Playing fields for the school's soccer and baseball program are adjacent to the main building. Two public tennis courts are also located there.

The technology education program has facilities for woodworking, metalworking, a wood drying kiln, a drafting room and an electronics lab.

The school library of 10,000 volumes has recently been connected to the Vermont Automated Library System (VALS), an online computer system providing instant access to catalog listings of virtually all library facilities in the State. Students can access listings on a given subject, order the volume or article through the Department of Libraries and receive the materials in a just a few days. The general public from Hazen communities are invited to make use of this service. The library also has an extensive audio-visual collection and an electronic encyclopedia, which are regularly used in classroom instruction and individual student research.

The school's computer program currently has about 45 computers available for student use. The school auditorium has fixed seating for 150, and capacity for 290 using folding chairs.

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**Goal:**

To provide facilities for a comprehensive education for all students.

**Objective:**

To maintain and enhance facilities for a variety of academic, athletic, social, cultural and community activities.

**Possible Action:**

Continue gradual improvement of school facilities. Study and project student enrollment on a yearly basis to plan for future needs. [*School Boards, Superintendent's Office.*]

## **Schools and Community**

The Orleans Southwest Supervisory Union, staff and teachers from Hardwick Elementary and Hazen Union Schools, the Hardwick business Community, the Hardwick Town Manager, and representatives from the Hardwick Selectboard, the Lamoille Business Education Trade Alliance and the Hardwick Planning Commission, are investigating opportunities for integrating the community, the businesses, and the schools. One option is a job-shadowing program where a student visits an area business to learn about a career option and the skills needed to perform the job. Since all Hazen Union students must currently complete 30 hours of community service to graduate, this group is also discussing ways to involve more of the business community in the development of community service opportunities.

A program has been in place at Hardwick Elementary School for the past four years where sixth grade students are matched with adult mentors from the community. A mentoring program has also been established for the seventh and eighth grade students at Hazen Union. Students participate on a volunteer basis and have the option of choosing either an adult or eleventh or twelfth grade mentor.

The resources of Hardwick Elementary and Hazen Union Schools are also available to homeschooled students within the community. Homeschoolers may use school libraries, participate in extra-curricular activities, and attend selected classes.

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**Goal**

- ◆ Form a strong partnership between Hardwick Elementary, Hazen Union, their respective Boards, businesses and the community, to form an effective partnership between a community and its schools.
- ◆ Provide educational opportunities to all Hardwick citizens.

**Objectives**

- ◆ Provide citizens with an educational experience that links class content to what they will be doing in work and life.

- ◆ Prepare citizens to fully participate in our democratic society with school and community projects that address real public issues and situations that affect them and their community.
- ◆ Prepare citizens to be lifelong learners to enable them to adapt to the rapidly shifting work places of the future.

#### **Possible Actions**

- ◆ Implement a job-shadowing program for Hazen Union students. [*Businesses, educators, Town Manager, Selectboard, Planning Commission*]
- ◆ Improve community service options for Hazen Union students that will allow students a variety of service options resulting in a wide range of experiences. [*Businesses, educators, Town Manager, Selectboard, Planning Commission*]
- ◆ Explore the idea of establishing student internships with the Planning Commission, the Town office/Town Manager, and the Town Clerk's office. [*Schools, Planning Commission, Town Manager, Town Clerk, Superintendent's Office.*]
- ◆ Support Hazen Union's exploration into expanding adult education opportunities in Hardwick. Course offerings may range from basic education to college credit to personal fulfillment. [*Businesses, educators, Town Manager, Selectboard, Planning Commission*]
- ◆ Support the Lamoille Business Education Trade Alliance. [*Businesses, educators, Town Manager, Selectboard, Planning Commission*]
- ◆ Poll the community members to determine what course offerings are needed to support adult learning. [*Hazen Union, Superintendent's Office.*]

# UTILITIES

## Water Systems

The Town of Hardwick operates a water system that serves 901 customers (2001), in the main business and residential district of Hardwick, including the former Village and the Hardwick Industrial Park, serving approximately 1,900 people. The Hardwick Water Department is funded entirely by user fees and receives no money from the Town General Fund.

The system is supplied by two high-yield sand and gravel wells located on the south side of Route 15 near the Hardwick Industrial Park. The water is pumped to a covered concrete reservoir on Bridgman Hill with a capacity of 500,000 gallons. The water mains are fed by gravity from the reservoir. These wells have provided an abundant supply of pure water to residents since the 1940's, and easily meet the system's present and projected needs.

However, the wells are situated in an area of intensive use, being adjacent to a major road, the industrial park, and near underground storage tanks, leading to concern that the wells may eventually become contaminated. To attempt to maintain the current water quality of the wells, the Town Manager's Office developed the Wellhead Protection Plan (WHPP) for the Town of Hardwick Water System in 1997. The WHPP lists potential sources of contamination, discusses managing existing risks, managing to minimize future risks, and states a contingency plan in case of an emergency. The WHPP establishes a protection area where growth and land use need to be monitored. The Water Supply Division of the Vermont Agency of Natural Resources in May, 1997 approved the WHPP.

To ensure a continuous supply of clean water, a new backup chlorinating system was installed at the well site in 1998. This is an on demand system that can be used if the wells become contaminated. The East Hardwick Fire District operates a water system supplying 106 customers, (1997), in the village of East Hardwick. User fees fund the system. The system is fed by gravity from a well field and covered concrete reservoir above the village. There are several hydrants in the village area, maintained by the Hardwick Fire Department.

## Sewer System

The Hardwick Sewer Department serves 822 customers (2001), covering the same area as the water lines. The Hardwick Sewer Department, like the Water Department, is funded entirely by user fees and receives no money from the Town General Fund. The sewage treatment plant is an aerated lagoon system built in 1980. The plant has a rated capacity of 371,000 gallons of domestic sewage per day. The Town conducted a 20-year review of the plant in 2001. While still in good shape, several upgrades to equipment will be made over the next few years. This will extend the life of the plant and will make it more efficient. Tightening of water quality standards at the state level could require further capital improvements at the plant and throughout the storm drain system in Hardwick Village. Currently, about 1/3 of the plant's capacity is available for

new users. This capacity is sufficient to accommodate some residential and industrial growth, but major growth in population or a heavy industrial user could require expansion of the existing plant. The maximum capacity of the sewer system, the amount of waste that can be received and treated, affects growth by limiting the number of homes and businesses that can hook on to the system. Increasing capacity by expanding its sewage treatment plant is a major factor a community must weigh in deciding how much and how fast it would like to grow.

**Solid Waste**

Hardwick generates an estimated 2500 tons of solid waste annually. The Town is a member of the Central Vermont Solid Waste Management District. The District helps to coordinate the services of several local and regional haulers who service the Town. They also provide recycling, education, and household hazardous waste collection.

**Electricity**

The Town of Hardwick operates the Hardwick Electric Department, the electric utility that serves the Town of Hardwick. The Department also serves customers in Greensboro, Craftsbury, Woodbury, Wolcott, East Calais, Elmore, Hyde Park, Stannard, Walden and Eden. The system is comprised of approximately 379 miles of transmission and distribution lines. The Department's wholesale power costs are approximately \$1,900,000 annually for the purchase and delivery of nearly 7 megawatts of electrical power.

**Current and Projected Use:**

Electrical energy is used by the following categories:

<u>Customer Type</u>	<u># of Customers</u>	<u>Percent of Usage</u>
Residential	2962	67%
Seasonal	620	4%
Commercial	352	15%
Industrial	23	13%
Municipal and Street Lighting	8	<1%

Hardwick Annual Growth Rate, (without conservation)

<u>1980-1990</u>	<u>1990-2000</u>
1.3%	1.0%

Electrical energy is transported to Hardwick via high voltage transmission lines running west from Marshfield and east from Morrisville, upgraded in the late 90's. The transmission lines are connected to Hardwick's two substations where the transmission voltage is converted to distribution voltage. Hardwick's distribution is adequate to meet current demand and through a continuing maintenance and upgrade plan will remain adequate in the foreseeable future.

The annual load curve shows that the Hardwick Electric Department, like most Vermont electric utilities, is a winter peaking system. The annual peak will normally occur during December, January, or February, depending on the weather conditions.

## **Telecommunications**

### **Telephone:**

The utilization of fax machines and computer modems has resulted in a greater demand for high-quality local phone lines. Verizon has begun implementation of upgrade plans including new utility stations on Center Road, Bridgman Hill Road, Kate Brook Road, and Brown Farm Road. Improved phone line quality and an adequate number of available lines is essential to encouraging business growth and increased employment opportunities in Hardwick.

### **Wireless Communication:**

In 1998, the Town of Hardwick adopted a Communications Facilities amendment to the Zoning Bylaws to "protect the public health, safety, and general welfare of the Town of Hardwick, while accommodating the communication needs of residents and businesses." The Town is faced with the challenge of facilitating the provision of telecommunication services while respecting the integrity of Hardwick's scenic, historic, and environmental and natural resources. New telecommunications and computing applications will be used to improve commerce, government, public health and safety, education, communication and the quality of life. These advantages can be accomplished in balance with protecting the character and appearance of the Town of Hardwick by enforcing standards for communication facilities and by utilizing creative planning methods such as the sharing of existing facilities and placement of communication antennas on existing buildings.

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**Goals:**

- ◆ Provide for the maintenance or creation of needed or desired public, or quasi-public, facilities and services in a fiscally sound and environmentally responsible manner.
- ◆ Preserve the character and appearance of the Town of Hardwick, while allowing adequate communications services to be developed.

**Objectives:**

- ◆ Reduce Hardwick's overall waste production, and recycle as much as possible of what remains.
- ◆ Protect the scenic, historic, environmental, and natural resources of the Town of Hardwick while facilitating the provision of telecommunication services to residences and businesses.

**Possible Actions:****Solid Waste**

- ◆ Set an example by recycling and reducing waste generation at the municipal level. [*Town of Hardwick.*]
- ◆ Consider options and proposals for "curbside" recycling. [*Selectboard.*]
- ◆ Encourage, and support the expansion of recycling programs that have been started at Hardwick Elementary and Hazen Union. [*Parents, students, and administration, School Boards, Planning Commission, Selectboard.*]
- ◆ Monitor and participate in the Waste District's planning and implementation through our town representative to the district. [*Town rep. to District, Selectboard, Planning Commission.*]
- ◆ Ensure availability of an accessible and user-friendly recycling drop-off center in town. [*Town rep. to District, Selectboard, Planning Commission.*]

**Water and Sewer**

- ◆ Study the effect expansion of sewer and water lines would have in a given area, and generate a policy on expansion, rather than dealing with requests piecemeal. [*Planning Commission, Selectboard.*]
- ◆ Establish defined water and sewer service areas to reinforce the Town's land use plan and limit the inefficient extension of services. [*Planning Commission, Selectboard.*]

**Telecommunications**

- ◆ Maintain a Communications Facilities Ordinance providing standards and requirements for the operation, siting, design, appearance, construction, monitoring, modification, and removal of communications facilities. [*Planning Commission, Selectboard.*]
- ◆ Minimize tower and antenna proliferation by encouraging the sharing of existing communications facilities, towers and sites where possible and appropriate. [*Planning Commission, Selectboard.*]

- ◆ Encourage the location of towers and antennas in non-residential areas and away from other sensitive areas such as areas with schools, hospitals, or child care facilities.  
*[Planning Commission, Selectboard.]*

# COMMUNITY SERVICES

## Hardwick's Government

Hardwick operates under a Town Manager form of government. The manager reports to a Select Board made up of five elected citizens. The manager is responsible for the day to day operations of the Town and prepares the annual budget, for approval by the Select Board and functions as the Police Commissioner. Staff employed by the Town includes a police chief, 5 police officers, a road crew of 6 people, a treatment plant operator, an office staff of 4 people, and a half-time Zoning Administrator.

There are a number of boards and committees appointed by the Select Board. These include the Planning Commission/Zoning Board of Adjustment, the Hardwick Electric Department Board of Commissioners and the Hardwick Recreation Committee.

Adoption of budgets and election of officials are done at the annual Town Meeting, held the first Tuesday in March.

Prior to 1988, Hardwick had both a Village and a Town government. In 1988, they merged into one Town entity and a charter was created for the Town.

## Health Services

### **Health Care Facility**

The Hardwick Area Health Center is part of Northern Counties Health Care, Inc., a non-profit organization administering several rural health clinics in the Northeast Kingdom. It operates a family care facility providing general health care for Hardwick and surrounding towns. Health maintenance is emphasized through a variety of educational programs and special clinics.

A major expansion and renovation of the facility was completed in 1991 as part of the consolidation of services following the closing of the Greensboro Health Center. Northern Counties Health Care, Inc. also opened a new dentist office on South Main Street in November 2001.

Medical services are provided by three full-time physicians, a physician's assistant, a nurse practitioner, and additional nurses, facilitated by an office staff. Medical staff are available for emergency calls 24 hours a day, reachable through the Center's answering service.

Other health organizations that have offices at the Health Center are: Caledonia Home Health, Copley Hospital Physical Therapy Unit, and Northeast Kingdom Mental Health.

Copley Hospital is the closest full care facility, located in Morrisville, 13 miles to the west. Providing continuity of care, the Health Center physicians are also members of the staff at

Copley Hospital. Other area hospitals include North Country Hospital in Newport, Northern Vermont Regional in St. Johnsbury, Central Vermont Hospital in Berlin, and the Fletcher Allen Health Center in Burlington.

### **Hardwick Emergency Rescue Squad**

The Hardwick Emergency Rescue Squad provides Hardwick's triage services. Founded in 1967, it was one of the first volunteer rescue organizations in the state. The first ambulance was a partially equipped hearse donated by a community member. The ambulance building on Creamery Road was built in 1981, funded by the Hardwick Hospital Association, and was expanded in 1992.

Hardwick Rescue responds to about 350 calls annually, including stand-by at community events and at structure fires, with two fully equipped ambulances, Rescue 1, and the four wheel drive Rescue 2. The service area includes all of Hardwick, Greensboro, Craftsbury, Wolcott, Woodbury, and Stannard, as well as portions of Walden, Elmore, West Wheelock, and East Calais. There are, on average, 45 scheduled duty members, first responders, Emergency Care Attendants (ECA), Emergency Medical Technicians (EMT), and drivers. Rescue members also conduct ECA, CPR, and first aid classes within the service area.

Throughout its history this volunteer organization has given dedicated service to its communities, and the communities have responded with a great deal of support and appreciation.

### **Hardwick Fire Department**

The "Granite Hose Company, Number 1" was formed on December 14, 1891 with approximately 18 charter members. The name was changed to the Hardwick Fire Department in the early 1900's. The present fire station on Wolcott Street was built in 1972-73.

Currently the Department has 22-25 members. Equipment includes two pumper trucks, two tankers, and one rescue truck.

Fire personnel carry pagers and the Department is dispatched by radio.

Hydrants are well distributed throughout the area served by the village water system. If the reservoir is drawn down to a certain level, an automated system sends water from the Town wells to the reservoir, hoping to provide adequate water flow.

The Department has been installing a dry hydrant system to give better access to water in the rural areas of town. There are currently dry hydrants on West Hill, Cobb School Road, Porter Brook Road and Two at Mackville Pond. The Fire Department coordinates with the Rescue Squad and has a "Jaws of Life" to assist them. Hardwick participates in a Mutual Aid Agreement with other area Departments.

## **Hardwick Police Department**

In 1979 the Village of Hardwick decided to disband the Village police department. Equipment was turned over to the Town of Hardwick, and a search for a chief was instituted.

In 1980 the first chief of the Hardwick Police Department was hired, and began 24-hour coverage with a staff of three officers.

In April of that year, the Town of Hardwick entered into a contract to provide police coverage for the Town of Greensboro. A fifth officer was hired. Greensboro contributed 20% of the Department budget in exchange for 48 hours of coverage per week.

In 1991 a budget was approved to add a sixth officer. All officers are required by law to attend the 14-week Police Academy training in Pittsford.

The Town of Greensboro renegotiated their contract in 1991 to contribute 22 1/2% of the budget for 54 hours of service a week.

The Department's service area includes approximately 75 square miles. The Department is unique in providing coverage in two counties, Caledonia and Orleans.

Police vehicles include three cruisers, one 4-wheel drive, and two snowmobiles.

All cruisers are equipped with video camera systems, Stinger Spike systems, and the two duty cars have Automated External Defibrillator units. Police mobile and handset radios have all been updated in the past two years.

The Department is on-line with the State of Vermont's Incident Based Reporting System, and new computer equipment was purchased and put into service for this system.

The Department works closely with the area schools, domestic violence advocates, and the prosecutor's office for Caledonia and Orleans Counties, as well as other law-enforcement and state agencies.

## **Enhanced 9-1-1**

Vermont's statewide enhanced 9-1-1 network is the first in the nation to be completely digital. Vermont's system is also the first to deploy a GIS in a fully integrated fashion. Vermont's call-taker training, certification and quality control program is one of the most rigorous available. From January 1, 2001 to November 30, 2001, 187,173 total 9-1-1 calls were received for the state of Vermont. The average time to answer was 4 seconds. Hardwick completed its 911 street numbering in 1998. (A special thanks goes to Anne Batten, Colleen McCarty and others for their hard work on that project). From January 1, 2001 to June 30, 2001, the 9-1-1 service received 220 calls from Hardwick. The E-9-1-1 Board continues to hear from local emergency responders that many people have not yet posted their 9-1-1 addresses on their businesses and homes. Hardwick residents should post their 9-1-1 address where it can be seen by responders, even at night.

## **Hardwick Area Patch**

The Hardwick Area Patch is a grassroots 501(C)3 organization serving the Orleans Southwest Supervisory Union, which includes Craftsbury, Greensboro, Hardwick, Stannard, Wolcott and Woodbury since 1996. It is one of six Patches in the state each located in underserved areas between county and state service areas. Hardwick Area Patch collaborates with many agencies on a federal, state and local level. One of its priorities is to provide people with access to services locally that they would have previously had to travel up to an hour to receive. Another priority is to identify the needs and resources of the community and work with the community to meet the needs and expand the resources. The Hardwick Area Patch focuses on both community development and community enrichment.

Local organizations and Agencies that are Patch Partners:

- Vermont Department of Social and Rehabilitation Services
- Vermont Department of Social Welfare
- Vermont Department of Vocational Rehabilitation
- Vermont Department of Public Health
- Vermont Department of Employment and Training
- Lamoille County Mental Health
- Lamoille Family Center
- Orleans Southwest Supervisory Union

## **Recreational Facilities**

Hardwick's recreational facilities include the ball fields at Hazen Union High School and at the Elementary School. Men and women's softball leagues use Hazen Union during the summer as well as two privately maintained fields, Shepard's field on Bridgman Hill and the Hootie Dome in East Hardwick. Little League is played at the Hardwick Elementary field. Hodgdon field, located on the corner of Cottage and Cherry Streets, is used for T-Ball. This park is enclosed by fencing and is a play area within the village.

A Low-Ropes course was built at Hazen Union. The course is designed to enhance team building and cooperative skills of participants. There are two public tennis courts also located at Hazen Union. Walking and biking trails begin at Hazen Union and wind through the woods. The Town of Hardwick is currently making plans to extend a bike path west of the Village. This trail system would also use existing paths maintained by the Vermont Association of Snowmobile Travelers (VAST) and connect with trails established by Hazen Union. These trails are available for X-country skiing.

The Town has a volunteer Recreation Committee that coordinates a number of activities for youth, including a swimming program at Caspian Lake and maintaining an outdoor

skating rink during the winter months. They are hoping to encourage greater use of Mackville Pond as a village park for picnics and swimming. The committee is constantly exploring new programs to offer, as well as upgrading existing ones.

### **Jeudevine Memorial Library**

Since May 2000 and under the leadership of the new Library Director, several short-term goals have been achieved at the public library to bring it up to modern standards. Equipment improvements include two public access computers with connections to the Internet received from the Bill and Melinda Gates Foundation and a copy machine purchased through the generosity of library patron, Ralph Fisher. The Freeman Foundation awarded the library a grant including funds to allow the library to be open seven days per week. The entire library collection has been reviewed and purged by the director and audio book and video collections have been started for adults and children. A Friends of the Jeudevine Library Group has been initiated.

During the next two years if local funding is increased significantly, a third year of grant money from the Freeman Foundation could be available. An immediate objective for the library is demonstrating at the local level that the Town of Hardwick supports its library. The goal is for the Town budget to cover all operating costs, including a livable wage and benefits for the employees who can be covered under the Municipal Employees Plan.

Presently the library meets state standards set by the Vermont Department of Libraries which allows it to apply for certain grants and receive free cataloging and books, as well as other services. When the new standards adopted by the State Library Board of Trustees come into effect (after passage by legislature), the Jeudevine Library will have to develop and carry out a plan to become handicapped accessible. The building also requires attention to roof and attic damage. The long-range plan, therefore, includes a building fund and endowment campaign to be initiated by the Friends of the Library..

The Jeudevine Memorial Library is one of the most beautiful libraries in the state. The library aspires to maintain its heritage while at the same time offering all the modern information services to its community. Statistically communities that have good libraries have a higher level of civic involvement, higher education levels, less violence, and better health. Support of the library is a responsibility shared by all members of the community.

# HOUSING

Hardwick's population in 2000 was 3,174 (U.S. Census Bureau). Population has grown at an average rate of 8% per decade since 1960. Hardwick's topography, soils, agricultural base and the unlikelihood of a large increase in employment opportunities in the area would make it very difficult to accommodate a large or sudden increase in population. This should be considered in planning and development decisions.

In 1990, a citizen subcommittee of the Planning Commission concluded that most of Hardwick's housing problems were really economic problems at the root, and that improving Hardwick's economy would be the most effective way to address them (see the Economic Development section). This group also recommended working with self-help building groups such as Habitat for Humanity, and exploring zoning techniques such as Planned Unit Developments and Community Land Trusts, that would concentrate growth and may make property more affordable.

In 1998, the Town received a Vermont Community Development Grant, which was subgranted to Lamoille Housing Partnership. This allowed LHP to acquire and renovate 3 deteriorated historic rental properties that contain 14 total housing units. In 2001, the Town received another VCDP grant, which was sublet to LHP for the purchase and renovation of Evergreen Manor, a 32-unit mobile home park. This has been a significant step in providing affordable housing to Hardwick residents. According to a report issued in October 2000 by the Department of Affordable Housing and Community Affairs, there were 59 units of affordable housing in Hardwick, including 30 designated for the elderly and 8 designated accessible.

Several challenges remain. One issue falls within the category of fiscal development and public awareness. Many community members face the fiscal constraints of a high level of personal debt, inability to obtain credit and insufficient wages to support the cost of housing.

Development can also be hindered by out-of-date or inconsistent zoning practices. Setback and lot size restrictions that are no longer practical or inappropriately designated districts both can work to discourage development.

Safe housing of acceptable quality should be promoted for all members of the community. Older buildings that have been allowed to deteriorate to unsafe and unsanitary conditions are a special concern.

## Onsite Septic Systems

As the density of housing in areas of unsuitable soils increases so does the danger of contamination of drinking sources from septic systems providing inadequate treatment of household sewage and gray water.

There are two types of contamination resulting from inadequate on-site treatment of sewage and gray water; biological and chemical. Biological contamination of ground and surface

water can cause disease. The health threats of chemical contamination of water by nitrates and constituents of household chemicals is thought to be significant, but is less well understood. A recent study by the State of Vermont indicates that these constituents can travel considerable distances in bedrock aquifers.

There is a real dilemma here: adopting an onsite sewerage ordinance, which towns cannot do without incorporating State standards for soils and design, would make much of Hardwick unbuildable, but construction of systems below these standards almost guarantees some degree of system failure, and possible contamination of surface and groundwater. Allowing cluster development, with individual lots of less than ten acres, which would require state review of soils and system design, may be a partial solution. Another possible way around the dilemma would be to encourage development in areas that can be served by the municipal sewer system.

---

### Goal

Make it possible for all Hardwick residents to obtain decent, affordable housing while protecting the public health, conserving energy, and minimizing the impact of housing construction on municipal services, agriculture, forestry, wildlife, and the rural character of the land.

### Objectives

- ◆ Encourage housing that conserves energy, provides for efficient delivery of public services, and minimizes impacts on agriculture, forestry, wildlife, and the rural character of the land.
- ◆ Prevent threats to the public health by contamination of surface waters, groundwater, and wells by inadequately treated sewage and gray water from poorly located and designed onsite septic systems.
- ◆ Establish zoning ordinances, subdivision regulations, and a site plan review process that are consistent and employ practical, responsible regulations to encourage the development of safe, quality housing which will positively affect the character of Hardwick.

### Possible Actions

Monitor population and age distribution trends to anticipate future housing needs. [*Planning Commission.*]

- ◆ Encourage business and industry that would employ local people, rather than importing employees needing housing. [*Selectboard, Chamber of Commerce, Economic Development Commission if formed, Planning Commission.*]
- ◆ Work with self-help housing groups such as “Habitat for Humanity” and non-profit organization, such as the Gilman Housing Trust and the Lamoille Housing Partnership to develop housing in Hardwick. [*Selectboard, Planning Commission, and residents.*]
- ◆ Consider implementation of zoning techniques such as cluster housing and planned unit

development that may make building sites more affordable, and provide for review of soil suitability for onsite sewage systems. [*Planning Commission, Selectboard.*]

- ◆ Educate contractors, people planning to build, and the general public, about health threats of onsite septic systems providing inadequate treatment of wastes. [*Planning Commission, zoning administrator, Conservation Commission if formed.*]
- ◆ Assemble available data on housing in Hardwick. [*Planning Commission, Town Office.*]
- ◆ Enact updated Zoning Bylaws. [*Planning Commission, Selectboard*]
- ◆ Work with officials at the state level to assist in the enforcement of state health and safety requirements. [*Zoning Administrator*]
- ◆ Provide education for citizens, local attorneys and real estate agents about development requirements and zoning regulations. [*Zoning Administrator, Planning Commission*]

# ENERGY

Paying for energy is one of the chief ways that income leaves a community. Thus energy costs hurt Hardwick's overall economy as well as individuals. Most of this money leaves the state, and is not available to hire a local carpenter to fix your house, buy clothes at a local business, or put towards a down payment to start your own business. Reducing energy costs is one of the best ways to "plug the leaks" in local economies.

The production and consumption of energy also has environmental effects, polluting air and water, and contributing to public health problems.

Most of the benefits we receive from energy use can be delivered using far less energy than is commonly the case. A room at a comfortable temperature, light, hot water, transportation, home entertainment, or manufactured goods can be produced with less "energy intensity" using a combination of conservation and available technology. Weatherization, energy efficient lighting, proper placement of light fixtures, water heater jackets, more efficient appliances and motors, are just a few of the methods available.

Alternative fuels, and renewable energy sources can also be part of the solution. Wood is locally available, renewable, and its sale for fuel employs local people. Only 20% of the money spent on fossil fuels stays in the state. 80% of the dollars spent on wood remains in Vermont, and is available to the local economy. Energy from solar or wind is also practical and cost effective in some situations.

Personal transportation is usually the largest share of a family's energy costs. Fuel costs for road maintenance accounts for the largest share of municipal energy costs. Hazen Union spent \$52,201 on electric heat in FY 1991. Hazen Union installed a wood chip system in 1993-94 and has seen a significant reduction in energy costs since the wood chip system was installed.

Most energy experts agree that a sharp rise in the cost of electricity and fossil fuels in the United States is inevitable. Communities that work steadily towards efficiency, overall reduction in energy consumption, and feasible use of local renewables will minimize the negative impacts of this rise.

---

## Goals:

- ◆ Reduce Hardwick's overall energy consumption.
- ◆ Reduce dependence on foreign energy sources.

## Objective:

Reduce energy costs to residents, businesses, and schools through installation of energy efficiency measures and other means to reduce energy consumption, and use of locally available renewable energy sources.

## Possible Actions:

- ◆ Plan now to reduce the economic effects of the sharply higher energy costs anticipated in

the future. [*Planning Commission, Selectboard, Chamber of Commerce.*]

- ◆ Work with our municipal utility, the Hardwick Electric Department, and Efficiency Vermont, the state's recently established energy efficiency utility, to institute programs that deliver needed energy services to residences and businesses while using less energy. [*Selectboard/Town Manager, Planning Commission.*]
- ◆ Reduce energy costs to taxpayers by analyzing municipal energy use and instituting reduction and efficiency programs. [*Hardwick Electric, Town Manager, consultants.*]
- ◆ Promote citizen installation of energy efficiency measures in Hardwick homes and businesses by publicizing the toll-free number for Efficiency Vermont. [*Hardwick Electric, Town Manager.*]
- ◆ Promote the use of wood and other renewable energy sources. [*Conservation Commission if formed, Planning Commission.*]
- ◆ Promote carpooling by publicizing the phone number and website for Rideshare, matching drivers and riders. (802-295-1824; [www.uppervalleyrideshare.com](http://www.uppervalleyrideshare.com)) [*Conservation Commission if formed, Planning Commission, service organizations.*]
- ◆ Encourage new construction that conserves energy by taking advantage of factors such as shelter from wind and proper orientation of windows to the sun. [*Conservation Commission if formed, Planning Commission.*]

## IMPACT ON ADJACENT MUNICIPALITIES

Hardwick shares borders with Greensboro to the north, Walden to the east, Woodbury to the south, Wolcott and a small portion of Elmore to the west. Additionally, Stannard and Cabot meet Hardwick at corners.

Most of the surrounding towns have an agricultural base, many commuters, village centers with mom and pop stores or gas stations, and a significant number of self-employed tradespeople and other small enterprises. The Cabot Creamery is the only major employer in the adjacent towns.

The major land use goal of this plan, working to retain agricultural and forest potential while preserving options for landowners, is a goal widely shared in the region. Hardwick's goal of creating employment opportunities for local people and expanding goods and services available in Hardwick should benefit surrounding towns. An entrepreneurship program being investigated for Hazen Union as part of the economic development strategy advocated in this plan would benefit students from Woodbury and Greensboro as well as Hardwick.

The Hardwick Planning Commission has a goal of increasing communication and exchange of ideas and strategies with neighboring municipalities. The member towns of the Orleans Southwest Supervisory Union worked collaboratively in 1997 to apply for a communications grant that would link all the communities through networked computers.

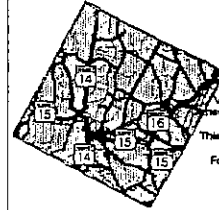
No negative impacts or incompatible development is anticipated as a result of the adoption of this Plan.



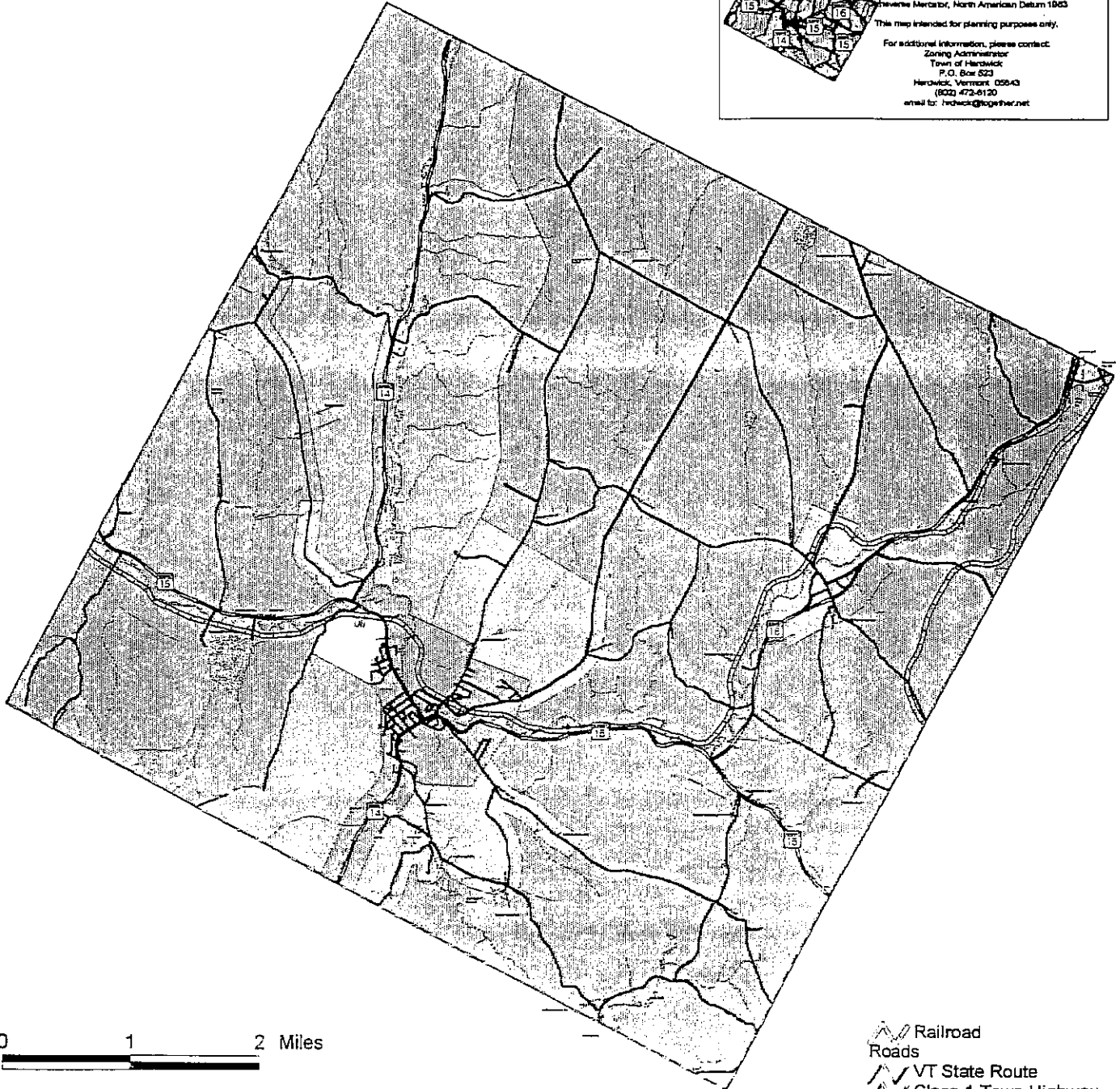
# Appendix A

## Hardwick Zoning Districts

June 1999



Vermont Coordinate System, Zone 5525  
NAD83  
NAD83  
North American Datum 1983  
This map intended for planning purposes only.  
For additional information, please contact:  
Zoning Administrator  
Town of Hardwick  
P.O. Box 523  
Hardwick, Vermont 05943  
(802) 473-6120  
email to: [hardwick@together.net](mailto:hardwick@together.net)



**USGS QUADRANGLES:** Digital Raster Graphics (DRG)-  
quadresampled TIF file, 124000, VCGI.  
Please note that terrain displayed is not as large  
than 124000, positional accuracy is degraded.

**ROADS:** 1:5000 Digital Road Centerline Project, VAOT, 1991-1994

**STRUCTURES:** ESRI Project, shapeDATA GIS data, 1996-1997.

**SURFACE WATER:** Intersected from 1:5000 orthorectified using USGS  
7 1/2' quadrangles and 1:25000 color infrared aerial  
photography as additional source material

**WETLANDS:** National Wetlands Inventory waters from 1:24000  
source reported, 3 sets including 1998. Wetlands for planning  
purposes only. Refer to the VAND-DEC, Water Quality Division,  
Wetlands Section for official wetlands determinations.  
(802) 244-6551

**ELEVATION:** USGS 124000 DEM, 30m cell average.

**ELEVATION:** VT DEM 30m and best elevations with additional  
feature point elevations VT Mapping Program, 1995-1998.

**PUBLIC CONSERVATION LANDS:** Vermont Conserved Lands Database  
Project 1:5000, UNH/USL, 1998.

**LAND COVER:** Classes generated from 1993 LANDSAT Thematic  
Mapper images, 25 meter cell resolution, 2 acre watersheds  
imposing unit, for the Lake Champlain Basin and Northern  
Forest Lands Studies, Mt. Holyoke College-Geospatial  
Lab, 1997.

**WELLHEAD PROTECTION AREAS:** SPAs for groundwater sources (wells,  
springs), 1:24000 USGS Quadrangles, VAND-DEC-Water Supply Division  
and VT Dept. of Health, 1998.

**SURFACE WATER PROTECTION AREAS:** SPAs for surface water sources  
(streams, ponds, etc.), 1:24000 USGS Quadrangles, VAND-DEC-Water  
Supply Division and VT Dept. of Health, 1998.

**SOURCE PROTECTION AREAS:** Surface and subsurface areas from or  
through which contaminants are reasonably likely to reach a public  
water source, OPE coordinate information 1994, Hydrologic PUE Core  
dataset, 1:24000 USGS Quadrangles, VT Dept. of Health,  
SPAs for planning purposes only. Refer to the VAND-DEC, Water  
Supply Division, for official SPA determinations. (802) 244-1562

**POLLUTION SOURCE INVENTORY:**  
State "Regulated" Non-Point Source Watershed Phase II, State  
"Regulated" Underground Storage Tanks, Landfills (active and  
inactive), 1:24000 USGS Quadrangles, VAND, 1994.

**On-site Sewage Disposal Systems:** greater than 6000 total, Manual  
Locations from VT Wastewater Management Division, 1994

**DEERYARDS:** VAND, 124000, 1994.

**Property Boundaries and VAOT Tract:** Collected by Vermont Department of Forest,  
Parks, and Recreation using Global Positioning System (GPS)  
technology, augmented by survey and deed descriptions, 1997.

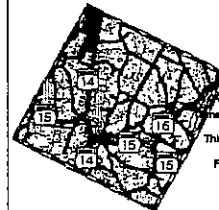
- Railroad
- Roads
- VT State Route
- Class 1 Town Highway
- Class 2 Town Highway
- Class 3 Town Highway
- Class 4 Town Highway
- Village Street
- Rivers and Streams
- Lakes and Ponds
- Proposed Zoning Districts
- Forest Resource
- Central Business
- Compact Residential
- Industrial
- Rural Residential
- Town Boundary



# Appendix B

## Hardwick Significant Habitat

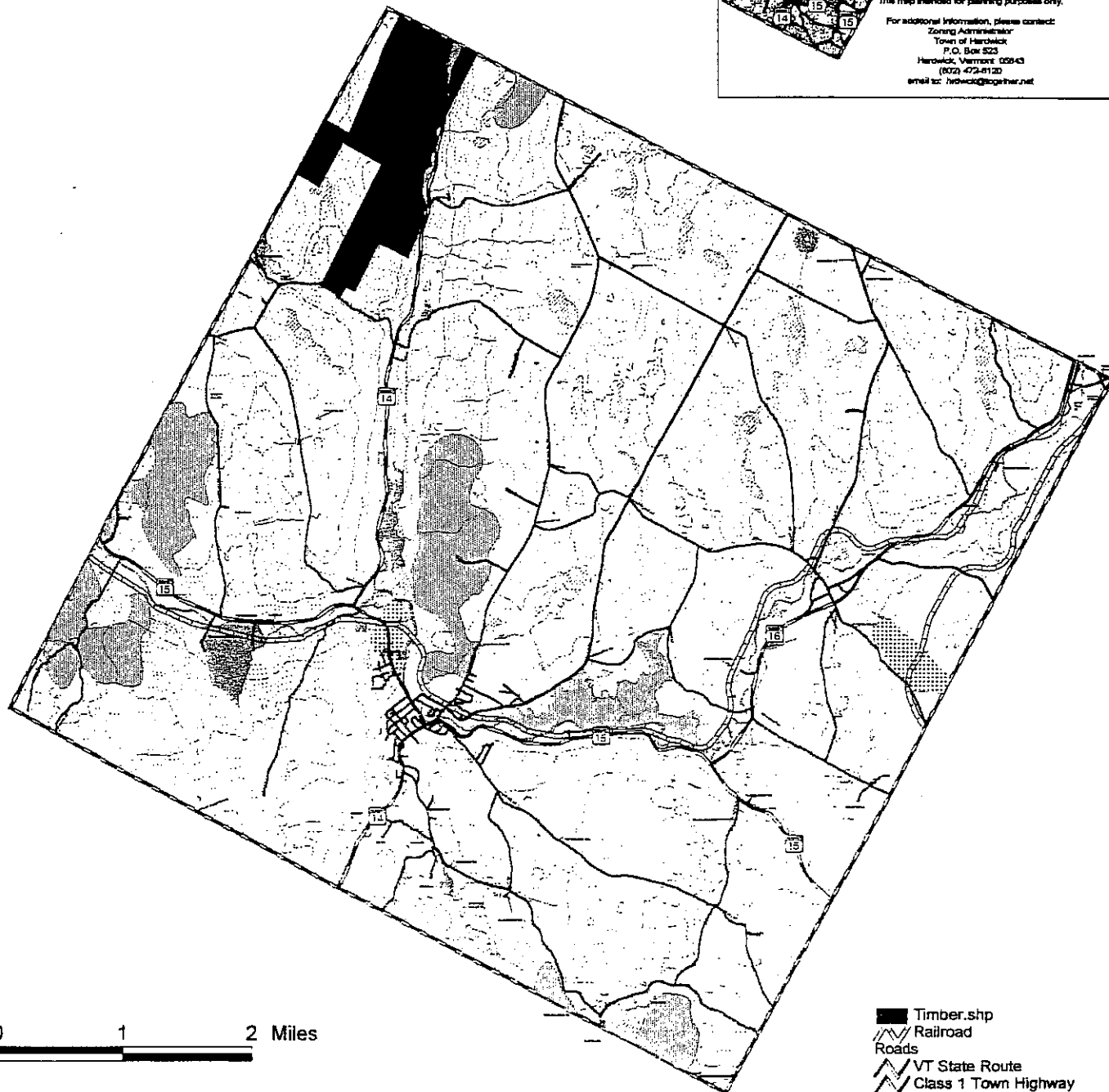
June 1999



Vermont Coordinate System, Zone 5026  
Reverse Meridian, North American Datum 1983

This map intended for planning purposes only.

For additional information, please contact:  
Zoning Administrator  
Town of Hardwick  
P.O. Box 523  
Hardwick, Vermont 05943  
(802) 472-4132  
email to: [hwtd@compuser.net](mailto:hwtd@compuser.net)



0 1 2 Miles

USGS QUADRANGLES: Digital Raster Graphics (DRG)-  
guaranteed TIFF file, 124000, V001.  
Please note that when displayed at scales larger  
than 124000, horizontal accuracy is degraded.

ROADS: 1:5000 Digital Road Classification Project, VAOI, 1991-1994.

STRUCTURES: SPH Project, [www047a.gps.com](http://www047a.gps.com), 1995-1997.

SURFACE WATER: Intersected from 1:5000 orthorectified using USGS  
7.5' DEM Contours and 1:25000 aerial infrared aerial  
photography as additional source material.

WELLHEADS: National Wetland Inventory wetlands from 1:24000  
source material, 3 acre mapping unit, 1988. Wetlands for planning  
purpose only. Refer to the VNR-DEC, Water Quality Division,  
Wetlands Division for official wetland designations.  
(802) 244-8021

ELEVATION: USGS 124000 DEM, 30m cell averages.

ELEVATION: VT DEM 30m grid plus observations with additional  
feature point elevations VT Mapping Program, 1995-1998.

PUBLIC CONSERVATION LANDS: Vermont Conserved Lands Database  
Project 1:5000, LVMS-BAL, 1994.

LAND COVER: Classes generated from 1990 LANDSAT Thematic  
Mapper images, 25 meter cell resolution, 2 acre minimum  
mapping unit. See the Land Cover System (LCS) and Hardwick  
Forest Lands Studies, MS, University College - Chittenden  
Campus, 1997.

WELLHEAD PROTECTION AREAS: SPAs for groundwater sources (wells,  
springs), 1:24000 USGS Quadrangles, VNR-DEC-Water Supply Division  
and VT Dept. of Health, 1998.

SURFACE WATER PROTECTION AREAS: SPAs for surface water sources  
(streams, ponds, etc.) 1:24000 USGS Quadrangles, VNR-DEC-Water  
Supply Division and VT Dept. of Health, 1998.

SOURCE PROTECTION AREAS: Surface and subsurface areas from or  
through which contaminants are transported likely to reach a public  
water source. GPS coordinates information 1994, Hillbush M&S Corp,  
original dataset: 1:24000 USGS Quadrangles, VT Dept. of Health,  
SPAs for planning purposes only. Refer to the VNR-DEC, Water  
Supply Division, for official SPA designations, (802) 244-1002.

POLLUTION SOURCE INVENTORY:  
Data "Required" New-Fuelburn Hazardous Waste Sites, State  
"Required" Underground Storage Tanks, Landfills (active and  
inactive), 1:24000 USGS Quadrangles, VNR, 1994.

On-site Sewage Disposal Systems, greater than 6000 sqft. Manual  
locations from VT Wastewater Management Division, 1994.

DEERYARDS: VNR, 1:24000, 1994.

Property Boundaries and VERT-TAC: Collected by Vermont Department of Forest,  
Park, and Recreations using Global Positioning System (GPS)  
technology, supported by survey and deed descriptions, 1997.

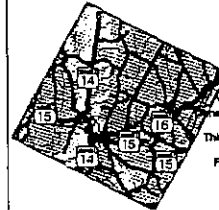
- Timber.shp
- Railroad
- Roads
- VT State Route
- Class 1 Town Highway
- Class 2 Town Highway
- Class 3 Town Highway
- Class 4 Town Highway
- Village Street
- National Wetland Inventory
- Rivers and Streams
- Lakes and Ponds
- Wellhead Protection Area
- Deeryard
- 250' Contours
- 1000
- 1250
- 1500
- 1750
- Town Boundary



# Appendix C

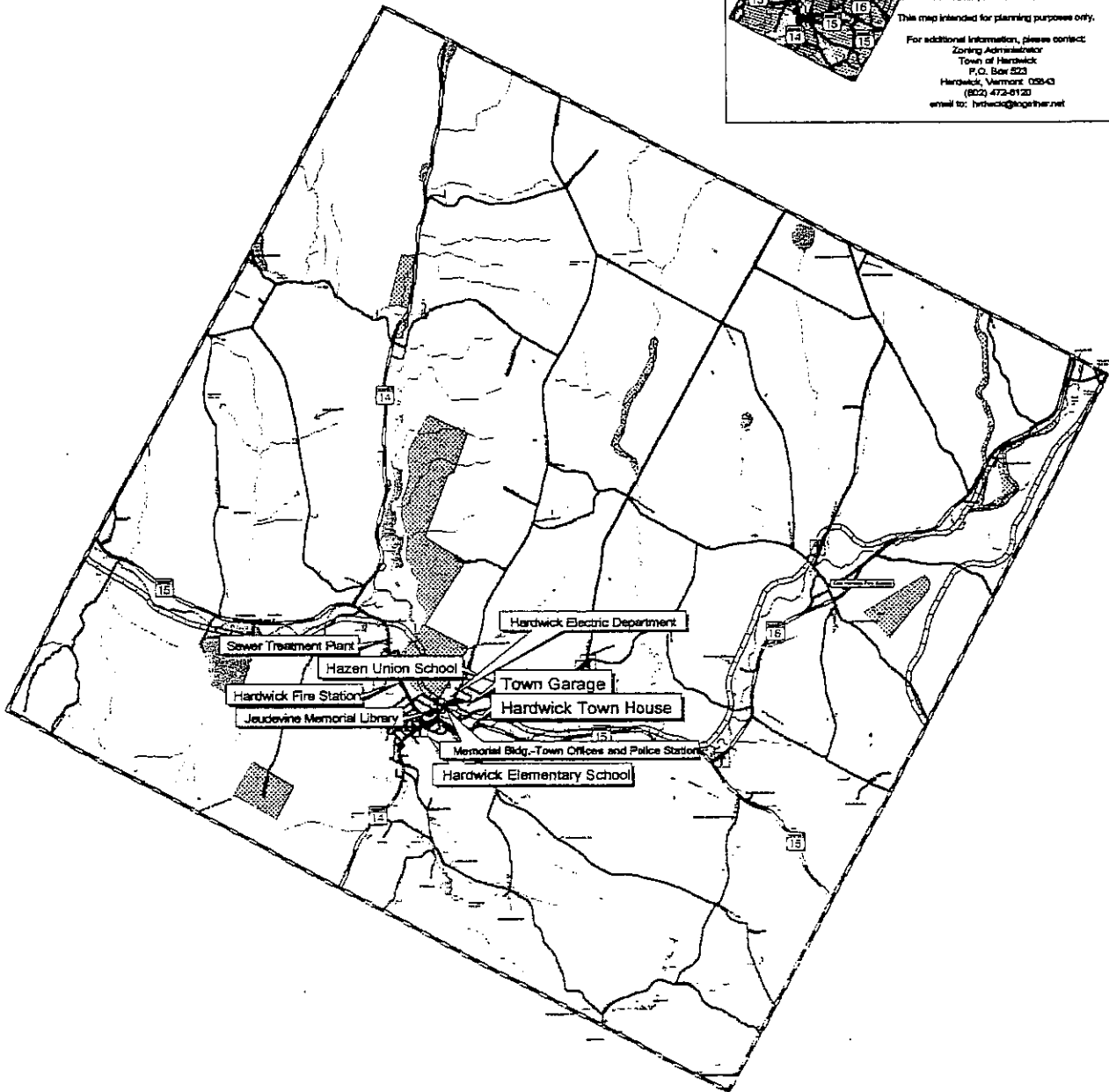
## Hardwick Utilities and Facilities

June 1999



Vermont Coordinate System, Zone 5528  
Inverse Mercator, North American Datum 1983  
This map intended for planning purposes only.

For additional information, please contact:  
Zoning Administrator  
Town of Hardwick  
P.O. Box 523  
Hardwick, Vermont 05843  
(802) 472-6120  
email to: [hwzoning@citynet.net](mailto:hwzoning@citynet.net)



**USGS QUADRANGLES:** Digital raster graphics (DRG)-  
unclassified 1:250,000, 1:250,000, VCGI.  
Raster data that were derived at a smaller scale  
than 1:250,000, transferred to a 1:250,000 scale.

**ROADS:** 1:250,000 Digital Road Conversion Project, WAOI, 1994-1994.

**STRUCTURES:** ERII Project, stateDATA GIS data, 1994-1997.

**SURFACE WATER:** Imported from 1:250,000 digital data using USGS  
7 1/2' quadrangles and 1:250,000 vector infrared aerial  
photography on a 1:250,000 scale.

**WATER BODIES:** National Wetlands Inventory (NWI) data from 1:250,000  
aerial photography, 3 year mapping unit, 1996. Wetlands for planning  
purposes only. Refer to the VNR-DEC, Water Quality Division,  
Wetlands Section for field verification information.  
(802) 244-4851

**ELEVATION:** USGS 1:250,000 DEM, 30m cell size.

**ELEVATION:** VT DEM 30m grid (not available with additional  
feature point elevations VT Mapping Program, 1998-1998.

**PUBLIC CONSERVATION LANDS:** Vermont Conserved Lands Database  
Project 1:250,000, USFWS, 1998.

**LAND COVER:** Classes generated from 1988 LANDSAT Thematic  
Mapper images, 25 meter cell resolution, 2 year worldwide  
mapping unit. For the Lake Champlain Basin and Hardwick  
Forest Lands Studies, St. Mary's College-Quebec/Quebec  
Lab, 1987.

**WELLHEAD PROTECTION AREAS:** SPAs for groundwater located wells,  
40000, 1:250,000 USGS Quadrangles, VNR-DEC-Water Supply Division  
and VT Dept. of Health, 1998.

**SURFACE WATER PROTECTION AREAS:** SPAs for surface water sources  
between 1998, 1998, 1:250,000 USGS Quadrangles, VNR-DEC-Water  
Supply Division and VT Dept. of Health, 1998.

**SOURCE PROTECTION AREAS:** Surface and subsurface areas from or  
through which contaminants are reasonably likely to reach a public  
water source, OPR coordinate information 1994, Holliston MAJL Corp.  
Original dataset: 1:250,000 USGS Quadrangles, VT Dept. of Health,  
SPAs for planning purposes only. Refer to the VNR-DEC, Water  
Supply Division, for additional SPA information, (802) 244-1082

**POLLUTION SOURCE INVENTORY:**  
State "Regulator" Non-Point Source Hazardous Waste Sites, State  
"Regulator" Underground Storage Tanks, Landfills Labeled and  
Inventory, 1:250,000 USGS Quadrangles, VNR, 1994.

**On-site Storage Disposal Systems, greater than 6000 gal, Mixed  
Location from VT Waste Management Division, 1994.**

**DEERYARDS:** VNR, 1:250,000, 1994.

**Property Boundaries and VAST Tract:** Collected by Vermont Department of Forest,  
Parks, and Recreation using Global Positioning System (GPS)  
technology, augmented by survey and deed descriptions, 1997.

- Church.shp
- Hydrants
- Railroad
- Roads
- VT State Route
- Class 1 Town Highway
- Class 2 Town Highway
- Class 3 Town Highway
- Class 4 Town Highway
- Village Street
- Rivers and Streams
- Lakes and Ponds
- Public Lands
- Town Boundary



# Appendix D

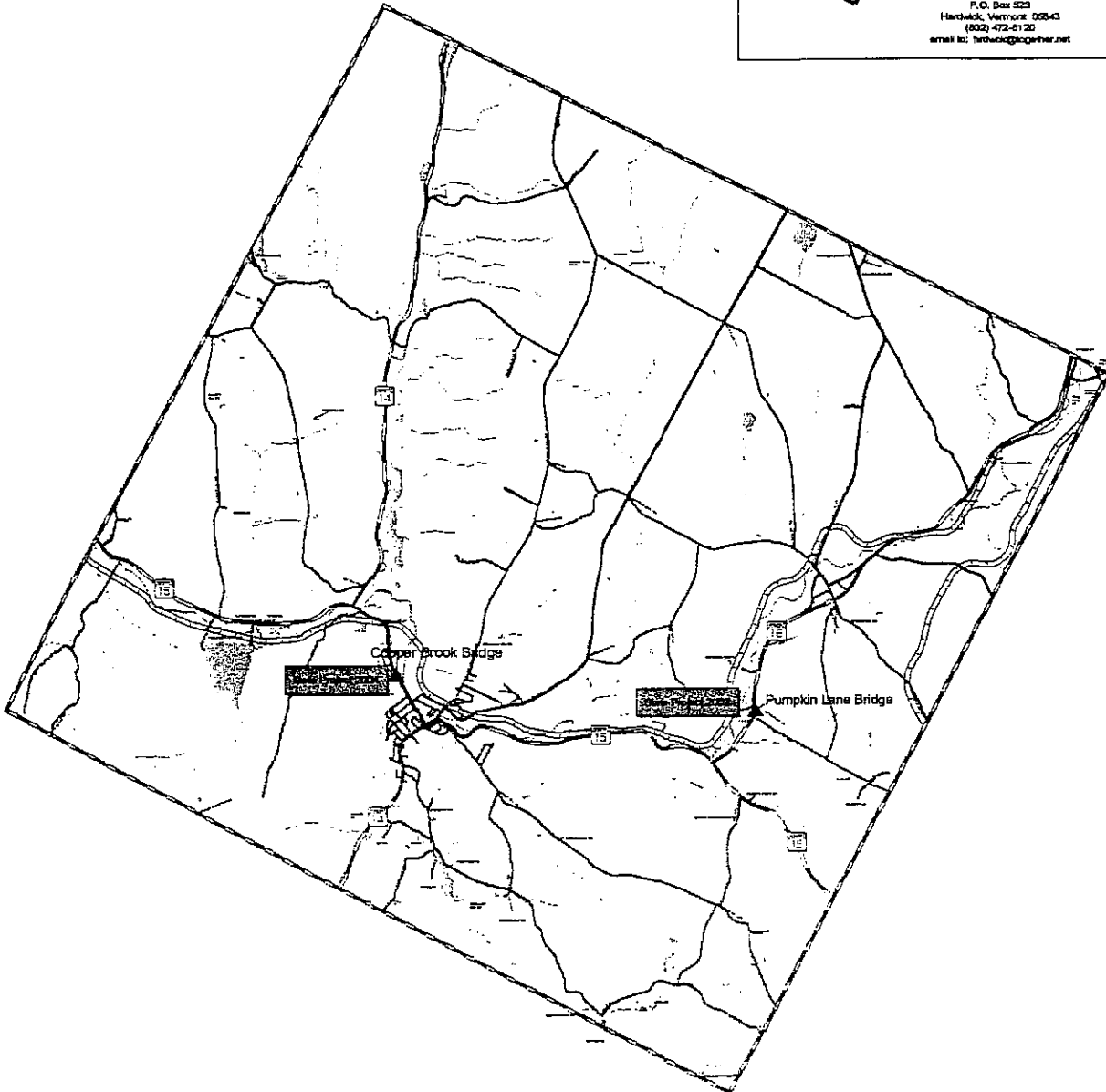
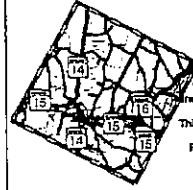
## Hardwick Transportation

June 1999

**GIS**  
Geographic Information System

Vermont Coordinate System, Zone 5025  
Inverse Meridian, North American Datum 1983  
This map intended for planning purposes only.

For additional information, please contact:  
Zoning Administrator  
Town of Hardwick  
P.O. Box 523  
Hardwick, Vermont 05843  
(802) 472-6130  
email to: [hwtdg@compuser.net](mailto:hwtdg@compuser.net)



**USGS QUADRANGLES:** Digital Raster Graphics (DRG)-  
georeferenced TIFF file, 1:24000, VCGI.  
Please note that when displayed at scales larger  
than 1:24000, locational accuracy is degraded.

**ROADS:** 1:5000 Digital Road Centerline Project, VACT, 1991-1994.

**STRUCTURES:** EPTI Project, InterDATA GIS data, 1995-1997.

**SURFACE WATER:** Imported from 1:5000 orthorectified using USGS  
7.1/2 quadrangles and 1:25000 water filtered aerial  
photography for additional vector resolution.

**NW WETLANDS:** National Wetlands Inventory wetlands from 1:24000  
aerial imagery, 3 scene mapping unit, 1996. Wetlands for planning  
purposes only. Refer to the VARR-DEC, Water Quality Division,  
Wetlands Section for official wetlands determinations.  
8002 264-6971

**ELEVATION:** USGS 1:24000 DEM, 30m cell averages.

**ELEVATION:** VT DEM 30m grid point elevations with additional  
feature point elevations VT Mapping Program, 1995-1998.

**PUBLIC CONSERVATION LANDS:** Vermont Conserved Lands Database  
Project 1:5000, UNV-BAL, 2000.

**LAND COVER:** Classes generated from 1986 LANDSAT Thematic  
Mapper images, 25 meter cell resolution, 2 scene minimum  
mapping unit, for the Lotus Charitable Trust and Northern  
Forest Lands Section, Mt. Holyoke College - Geospatial  
Lab, 2002.

**WELLHEAD PROTECTION AREAS:** SPAs for groundwater sources (wells,  
springs), 1:24000 USGS Quadrangles, VARR-DEC-Water Supply Division  
and VT Dept. of Health, 1998.

**SURFACE WATER PROTECTION AREAS:** SPAs for surface water sources  
(streams, ponds, etc.) 1:24000 USGS Quadrangles, VARR-DEC-Water  
Supply Division and VT Dept. of Health, 1998.

**SOURCE PROTECTION AREAS:** Surface and subsurface areas from or  
through which assessments are necessary to reach a public  
water source. GPS coordinates information 1:5000, Healthcom WLS Corp.  
original dataset; 1:24000 USGS Quadrangles, VT Dept. of Health.  
SPAs for planning purposes only. Refer to the VARR-DEC, Water  
Supply Division, for official SPA determinations. 8002 264-6971

**POLLUTION SOURCE INVENTORY:**  
State "Regulated" Non-Point-source Hazardous Waste Sites, State  
"Regulated" Unpermitted Storage Tanks, Landfills (active and  
inactive), 1:24000 USGS Quadrangles, VARR, 1994.

On-site Storage Disposal Systems, greater than 6000 gal. Manual  
licenses from VT Wastewater Management Division, 1994.

**DEERYARDS:** VARR, 1:24000, 1994.

Property Boundaries and VAST Tag: Collected by Vermont Department of Forest,  
Parks, and Recreation using Global Positioning System (GPS)  
technology, augmented by survey and deed descriptions, 1997.

- Railroad
- Roads
- VT State Route
- Class 1 Town Highway
- Class 2 Town Highway
- Class 3 Town Highway
- Class 4 Town Highway
- Village Street
- Rivers and Streams
- Lakes and Ponds
- Town Boundary

Map produced by RVT, 6/1/99.