

FERRISBURGH TOWN PLAN



2006
Amended 2007

On December 4, 2007 the Ferrisburgh Selectboard adopted the following three amendments.

- 1) Eliminate all of the “Scenic Considerations” portions of the newly enacted 2006 Town Plan;
- 2) Eliminate the Upland Conservation Areas as shown in dark green on the Land Use Planning Areas map of Ferrisburgh, on Page 63 of the Town Plan 2006.
Replace it with a designation of RA-5, RURAL RESIDENTIAL, five acre zoning, **just as we have had it for 25 years.**;
- 3) Eliminate the new requirement of a 100 foot buffer from riparian areas along streams, creeks, lakes, rivers, and wetlands of any kind. **Replace it with the State Law that requires a 50 ft. buffer and give farmers a variance for farming.**

FERRISBURGH VERMONT

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Ferrisburgh Town Plan

July 6, 2006

Amended December 4, 2007

Thanks to all those many townspeople who contributed to the up-dated Town Plan.

The hundreds of citizens who answered the survey and provided important guidance, including several classes at the Ferrisburgh Central School; Planning Commission members; Selectboard; Zoning Board; teachers and school principal at the Ferrisburgh Central School; the Volunteer Fire Department, Conservation Commission, Historical Society and those who volunteer with the Lewis Creek Association; Rokeby Museum; Lake Champlain Maritime Museum; the Road Foreman and Tree Warden; farmers and other businesses in town; those who attended planning meetings, edited sections of the plan, and provided information and ideas; the Addison County Regional Planning Commission and Vermont Agency of Commerce and Community Development Municipal Planning Grant; the Greenbelt Alliance, Vermont Land Trust, and Preservation Trust of Vermont; and all those others who provided information and creative solutions to address the complex issues facing rural town planning today.

Cover reprinted with kind permission of Rokeby Museum.

Rowland E. Robinson, *Camel's Hump*. c. 1875. Oil on board.

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1. FORWARD

1.1. INTRODUCTION

A. General Description

The Town of Ferrisburgh, Vermont, comprises roughly 61 square miles or 39,000 acres of land in the Lake Champlain Valley. It is ranked as Vermont’s ninth largest town in area. Like much of the Champlain Valley, the town’s landscape is generally flat to rolling, with few hilly areas, some fine forestlands and extensive areas of excellent, productive agricultural soils. Ferrisburgh is well watered by the Lewis, Little Otter, Dead and Otter Creeks; it also has large areas of ecologically significant wetlands. Ferrisburgh enjoys the longest shoreline frontage of any Vermont town bordering Lake Champlain, 21 miles.

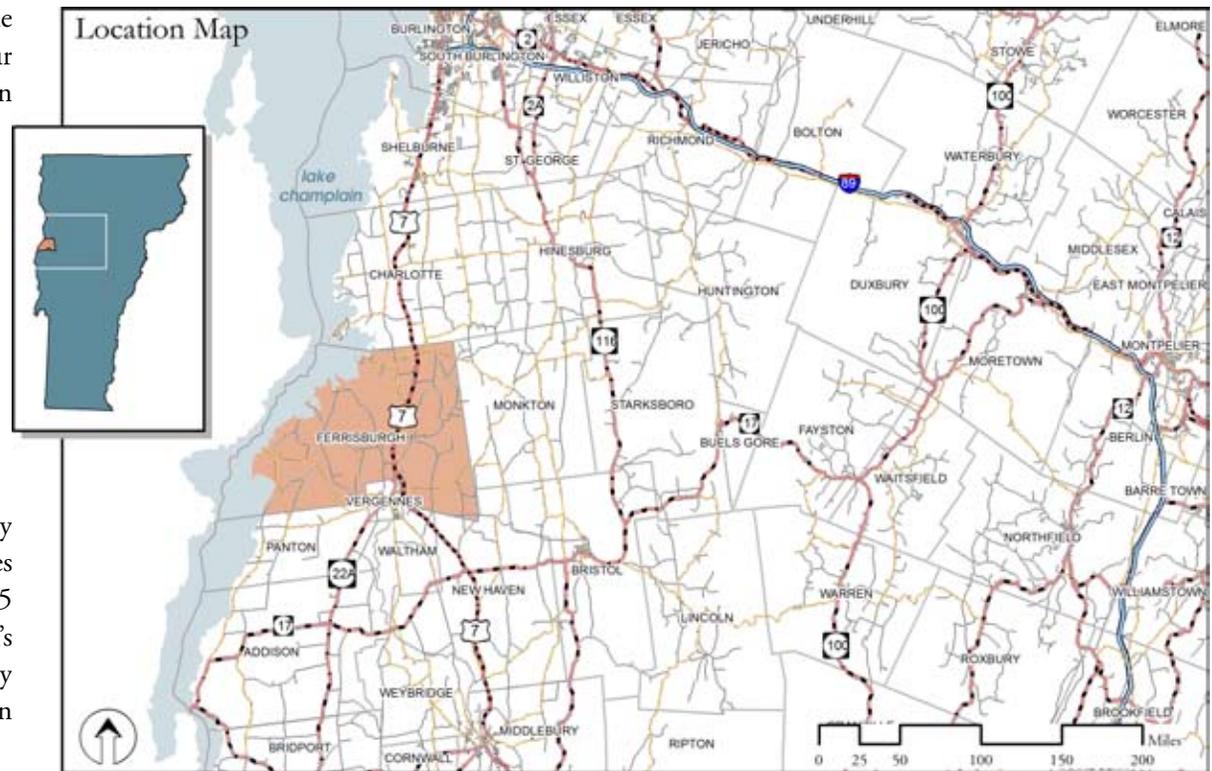
Founded in 1762, Ferrisburgh has a rich history, especially from the pre-colonial era through the Revolutionary War, which is celebrated in our nationally renowned museums, the Lake Champlain Maritime Museum and the Rokeby Museum. Many of the earliest European settlers still have descendants living and working in town or in neighboring communities. Farming, forestry and sugaring are still significant land uses in Ferrisburgh. The town also serves as a rural “home town” for hundreds of residents who work in nearby communities, and as a summer vacation spot for hundreds more from around the nation who seek rest from urban areas.

The busy, north-south U.S. Route 7 highway corridor bisects the town. The communities of Burlington and Middlebury lie roughly 15 miles north and south, respectively. Ferrisburgh’s nearest commercial and service center is the City of Vergennes, about 2.5 miles south of the Town Clerk’s Office.

B. Purpose of a Town Plan

Since the late 1960s, the citizens of Ferrisburgh have regularly assessed the natural and human resources in town and updated their town plan and the associated zoning bylaws and other regulations. The statutory authority for this planning work can be found in Chapter 117 of Title 24 of the Vermont Statutes Annotated (V.S.A.). This chapter was considerably amended in 2004 to meet changing land uses and demands for resources in Vermont. Under state law, town plans must be updated every five years.

A town plan is required to establish the goals and policies that guide future growth, development of land, provision of public services and facilities, and





protect the environment. The plan must include a map of prospective land uses and provide policy guidance for the town's land use regulations and other implementation tools. Thus, local citizens are empowered, through their interpretation of the policies in the town plan, to regulate the manner in which development proceeds in their town. Ferrisburgh residents run this planning and zoning process in order to protect the public health and welfare of the community, while protecting the town's natural resources for future generations.

In recent years there has been considerable development in Chittenden County to the north of Ferrisburgh and it is reasonable to assume that our town will experience increased development over the next five years, especially in connection with growth in employment opportunities in the Greater Burlington area. Since communities exist primarily for the health and enjoyment of those who live and work in them, it follows that the type, location and timing of community growth should be determined by the people of Ferrisburgh rather than left solely to chance or to the decisions of non-resident developers. Comprehensive planning is always better than stopgap measures. The intent of this plan, as others before, is not to propose policies or make recommendations that would eliminate any existing land uses or to stop all future development. Instead, the purpose of this plan is to channel desired growth to appropriate locations within the town, while conserving other more fragile areas.

C. Interpreting the Plan

Goals are long-range aspirations that serve as a broad planning and development guide. A goal describes the end condition that is sought.

Objectives are narrower in scope than goals. They can be either short- or long-term in their description and are achieved by implementing one or more policies. Objectives are measurable components of a goal.

Policies are specific, required actions that, when followed, will result in attainment of an objective. Policies are to be strictly adhered to in all regulatory actions and decisions involving development.

1.2. GUIDING PRINCIPLES

Goal A: To ensure and protect an active, working agricultural and rural landscape with a strong, diverse local economy.

1. Support and promote agriculture of all types, and encourage preservation of farm and forestlands for future generations through conservation easements and other mechanisms.
2. Minimize loss of primary agricultural soils.
3. Promote the adaptive reuse of vacant agricultural buildings, and encourage preservation of old and historic rural buildings.
4. Promote development that directly supports farming and its supporting businesses.
5. Promote and support home occupations and accessory uses of private property for small business growth, especially as it relates to the agricultural and rural nature of the local economy.
6. Promote local-grown food and fiber, farmers' markets and expanded market opportunities for value-added agricultural products and organic food.

Goal B: To preserve and protect significant natural areas, habitats, ecological corridors, wetlands, shorelines and historic features; protect the environment; and provide for recreation.

1. Work with groups – such as the Ferrisburgh Conservation Commission, Lewis Creek Association, Lake Champlain Trust, Champlain Valley Greenbelt

Alliance and the Vermont Land Trust – to protect natural resources, open space, forestland and farmland.

2. Maintain an inventory of critical habitats, wildlife corridors, areas with state rare or endangered species or ecological communities, deer wintering yards and wetlands, and establish policies for their protection.

3. Promote the preservation of historic structures and areas including villages, agricultural structures, public and private historic buildings, and remote areas of town.

4. Protect the Lake Champlain shorelands, wetlands, rivers, watersheds and aquifers; and maintain capacity studies on aquatic systems and wetlands.

5. Provide for recreation in town, including public access to Lake Champlain, Otter Creek, Little Otter Creek and Lewis Creek, walking trails, cross country skiing, snowshoeing, snowmobile trails, bicycle paths, boating and parks.

6. Encourage new development that does not diminish the value of outdoor recreation.

7. Limit development in areas of town where significant environmental and natural resources are located, while promoting development in clearly identified areas away from those critical areas.

Goal C: To provide adequate and safe transportation facilities.

1. Maintain and improve town roads to high levels of safety, including increased pedestrian pathways and bicycle lanes where feasible.
2. Work with the Agency of Transportation (AOT) to limit new highway accesses onto US Route 7.
3. Work with AOT to ensure safety at road intersections, especially those that intersect with US Route 7.
4. Support public transit, car-pooling, and park-and-ride facilities.

Goal D: To plan to meet future needs for utilities, public facilities and educational facilities.

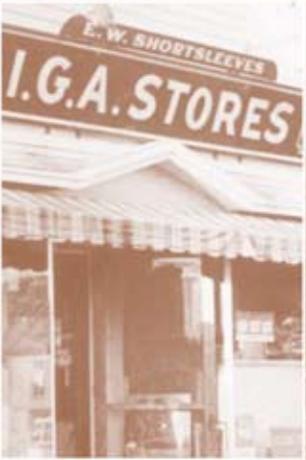
1. Work with local school boards to ensure provision of adequate school facilities to meet needs of students and mandated requirements, and broaden access to educational and vocational opportunities.
2. Improve and maintain all public buildings and facilities, and plan for future needs through ongoing capacity studies and development policies.
3. Assess future potential needs for municipal water and sewer services, and solid waste disposal.
4. Support Ferrisburgh's Volunteer Fire Department and the Vergennes Area Rescue Squad.

Goal E: To encourage energy conservation and light industry.

1. Encourage homes and businesses to conserve energy, reduce waste and recycle.
2. Encourage commercial and industrial uses that are low impact and compatible with the rural character of the town.
3. Provide access for transmission lines, while ensuring private landowner rights.
4. Promote clean, light industry and commercial development in clearly defined areas of the town, while protecting agriculture and associated farming businesses.

Goal F: To ensure low and moderate income housing is available.

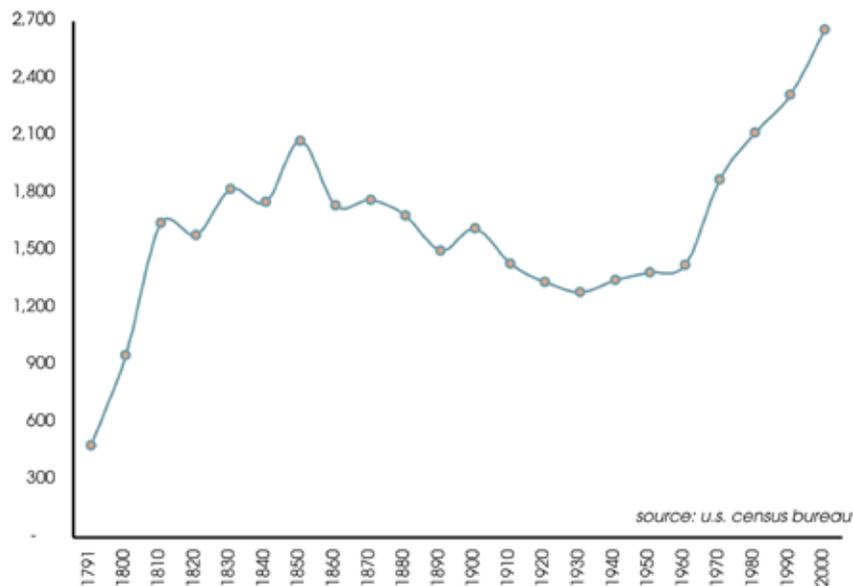
1. Regularly assess housing needs of those persons with low and moderate incomes.
2. Permit and encourage density bonuses and other mechanisms in those subdivisions or PUDs that include affordable housing.
3. Permit accessory dwelling units, multi-family housing and manufactured houses.



2. FERRISBURGH PAST

The spelling of the town's name remains problematic. At first, the name was "Ferrissburgh" or "Ferrissborough," but the extra letters were dropped (most of the Feriss family dropped the extra "s" as well). The village of Ferrissburgh, now commonly referred to as North Ferrissburgh or 'The Hollow', got its first post office in 1838. The postal service decided in 1892 that communities should simplify the spelling of their names by dropping silent letters like Ferrissburgh's final "h." This led to yet another variant spelling for the town's name, which survives to the present. The preferred spelling, however, includes the silent "h."

There are 20 known cemeteries in Ferrissburgh, with many graves dating back to the late-18th and early-19th centuries. Specific family names are often found in the various cemeteries, such as the Collins and Gage cemeteries, which are dominated by those families. Many founding family names are still commonly seen in Ferrissburgh or neighboring towns, such as: Palmer, Hawkins, Ball, Spencer, Danyow, Preston, Collins, Beach and Barnes. It is hard to determine for sure who was in town during the Revolutionary War (1775 to 1783), but there are some graves that appear to mark those who served in the War



Ferrissburgh Population, 1791 to 2000

of 1812 when Fort Cassin at the mouth of Otter Creek on Lake Champlain played a significant role in American history.

Fort Cassin was the site of a critical battle in the War of 1812, where almost 200 men were garrisoned. Thomas Macdonough was assigned the command of the naval forces on Lake Champlain. On May 14, 1814, the British sloop, Linnet, and eight galleys bombarded Fort Cassin. If they had won the British would have blocked the mouth to Otter Creek, remained in control of the lake, and prevented the nearly complete American fleet, which was being built in Vergennes, from launching. Following that battle, the British fleet was forced to retreat. This American victory encouraged more Vermonters to sail over to Plattsburgh and help defeat the British land troops at the Battle of Plattsburgh.

B. Agricultural Heritage

In 1840 in the Town of Ferrissburgh, according to Zadock Thompson's *Vermont 1842*, there was: one gristmill, three sawmills and one store; 495 horses; 5,183 cattle; 25,676 sheep; 871 swine; 2,700 bushels of wheat; 18 bushels of barley; 10,900 bushels of oats; 658 bushels of buckwheat; 8,910 bushels of Indian corn; 12,000 tons of hay; 1,400 pounds of sugar (maple); 6,690 pounds of wool; and a population of 1,755.

Thirty years later, settlement had spread along what is today Route 7, along water routes and on higher ground. Much of the town's land was cleared of trees and sold off to make way for sheep and later for dairy farming. Thus, by 1850, the town's population reached its 19th century high level of 2,075, thereafter declining over the next century. The next major period of population increase began in the late-1960s and continues to this day, with a population of 2,650 in 2005.

By the 1880s, Ferrissburgh was famous for its merino sheep both for wool and breeding stock and there were around seven merino sheep producers in town. It is from Vermont that the famous merino sheep breeding stock were subsequently dispersed around the world. In addition to the sheep industry, dairy farming, several creameries and arable crops provided a rich agricultural economy for both local and regional markets, as we still do today.

C. The Society of Friends and the Robinson Family

The original settlement of Ferrisburgh included many Quakers, members of the Society of Friends. There are several cemeteries that reflect these early settlers, including names such as Hazard, Fields, Dakin, Palmer and Prindle. One such Quaker family, the Robinsons of North Ferrisburgh, has become well known nationally. Members of the Robinson family were millers, farmers, abolitionists, authors, naturalists and artists. The Robinsons initially moved to Ferrisburgh from Rhode Island in 1790 when they built a farmstead along what is today Route 7. This building is listed on the Vermont Register of Historic Places and is a National Historic Landmark. The farmstead is now open to the public as the Rokeby Museum, a testament to the agricultural and Quaker heritage of Ferrisburgh. The Rokeby Museum is one of the best-documented Underground Railroad sites in the country. Rowland Thomas and Rachel Gilpin Robinson sheltered many fugitive slaves at their home during the decades of the 1830s and 1840s.

There were several Quaker Meeting Houses in town. One was in North Ferrisburgh along Old Hollow Road, and another was at the Friends Cemetery on Lewis Creek off Quaker Street. There the sign reads, “ This marks the site of the Ferrisburgh Meeting of Friends, set off from Danby MM, June 30, 1801. Meeting laid down March 1945.”

Rowland Robinson organized an anti-slavery convention, which was held in Ferrisburgh during July of 1834. Frederick Douglas delivered a fiery speech in opposition to slavery. The convention was held where the Union Meeting Hall, built in 1840, now stands in the center of town.

Quakers do not normally go to war, and as conscientious objectors some Ferrisburgh residents were arrested, imprisoned, tortured and killed for their beliefs. In 1863 Peter Dakin of Ferrisburgh, Lindley Macomber of

Grand Isle and Cyrus Guernsey Pringle [Prindle] of Charlotte, were arrested and sent to Camp Vermont on Long Island in Boston Harbor. Later they were shipped to Virginia where they were tortured. Eventually President Lincoln relieved them of military duty and sent the badly injured men home to Vermont. Pringle went on to become the premier American botanist of the 19th century and the Herbarium at the University of Vermont is a testament to his life's work.

D. Transport Corridors and Early Commerce

The navigable waters of Otter, Little Otter and Lewis Creeks, emptying into Lake Champlain with its direct connections through to the Hudson River and New York City to the south via the Champlain Canal, and the St. Lawrence River and Montreal to the north, were of critical significance in the history of early settlement. The Otter Creek is navigable eight miles upstream from Lake Champlain, and the Little Otter for three miles. Water was the cheapest means of transporting goods to market, thus Lake Champlain was the interstate highway of the 19th century, with a dozen ferries on the lake and sleds with oxen in winter.

The town's rivers were also a source of energy to power the needed grist and woolen mills. Both the Little Otter and Lewis Creeks were noted for their excellent waterfalls, which provided power for mills. Mr. Hazard operated

a large woolen fulling mill upstream of the falls in North Ferrisburgh. There was also a diversity of commodities shipped out, from merino sheep to locally caught pike and bass, to bricks made from the locally abundant clays. These water routes also provided transport for the lumber shipped out from Ferrisburgh, including maple, beech, basswood and butternut trees renowned for their high quality. Timber was plentiful in the town and provided a lucrative harvest for both local building and for transport via Lake Champlain to New York City.



Rokeby, The Robinson Family Home

During the early years of the Revolutionary War, through its location on Lake Champlain, Ferrisburgh was witness to many of the great pivotal moments in American history. Lake Champlain is one of the most historic bodies of water in North America. Researchers estimate that as many as 300 shipwrecks have occurred during its maritime history. On October 11, 1776 following the battle of Valcour Island, Benedict Arnold fled the British offshore from Ferrisburgh. A replica of his ship, the Philadelphia, is at the Lake Champlain Maritime Museum at Basin Harbor, the original being in the Smithsonian Museum in Washington D.C.

After the Revolutionary War, in 1789, Captain Platt Rogers of Peekskill, New York established a ferry and a shipyard at Basin Harbor with the labor of what were probably free African Americans as well as some local workers. In 1790, he built a substantial stone house at Basin Harbor. This homestead is still standing. Platt Rogers owned about 2,000 acres of land on both the Vermont and the New York sides of Lake Champlain, and one of his family members founded Plattsburgh. In Ferrisburgh, he owned essentially all of the shorelands from Button Bay to the mouth of Lewis Creek. Platt Rogers died in 1798, and following his death the Storms family, who were free blacks, were given lands at Kellogg Bay. The Storm family is buried in the graveyard at Basin Harbor and may have been the first black family in Vermont.

Platt Roger's daughter married a Winan, and the Winans operated an inn and tavern at Basin Harbor beginning in about 1798. From 1804 to 1812, there was a naval shipyard at Basin Harbor. This shipyard moved to Vergennes after the War of 1812. The Winan brothers built the first steamboat on the lake in 1809, called the Vermont, which was only the second steamboat built in America. The Vermont was built in Burlington at what is today King Street. The first steamboat was Robert Fulton's Claremont, and the Winan brothers built the hull for that ship in Poughkeepsie before they relocated to Vermont.

The Beach family may have originally settled in Monkton, but the first record in Ferrisburgh is Stephen Beach in 1800, settling about a mile south of Basin Harbor. In 1809 one of the earliest schools in Vermont was built in this area and later, in 1818 the schoolhouse which is on Schoolhouse Road today, was

re-built with stone quarried on Beach property. When the building ceased being a school, the property reverted to the Beach family. The Beach house was built in 1837 south of Basin Harbor. Some records suggest that the first Ferrisburgh Post Office was also located at Basin Harbor, beginning in about 1800 and continuing until the 1950s.

Along the lake at Kingsland Bay, Gideon Hawley built a stone house in about 1790 to serve as an inn. This building, located in Kingsland Bay State Park, is on the state's Register of Historic Places. Based on accounts of the time, it is reasonable to assume that Samuel de Champlain stopped at Kingsland Bay in 1609. Other noteworthy visitors included Ethan Allen in 1776, Ben Franklin in 1776 and Benedict Arnold in 1777.

Long Point, in the northwest corner of Ferrisburgh has 52 camps built mostly between 1890 and 1940. These are typically wood frame two-storey buildings with large porches. The North Road was the first loop to be developed, and most houses were fairly simple. However, some were large summer homes, with servants' quarters. Architect Percy Griffin designed one such sprawling summer residence, Woodbridge Hall (1896), for Walter Scranton, which is located prominently between Porter and Kingsland Bays. The style is somewhat like an English manor. After Scranton, a bank president in Vergennes, hurriedly left when substantial funds were found missing from his bank, the property was sold to Charles and Jessica Swift of Middlebury.

The ease of travel to Ferrisburgh via Lake Champlain also provided a relatively easy access for recreational development in the late-19th century, with "camps" built along the shoreline. At Kingsland Bay, Ecole Champlain, a girls camp where French was taught, was used until the 1960s; the building is still standing. In the period 1910 to 1930, many summer recreational camps for children were established in Vermont. One such camp in Ferrisburgh was Camp Marbury for girls, at Basin Harbor, with buildings in an Adirondack rustic style.

The north-south road (now Route 7) was, and remains, the main road along the western side of Vermont south of Burlington. In the 19th century, there were a number of staging locations for horse-drawn vehicles. For example in

North Ferrisburgh, there was a hostelry on Stage Road. On the east side of Route 7 at the corner of Old Hollow Road, stood the large Martin Hotel that, like so many fine buildings in town, burned down not many decades ago.

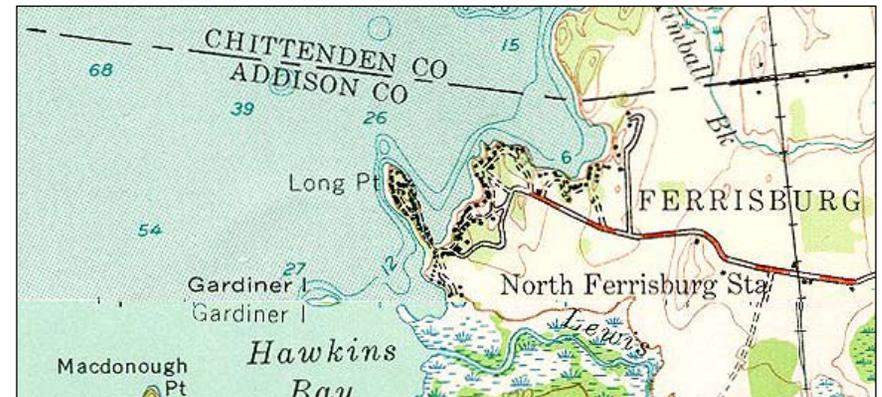
The railroad was established by the mid-19th century with two railway stations, one in North Ferrisburgh and one west of Ferrisburgh Center.

E. Historic Settlement Patterns

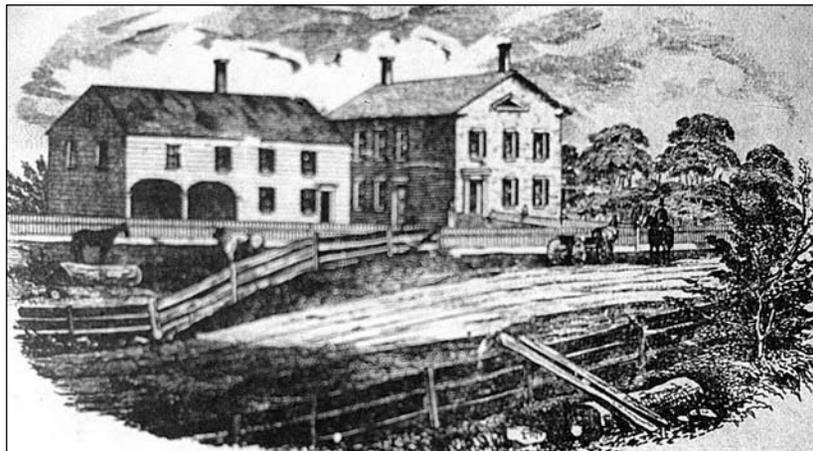
The location of homes, farms and businesses still reflect Ferrisburgh's history. Some Vermont towns have a clear single town center defined by a densely developed village, often around the village green, and scattered settlement in the rural land around. Other towns are compact hill or mountain towns constrained by topography. Many rural towns, like Ferrisburgh have several centers. Ferrisburgh's settlement pattern reflects the flat land and transport corridors used by early settlers. The swampy wetlands associated with the Otter, Little Otter and Lewis Creeks have tended to restrict settlement. Settlement patterns show regularly scattered houses on non-swampy land along the shores of Lake Champlain, at ferry landings, up the navigable rivers, and along the main north-south road (Route 7).

North Ferrisburgh appears to have been the most densely settled area of town historically, with the first permanent European settlement there in 1784,

and a gristmill built there by Robert Hazard in about 1792. There was also an early mill on Little Otter, west of Ferrisburgh Center together with a grist mill and creamery, below Frazier's Falls. Here too was the first framed house in town. In 1806, a brickyard opened along Otter Creek, shipping to points all along Lake Champlain. In 1839, a Methodist Church was built in North Ferrisburgh. A Union Meeting Hall was built in 1840 at the town center using bricks from the brickyard near the Gage cemetery. The Union Meeting Hall is listed on the state's Register of Historic Places.



A 1940s Map of Long Point



The 1810 David Hazard House Located on Route 7



The Martin Hotel at the North Ferrisburgh Crossroads

The 1871 Beers Atlas shows the fairly compact village in North Ferrisburgh east off Route 7. This village consists of one 'main' road with a minor road up Champlin Hill to the little cemetery. The village also extended to the area around the waterfalls on Lewis Creek where there were a large number of commercial and residential buildings including: a forge, blacksmith, sash and blind factory, woolen mill, wheelwright and one of the earliest schools in town. There was also a 19th century scattering of houses at several locations along Route 7, including in the center of town, associated with the crossroads and the railroad.

In 1862, School House Number 17 was built at the intersection of Little Chicago Road with Route 7. Today that building houses the Town Clerk's Office. A short way north of this building in 1868, the Congregationalists built an elegant Italianate style church, which later became the Ferrisburgh Grange Hall. This building was burned down in 2005, but the town is planning to rebuild it as an historical replica to become the new Town Offices, Grange Hall and Community Center. By 1871, there were 17 schoolhouses and school districts in town.

By 1900, North Ferrisburgh had many businesses including: a flour mill, two grist mills, and three general stores owned by E.A. Preston, F.E. Baker and



The Rutland Railroad Depot in North Ferrisburgh (Moved to Route 7)

A.P. Williams. Dr. Ed Collins was the physician in the Hollow at that time. The big gray house in the Hollow, called the opera house by some, was the Allen House, built in 1884. The ground floor housed Preston's general store and the post office, and above there was a large dance floor and stage area for music and drama. The original backdrops for the stage curtains used in the old Grange Hall are still located in that building.

Houses in Ferrisburgh tended to be located on the 'main' roads, not minor side streets. There thus developed a regular distribution of houses along what is today Route 7, a pattern that was reinforced by the relatively close path of the railroad. Ferrisburgh does not show the high-density, concentrated linear pattern such as found in Pittsford further south on Route 7. Ferrisburgh is served by three post offices, namely North Ferrisburgh, Ferrisburgh and Vergennes, and has several centers of settlement.

Ferrisburgh's historic settlement pattern is, therefore, low-density linear along Route 7; a distinct, primarily 19th- century compact village in the Hollow in North Ferrisburgh; a dense string of buildings along the lakeshore, and less dense along river transport routes; and a less distinct clustering of houses around the Greenbush Road intersection with Route 7 and at the Little Chicago Road intersection with Route 7.

F. Reference Section

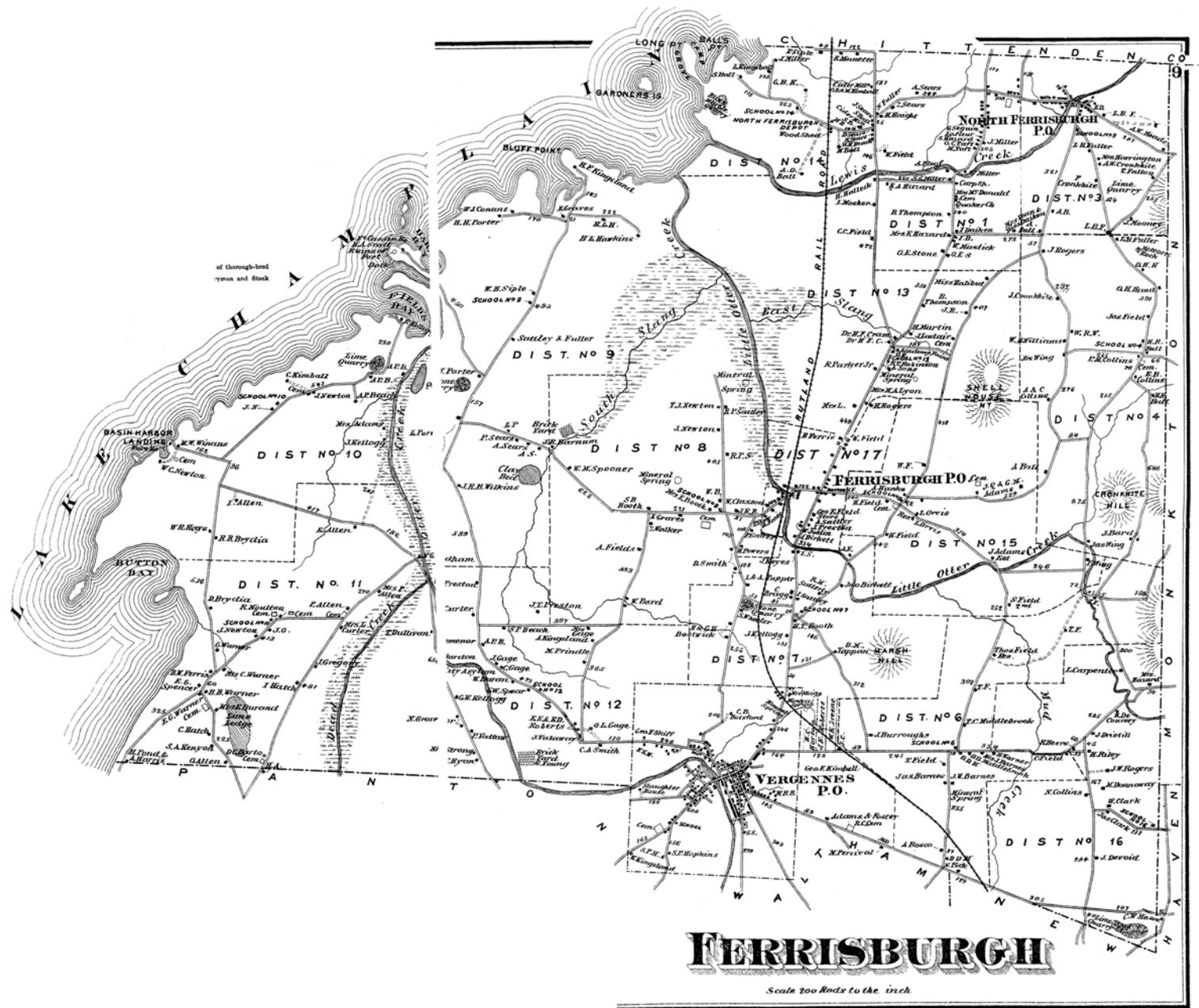
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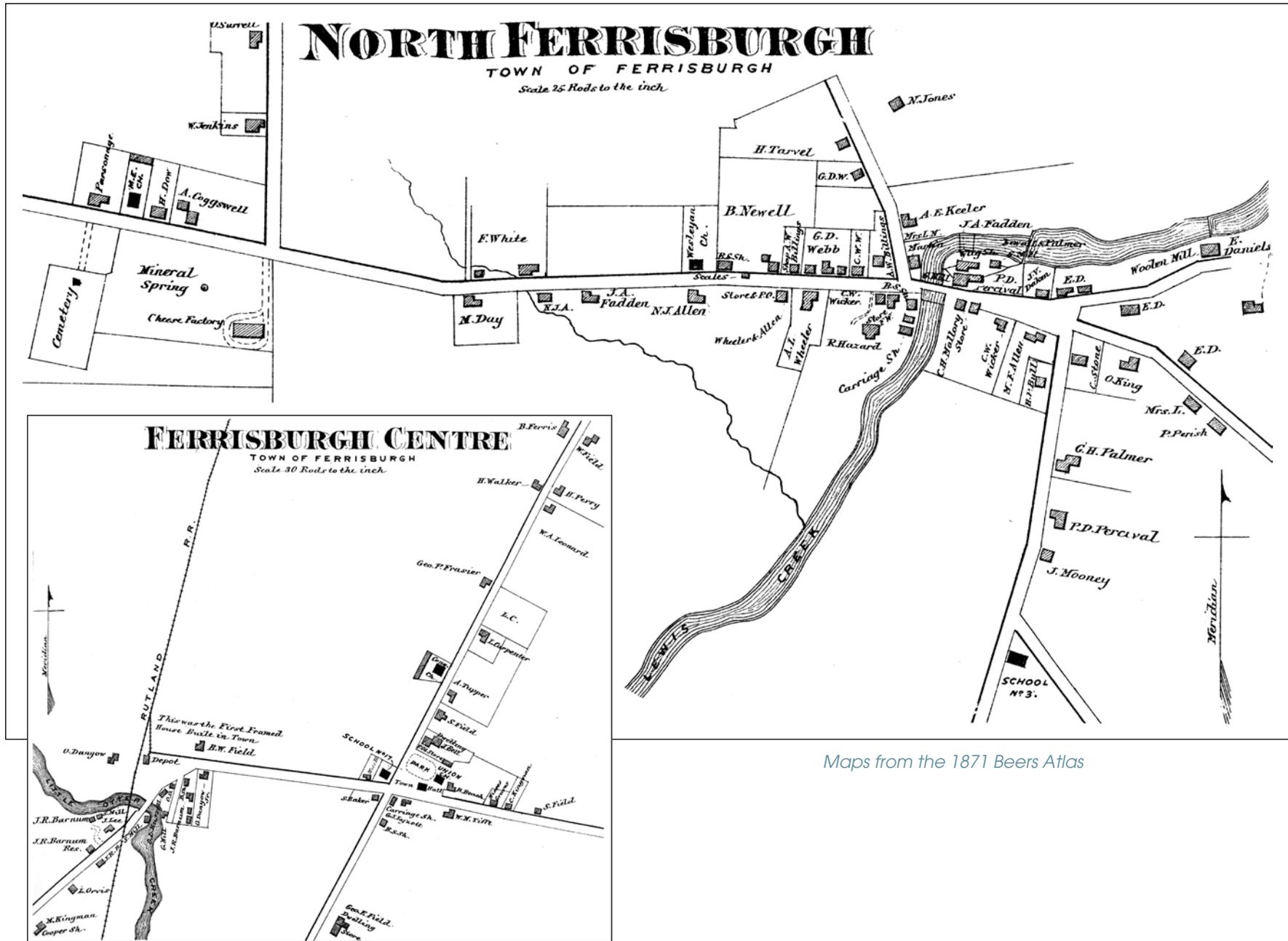
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Map from the 1871 Beers Atlas

Ferrisburgh Town Plan
2006 to 2011



Maps from the 1871 Beers Atlas



3. FERRISBURGH PRESENT

3.1. NATURAL RESOURCES

A. Overview

Ferrisburgh has a wealth of natural areas amidst a landscape of dairy farms. The relatively flat terrain has a handful of limestone cobbles and Shellhouse Mountain, which is 700 feet high. Most of the land is below 250 feet, with productive marshlands and three large rivers flowing into Lake Champlain.

B. Geology and Topography

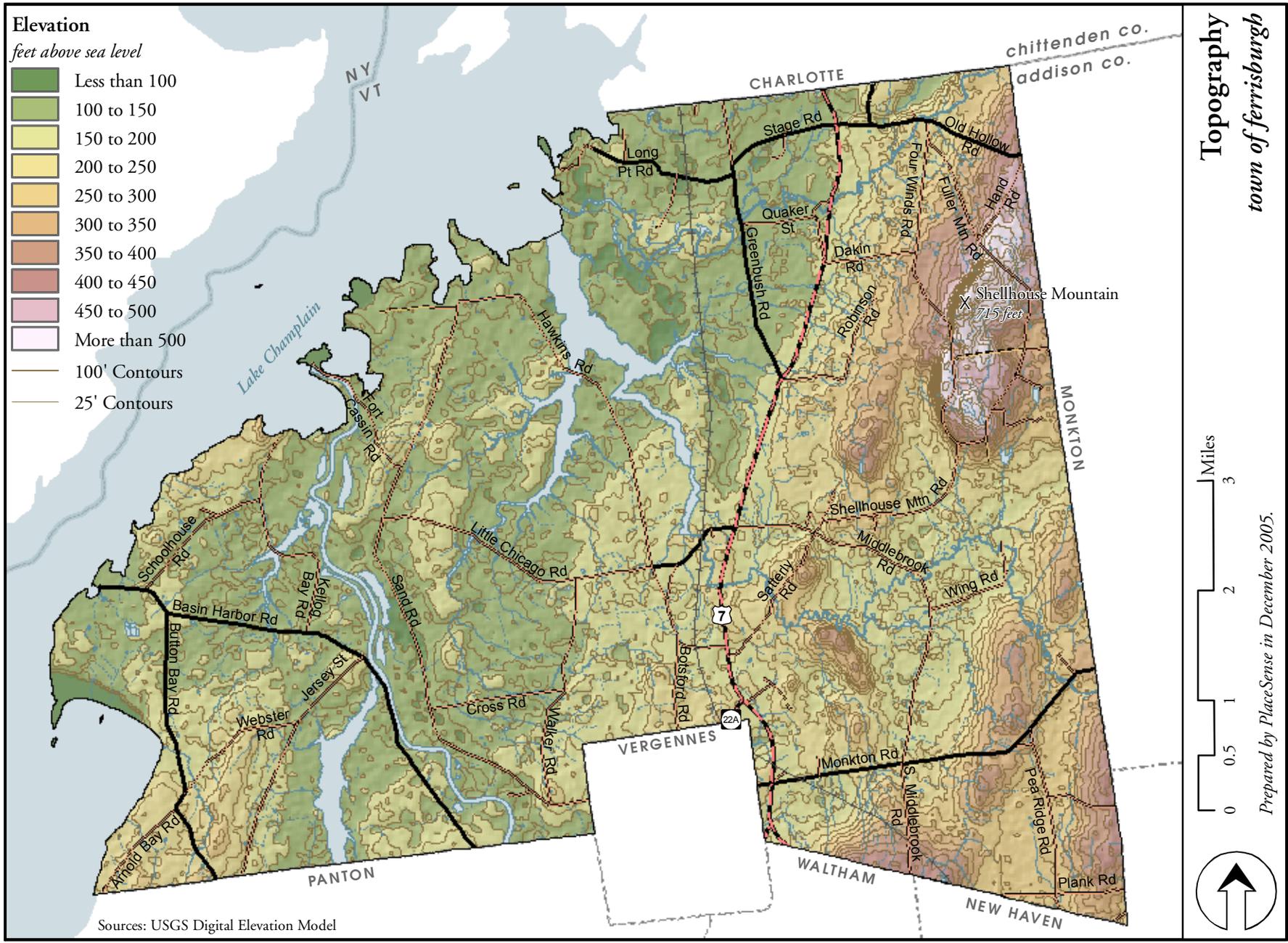
The mountains of the Adirondacks to the west, across Lake Champlain, are some of the most ancient rocks in North America. They are part of a Continental Shield area of hard igneous and metamorphic rocks such as granites and amphibolites. The sediments that were found on the floor of the ancient seas located east of this Shield area were eventually pushed, folded and subsequently faulted by mountain-building tectonic activity caused by continental drift. This mountain building first produced sedimentary rocks like sandstone, limestone and shales that may have been thrust up into mountains of spectacular height (comparable to the present day Himalayas). These rocks were then subjected to great heat and pressure to give us the hard metamorphic sandstones, quartzites, dolomites, marbles and slates of the Champlain Valley, and the schists found east of Ferrisburgh in the Green Mountains of Vermont (part of the Appalachian Mountain Chain). All of these former mountain features have long since been eroded down to the town's present-day moderate hills and low elevation topography. Because Ferrisburgh's geological history included periods when the area was covered with warm, shallow salt water, some of the bedrock in town contains fossil beds, particularly in the Button Bay area.

Between the Adirondacks and the Green Mountains, in a trough created by geologically old tectonic fault lines, lies the ancient deep Lake Champlain of today. Ferrisburgh's bedrock is sliced by many of these ancient faults, some of which have created the steep west-facing cliffs on Shellhouse and Fuller Mountains in the eastern section of town. Ferrisburgh remains in an area of moderate earthquake risk, as does much of the Northeast.

Much more recently in the geological time scale, at the close of the Pleistocene Ice Age as the continental glaciation receded northward, post-glacial Lake Vermont occupied the Champlain Valley about 13,000 years ago. The level of this ancient lake was several hundred feet higher than the present-day Lake Champlain, and thus Ferrisburgh would have been mostly underwater for



A View of the Champlain Valley in Ferrisburgh



several hundred years. On the floor of this lake were deposited the silt and clay sediments and soils that are now found extensively throughout town. This glacial lake was immediately followed by the Champlain Sea, a salt-water bay of the North Atlantic Ocean, which occupied the Champlain Valley for about 2,000 years (from about 13,000 to 11,000 years ago). The Champlain Sea left more silts and clays, and some wave-cut terraces and beaches, such as on the west flank of Mount Philo, just north of Ferrisburgh.

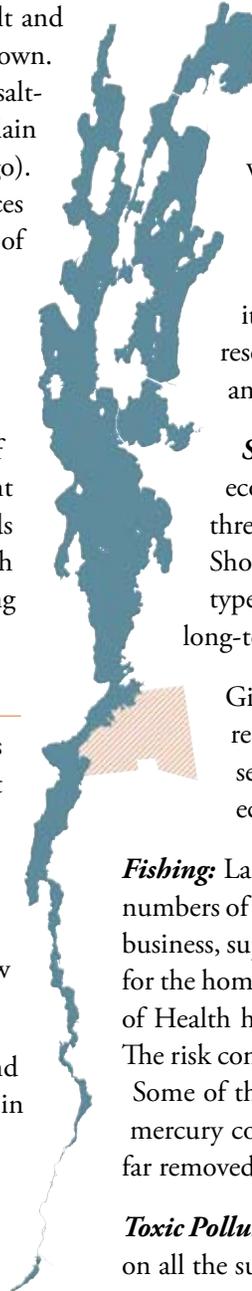
This geological history has provided us with mineral deposits, such as iron ore, which was mined throughout the 19th century in Ferrisburgh and surrounding towns, as well as the limestone that was used in many foundations, such as at the Union Meeting Hall. In addition, some of the clay deposits, which originated as bottom sediments in Lake Vermont and the Champlain Sea described above, were used in local brickyards both for local use, and for sale to other towns. However, compared with many other towns in Vermont, extraction of earth resources, including sand and gravel, is minimal in Ferrisburgh today.

C. Surface Waters

Lake Champlain is the sixth largest freshwater lake in the United States and is 112 miles long with many bays and over 70 islands. The deepest point in the lake is 392 feet, off Long Point in Ferrisburgh, towards Split Rock. Because the surface of Lake Champlain is only about 95 feet above sea level this makes Lake Champlain in Ferrisburgh one of the deepest points in the U.S. at about 297 feet below sea level compared with Death Valley in California which is only 282 feet below sea level. The average depth of the lake is only about 64 feet.

The mean water level of Lake Champlain is 95.5 feet above sea level, and the Federal Emergency Management Agency (FEMA) sets flood level in Ferrisburgh at an elevation of 102 feet above sea level.

Lake Champlain is an extraordinarily important environmental, recreational and economic resource for the Town of Ferrisburgh and the State of Vermont. Lake Champlain's water serves as drinking



water for many, if not most, residents and visitors. The lake's relatively clean water and aesthetic beauty continue to draw business and tourists to the region. Thus, water quality is critical for the lake to continue as a major regional drinking water supply and to sustain a healthy fishery and activities such as swimming and boating which, in the recent town-wide survey virtually all residents identified as extremely important recreational activities. The significance of Lake Champlain and its watershed have been underscored with the designation of this resource and its environs - including the Adirondack Mountains - as an International Biosphere Preserve.

Shorelands: Ferrisburgh has about 21 miles of shorelands, with ecologically significant habitats for state rare, endangered and threatened species scattered along most of the length of the shoreline. Shoreline protection against habitat loss, erosion and pollution of all types is critical for both wild plant and animal species and for the long-term recreation and camp use by humans.

Given the importance of Lake Champlain for fishing and other recreation, the recently arrived alewife and the constant problem of sea lampreys and zebra mussels suggest a critical need for aquatic ecosystem conservation policies and comprehensive planning.

Fishing: Lake Champlain is nationally renowned for its fisheries in terms of numbers of fish, size and species diversity. This fishery is a multi-million dollar business, supporting both local and national fishing related business, and food for the home table. It should be noted however that the Vermont Department of Health has issued Health Advisories for fish caught in Vermont's waters. The risk comes primarily from heavy metals such as mercury, and from PCBs. Some of these pollutants were deposited many decades ago, others, such as mercury continue to be deposited by air blowing in from industrial regions far removed from Vermont.

Toxic Pollution: Long-term air and water pollution contribute a heavy burden on all the surface waters in town. The most recent reports, Health Advisories

and updates, can be obtained from the Vermont Department of Health (see reference section below).

Sea Lamprey: Sea lamprey, which have recently been determined to be an ancient native species in Lake Champlain, spawn in several rivers flowing into Lake Champlain. These creatures attach themselves to fish and impact the multi-million dollar tourist fishing business. Thus, there is a periodic poisoning program along Lewis Creek in Ferrisburgh, undertaken by the U.S. Fish and Wildlife Service, Vermont Department of Fish and Wildlife and the New York State Department of Fish and Wildlife. Exactly how this poisoning program will affect the long-term aquatic ecology is not known, but recent



A View of Kingsland Bay

research suggests that it has negative effects on rare and endangered native species.

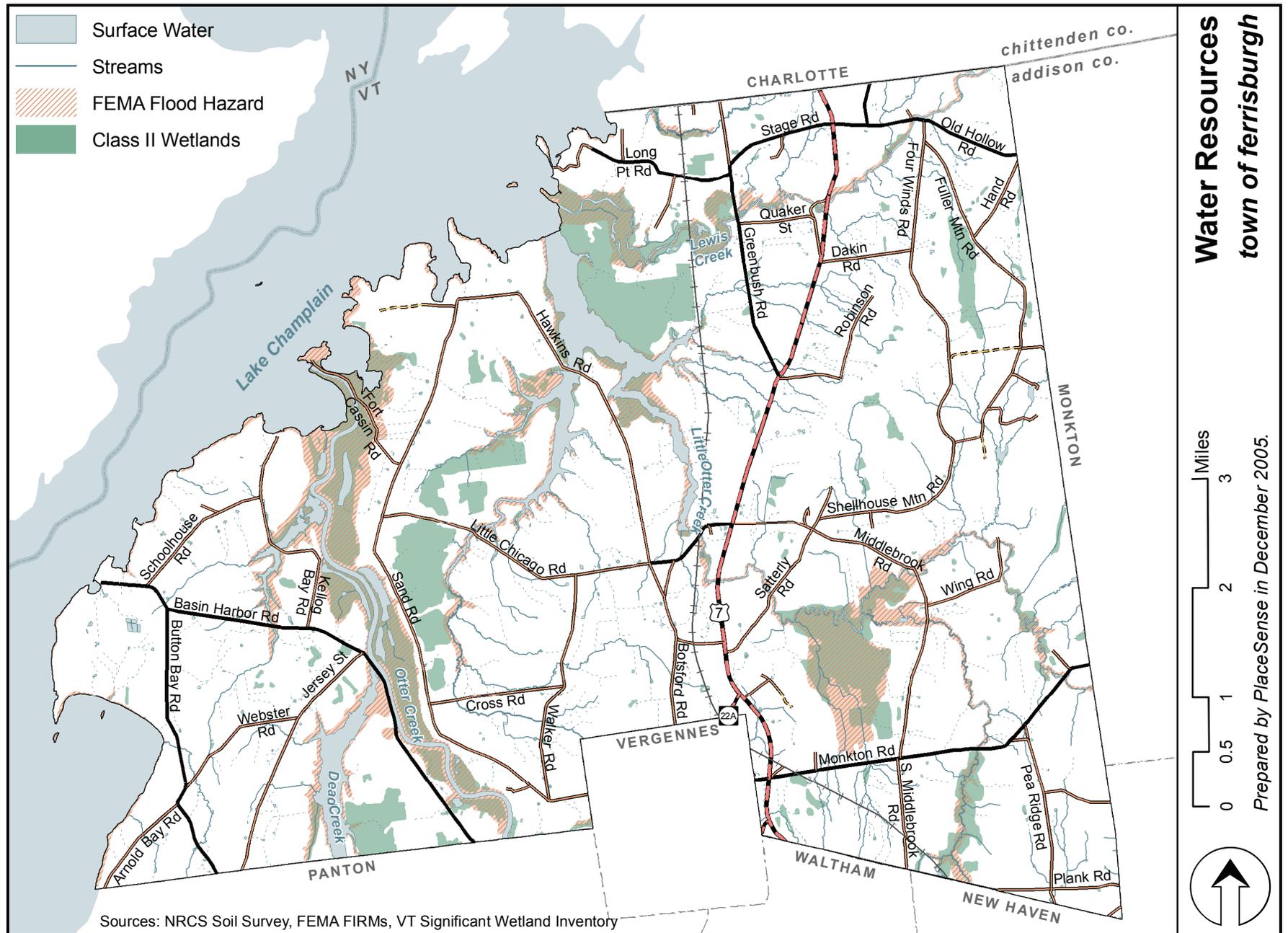
Zebra Mussels are an introduced species causing havoc in the lake. These are small, very sharp-shelled mussels that encrust all the historic shipwrecks and block freshwater intake systems for houses and hotels, including Basin Harbor, and the Vergennes/Panton Water District intake off Arnold's Bay.

Streams and Rivers: Ferrisburgh has four substantial rivers or streams with important ecological and human functions, Otter, Little Otter, Lewis and Dead Creeks. These streams flow into Lake Champlain. The flow rate in Otter Creek is the third greatest in Vermont after the Winooski and Missisquoi Rivers. Otter Creek drains a land area of about 1,100 square miles; only the Winooski drains a larger area. Lewis Creek drains about 81 square miles.

All Ferrisburgh's surface waters are state designated as Class B waters of recreational use, not drinkable. Agricultural runoff is the primary cause of surface water pollution, leading to some eutrophication and algae blooms in lake bays. Nutrient enriched agricultural runoff is high along Otter Creek. In addition, poor septic systems contribute pollutants from some homes along all the rivers and lakeshore.

Otter Creek: The main stem of the Otter Creek, at 100 miles long, is the longest flat-water boating river in Vermont. The most significant cause of water quality degradation in Otter Creek Watershed is sedimentation. The second major cause is pathogens, from wastewater treatment facility outfalls, animal waste runoff and failing septic systems adjacent to surface waters. The third major cause is nutrient enrichment, which is largely a result of agricultural runoff.

As part of its Watershed Improvement Project, the Vermont Agency of Natural Resources (ANR) is writing a comprehensive plan for protecting and improving water



quality in the Otter Creek Watershed. The Otter Creek Watershed is the area that drains into the Otter Creek and its tributaries. These watersheds includes portions of Chittenden, Addison, Rutland and Bennington counties.

The Otter Creek Watershed planning process will identify watershed communities' issues and concerns regarding water quality. This collaborative effort will eventually lead to a series of recommendations for improving water quality. Public meetings held in the spring of 2004 in Addison County identified the following issues of concern: water quality, stream bank erosion and general instability, riparian habitat and buffers, public involvement, and high levels of pathogens. As part of the Otter Creek Watershed Plan, ANR and other partners will develop a proposal for the long-term management goals for all waters in the watershed, including rivers, streams, lakes and ponds.

The smaller watersheds of Little Otter Creek and Lewis Creek, both found north of the Otter Creek watershed, are also included in the Agency of Natural Resources comprehensive plan.

National Significance: Lake Champlain was designated a resource of national significance by the Lake Champlain Special Designation Act (Public Law 101-596), which was signed into law in 1990. The Act's goal was to bring together people with diverse interests in the lake to create a comprehensive pollution prevention, control and restoration plan for protecting the future of the Lake Champlain Basin. This goal has been realized by the plan, *Opportunities for Action*. The Lake Champlain Basin Program is currently working to implement the plan by addressing water quality issues, land and water use, and recreational and educational opportunities throughout the basin. *Opportunities for Action* identified four priorities for the Lake Champlain Basin, three of which are directly related to erosion and pollution in the lake:

- Reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the lake.
- Reduce toxic contamination to protect public health and the Lake Champlain ecosystem.

- Minimize the risks to humans from water-related health hazards in the Lake Champlain Basin.

Ferrisburgh is not the only town contributing pollutants into the lake's waters, however. Most notably the Otter Creek watershed includes many towns, all of which contribute to the pollutant discharge both directly and indirectly. Thus, inter-town and regional cooperation is critical to long-term success in pollution reduction into the lake.

Lewis Creek: Lewis Creek flows from its headwaters in Starksboro 33 miles through the towns of Monkton, Hinesburg and Charlotte before emptying into Lake Champlain in Ferrisburgh. Along the way, it drains 52,000 acres and flows past farms and villages, through deep woods and open pastures, over ancient ledges and under more than 20 bridges.

From Starksboro to Ferrisburgh, the creek is a haven for diverse wildlife including mink and otter, bobcat and fisher, kingfisher and great blue heron, native brook trout and others. Their habitats vary from mile to mile: from overhanging forests where trout dart in shaded pools, to marshy areas where spring peepers announce the arrival of warm weather, to open pastures where Holsteins graze and blackbirds and bobolinks nest nearby.

Lewis Creek has also been a focal point for human settlement as in the 1800s settlers cleared the land and built mills and dams to harness the water's power. Many established family farms to cultivate the fertile valley floor. During this time, the Lewis Creek watershed began to experience deforestation, stream bank erosion, and sedimentation. Over the last century, Lewis Creek recovered much of its natural beauty. Today the mills are quiet, but the creek's floodplains remain an important agricultural resource, and its lazy wanderings and dramatic waterfalls have become critically important to wildlife and to people seeking refuge from urban life.

However, as development continues to expand into rural areas, the Lewis Creek watershed is once again becoming threatened by habitat degradation and fragmentation. Since 1990, the Lewis Creek Association (LCA) has been working with these towns and their citizens to protect the Lewis Creek, its tributaries, and the watershed as a whole. LCA works is involved in the

following efforts:

- ▣ Outreach and education for local schools, community organizations and town governments
- ▣ Publishing a website and printed newsletter
- ▣ Tracking cards for wildlife identification and field outings
- ▣ Geomorphic assessments and annual water quality sampling
- ▣ Stream channel and wildlife habitat restoration
- ▣ Development of land management plans, open space agreements and stewardship plans
- ▣ Involvement in watershed, town and regional planning

Detailed results from the LCA's annual water quality sampling program are available online at www.lewisecreek.org.

D. Groundwater and Drinking Water

Groundwater is the water that is stored underground, often in underground aquifers, or porous rocks or fractured rocks. Ferrisburgh does not appear to have extensive or high yielding underground water storage or aquifers. Nonetheless, many town residents, especially in North Ferrisburgh, including Greenbush Road, rely on drilled wells. A map of wellheads is available in the Town Clerk's Office. Some groundwater wells produce water containing nuisance substances such as iron, manganese, hardness minerals, hydrogen sulfide gas and sulfate reducing or iron fixing bacteria. Well yields vary from plentiful to extremely low and highly problematic.

Other residents rely on a mix of groundwater and surface water in wells that are relatively shallow dug wells or springs. Such wells are susceptible to natural contamination and pollutants such as leaking petroleum or industrial tanks, road salt, failing septic systems and agricultural chemicals.

About half of all residences in Ferrisburgh, if not more, receive their drinking water via several private lines from the Vergennes-Panton Water District. This is surface water, from Lake Champlain, piped into the pumping station in



Two Views of Lewis Creek in Ferrisburgh

Arnolds Bay from a deep water intake located around a quarter mile offshore, and then, after treatment, distributed via various private lines throughout the southern, western and central areas of Ferrisburgh. (See further discussion in Section 3.2 G for more details on drinking water supplies.)

E. Soils

Soils in Ferrisburgh were deposited under a series of historic glacial lakes formed by melting ice. The soils also received some marine deposits during a period when the Champlain Valley was connected to the North Atlantic Ocean through its northern end. The resultant dominant soils in Ferrisburgh are high quality agricultural soils that are calcium rich and hold water, such as Vergennes, Covington and Livingston series of soils. These soils include heavy clays, which drain somewhat poorly and greatly minimize potential for development owing to their low permeability and their tendency to erode easily, but they are very good for agriculture. Soils classified as Amenia, Elmwood, Melrose and Nellis soils that are more loamy in nature are considered ‘prime’ agricultural soils, with Vergennes and Covington listed as having ‘statewide’ importance. The terms ‘Prime’, ‘Statewide’ and ‘Local’ are particularly critical



Looking East towards the Green Mountains from Ferrisburgh

in Act 250 development review, under criteria 9B and 9C, which implement the state’s policy to preserve primary agricultural and forest soils and require mitigation plans.

Prime agricultural soils are found in only limited areas in Vermont and are often covered by development because early settlers established towns in such areas, and also because such soil has good ability to handle wastewater. Many acres of agricultural soils, mostly ‘Statewide’ agricultural soils, have been conserved in Ferrisburgh, providing a large area for commercial agriculture. Ferrisburgh has very little ‘Prime’ soil and, thus, conserving soils resources will be of paramount importance to future generations.

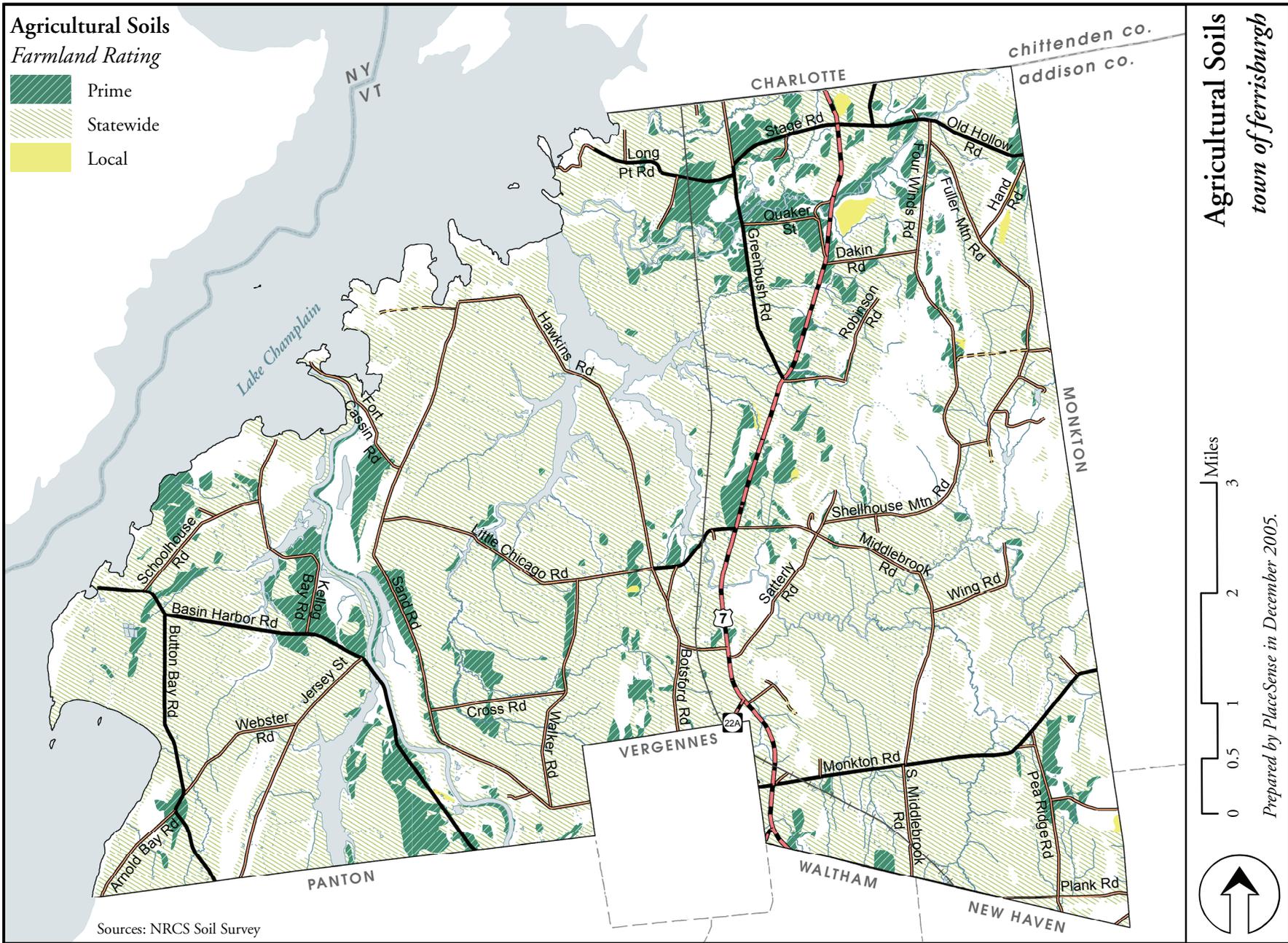
F. Septic suitability

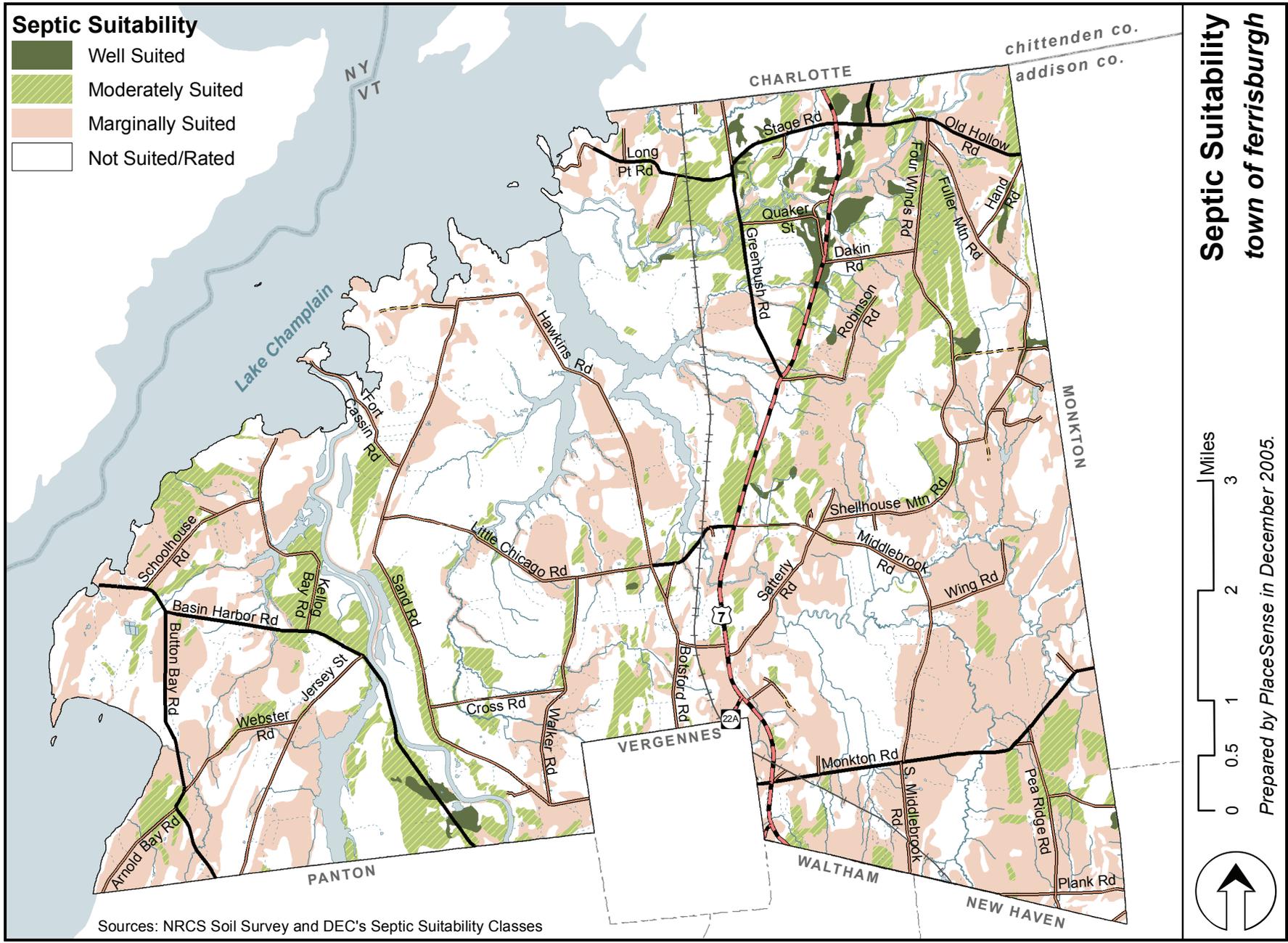
Ferrisburgh residents are well aware of the limitations of the town’s soils with respect to conventional on-site sewage disposal and wastewater treatment. More than half the town has soils unsuitable for conventional on-site septic systems and much of the rest of the town has soils only marginally suited to handling septic. The best areas for handling septic often overlap with good agricultural soils, and are found in North Ferrisburgh, and to a limited degree in south and west Ferrisburgh. From a planning perspective, wastewater disposal is a key factor in Ferrisburgh.

The State of Vermont, through the Agency of Natural Resources (ANR), Department of Environmental Conservation (DEC), regulates on-site sewage disposal. The recently revised state *Wastewater Systems and Potable Water Supply Rules* (1/1/2005), which go fully into effect in 2007, will require that all subdivisions, new construction, changes in use of property and additions to existing structures that increase the number of bedrooms, obtain a state permit.

G. Slope

The topography of Ferrisburgh is relatively flat, with hilly areas only along the town’s eastern border. Thus, slope does not typically prove to be a barrier to construction.





H. Forest Ecosystems

Although in the historic past there would have been extensive areas of forestlands, including swamp forest, today less than 50 percent of Ferrisburgh's land area is forested. Mesic, clay-plain lowland forest, once the most widespread ecosystem in the Champlain Valley, is now present only as isolated remnant tracts. Tree species included: white oak, red oak, swamp white oak, bur oak, ash, hemlock, shagbark hickory, bitternut hickory, red maple, silver maple, sugar maple and white pine. All of these still grow abundantly in the Champlain Valley, but no longer in the complex clay-plain ecosystems that once forested the valley.

Wetland forests include tree species such as silver maple, American elm, swamp white oak, shagbark hickory, musselwood and willows. Drier forests include species typical of rich lowland species such as sugar maples, white pine, beech, birch, red oak, white oak, remnant American elm and remnant butternut and basswood.

Since most of Ferrisburgh is flat and soils are largely composed of clays, the town has excellent potential for timber production. Forestlands in Ferrisburgh are not prone to leaching from acid rain because the carbonate content of the soils buffer the acid impact. Fertile, productive forest soils are abundant in Ferrisburgh.

For about the first 200 years of European settlement, the agricultural areas of the Champlain Valley had a relatively stable land use pattern. The original native forest had been largely cleared and turned into farmland by the early 1800s. Hilltops, wet areas and other places not as useful for growing crops or pasturing herds were left as woodlots, which provided firewood, lumber and a potential source of income in time of need. Hedgerows defined the fields, running along the edges of roads, property lines and small streams. The hedgerows were essential to the survival of some of the native forest species as they allowed for connections and movement between the relatively small woodlots.

This pattern began to change in the 20th century as some of the less viable farmland was abandoned. This was followed by the transition to larger farm

machinery, which led to the merger of smaller fields, often resulting in the elimination of hedgerows. The woodlot ceased to be a necessary part of a farm and thus often became the most expendable land to be sold for development. Over the second half of the century, residential development began to occur in and around the edges of wooded areas throughout the Champlain Valley. So despite increases in the total amount of woodland over the past century in the valley, the ecological functions of the forest have in many places declined resulting in a poorer quality habitat for wildlife. In an attempt to slow down or reverse this trend, the Ferrisburgh Conservation Commission has advised the Planning Commission to give emphasis to preserving forestlands in town.

Elizabeth Robinson Town Forest: In about 1962, Elizabeth Robinson willed the town a 135-acre woodlot on Shellhouse Mountain Road. Today there appear to be 121 acres shown on the tax parcel map. This forest was logged significantly in 1951-52. In the late 1960s, the forest was managed by a town forester for a mix of uses including timber, watershed protection, demonstration forestry, and recreation. In the 1970s, the forest was managed by the state's Public Lands Forester. In the 1980s, the Ferrisburgh Conservation Commission (FCC) was established and today this organization has a Management Plan with goals to manage the forest to preserve a surviving remnant of the Champlain Clayplain Forest for future generations. The FCC Management Plan also includes goals of protecting wildlife, especially bobcat habitats, and therefore to minimize logging, erosion and recreational uses.

I. Wetlands

Ferrisburgh has some of the highest quality wetlands in New England. These lie in the lower reaches of the Otter, Little Otter, Lewis and Dead Creeks. They are collectively referred to as the Otter Creek complex and are perhaps best known for their biological importance providing necessary habitats for wildlife and fish, and home to a number of state threatened, endangered and rare plants. The wetlands along Lower Otter Creek are home to many rare state plants.

Significant wetlands in Ferrisburgh include:

- ☐ Little Otter/Lewis Creek Marsh, 1,600 acres.

- ▣ Upper Little Otter Creek/Marsh Hill Swamp/Marsh Hill Meadow, 600 acres
- ▣ Little Chicago Road Woods, 200 acres
- ▣ Dead Creek Marsh, 600 acres
- ▣ Lower Otter, 1,000 acres

Increased permanent residences, marinas and increased nutrient runoff all threaten wetland complexes. Wetlands have many important functions, including filtering pollutants, flood storage, providing habitat for state threatened and endangered species, recreation, economic benefits, scenic beauty, promote spawning, feeding and general habitat for fish and amphibians.

It has been found that leaving wetlands intact and designing projects around them, rather than filling them in, or interrupting the wetland area with roads or culverts, is likely to be far more cost-effective over the long-term than trying to replicate the functions they provide elsewhere. Each wetland must be evaluated on a case-by-case basis.

All wetlands in the United States are regulated by the U.S. Army Corps of Engineers (COE). Any draining, dredging, filling, excavation or other development requires a COE permit. Federal wetland rules operate independent of state regulations. The National Wetlands Inventory (NWI) was conducted by the U.S. Fish & Wildlife Service in the 1970s. In December of 2005, the Vermont Agency of Natural Resources' Department of Environmental Conservation released the updated, field-verified *Vermont Significant Wetland Inventory (VSWI) Map* (available for reference in the Town Clerk's Office).

Vermont Wetland Rules establish three classes of wetlands.



Wetlands along the Little Otter Creek

- ▣ **Class One** wetlands are exceptional and irreplaceable in their contribution to Vermont's natural heritage and merit the highest level of protection. None of Ferrisburgh's wetlands have been placed in this classification (only a very small acreage anywhere in Vermont as been identified as Class One).
- ▣ **Class Two** wetlands are shown on the VSWI Map. These are significant wetlands, which require a 50-foot minimum undisturbed natural buffer. Ferrisburgh, as the map shows, has many acres of Class Two wetlands.
- ▣ **Class Three** wetlands have not been determined to be of such significance that they require protection under state law. However, they are locally significant and under the jurisdiction of the US Corps of Engineers. There are many such areas in Ferrisburgh.

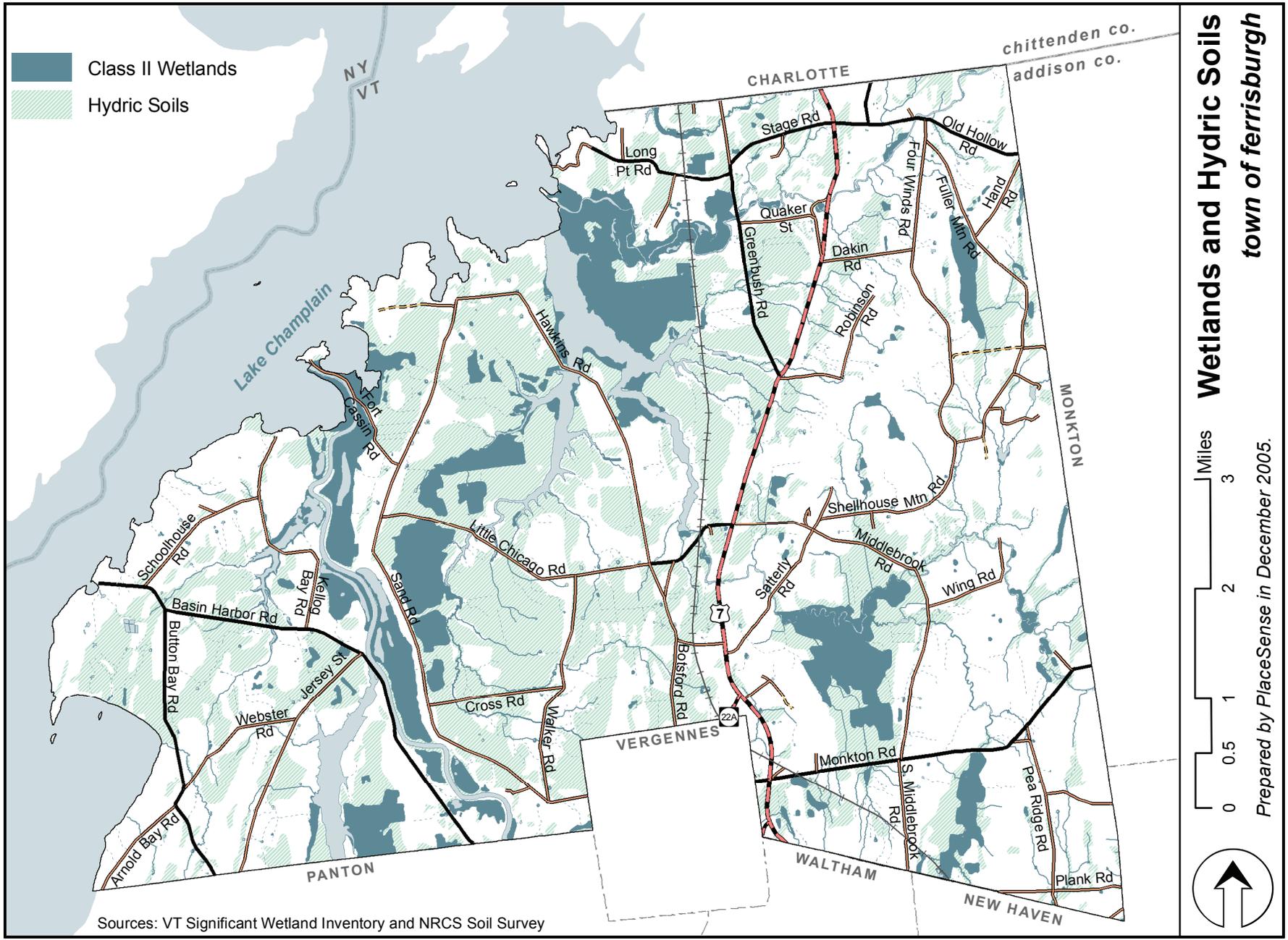
Vermont Wetland Rules protect all Class One and Class Two Wetlands, as well as all wetlands contiguous to such mapped wetlands. In other words, any wetland that is hydrologically and vegetatively connected to a mapped wetland is also protected under the rules, regardless of whether it appears on the maps. If a non-mapped wetland is adjacent to a mapped wetland, it is considered contiguous and is protected by the rules. ANR staff makes this determination.

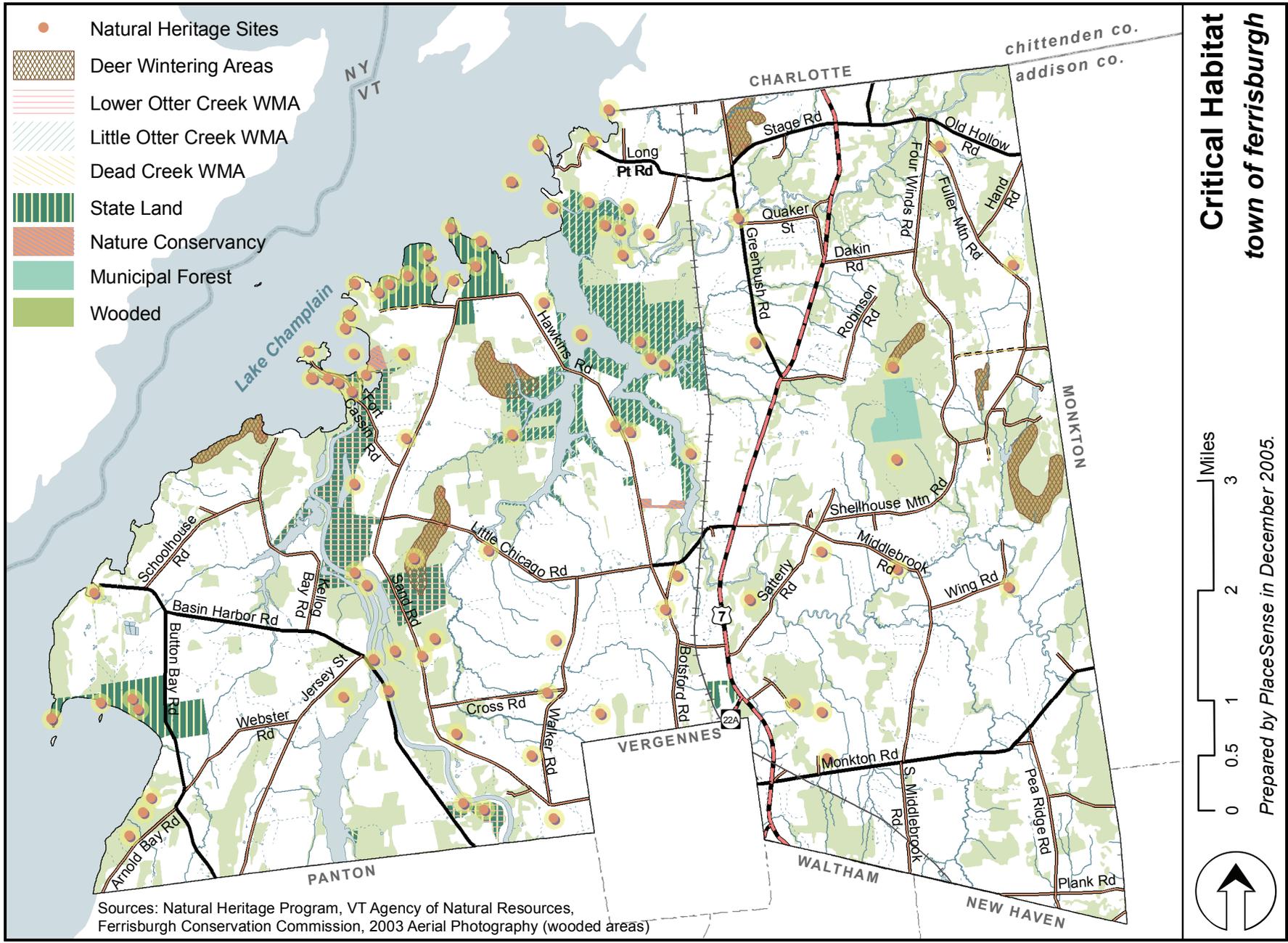
Vermont Wetland Rules apply to buffer zones, and any activity in the wetland or buffer requires a Conditional Use Permit (CUD) from the ANR

(see Reference Section below).

J. Flood Hazards

Flooding is the most common natural disaster causing property damage in Vermont. Flood hazard areas have been mapped along many of Ferrisburgh's streams and the Lake Champlain shoreline. Flood hazard areas in town are





currently defined as the area that would be inundated during a 100-year flood (The 100-year flood is the flood elevation that has a one percent chance of being equaled or exceeded each year). FEMA's flood maps are available for reference in the Town Clerk's Office.

The town is enrolled in the national Flood Insurance Program. Any development in flood hazard areas is not only a risk to itself, but has the potential to increase the severity of flooding downstream from its location. Flooding is a serious threat to public safety, structures and infrastructure, and the natural environment. (As discussed later, it is the town's policy to limit further development within defined flood hazard areas.)

K. Wildlife

Ferrisburgh's forests, fields, wetlands and lakeshore provide prime habitat for a variety of wildlife species. Bird life is particularly abundant, with Ferrisburgh having the highest bird counts in all of interior New England.

The 1,097-acre Little Otter Creek Wildlife Management Area (WMA) lies adjacent to Lake Champlain. Because of the surrounding open areas in agriculture, deeryards are found in the forests and open spaces of the WMA. Deer wintering yards are not common in the Champlain Valley, but the WMA has a stand of hemlock that provides excellent winter protection.

The extensive wetlands are home to a whole range of wildfowl including: mallards, gadwall, green and blue-winged teal, goldeneye, Canada geese, loons, common and hooded mergansers, black duck, wood duck, great blue heron, bittern, coot, seagull, vulture, eagle and osprey. Many rare birds are also found including least bittern, sedge wren, sora, loggerhead shrike and blue grey gnatcatcher.

Extensive, significant wildlife habitats and corridors are also found throughout Ferrisburgh, particularly on the steep bedrock cliffs and cobbles, and along wooded stream and drainage corridors. Species common to Ferrisburgh include deer, turkeys, bobcats, upland game birds, grassland bird species, coyotes and riverine species such as fisher, beaver, otter and mink. Several species of state listed rare, threatened or endangered wildlife species are known



An Egret in a Ferrisburgh Wetland

to be found in Ferrisburgh, and a list of these can be found at the Agency of Natural Resources, Nongame and Natural Heritage Program section of the Vermont Department of Fish and Wildlife.

L. Ecologically Sensitive Areas

The Vermont State Department of Fish and Wildlife has identified significant habitat areas in Ferrisburgh. The town's extensive agricultural lands, natural wet meadows and abandoned farmland provide breeding habitats for several rare bird species such as the northern harrier hawk, redheaded woodpecker and upland sandpiper. The state has identified 11 areas described as ecologically significant and worthy of high levels of protection as follows:

- ❑ **Button Bay State Park**, a cedar-pine lake bluff forest and mesic oak-hickory northern hardwood forest with several species of state endangered plants.
- ❑ **Dead Creek Marsh**, a deepwater marsh with many rare breeding birds, and the rare stinkpot turtle.

- ▣ **Ferrisburgh Cobble**, which is home to two rare plants.
- ▣ **Gardiner Island**, a calcareous island in Hawkins Bay, with many state rare plants.
- ▣ **Grosse Point**, a cedar-pine lake bluff with three state threatened plants
- ▣ **Kingsland Bay State Park**, the best remaining example of cedar-pine lake bluff forest with seven state threatened plants.
- ▣ **Little Chicago Road Woods**, red maple-oak-hemlock forest seasonally flooded with several state threatened plants.
- ▣ **Little Otter/Lewis Creek Marsh**, an excellent example of deep emergent marsh with several state threatened plants.
- ▣ **Lower Otter Creek**, floodplain marsh communities with many state threatened plants and animals including several types of rare mussels.
- ▣ **Marsh Hill and Meadow**, which is home to several rare plants.
- ▣ **Shellhouse Mountain**, a rugged, limy, forested 550-acre forest with dry chestnut oak woodland, and some unusual swamp forest stands of red and silver maple, and green ash with several state threatened and rare plants, part of which is Town Forest.



A Pair of Eagles in Ferrisburgh

The section of Lewis Creek downstream of Route 7 has also been recently identified by ANR as habitat for two endangered fresh-water mussel species (not Zebra mussels) and this stretch of Lewis Creek is under close state and federal scrutiny because it appears that mussel habitat is degrading and declining in quality.

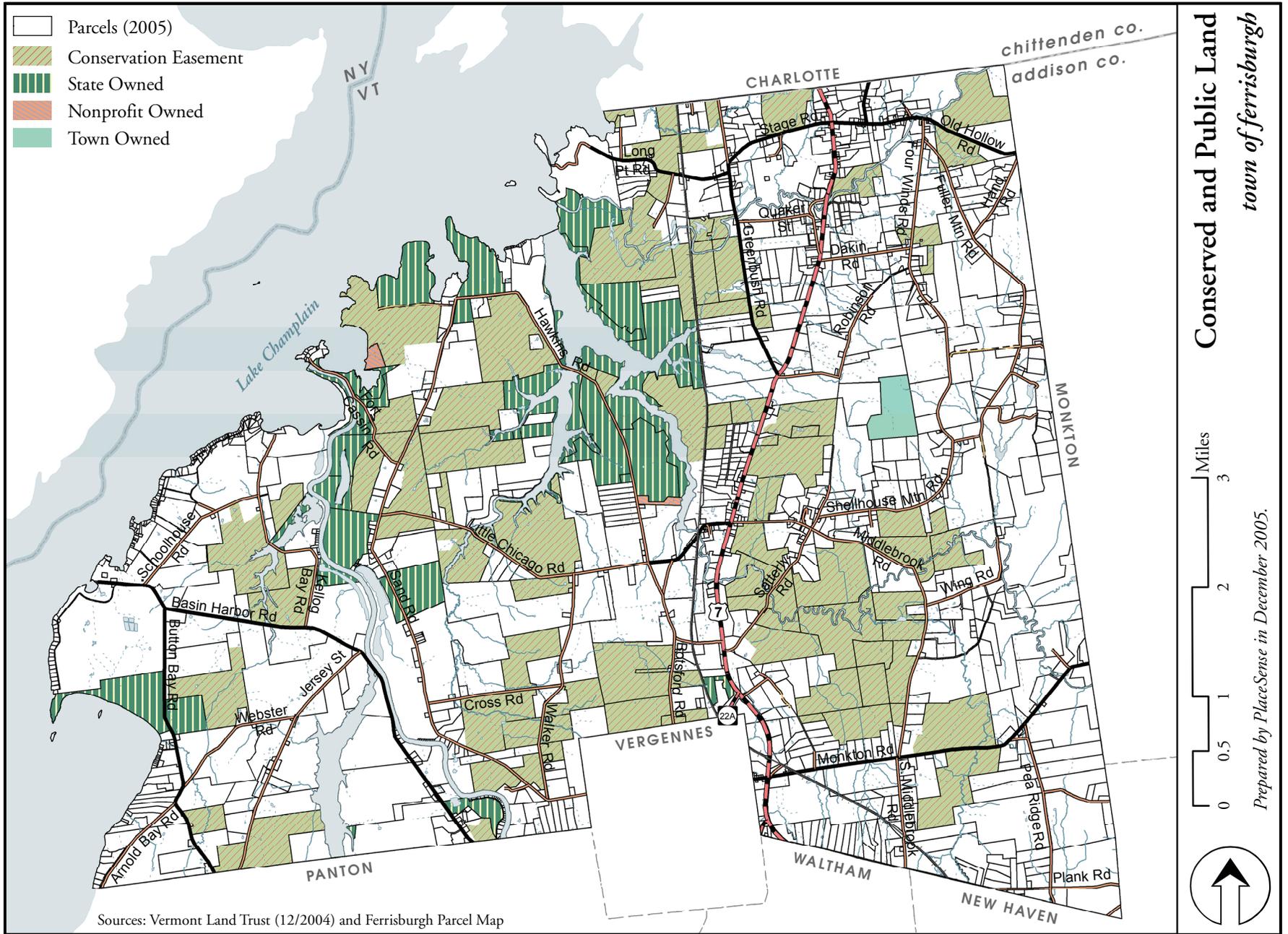
M. Agricultural Lands

Because of its fertile soils, the warmer climate in the Champlain Valley, and the town's long tradition of farming, Ferrisburgh is still very much an agricultural town. There are 28 dairy farms in town, and of these one large dairy farm is organic and one is transitioning to organic. There are also two non-dairy farms that are listed as organic. There are four sugaring operations, and six farms producing primarily vegetables, fruit and flowers.

Enormous effort by Ferrisburgh resident farmers in partnership with the Vermont Land Trust has gone in to conserving the good soils and farmlands in Ferrisburgh. The result is almost 8,500 acres of farmland conserved in perpetuity by about 28 families in town. This acreage represents about 21 percent of the town's area. The Vermont Land Trust (VLT) and the Vermont Housing and Conservation board (VHCB) have been particularly active in assisting these farm families with conserving good farmland for the future. These Ferrisburgh families recognize that in order to have viable and sustainable farms you need to have enough farmers and farmland in a geographic area to support viable businesses associated with farming, such as the agricultural equipment dealerships, veterinarians, feed and farm supply stores and so forth. Of these farms, four are currently practicing organic agriculture.

The town's good soils, local tradition and large lot sizes also ensure that many residents grow large gardens each year and put away food for the long winter months. The amount of food grown in Ferrisburgh by farmers and residents increases the town's food security. Food security means having enough food locally so that when a natural or human disaster shuts down the usual transportation routes there is an adequate supply available for enough days.

Pressure from development spreading down from Chittenden County to the north will continue to remove primary soils from future agricultural uses. At the same time, demands for food and fiber will increase. Agriculture has been part of the history of Ferrisburgh and it is strongly supported by Ferrisburgh residents.



N. Reference Section

Vermont Advanced Wetlands Planning and Protection Report: Town of Ferrisburgh, Department Environmental Conservation, Agency of Natural Resources, State of Vermont, 2000.

The Vermont Stormwater Management Manual, Agency of Natural Resources, 2002

Hardwood Swamps of Vermont: Distribution, Ecology, Classification, and Some sites of Ecological Significance. Sorenson et al. Nongame and Natural Heritage Program, Vermont Fish and Wildlife Department, Agency of Natural Resources, Waterbury, Vermont, 2004.

Wastewater System and Potable Water Supply Rules, Department of Environmental Conservation, 2005.

Stream Geomorphic Assessment of Lewis Creek: Pilot Project Report. DEC, May 2004. www.anr.state.vt.us/dec/waterq/rivers/docs/rv.lewiscreekreport.pdf

For questions on jurisdictional determination over wetlands contact the Department of Environmental Conservation, Wetlands Section, Rutland, phone: 802-786-5921 www.vtwaterquality.org/wetlands.htm

For information on other state programs that may require permits contact the Permit Specialist: VT DEC Environmental Assistance Office, Waterbury, phone: 802-241-3589. www.anr.state.vt.us/dec/ead/pa/index.htm

Federal Wetland Regulations are independent of state and local regulations. For more information contact: US Corps of Engineers, Essex Junction, phone: 802-872-2893. www.nae.usace.army.mil

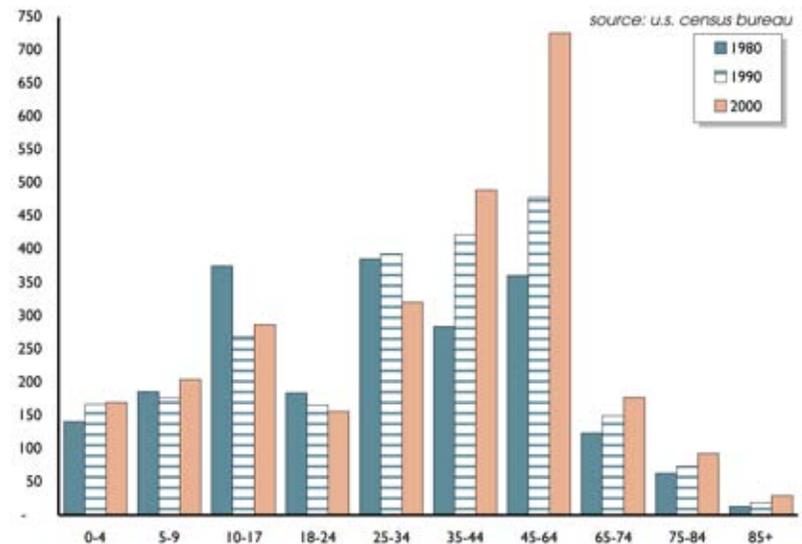
For information on Lake Champlain see LakeNet at www.worldlakes.org, the Lake Champlain Basin Atlas at www.lcbp.org, the Lake Champlain Maritime Museum and the Lake Champlain Committee.

For information on Lewis Creek see www.lewiscreek.org.

3.2. HUMAN RESOURCES

The residents of Ferrisburgh are a wonderful mix of people, some descendants of the original settlers or those who emigrated here in the 19th century, and more recent settlers of the late 20th century. Thus, there are sixth or seventh generation Vermonters and Vermonters who were born elsewhere and came here by choice more recently.

We are also fortunate to have a summer population of part-time residents who come to their ‘camps’ along Lake Champlain. These folks often have a long tradition of their families coming to Ferrisburgh every summer and they are an important part of our community.

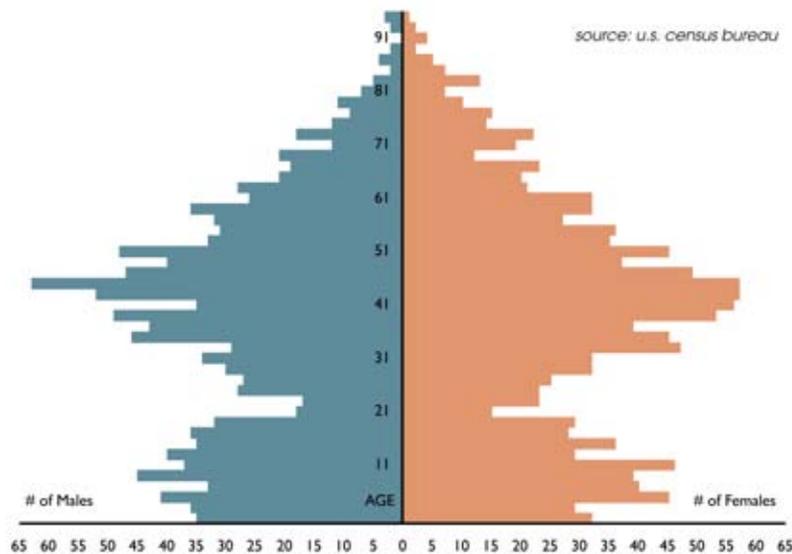


Ferrisburgh Age Distribution, 1980 to 2000

A. Population

Out of 242 towns in Vermont, Ferrisburgh is the eighth largest town in Vermont at 61.24 square miles. In terms of population density, however it is 99th, at about 43 people per square mile. By comparison, Winooski has the greatest population density at 4,720 people per square mile; Vergennes is third at 2,741 per square mile; and Burlington is fourth at 2,512 people per square mile.

The total population of Ferrisburgh in 2005 was about 2,650. There is a relatively small and decreasing percentage of residents in the 18 to 24 age group, and a marked increase, as elsewhere in the state, of people between 45 and 65 years of age (the baby-boom generation). Analysis of the population's age structure suggests that many of Ferrisburgh's senior citizens move out of town seeking retirement housing and support services that are not available here. As boomers retire and age over the next several decades, there may be greater demand for such housing and services in Ferrisburgh.



Ferrisburgh Population Pyramid, 2000

Population projections are not easy to make on such a geographically limited scale where population increase will be more a reflection of what happens in Chittenden County to the north than in the Town of Ferrisburgh alone. Addison County Regional Planning Commission has prepared a population projection that estimates Ferrisburgh's population will be between 3,100 and 3,600 people by 2025.

Comparison of Growth Rates, 1960 to 2000

	1960	1970	1980	1990	2000	1960 - 1970		1970 - 1980		1980 - 1990		1990 - 2000			
	#	%	#	%	#	#	%	#	%	#	%	#	%		
Ferrisburgh	1,426		1,875		2,117	2,317	2,657	449	31.5%	242	12.9%	200	9.4%	340	14.7%
Charlotte	1,271		1,802		2,561	3,148	3,569	531	41.8%	759	42.1%	587	22.9%	421	13.4%
Monkton	551		765		1,201	1,482	1,759	214	38.8%	436	57.0%	281	23.4%	277	18.7%
New Haven	922		1,039		1,217	1,375	1,666	117	12.7%	178	17.1%	158	13.0%	291	21.2%
Panton	352		416		537	606	682	64	18.2%	121	29.1%	69	12.8%	76	12.5%
Vergennes	1,921		2,242		2,273	2,578	2,741	321	16.7%	31	1.4%	305	13.4%	163	6.3%
Waltham	186		265		394	454	479	79	42.5%	129	48.7%	60	15.2%	26	5.5%
Vermont	389,881		444,732		511,456	562,758	608,827	54,851	14.1%	66,724	15.0%	51,302	10.0%	46,069	8.2%

source: u.s. census bureau

B. Economy

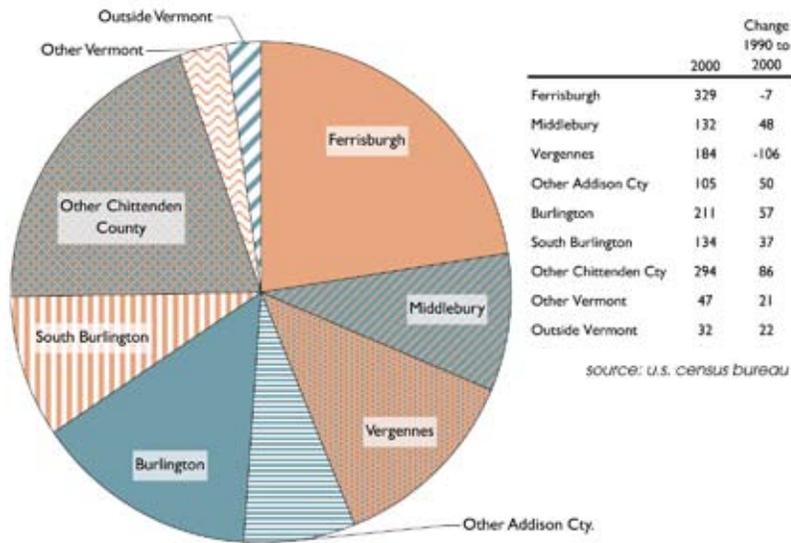
In many ways, Ferrisburgh continues its heritage of home-based businesses, with a percentage who travel out of town to find work. There are fewer farmers on larger farms, but agriculture and related businesses are still a critical component of our economic base and a dominant feature of the landscape. In addition to dairy, orchard, livestock, hay, pasture, chickens, maple syrup production and vegetable farming a wide variety of other businesses operate in Ferrisburgh including: processed farm and sugaring products, landscaping services, gardening center, computer consultants, web site sales, art galleries, antique sales, farm machine sales and services, auto repair shops, skilled woodworking, carpenters, builders, music teachers, and boat builders. While some of these are quite large in scope, most are home occupations or small accessory businesses. Many businesses and residences have relatively easy access to the Internet via cable or DSL that further enhances business opportunities in town. However, some areas are lacking a good communication network. This need is addressed elsewhere in this plan.

Dakin Farm is a major commercial and retail catalogue business, located in North Ferrisburgh on Route 7. The farm was first settled by Timothy Dakin around 1792. Today, it is owned by the Cutting family and the base for their business, which sells agricultural products such as maple syrup, candy hams, jams and associated value-added rural goods.

Farms and open land are worth about \$37 million of assessed value, on a total town assessed property value of about \$415 million. Forty businesses in town are assessed as commercial real estate with a total assessed value of about \$26 million. Basin Harbor

has the highest commercial assessed value at \$6.6 million. Industrial and utilities are \$3.5 million; Camps are valued at \$127.5 million, and residential properties at \$221 million.

In the US Census of 2000, of the 1,468 employed Ferrisburgh residents, 23 percent worked in town; 23 percent worked in the greater Burlington area;

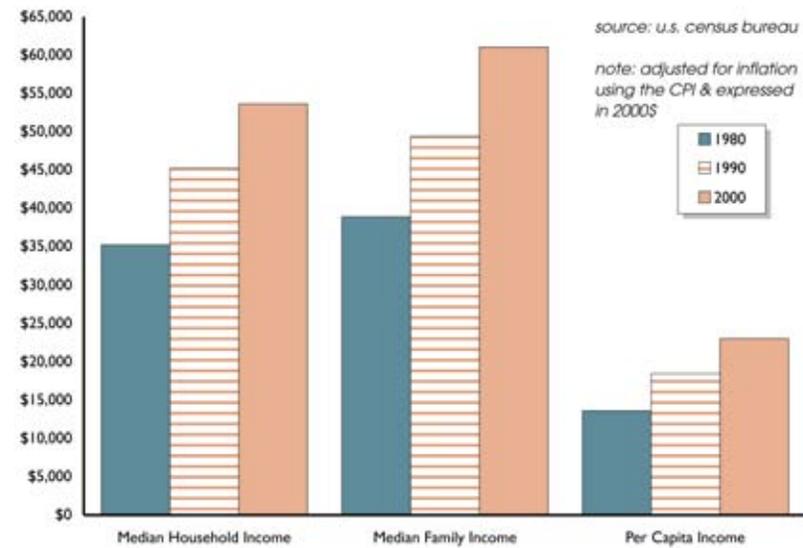


Place of Work for Ferrisburgh Residents, 2000

13 percent in Vergennes (a decrease over the 1990 Census) and nine percent in Middlebury. Unemployment is low and per capita (person) income in Ferrisburgh is about \$23,000 annually, compared with about \$20,000 statewide.

In assessing possible childcare needs for Ferrisburgh's working parents, the data shows that there are 630 families in town, an increasing percentage of which are supported by two working adults. Ferrisburgh has 110 families with pre-school aged children and two working parents, and 236 families with school-aged children where both parents go out to work. This is approximately the same percentages as seen statewide. There are no licensed daycare centers in Ferrisburgh, but there are a few home-based providers that may care for up to six children.

The recently completed survey clearly indicates that residents of Ferrisburgh continue to prefer to live in an agricultural rural town with strong opportunities for local, and home-based businesses and service occupations.



Income Levels of Ferrisburgh Residents, 1980 to 2000

Basin Harbor Resort is the 700-acre Beach family resort located on Lake Champlain, with its own golf course, public marina, and airport. The Lake Champlain Maritime Museum is also based at the resort. This site has been attracting visitors since around 1798. Today, there are about 77 cottages and a number of rooms in the three guesthouses - a number of which are historic buildings. The Beach property is the most valuable single piece of property in town.

C. Education

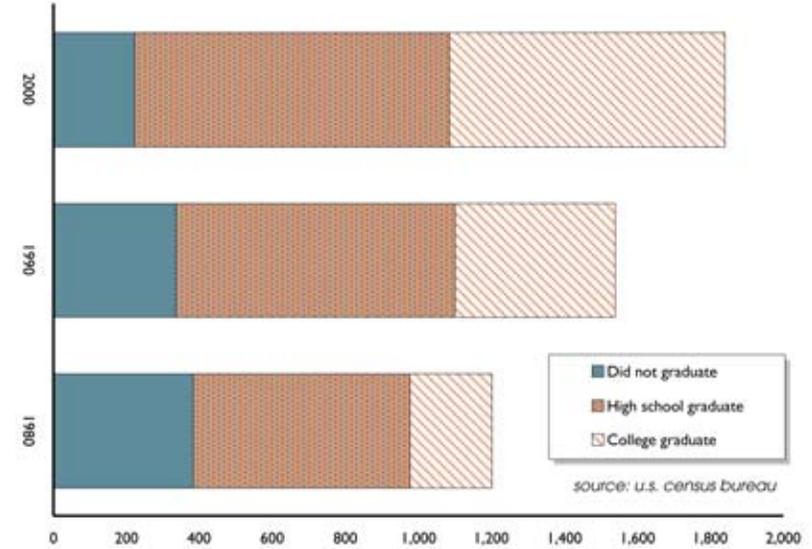
Ferrisburgh is part of the Addison Northwest Supervisory Union (ANWSU). The other towns in the ANWSU are Addison, Panton, Vergennes and Waltham. The Ferrisburgh Central School is the local elementary school while the Vergennes Union School serves grades 7 through 12. At present, there are 206 students in Ferrisburgh Central School, 63 students in middle school, and 145 in high school. Students in the high school may choose to attend the Hannaford Career Development Center in Middlebury, and on average, over the period 2001 to 2005 there were eight children a year attending. Several private or parochial schools located outside of town serve the Ferrisburgh area as well.

In the 2000-2001 school year, Ferrisburgh reached a peak student population number of 242, since then numbers have leveled off to 206, and only a slight increase is projected over the next five years.

Parents in the Workforce, 1990 and 2000

	Total Families	One or More Children Under Age 6								No Children Under Age 6 One or More Children Age 6 to 17							
		Two-Parent Family				Single-Parent Family				Two-Parent Family				Single-Parent Family			
		Two Parents in Workforce #	%	One Parent in Workforce #	%	Parent in Workforce #	%	Parent not in Workforce #	%	Two Parents in Workforce #	%	One Parent in Workforce #	%	Parent in Workforce #	%	Parent not in Workforce #	%
Ferrisburgh 1990	570	132	23.2%	47	8.2%	14	2.5%	-	-	286	50.2%	57	10.0%	32	5.6%	2	0.4%
Ferrisburgh 2000	630	110	17.5%	63	10.0%	32	5.1%	11	1.7%	236	37.5%	111	17.6%	67	10.6%	-	-
Vermont 1990	137,236	24,902	18.1%	14,007	10.2%	5,805	4.2%	3,454	2.5%	53,895	39.3%	16,387	11.9%	14,797	10.8%	3,989	2.9%
Vermont 2000	144,636	20,489	14.2%	9,841	6.8%	9,392	6.5%	4,939	3.4%	58,263	40.3%	16,410	11.3%	21,062	14.6%	4,240	2.9%

source: u.s. census



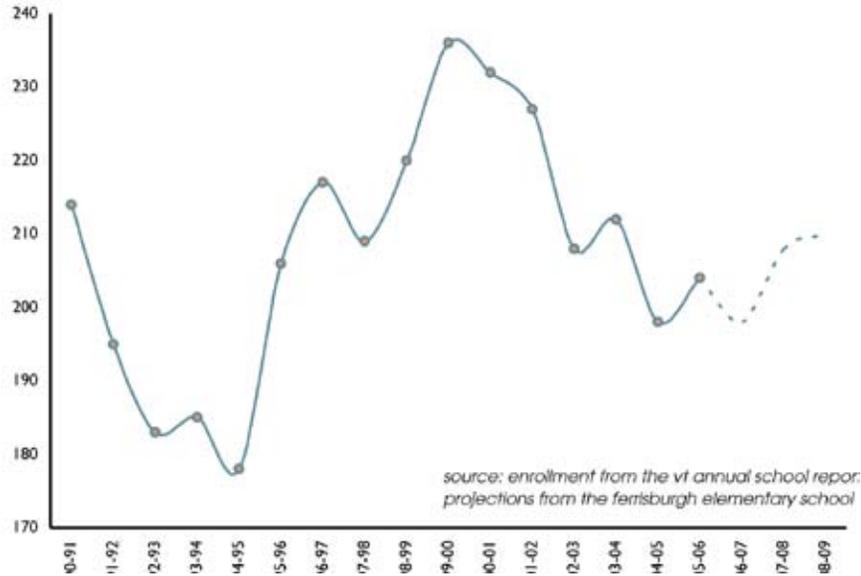
Education Level of Ferrisburgh Residents (age 25+), 1980 to 2000

D. Housing

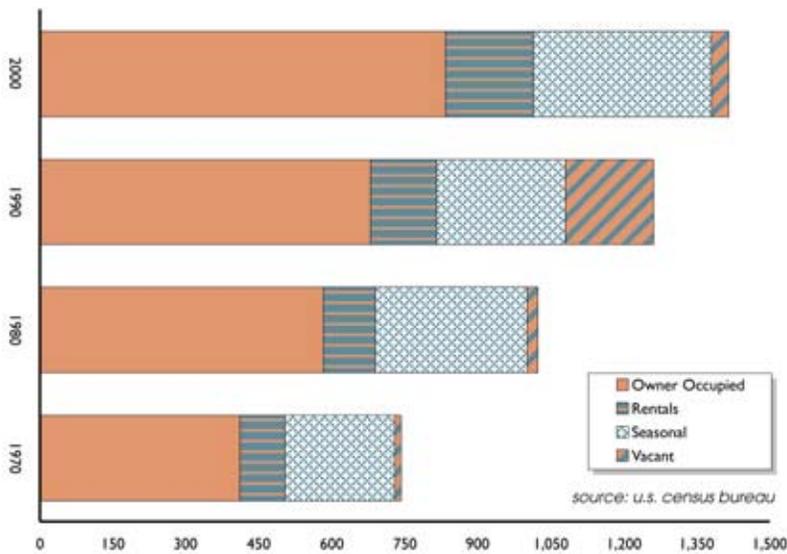
Ferrisburgh not only houses year-round residents, but it has a high number of seasonal ‘camps’, most notably along the shores of Lake Champlain and fairly large number of rental units for a rural town. The ratio of seasonal to year-round homes remains relatively constant although actual total numbers in each category increases each year, and the number of vacant housing units remains small.

The present housing inventory in town shows: 443 houses on less than 6 acres; 351 on more than 6 acres; 67 mobile homes; 2 apartments; 54 farms with houses; and 294 camps (some of which have become permanent residences).

The average household size has continued to decline over the last 40 years from about 3.67 in 1970 to 2.62 in the year 2000.



Ferrisburgh Central School Enrollments & Projections, 1990-91 to 2008-09



Ferrisburgh's Housing Stock by Tenure, 1980 to 2000

Affordability Calculation

The State of Vermont defines 'affordable' housing as housing that does not cost more than 30% of the gross income of a household earning 80% of the county's median family income. Housing costs for homeowners include mortgage, tax and insurance payments. For renters, costs include rent and utilities.

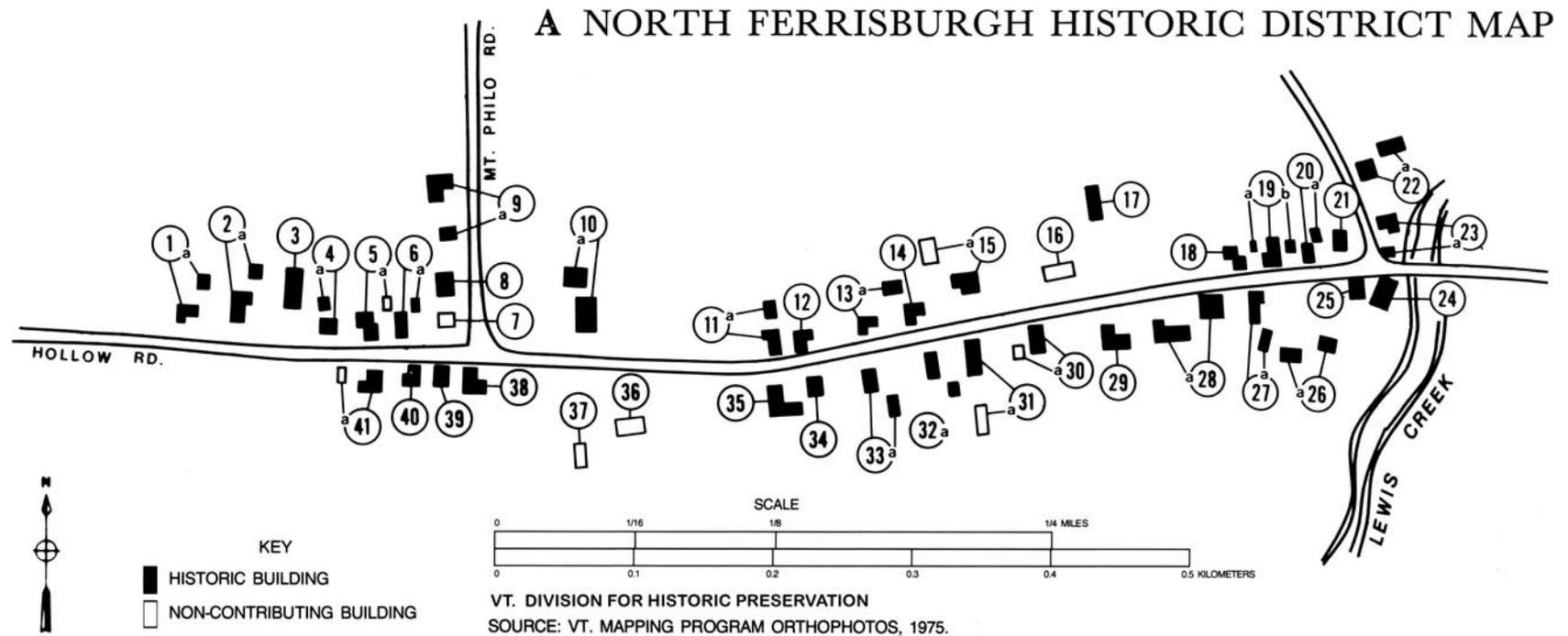
In Addison County the median family income in 2005 was \$59,850, and 80% of that is \$47,880. Based on the formula above, affordable housing in Addison County cannot cost a household more than \$14,364 a year or \$1,197 a month.

Based on the formula, an 'affordable' house in Addison County would likely sell for between \$130,000 and \$180,000, depending on factors like the amount of down payment, household debt, interest rates and local tax rates.

The median assessed value of a year-round residence on Ferrisburgh's 2004 Grand List was \$124,000. That home is 'affordable' for a household earning around \$35,000 to \$40,000 per year, which is within the county's affordability limits.

However homes in Ferrisburgh are selling for prices well above their assessed value. In 2004, the median sale price for a home was \$225,000, based on 43 sales. This home is 'affordable' for a household earning \$60,000 to \$70,000 per year, depending on the factors listed above.

24% of the town's home-owner households reported on the 2000 Census that they paid more than 30% of their income towards housing costs. According to the 2000 Census, the average rent in Ferrisburgh was \$613 per month, which was not 'affordable' for 15% of renting households.



F. Community Facilities and Services

Police: The Addison County Sheriff's Department provides Civil Process for the entire county. The Vermont State Police provide service for motor vehicle regulation and criminal law enforcement. Ferrisburgh funds a sheriff patrol contract.

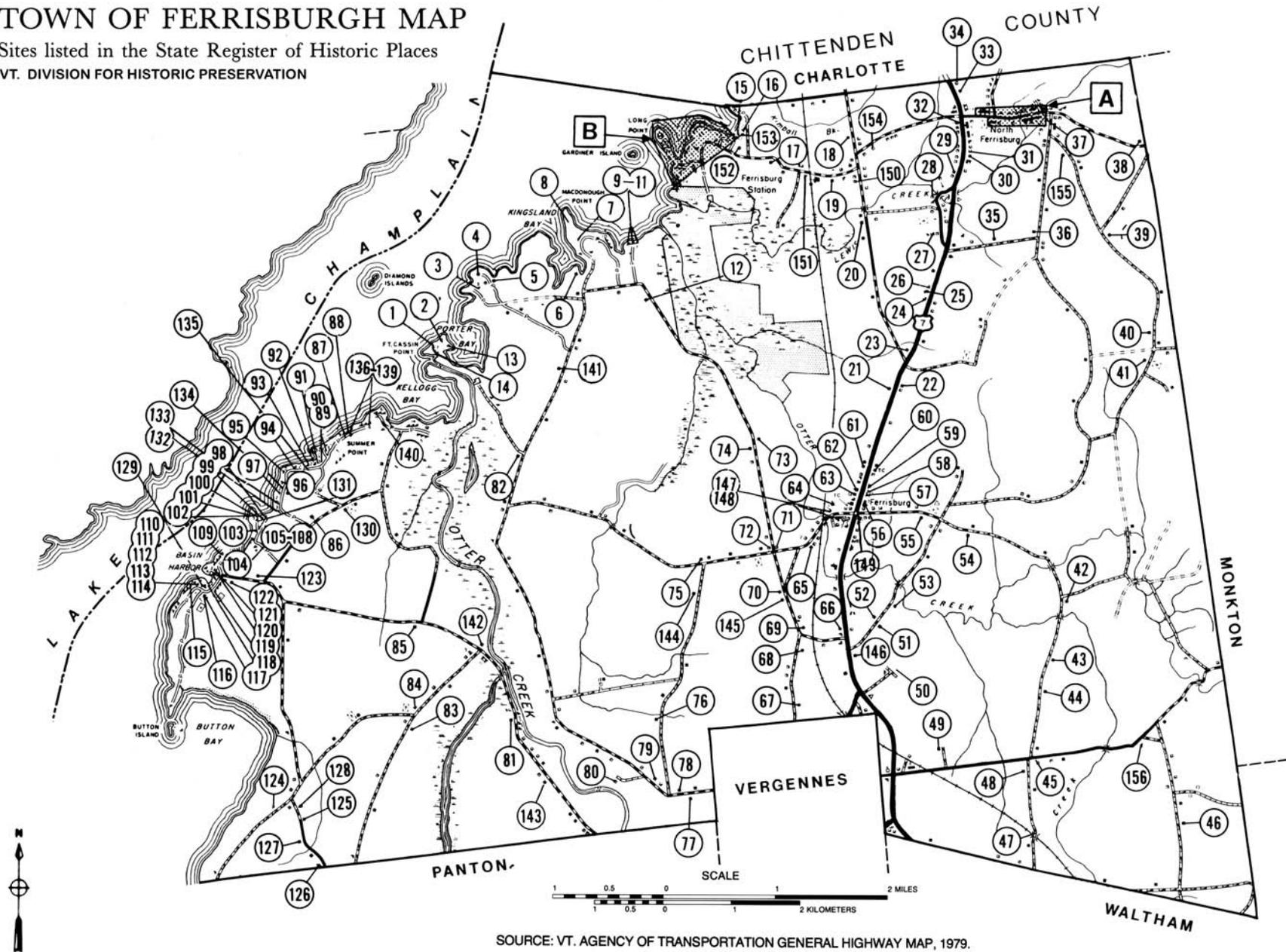
Volunteer Fire Department: There is a dedicated group of volunteers in the Fire Department, with equipment housed in the 1993 Firehouse on Route 7 north of the Center. The annual budget is about \$50,000. In 2004, they responded to 64 calls, 26 of which were motor vehicle crashes, 15 fire related, and 3 fuel spills. In 2005, there were 60 calls, including 24 motor vehicle crashes and three fires set by arson, including the historic Grange Hall. Some 7,500 volunteer hours were recorded by the department.

Rescue Services: The Vergennes Area Rescue Squad (VARS), a local non-profit organization with 42 active members, responds to calls in Ferrisburgh as well as Panton, Bristol, Charlotte, Addison, New Haven, Vergennes, Waltham and Weybridge. VARS bills for its services, receives additional funding from towns serviced, and accepts donations. In 2005, VARS responded to 243 emergencies in Ferrisburgh out of 840 area-wide, which was a big increase over 2004. VARS is planning a capital drive this year for a new building.

Medical Services: There are no medical facilities in Ferrisburgh, but many doctors, nurses and dentists are available a short distance north or south of town. Addison County Home Health and Hospice can make home visits, and the Community Health Services of Addison County has an Open Door Clinic in Middlebury.

TOWN OF FERRISBURGH MAP

Sites listed in the State Register of Historic Places
VT. DIVISION FOR HISTORIC PRESERVATION



SOURCE: VT. AGENCY OF TRANSPORTATION GENERAL HIGHWAY MAP, 1979.

At Town Meeting, on the first Tuesday in March, voters typically approve funding to support the following agencies and organizations that provide services to the town and its residents: Addison County Parent Child Center; Addison County Community Action Group; Addison County Counselling Service; Addison County Economic Development Corporation; Addison County Home Health and Hospice; Addison County River Watch Collaborative; Addison County Transit Resources; American Legion, Memorial Day Observation; Bixby Memorial Library; Boys and Girls Club of Greater Vergennes; Champlain Valley Agency on Aging; Community Health Services Open Door Clinic; Elderly Services; Gage Cemetery Association; George Aiken Resource Conservation District; Lewis Creek Association; Otter Creek Natural Resource Conservation District; Retired Senior Volunteer Program; Union Cemetery; Vergennes Area Rescue Squad; Vermont Center for Independent Living; Watershed Center, and WomanSafe (total for all approximately \$43,000).

Health Officer: Ferrisburgh has a Health Officer who is nominated by the Selectboard and appointed by the Commissioner of Health. This person responds to animal bites, West Nile virus issues, rabies, failed septic systems and so forth.

Department of Health: The Emergency Preparedness Unit is operated by the Department of Health, Middlebury District. The Department of Health also undertakes food and lodgings inspections and information on this can be found at www.healthyvermonter.info.

Emergency Preparedness: Fire Chief Wager is presently coordinating an emergency preparedness plan with several local and state organizations.

Library: Historically there was a library in the Hollow in North Ferrisburgh, but today the Bixby Memorial Library in Vergennes is the local library, and it is well used by Ferrisburgh residents. There are 2,981 registered borrowers distributed as follows: Vergennes 37%; Ferrisburgh 30%; Panton 7%; Waltham 5%; Addison 10% and elsewhere 11%.

Solid Waste: Ferrisburgh is part of the 19-town Addison County Solid

Waste Management District, which has a comprehensive management plan. Recycling in Ferrisburgh is mandatory as part of membership to the ACSWD. There is a transfer station on Route 7 in Middlebury.

G. Utilities and Telecommunications

Drinking Water: As discussed earlier, in Section 3.1D, most homes and businesses in north and east Ferrisburgh rely on deep or shallow wells and springs, which are vulnerable in terms of both water quality and quantity. (A wellhead map is filed in the Town Clerk's Office, although it is only somewhat up-to-date.) Areas such as Greenbush Road have a difficult time finding water in adequate quantities or quality.

Long Point, in North Ferrisburgh is an association of private landowners who have seasonal camps. Most of the old camps have wells, but in an effort to upgrade the water supply the association is in the process of upgrading a number of wells to be able to supply most camps with more reliable drinking water through a community water system.

Approximately 40 to 50 percent of Ferrisburgh residents, primarily in southern and western areas of town, are on public water through a number of pipelines linked into the Vergennes/Panton Water District. This water district was established in 1973. The district cannot have capital investment outside its district, but it can and does have a number of pipelines and loops linked into its system. There are at least nine pipelines serving Ferrisburgh residents and businesses. One system is the Ferrisburgh Fire District, which serves about 90 homes and businesses and runs up to the new Fire Station. Each of the other pipelines are owned and maintained by groups of residents forming private associations. Water is metered at the associations' links into the Vergennes/Panton line and residents are charged by their various associations for their share of the metered water.

The Vergennes/Panton water is pumped from a deep-water source in Lake Champlain, 0.28 miles offshore from Arnolds Bay. This water is flocculated to remove turbidity, chlorinated and fluoridated before distribution. The Pumping Station is operating at about 60 percent capacity and could generate enough water to serve the needs of all residents of Ferrisburgh.

Wastewater: Ferrisburgh's wastewater is treated through individual or shared on-site septic systems. Basin Harbor has its own on-site system. In 2002 and 2005, Vermont adopted new regulations for on-site septic systems and by July 2007, all subdivisions, new construction, and system modifications and replacements will need a state water supply and wastewater permit. Additionally, certain modifications to existing structures and changes in use will also need permits. The basic condition of the Potable Water and Wastewater Rules is that the system must function year-round and keep all effluent at least six inches below ground.

Conventional septic systems require specific soil and site conditions to adequately treat waste. Depth to bedrock, depth to the water table, slope and soil texture all affect a site's ability to effectively treat septic waste. For soil-based treatment to work, partially treated effluent must be able to slowly percolate through the soil. The soil provides secondary treatment of the wastewater by allowing aerobic (oxygen-using) bacteria to continue deactivating the disease germs that remain in the effluent, and some degree of tertiary treatment (nutrient removal) by biochemical mechanisms. Two elements are necessary for proper treatment, time and air. Water drains too quickly through sand and gravel soils, not allowing sufficient time for treatment. In clay soils, there are not enough well connected air pockets to allow the effluent to drain through and aerobic treatment to occur. Silts and loams have moderate characteristics of good treatment as well as rapid enough transmission rates.

Most of Ferrisburgh's soils have limited ability to treat of wastewater. The lack of percable soils is a limiting factor for development and adds cost to building a home in town.

Home Heating: Most households heat primarily with oil, or propane, although many have wood heat as a back up system, or as a supplement to the furnace.

Telecommunications: Champlain Valley Telecom provides local wired phone service in Ferrisburgh. Wireless phone service in town is spotty outside the Route 7 corridor, which has fairly complete coverage. Champlain Valley Telecom provides DSL (digital subscriber line) service to some subscribers

in town for high-speed internet access, and there is limited cable television and cable modem internet service to areas along the Route 7 corridor and adjacent to Vergennes. There is presently inadequate high-speed internet service available in Ferrisburgh.

There are currently no telecommunications towers located in Ferrisburgh. There are several farms in town with antennas installed on their silos. These antennas are providing cell phone coverage primarily along the Route 7 corridor. These existing antennas are excellent examples of how infrastructure can be incorporated into the town's existing built environment in a manner that has virtually no visual impact. Most people driving by these silos would not be aware that they are also serving as cell phone towers.

H. Energy

As described in the Ferrisburgh Yesterday section of this plan, in the early-1800s, the development of water-powered mills along the town's streams led to the creation of settlements. Into the early 20th century, most of the resources and all of the energy used by town residents still came from the immediate area. With the advent of the automobile era, people in Ferrisburgh began to rely heavily on petroleum products to run their vehicles, heat their homes, and manufacture and transport the produce and products necessary for their survival. At the same time, the use of electricity increased rapidly as modern electric appliances became common in residents' homes.

Historically, there has been a relationship between energy sources, energy costs, location of development, the local economy and population growth. In the past, availability of waterpower concentrated settlement along streams. As those industries declined, the town established a more dispersed settlement pattern, as agriculture became the main economic activity in town. As employment opportunities increased in nearby economic centers, and the ease and speed of commuting increased, Ferrisburgh experienced a population boom and a new settlement pattern as a bedroom community.

Electricity: *Green Mountain Power supplies electricity throughout Ferrisburgh.* The Vermont Electric Power Company (VELCO), a private corporation owned by the power companies in the state, owns most of the

bulk power transmission system in Vermont, including a 34.5 kV electric transmission line that runs through Ferrisburgh on a south-north route between New Haven and Burlington. Currently, VELCO is moving forward with a project to replace this line with a larger, 115 kV line. Re-location of the corridor in Ferrisburgh is also planned, as well as an expansion of the substation. Ferrisburgh residents and officials have expressed opposition to this project, mainly based on aesthetic and property values concerns.

Energy Alternatives: On average, the energy equivalent of over five megawatt hours of solar energy falls on each acre of land in Vermont annually. Despite long winters and a variable climate, there is a relative abundance of sunshine and potential for utilizing solar energy. In many cases, passive solar buildings can be constructed at little or no extra cost, providing free heat and light – and substantial energy cost savings – for the life of the building. Solar water heating can reduce energy costs by up to 65 percent. New developments in photovoltaic cell (PV) technology, which converts solar energy into electricity, has led to PVs that are smaller, less expensive and more consumer-friendly – trends that should continue into the future.

Wind power can be harnessed for both large and small-scale power generation. In recent years, several studies have shown that Vermont's wind resource is abundant enough to meet a significant portion of the state's electric energy needs. While large-scale generation is unlikely to be located in Ferrisburgh, residential wind turbines are possible. Small wind turbines, designed for individual residential or business use, usually generate under 15 kW. They have two or three blades usually with a diameter of eight to 24 feet. They are often mounted on a guyed monopole or a freestanding lattice tower ranging in height from about 80 to 120 feet. Turbines need to be 40 to 60 feet above nearby trees or other obstructions for optimum efficiency. This technology is developing rapidly and over the next decade it is expected that residential wind turbines will become smaller, more efficient and affordable.

Biomass consists of renewable organic materials, including forestry and agricultural crops and residues, wood and food processing wastes, and municipal solid waste. All these products or waste products can be used as energy sources. The benefits of these resources are that they are local,

sustainable and often waste materials. Some biomass materials, such as wood, have been traditionally burned to provide heat. However, these materials can also be used in more efficient ways, such as producing gas that can then be burned to generate heat or power.

Energy consumption is essential to human society and at the same time threatens the environment that sustains us. The challenge for the future will be to reduce our overall energy consumption and to shift demand towards energy sources that are renewable and have an overall low environmental impact. Household energy use represents approximately 30 percent of total statewide energy consumption. Almost 80 percent of domestic demand is for space heating and domestic hot water.

According to the 1994 Vermont Twenty Year Energy Plan, nearly half of the energy used in Vermont is for transportation. Almost half of that transportation energy is consumed by commuters, shoppers, recreationists and others traveling in private automobiles. Public transit represents a very small portion of the energy used for transportation. Over the past 20 years, the percent of Ferrisburgh's workforce commuting alone rather than carpooling has increased, and the average commute has lengthened in time.

Energy Conservation: While energy policy and fuel prices often seem abstract or completely beyond the control of local government and consumers, energy conservation is the simplest way for individuals to take action. If the potential of energy conservation were fully realized, it would go a long way towards solving our nation's energy problems. Energy-efficient construction methods, materials, fixtures and appliances can substantially reduce the energy consumption of buildings. The Champlain Valley Office of Economic Opportunity provides a weatherization service that assists income-qualified households in the region take steps into increase the efficiency of their homes and reduce their energy bills. Over the past several decades, improved materials and techniques have greatly increased the efficiency of and reduced the energy required in new homes.

I. Transportation

Ferrisburgh has always been part of a transportation corridor. In the past, the emphasis was on the lake and inland by stream, then rail came to dominate. Today, the emphasis is the road network and the town's primary highway, the U.S. Route 7 corridor.

Rail: The rail line remains in use, but only for freight at the present time. A commuter train project was started between Burlington and Charlotte, and it was hoped to extend this to Ferrisburgh and Vergennes, but unfortunately it was discontinued before it had an opportunity to become more widely used.

Air: Ferrisburgh has a private airport at Basin Harbor.

Water: There is a private marina on Otter Creek in Ferrisburgh.

Public Transport: Addison County Transit Resources currently offers four trips daily between Middlebury and Burlington with one bus stop on Route 7 at the busy Old Hollow Road/Stage Road intersection. There is one local taxi cab service in town.

Commuting: With essentially no public transport Ferrisburgh, residents must rely on the use of private automobiles. More than half of the employed residents of Ferrisburgh travel each day by car to a place of work north or south of town, typically on Route 7. It is not likely that this situation will change radically over the next five years and thus transportation policies will need to be developed in order to plan for the future. The state Agency of Transportation is planning to build a park-and-ride at the Route 7/22A intersection in Ferrisburgh. Hopefully, this will encourage carpooling and ride sharing.

Route 7 is the major north-south arterial highway serving the western side of the State of Vermont. This route stretches from one end of the state to the other. Route 7 is a two-lane highway covering 7.3 miles within the town. Within Ferrisburgh, the surface width of the traveled highway is 40 feet, shoulder to shoulder, with 12-foot lanes and 8-foot shoulders. The road right-of-way, which varies in width, is under the control of the Vermont Agency

of Transportation. There are limited passing places and heavy traffic. Speed limits are 50 miles per hour for most of the distance through town, with 40 mile per hour speed zone through the center of town associated with the turn off for the school at Little Chicago Road.

In 1990, the average daily traffic (ADT) on Route 7 at the intersection of Little Chicago Road was 11,000. 15 years later, 12,700 vehicles drive past that intersection each day. With this growth comes greater congestion and reduced safety.

In 1995, the Agency of Transportation completed *Vermont's Long Range Transportation Plan*. This plan noted, "Uncontrolled access along our major transportation routes leads to a breakdown in their ability to provide regional mobility and safe operation. The highway development brings with it traffic congestion and the hazards of frequent, random turns into and off the highway." In the 2002, the agency's main planning objectives included:

- Manage the state's existing transportation system facilities to provide capacity, safety, and flexibility in the most effective and efficient manner.
- Improve all modes of Vermont's transportation system to provide Vermonters with choice.
- Strengthen the economy, protect and enhance the quality of the natural environment, and improve Vermonters' quality of life.

To these ends, Ferrisburgh needs to look closely at future development along the Route 7 and Route 22A corridor, work closely with the state, and develop clear highway policies.



The Spade Farm Covered Bridge

Average Annual Daily Traffic on Route 7 in Ferrisburgh, 1986 to 2004

	1986	1988	1990	1992	1994	1996	1998	2000	2002	2004	% Change 1986 to 2004
Waltham Town Line to New Haven Road	6,660	6,710	6,350	7,660	6,720	6,900	7,500	7,900	7,800	7,900	19%
New Haven Road to Monkton Road	5,850	5,970	5,650	5,910	7,580	7,800	7,700	7,900	7,300	7,800	33%
Monkton Road to Route 22A	5,570	6,950	6,635	6,835	6,685	6,900	7,300	7,300	7,000	7,200	29%
Route 22A to Little Chicago Road	9,610	11,080	10,575	10,900	10,660	11,000	12,000	11,900	12,600	12,600	31%
Little Chicago Rd to Greenbush Road	9,090	10,510	10,030	10,860	10,920	11,300	11,600	11,800	12,700	12,600	39%
Greenbush Road to Old Hollow Road	8,700	10,050	9,680	9,680	9,800	10,100	10,800	10,900	11,300	11,500	32%
Old Hollow Road to Charlotte Town Line	9,050	10,420	9,710	10,515	10,570	10,900	10,900	10,700	11,100	11,000	22%

Entering US Route 7 from side roads is difficult due to heavy traffic at times, the relative high speeds and reduced site distance in certain directions. One such problematic intersection on US Route 7 is at Old Hollow Road and Stage Road. A VTrans traffic study was done in 2002, indicating a higher incidence of late afternoon crashes particularly in the period October through December. There are also numerous accesses onto Route 7 in this area, which exacerbates the situation. The 2002 traffic study presented a number of mitigating measures for this intersection, some of which have not yet been done, including lowering the speed limit, installing overhead flashing beacons, enforcing the no-parking along the road, and providing left turn lanes.

Route 22A: In addition to Route 7, there is a short section of Route 22A near the Vergennes turnoff in Ferrisburgh. Route 22A is a major truck route connecting to Route 7 in Ferrisburgh. Route 22A is a regional connector that passes through the City of Vergennes and connects to Route 17 leading from Vermont to New York State. This is the primary route from this area to connect with Interstate 87 in New York. Route 22A contributes 6,600 car and truck trips per day onto Route 7. Route 22A and Route 7 are maintained by the state.

Town Highways: Ferrisburgh maintains 77.55 miles of highways:

- Class 2 Town Highways: 18.39 miles
- Class 3 Town Highways: 56.06 miles
- Class 4 Town Highways: 3.1 miles which are maintained and many more which are not maintained.

There are also numerous legal trails in Ferrisburgh that the town maintains legal rights-of-way across. Many of these are mapped, but the total mileage is not presently known.

Class 2 highways include Basin Harbor Road, Monkton Road, Old Hollow Road, Long Point Road, Greenbush Road and Button Bay Road. In fiscal year 2005,

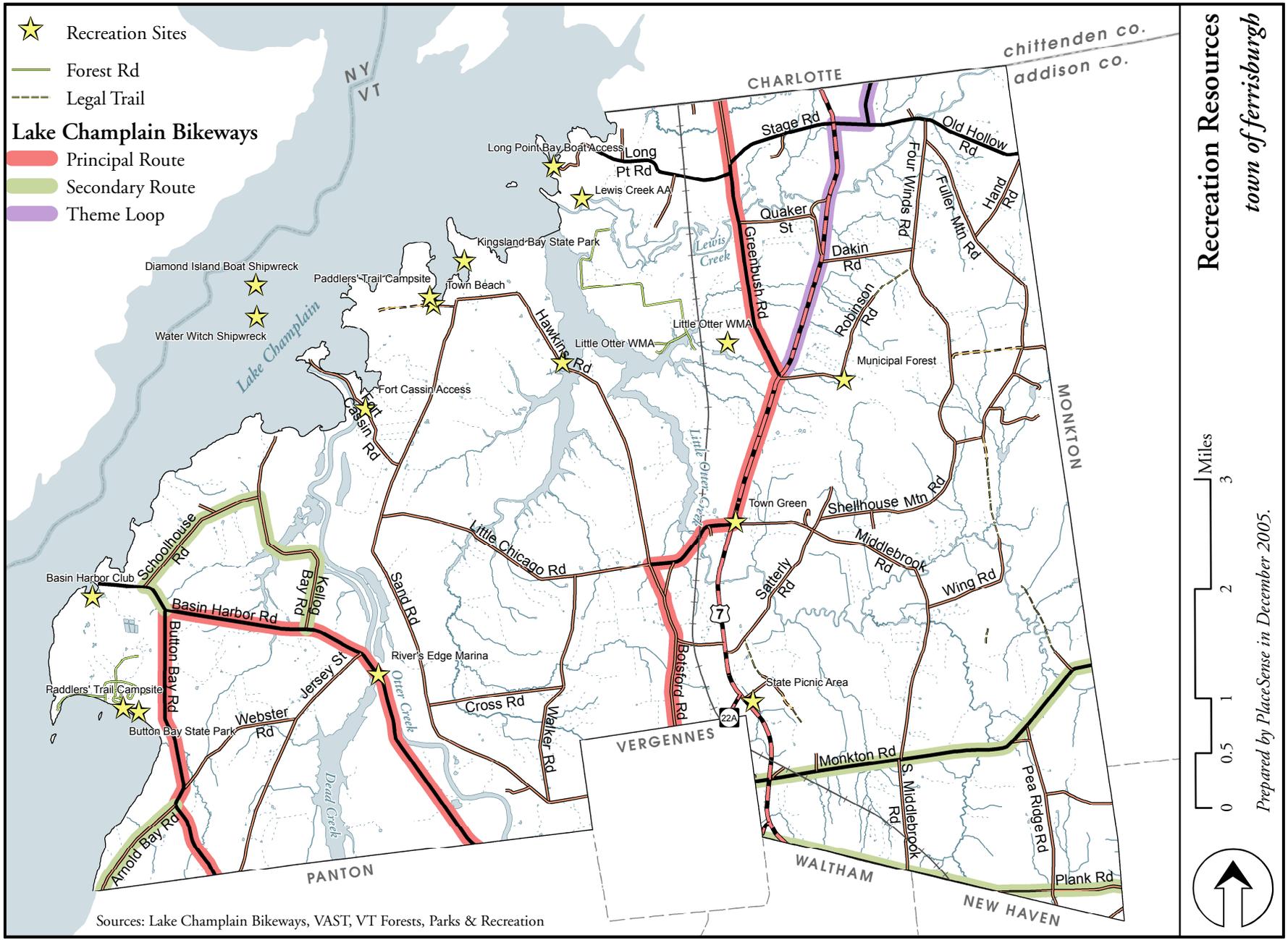
Ferrisburgh received \$157,524 from the State of Vermont for maintenance of these highways. Class 3 highways are all other highways that are negotiable in all seasons. Class 4 highways are all other untraveled highways, not including town trails that are not maintained year-round.

Although not designed for it, more and heavier traffic is occurring on secondary roads. For example, milk trucks are now tractor-trailers and can exceed the weight limits on these roads, as can manure haulers, which causes the road base to deteriorate at a faster rate. There are no sidewalks throughout most of Ferrisburgh and lack of shoulders is also a problem for pedestrians, bicycles and strollers as the traffic increases, moves faster, takes up more space in the road and seems more oblivious to those not in a vehicle.

Highway Department: Ferrisburgh has its own Highway Department with a full-time Road Foreman and three additional employees. The department is responsible for summer maintenance, winter snow removal and maintenance, and reconstruction of town highway infrastructure. Ferrisburgh has a maintenance facility and various pieces of road maintenance and construction equipment.

Highway expenditures are the largest item within the town (non-school) budget. In 2004-2005, this budget was approximately \$760,000 and the 2005-2006 budget is \$607,000. About half the budget pays for winter maintenance with small portions going towards bridge and highway construction.

Ferrisburgh is currently updating its infrastructure inventory. In 1998,



Ferrisburgh had approximately 77.8 million dollars invested in its highway system. The infrastructure includes the highways and trails listed above, 11 bridges, guardrails, culverts and road signs.

Bicycle and Pedestrian Use: Currently the Champlain Bikeway has marked routes through Ferrisburgh using Route 7 and many of the secondary roads. Ferrisburgh presently does not pave any shoulders on its secondary roads, nor does the town maintain any sidewalks. Ferrisburgh needs to consider policies for sharing the road with pedestrians and bicyclists. Special attention should be given to developed areas such as North Ferrisburgh Hollow, Basin Harbor Club, and Little Chicago Road near the Ferrisburgh Central School.

J. Recreation

There are many town or state owned open spaces and recreational facilities in Ferrisburgh, making the town an important recreational location for local residents and visitors from afar. Ferrisburgh residents were very clear in their answers to the town survey, which the Planning Commission undertook last year, that they want to see a diversity of recreation easily available to everyone throughout town. Further, answers to questions about a future town center showed a very strong desire for recreation, parks, and community gathering spaces and functions.

State Parks: Kingsland Bay and Button Bay.

Wildlife Management Areas: Little Otter Creek, Lower Otter Creek, Fort Cassin and Dead Creek.

Lake and River Access Areas: Fort Cassin, Lewis Creek, Basin Harbor, the Town Beach and Porter's Point.

Town Forest: Shellhouse Mountain Municipal Forest (121 acres).

Village Green: 1 acre at the town center

Town Beach: A picnic and swimming area (1 acre) on Lake Champlain. Car-top boaters also frequently use this area.

Ferrisburgh Central School has a playground, playing fields and a gym on approximately 24 acres.

State-owned roadside picnic area in Ferrisburgh on Route 7 near Locust Lane.

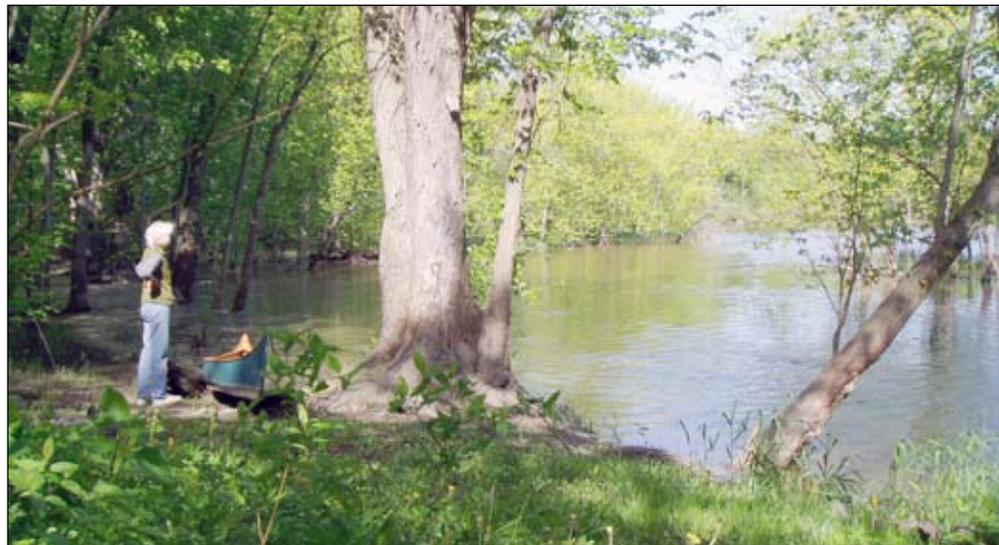
The Basin Harbor Club has a golf course and a private airstrip.

Vergennes Pool: Residents of Ferrisburgh may also use the Sam Fishman Pool in Vergennes.

VAST snowmobile trails weave across many acres in Ferrisburgh.

Champlain Bikeway routes are marked along many roads in town, especially in West Ferrisburgh.

Ferrisburgh's Lake Champlain shoreline is part of a lake-wide canoe and kayak Paddlers' Trail with access to public and private campsites along the shoreline. Two Paddler's Trail campsites are located in Ferrisburgh, at Kingsland Bay and Button Bay State Parks.



Canoeist on the Little Otter Creek

The Lake Champlain Maritime Museum, located adjacent to the Basin Harbor Resort on Lake Champlain, has become a nationally renowned center for research on Lake Champlain especially as it applies to the early history of North America. Here there is a replica of the Philadelphia, and many artifacts from the Revolutionary War period of American History.

Underwater Historic Preserve: Like all such underwater preserves in navigable water, it belongs in the public trust, and is under the protection of the Vermont Division for Historic Preservation and the New York Department of Environmental Conservation.

Fishing and Marinas: There is a large boating and fishing recreation business on Lake Champlain with some of the best bass fishing in the nation attracting thousands of visitors a year. One of the many marinas on Lake Champlain can be found on Basin Harbor road, and another is located at Basin Harbor Club.

Public Access: All the waters of Lake Champlain are navigable and in the public trust, and the lower sections of Otter, Little Otter and Lewis Creek up to the waterfalls just upstream of Old Hollow Road in North Ferrisburgh are also classified as part of Lake Champlain and open to fishing all year round. Maintaining public access is important to the majority of Ferrisburgh residents according to the recent survey.

Despite the abundance of recreation opportunities in town, Ferrisburgh has only a limited selection of overnight accommodations and places to eat, with the exception of the Basin Harbor Resort. In other parts of Vermont, the rise in bed-and-breakfast accommodations, especially in historic houses or farmhouses to supplement farm income, are becoming much more common and in high demand. Ferrisburgh's policies may wish to encourage such economic growth. Of course, Vergennes is 'in town' so to speak with several of places to eat and stay.

In parts of Vermont, there are many miles of pathways for bicycles, and physical activity is strongly advocated for all Vermonters. Bicycle riding is a healthy activity for Vermonters of all ages, and an important aspect of modern

tourism in Vermont. In the recently completed town-wide survey, a high percentage of respondents listed walking, and biking and snowmobiling as important to them. In addition, several classes of children at the Ferrisburgh Elementary School completed the survey and a very high percentage asked for more recreation trails and bike paths in town.

Ferrisburgh has some roads designated as official routes by the Lake Champlain Bikeways. However, many roads are not maintained in a manner that would allow safe bicycle riding. Many scenic roads have no shoulders, including: Basin Harbor, Kellogg Bay, Schoolhouse, Bottsford, Vergennes-Monkton, Hawkins, Sand, Old Hollow, Mt. Philo, Shellhouse Mountain, Four Winds, Fuller Mountain, Middlebrook and Little Chicago.

K. Development Trends

In many ways, the current land use patterns have changed little over the last five years. The rate of new home construction has remained relatively stable, although house renovations and property values, especially on the lake, have increased enormously as seen in the 2005 appraisal. Most of the town is still a mix of wetland, forest and active farmland and many more acres have been set aside in permanent conservation easements making it likely that the overall land use pattern will continue its present trend. In effect, the policies of the last five years, together with the associated zoning ordinances and subdivision regulations have worked as planned.

According to Ferrisburgh's Grand List, there were approximately 900 residential parcels in town, comprising about 35 percent of the town's land area. Between 2001 and 2004, about 50 new residential parcels were added to the Grand List.

Although the number of new residences each year is still quite low, the value of improvements, renovations and out-of state sales has increased the value of both residences and seasonal homes. A buildout analysis based on current conditions in Ferrisburgh as of 2005 indicates that there is the potential for a maximum of 3,100 new homes under the town's current zoning. If areas of town with soils with severe limitations for treating septic were considered undevelopable, the maximum buildout would be closer to 1,700 units.

In this buildout analysis, all public and conserved lands were considered undevelopable, and densities were based on the town's currently adopted zoning regulations. It is extremely unlikely that the town could ever be built out to that maximum density, but the analysis is useful in determining the pattern of development that is being promoted by the town's regulations and how land capability is likely to constrain development within the town. It also suggests a closer look at possible future policies to meet the vision for the town that residents have clearly articulated.

L. Reference Section

The Historic Architecture of Addison County, Vermont State Register of Historic Places, Vermont Division for Historic Preservation, 1992.

The Lake Champlain Committee, www.lakechamplaincommittee.com; the Vermont Recreation Trails, Department of Forests, Parks and Recreation, and the Land and Water Conservation Fund (LWCF) periodically have funding to assist in improving recreation facilities, trails and access.

For more information about snowmobiling in town contact the Vermont Association of Snow Travellers (VAST) at www.vtvast.org or (802) 229-0005.





4. FERRISBURGH FUTURE

4.1. NATURAL RESOURCES POLICIES

The following policies are recommended based on the past history and present inventory of town resources, and the town planning desires articulated by town residents.

A. Earth Resources

1. Condition the removal of topsoil, sub-soil, sand, gravel or stone through a permit to prevent soils loss, erosion and environmental damage.

B. Steep Slopes & Shallow Soils

1. Discourage removal of all existing vegetative cover on all areas with slopes over 15 percent or where soils are shallow to bedrock.
2. Ensure that grading, cutting or filling does not result in a finished grade over 50 percent.

C. Wastewater

1. Issue town permits for development contingent upon applicants receiving all required state and federal permits, including a state water and wastewater permit.
2. Maintain accurate town records of approved septic systems.
3. Encourage upgrading of old or inadequate septic systems, especially near shorelines, rivers and wetlands.

D. Floodplains, High Water Table and Stormwater Runoff

1. Avoid development in flood hazard or flood prone

areas, or those with regularly high water tables or hydric soils.

2. Ensure that all development permitted in floodplains, areas of high water table or hydric soils complies with all state and federal laws.

3. Continue Ferrisburgh's participation in the National Flood Insurance Program and maintain flood insurance maps.

4. Require adequate management of stormwater runoff from developed lands, parking areas, roads and driveways so that surface waters will not be negatively impacted by stormwater discharge.

5. Require that subdivisions provide an adequate stormwater drainage plan for the entire subdivision parcel.

E. Watershed, Wellhead Protection and Well Isolation Zones

1. Ensure that development on lands within recharge areas or protection areas for municipal or private water supplies does not diminish the potential quantity or quality of ground and surface water by disrupting the flow, or polluting the water supply as a result of failed septic systems, storage of hazardous waste materials, runoff or other cause.

2. Require private well isolation zones to be delineated on final plats and, as far as is feasible, contained on the property where the well is located.

F. Streams, Headwaters and Shorelines

1. Require a minimum 50-foot buffer of natural vegetation from the top of the banks of all streams, rivers and creeks.
2. Set all development along the Lake Champlain shore back at least 100 feet where feasible and require a buffer of natural vegetation be maintained along the shoreline.
3. Undertake a formal assessment of the effectiveness of buffers and develop further policies for riparian buffers.
4. Encourage further conservation of lands adjacent to surface waters.
5. Undertake road and bridge construction or repair in a manner that protects stream flow, reduces pollution from salt, herbicide and petroleum runoff and protects stream banks from erosion.
6. Work with environmental agencies and organizations to maintain an inventory of stream sampling data and needs for riparian buffers.
7. Ensure that the Shoreland District is visually, functionally and physically related to the lake.
8. Recognize that bank stabilization is critical to preserve lakeshore character and reduce sedimentation and runoff carrying nutrients like phosphorus and pollutants into the lake; require

development setbacks to prevent increased bank erosion and pollution; and consider use of site plan review for lakeshore district development proposals.

9. Support the continuation of and the participation by Ferrisburgh's landowners in programs sponsored by the Natural Resource Conservation Service to implement soil conservation and ecologically sound farm management practices.

10. Explore the need for a program to identify inadequate or failing septic systems and prepare remediation plans in the near future; ensure that new construction and renovation projects along the lakeshore trigger site and septic system review; and require, through zoning, adherence to accepted or adopted standards for aesthetic and environmental quality.

G. Wetlands

1. Follow all federal and state laws regarding development in or near wetlands and wetland buffers.
2. Condition all filling of land, whether wetland or not, through a permit to prevent environmental damage.
3. Maintain a minimum 50-foot buffer of natural vegetation around all Class Two wetlands.
4. Require that a formal assessment be conducted of all wetlands, both Class Two and Class Three, on a parcel intended to be developed, including field delineation by a qualified wetland ecologist, with the costs borne by the applicant.

5. Ensure that recreational use in or near a wetland will not interfere with necessary wildlife habitat or significant wetland function.

H. Natural Areas and Critical Habitat

1. Work with the Vermont Agency of Natural Resources Nongame and Natural Heritage Program to ensure development does not endanger critical habitats or state rare, threatened or endangered species.

2. Maintain a natural buffer from and require screening of any development adjacent to Natural Areas and Critical Habitat.

3. Prohibit any unreasonable, out-of-the-ordinary, or unexpected noise, odors or artificial lighting.

4. Require lighting in adjacent developments to be down-directed and shielded to minimize light directed upward or outward, to the greatest extent possible.

5. Maintain a 300-foot undisturbed buffer at deer wintering yards and identified bobcat or bear denning sites.

6. Encourage landowners to improve wildlife habitat, such as by applying for funding to improve wildlife habitat through the Natural Resources Conservation Service (NRCS - www.vt.nrcs.usda.gov).

7. Encourage landowners, hunters, wildlife viewers and the Ferrisburgh Conservation Commission to map wildlife trails and corridors.

I. Forestlands

1. Direct the Ferrisburgh Conservation Commission to maintain and implement an updated Town Forest Management Plan.

2. Encourage landowners to inventory their forestlands and manage them sustainably, through mechanisms such as third-party certification and value-added products.

3. Prohibit timber cutting within 300 feet of deer wintering yards, or identified bear or bobcat denning sites.

J. Agricultural and Forest Soils

1. Discourage development on soils classified as Prime, Statewide and Local by requiring clustering, minimal soil loss to development, and/or mitigation on- or off-site.

2. Encourage permanent easements to conserve agricultural soils and productive forest soils.

K. Scenic Areas, Roads and Views

1. Enforce state shade tree laws on all town roads and other town lands, under the direction of the Town Tree Warden.

4.2. HUMAN RESOURCES POLICIES

The following policies are recommended based on the history and data presented in the foregoing sections and the vision articulated by town residents.

A. Population

1. Maintain and create public facilities and spaces that encourage social interaction among town residents.
2. Foster greater cooperation and mutual respect among persons with different views and opinions.
3. Increase residents' understanding of how town government works.
4. Publicize town news and information to residents through media such as a newsletter, website or periodic reports to press and broadcast media.
5. Support elderly residents and their assisting organizations in efforts to maintain independence.

B. Housing

1. Encourage all Planned Unit Developments (PUDs) to include affordable housing units.
2. Encourage multi-family and manufactured housing that can provide affordable places for people to live.
3. Prioritize affordable housing building to first renovate, second to infill with new construction on vacant lots in densely settled areas, and third to build new homes.

4. Allow for density bonuses for creation of affordable housing units in PUDs.
5. Support the provision of housing that will allow elderly residents to continue to live in the community.
6. Support the provision of housing that will allow young people to buy homes and raise their families in the community.
7. Work to ensure that Ferrisburgh is an attractive community with affordable housing options for younger residents.
8. Work with land trusts and developers to encourage development of small-scale affordable housing PUDs.
9. Promote affordable housing and an increase in availability of rental housing by allowing for apartments associated with existing houses or conversion of large single-family homes into multi-family homes, consistent with rural Ferrisburgh.
10. Encourage accessory dwellings by adding rental units to existing homes or accessory structures.
11. Maintain a mix of housing types and values by discouraging 'cookie cutter' housing developments that contain homes of a single style, size or sale price.
12. Encourage any new residential development to be energy efficient and promote use of the Vermont Energy-Star Program.

B. Home Occupations and Businesses

1. Encourage and support home occupations.
2. Define home occupations as activities that utilize no more than 30 percent of a residence and generate income to no more than three individuals including at least one of whom is a permanent resident of the house in which the occupation takes place.
3. Require home businesses, which take up more than 30 percent of the residence, or which use the major part of an accessory building, be treated as a conditional use of the property.
4. Ensure that home businesses are 'low key' and neither have an undue adverse effect nor alter in any substantial way the local rural residential nature of the house, the character of the neighborhood, or access roads by excessive noise, traffic, odors, lights or hours of operation.
5. Encourage and support tourism businesses.
6. Encourage improved availability of high-speed, broadband internet connections.

C. Economic Development

1. Encourage and support development of small-scale and value added commercial development.
2. Discourage development on primary agricultural and forest soils.
3. Uphold farmers' right to farm using generally accepted agricultural practices.

4. Encourage commercial and industrial development in the areas of town traditionally designated for commercial growth, namely the Highway Commercial areas and Industrial areas.
5. Allow commercial or industrial development in other areas of town only in accordance with policies developed under Home Occupations and Businesses, and with design review consistent with the character of the area.
6. Encourage businesses that produce value-added products and engage in sustainable business practices, especially as they enhance and support the traditional agriculture and forestry and rural character of the town.
7. Encourage the use of local grown food products, farm stands and Community Supported Agriculture (CSA) in all parts of town.

E. Education and Childcare

1. Work with the Ferrisburgh Central School on a regular basis to support the school in its mandated requirements and enhancements that support rural education.
2. Encourage the school students to take an active role in their town through working with the Planning Commission, Conservation Commission and related activities.
3. Work in partnership with appropriate state agencies and the school to improve and maintain the school recreation area.

4. Promote and encourage volunteering in school programs and activities.
5. Ensure safe access to the elementary school and plan for future connections that would allow pedestrian or bike access.
6. Support the development of programs that incorporate an appreciation of local history, community participation and the democratic process into the learning environment.
7. Encourage citizen participation in the school policy-setting process.
8. Support the development of programs in Ferrisburgh's elementary school to promote an increased understanding of natural systems and to use the town's natural areas as a resource for engaging children in their local environment.
9. Support the provision of early education and after-school programs.
10. Encourage high quality childcare services that meet the needs of the town's working parents.
11. Ensure excellent and diverse educational opportunities in order to facilitate a tradition of lifelong learning by town residents and work to engage residents of all ages the town's education system.
12. Ensure that the town has planning in place to provide adequate municipal facilities to meet current and future growth.

F. Historical and Cultural Resources

1. Work with public and private sources of funding to reconstruct the historic Grange Hall as new Town Offices, Community Center and Grange Hall.
2. Identify and establish a building for the Ferrisburgh Historical Society, such as School Number 17, built in 1862 (presently the Town Clerk's Office).
3. Identify and maintain the town's historical records, and install a new, larger Town Vault in the reconstructed Grange Hall, working with the State Division of Historic Preservation.
4. Protect all archeological sites or potential sites, notably along all riverbanks and conservation areas, working with the appropriate state and federal agencies.
5. Establish design control policies for the Historic District in North Ferrisburgh.
6. Determine how best to identify by metal or wooden plaques the 156 historic buildings in town and gather current addresses for all the structures.
7. Encourage the adaptive re-use of historic buildings, which retain authentic features.
8. Use landscaping as an integral aspect of all development in town such that protective groundcover is established and shade trees, screening trees and shrubs are planted in a manner that reflects a rural landscape.
9. Encourage use of native species for landscaping plants.

G. Community Facilities and Services

1. Build new Town Offices with a community meeting space on the site of the historic Grange Hall.
2. Achieve a rate and pattern of development that is consistent with the town's ability to assimilate new residents without overburdening community facilities and services and negatively impacting the town's fiscal condition.
3. Establish a taskforce to identify childcare needs in town and make recommendations to address needs.
4. Encourage development of a five and ten-year capital budget program that would allow the town to require phasing of developments and the assessment of impact fees on large developments, over ten residential units, that may lead to need for increased local services and facilities.
5. Continue to actively plan for the town's solid waste disposal needs by participating in the Addison County Solid Waste Management District.
6. Continue to support the local volunteer fire and rescue services in town and ensure that there is adequate road access for emergency responders to be able to reach buildings.
7. Work with the Volunteer fire Department and Rescue Services to maintain safety in town, including implementation of the 911 Emergency numbers.
8. Work with the state and county sheriff as needed for police services.

9. Develop a comprehensive town disaster plan in cooperation with appropriate state agencies, which include recommendations for town and homeowner preparedness and coordination of disaster management.

H. Utilities and Energy

1. Encourage the Planning Commission to undertake energy audits.
2. Support high-speed internet access by actively encouraging service providers into the areas.
3. Encourage alternative sources of energy such as solar and low impact wind power and ensure that the town's regulations do not unduly restrict installation of small-scale wind generators or solar panels.
4. Ensure that new housing or housing additions are in accordance with Act 20 energy standards.
5. Monitor new construction to ensure Act 20 certificates are filed with the town.
6. Encourage new housing to be Energy Star rated.
7. Encourage winterization and efficiency measures for structures being renovated.
8. Provide for commuter ride-share programs
9. Enact a program to acquaint potential town carpool partners.
10. Discourage the use of 'always on' street and other outdoor lighting.
11. Require any company seeking permits for

telecommunications infrastructure to prove that no existing structure in town meets their needs before being allowed to construct a tower; and encourage use of existing structures by making such projects much easier to permit than construction of a new structure

12. Remain involved in the VELCO transmission line upgrade project *to ensure that Ferrisburgh receives its fair share of required mitigation measure including putting either the transmission line or roadside distribution lines underground so that extremely tall poles will not be required where the new line crosses roads.*

I. Transportation

1. Maintain an up-to-date inventory of roads, highway structures, bridges, buildings and maintenance equipment to ensure that residents have a properly maintained highway system.
2. Limit the number of curb cuts when developing new roads or drives.
3. Support development of the Route 7 Corridor Management Plan by incorporating compatible access management provisions into the town's land use regulations.
4. Limit and control the number and location of access points onto state highways to ensure safety and the road's ability to serve projected increases in traffic.
5. Maintain safe sight distances for access to US Route 7 and other major intersections.

6. Work with the Agency of Transportation (AOT) to implement changes to US Route 7 in Ferrisburgh Center that will enhance the civic center of town and its associated school including: traffic calming, signalization of the Little Chicago Road intersection, road realignment of the four way crossroads, turning lanes, crosswalks and other appropriate techniques such as a roundabout on Route 7.

7. Work with AOT to implement changes to Route 7 at the intersections of Stage Road and Old Hollow Roads including: eliminating the large truck parking area associated with the Mobil Gas station that limits sight distance for traffic turning left onto Route 7 from Old Stage Road and from the Mobil station; signalization; and reduction of the speed limit in North Ferrisburgh.

8. Ask the Town Road Foreman, working with the AOT, to clearly identify intersections in town that are becoming potentially hazardous and begin to develop a long-term plan to maintain safety.

9. Monitor town roads for damage by heavy vehicles.

10. Consider the weight and size of delivery vehicles, milk trucks and agricultural equipment as new connecting roads are built and older ones are reconstructed.

11. Work with farmers, commuters, local residents, pedestrians, bicyclists and other interested parties to develop a plan to share the town's roads that would include specific recommendations to address safety and maintenance issues.

12. Undertake a study of town roads to determine the feasibility of creating separate bicycle or walking paths as part of the public highway system and develop a town-wide plan for bicycle and pedestrian routes.

13. Determine the feasibility of putting in place a sidewalk on the public right of way land along the south side of Old Hollow Road.

14. Construct and maintain a pedestrian walkway from the school to the old and the new Town Offices.

15. Enter into substantive talks with AOT when the next round of re-paving of any of the state highways is planned for purposes of establishing paved shoulders wide enough to accommodate bicycles, joggers and pedestrians.

16. Prepare an inventory of all Class 4 roads and maintain them so that they are available for public access for trails or other public uses.

17. Work to improve pedestrian and bike safety on bridges.

18. Encourage alternative transportation policies that reduce traffic on state highways by promoting increased use of public transit, freight, rail, carpooling, bicycling and walking.

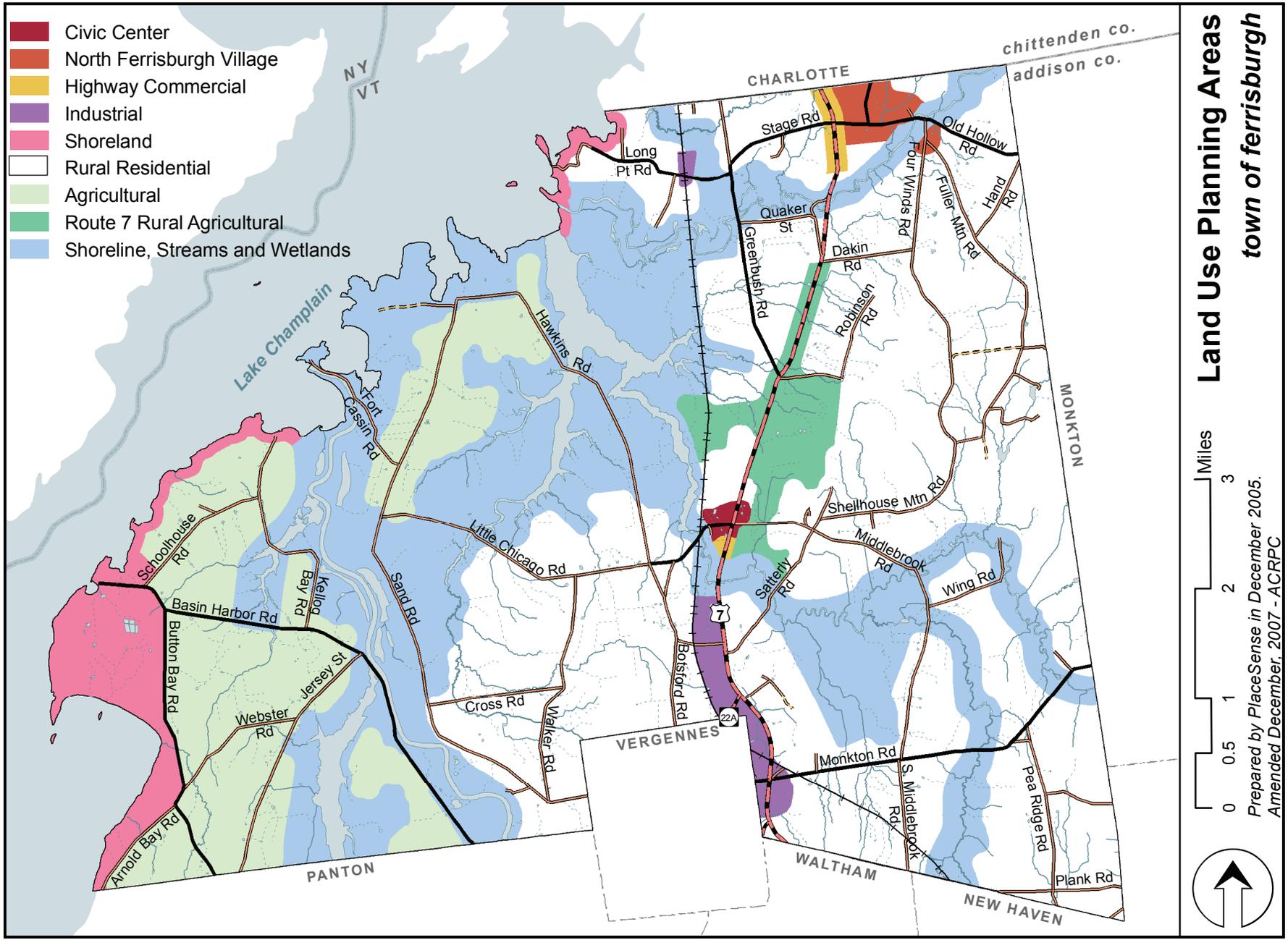
19. Set up a taskforce to determine the feasibility of establishing adequate park-and-ride locations for Ferrisburgh residents who commute on Route 7.

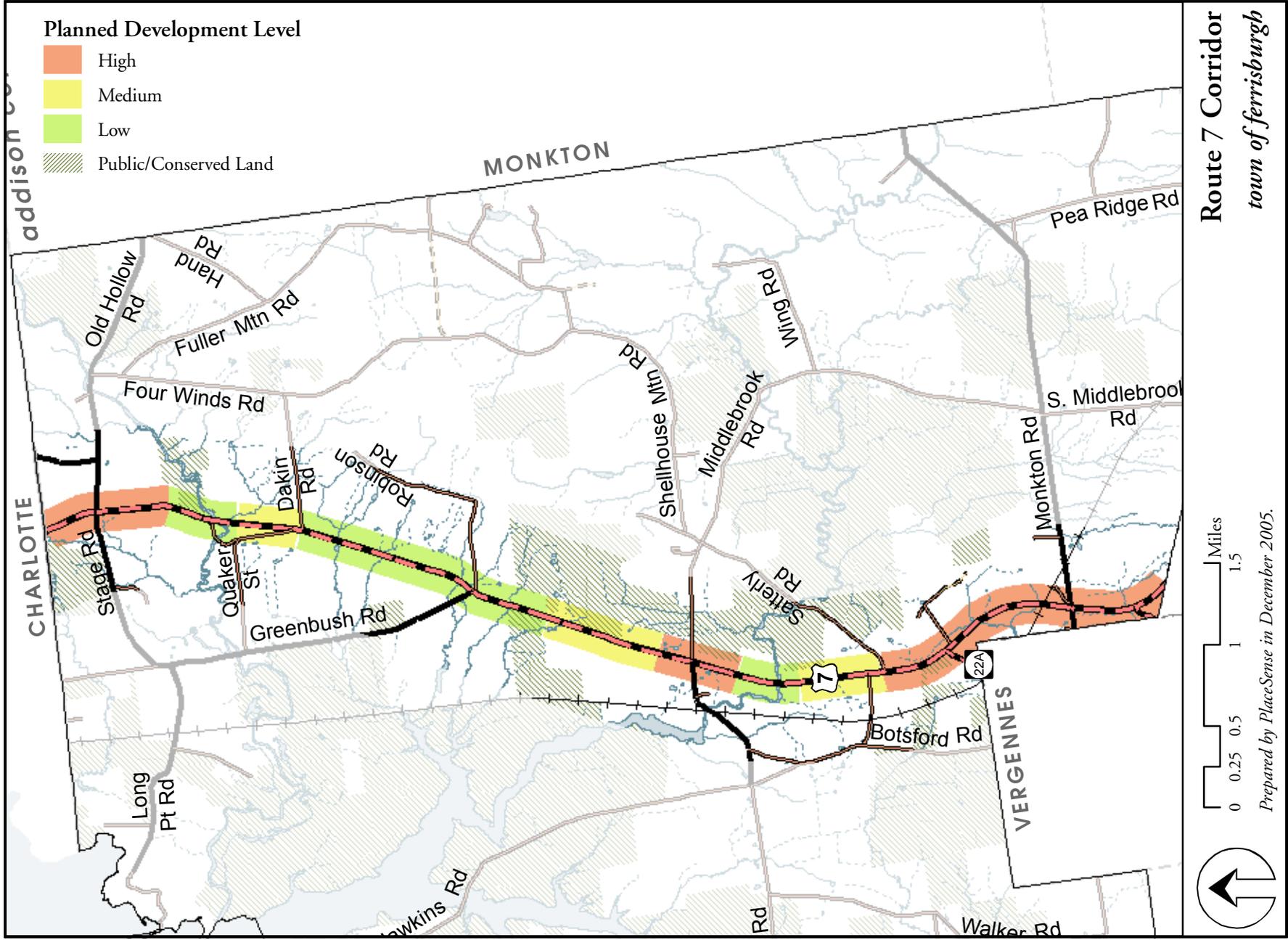
20. Monitor age structure of resident population and determine needs for transportation, especially in times of emergency.
21. Prohibit the construction of new paved sections of town road unless safety, traffic demand and maintenance considerations dictate that a paved road section is appropriate.
22. Require that all new lots have a legally enforceable permanent right-of-way at least 60 feet in width.
23. Ensure that private roads and drives are constructed in a manner that causes minimal erosion, are not overly engineered, or not in keeping with the rural character of the town.
24. Use the minimum amount of salt necessary to keep roads clear of snow and ice in order to reduce ecological damage, and consider use of non-salt de-icing agents where appropriate.
25. Promote awareness of key animal crossings in town.
26. Maintain the town's roads and bridges, and make needed improvements in a manner that protects Ferrisburgh's special features.
27. Continue ongoing review and revision of speeds limits on all town roads.

J. Recreation

1. Revitalize the Town Recreation Committee and encourage its members to coordinate with the Planning Commission, Conservation Commission and schools.

2. Maintain the Town Beach and facilities.
3. Protect, clearly mark and maintain all public access points to the town's creeks and Lake Champlain.
4. Monitor and enforce wastewater disposal in all camp areas, including locations where campers and RVs are parked as vacation homes.
5. Encourage the local snowmobile club to maintain and clearly mark places where VAST trails cross roads.
6. Encourage private landowners to allow hiking and cross-country ski trails across their lands.
7. Limit ATV use to private property.
8. Encourage lakeshore landowners to support the Lake Champlain Paddlers' Trail.
9. Encourage developers of major subdivisions or landowners to donate land or facilities for public access or trails.
10. Permit development that is designed and situated in such a ways as to minimize any adverse effects on recreation resources.
11. Maintain public access to traditional recreation areas and encourage the common rural practice of allowing for hunting, fishing and other low-impact recreational activities on private lands.
12. The town should add to the recreation facilities at the Town Civic Center to include a park and community center.
13. Encourage all recreationists to respect private property by removing litter, avoiding trails in mud season, using care crossing fences and not discharging firearms near homes.





4.3. LAND USE AREAS AND POLICIES

These areas are not zoning districts, but merely areas with common characteristics and development trends. The legally enforceable zoning districts are described in the Ferrisburgh Zoning Regulations. Ferrisburgh's land use plan is intended to guide future growth and development, and protect the town's unique resources. Based on the foregoing history, data, and inventories, several areas have been roughly delineated and are described below.

A. Agricultural and Forestry Areas

These areas have soil characteristics best suited for agricultural and forestry uses, including areas with Prime agricultural soils, soils of Statewide significance and soils of Local significance (see glossary for definitions). These lands are currently in agricultural or forest use and a significant percentage of them have been conserved, ensuring that they can remain in productive use in perpetuity.

It is the town's policy to protect these areas and maintain the town's rural, agricultural and forestry character, which is largely created by its open, working agricultural and forestry landscapes. This plan's policies aim to protect agricultural businesses of all sorts, including home occupations. The goal for these areas of town is to maintain an open, working rural landscape with scattered housing.

Low-density residential uses and other compatible uses such as open space, conservation, low-intensity outdoor recreation, commercial forestry and maple syrup production, should be permitted. Other uses, including residential and small-scale commercial activities that support agriculture, should be permitted as conditional uses.

While densities should remain low, efforts should be made to encourage clustering of development in a manner that will preserve larger tracts of land for productive use (see discussion of rural development patterns below). Town residents have expressed a desire not to have land use patterns in Ferrisburgh that look like suburban America, preferring patterns which are rural in their look and feel.

B. West Ferrisburgh Agricultural Conservation Area

This area lies west of Otter Creek. It has long been a rich and productive farming area. Town residents have clearly expressed a desire to retain an agricultural working landscape and agricultural soil conservation is strongly supported in town. This area has high-quality, productive soils and a relatively pristine farming landscape. Agriculture and forestry should be the permitted uses in this area and development densities for other uses should be allowed only at very low levels, measured against a test of undue adverse effect

C. Conservation Areas

These areas include upland areas in east Ferrisburgh, including Shellhouse Mountain; and wetlands, rivers and the central lakeshore.

Ferrisburgh is renowned for its vast acres of wetlands, critical habitat for wildlife, and natural areas with rare plant and animal species. As illustrated on the resource maps included in this plan, the town has significant areas with characteristics that seriously constrain development.

Ferrisburgh's zoning should continue to protect the town's wetlands, flood hazard areas, steep slopes, deer wintering yards, areas with shallow soil, rare, threatened or endangered species and other natural areas. Regulations should also continue to discourage development in remote, unserved areas that are unsuitable for development. Many of these areas have limited road access and it is the town's policy not to provide such service.

There are only a few clusters of pre-existing development located directly on the major streams. Most of the land is in agricultural use or is part of one of the state-owned Wildlife Management Areas. The riparian areas along streams should be considered for protection with 50-foot buffers from bank top on both sides of the stream.

Lands in this planning area should be kept in their natural state to the greatest extent feasible. Land uses permitted in these areas must be compatible with the limitations of these areas, such as agriculture, forestry and non-commercial

low-impact outdoor recreation. Uses allowed in these areas should be severely limited in order to conserve critical ecological habitats.

Camps and single-family residences should be reviewed to determine potential impact on critical ecological habitats, soils, sewage, water, access, frontage and scenic considerations. Buffers of land must be conserved to minimize the impacts of any development. The town should continue to allow development only at very low densities within these areas.

D. Lakeshore, North and South

This planning area includes two areas of Ferrisburgh's Lake Champlain shorelands. Along the lake, current development has been primarily intensive renovation of the older seasonal housing stock with some very high value new construction. Generally, this area includes concentrations of existing residential, vacation and commercial uses in a unique setting requiring high levels of environmental and natural resource protection. The character of the area is summer vacation homes. Compared with other areas of town, development in these areas is historically dense.

The shorelands of Lake Champlain in Ferrisburgh have been relatively well protected through the presently designated 'Shoreline' zoning district and associated bylaws.

New development of or significant renovation to existing camps and single-family residences should be reviewed to determine potential impacts of sewage, water, access, frontage and scenic considerations. Bylaws should be amended to reflect that year-round town services such as road maintenance and fire/rescue protection are not provided in some of these areas, which historically have had narrow winding dirt roads often little wider than a pick-up truck.

Development in these areas should be reviewed as conditional uses based on detailed standards and clear conditions that address issues such as riparian setbacks, soil erosion, possibility of wastewater pollution of surface water or surrounding wetlands, vegetation and wildlife corridors, scenic vistas, view corridors. Development densities should be maintained at current levels or reduced where necessary to prevent impairment of adjacent, sensitive resources.

E. Rural Residential Areas

The character of these areas is rural with relatively low to medium densities (for Ferrisburgh) or clustered development, typically close to town roads. Only a limited number of soil types in Ferrisburgh lend themselves to conventional on-site septic systems.

Year-round family dwellings are the intended use for this district. A minimum lot size of two acres has traditionally been required for these areas to encourage their utilization and thereby reduce site development costs, increase public health, restrain public service capital and unit costs and preserve the remaining agricultural soils.

The town should explore incentives and bonuses to promote a compact development pattern in areas deemed most appropriate for additional residential construction (see discussion of rural development patterns below).

F. North Ferrisburgh Historic Village

North Ferrisburgh along Old Hollow Road stands out as a village center within the town. This is a compact historic village, well documented in the town records as an area of mixed residential and commercial uses and is listed by the state as a Historic District. Traditionally, this village has lot sizes of various dimensions, large and small, some close to the road, others set back, some with large lots and some small, giving a diverse scale of settlement pattern and the character of a 19th-century village.

It is recommended that a new zoning district be considered in that part of town, from Route 7 east along both sides of Old Hollow Road, north up Mount Philo Road to the boundary with Charlotte, east along Old Hollow Road, including Champlin Hill, over the Lewis Creek Bridge, a short way up the hill on Old Hollow Road to include the historic houses located there, and south a short distance to include the historic houses and old schoolhouse along Four Winds Road.

Historically appropriate design control criteria should be considered for new or replacement construction within a designated historic district.

The historically partially-built pedestrian sidewalk along the south side of Old Hollow Road should be completed given the higher density of settlement and relatively limited historic setback distances from the traveled portion of the highway.

There is a limited amount of land within these areas that is available for additional residential development. The town's regulations should provide for a development pattern that will match with the current character and settlement pattern of this historic village center. There is limited infrastructure and services in this area and thus densities of more than two units per acre is not recommended.

G. Highway Commercial Areas

a) North Ferrisburgh: Land around the historically busy intersection of Stage Road and Old Hollow Road with Route 7 is largely commercial in character, with a landscaping business, motel, large modern gas station, the North Ferrisburgh Post Office and state highway depot, a used car business and other commercial and residential lots. This area has historically served those who use the main road corridor north/south as well as those coming from the western part of town, and from Monkton to the east.

This section of Route 7 is the 'gateway' into historic Ferrisburgh and the farmlands of Addison County from the north.

b) Area south of the Civic Center running to Little Otter Creek: Most of these areas are currently zoned for development at a two-acre density. Access on the state highway and the visual character of this entrance to the town are issues of concern that should be addressed by the town's regulations to maintain historic character.

All uses in this area should be conditional, and include only small-scale commercial enterprises and mixed uses typical of a 19th century highway crossroads area, with varied lot sizes, landscaping and setbacks such that views of open lands behind may be obtained. Infrastructure is limited in these areas.

H. Civic Center

The southern boundary of Ferrisburgh on Route 7 wraps around northern Vergennes, and much of West Ferrisburgh is reached only by driving through Vergennes. It is thus logical that Vergennes is the service center for Ferrisburgh and other surrounding communities. Civic center functions of Ferrisburgh are however clearly located in the roughly geographical center of town around the intersection of Little Chicago Road and Middlebrook Road with Route 7. In this area today there are several public and community facilities: the old Union Hall and Town Green on Route 7; a Methodist Church; the Town Clerk's Office; one of the two Ferrisburgh post offices; town properties for road equipment and storage; and the Ferrisburgh Central School. Until recently there was the historic Grange Hall with its large community meeting room. In addition, there are residential lots mixed in with a range of commercial uses including a new bake shop with good parking adjacent Route 7. Lots vary in size and setbacks. This area is surrounded by open space and farmland, some of which is conserved.

There is a limited amount of land available for development in this area, and the soils are not as conducive to conventional on-site septic development as in North Ferrisburgh. Conserving some open space for future expansion of the school or the Civic Center on the west side of Route 7 should be considered, especially given the fact that Route 7 bisects this area which will make it difficult to develop a Civic Center around the traditional Town Green and Union Meeting Hall. The historic reconstruction of the Grange Hall should further enhance the character and functions of this area, and increase its community gathering functions.

Route 7 is largely commercial in this area and efforts should be made to slow traffic and improve pedestrian connections between commercial and public buildings. Designating a Civic Center could also serve as an impetus for much needed improvements in the safety of the intersection especially for school busses.

This crossroads area has historically served as a medium density (for Ferrisburgh) civic center of the town and should continue in that role

with conditional uses that support the historic character of the center. There is currently limited infrastructure in this area and thus lot sizes less than two acres is not recommended unless it is part of a carefully planned and approved PUD.

I. Industrial Areas

Two areas have been identified as appropriate for industrial uses in Ferrisburgh due to their location along the railroad and access to the state highway. In reviewing industrial uses, the town should consider the impacts of the proposed use including traffic, noise, light and pollution, and require adequate buffers between industrial and non-industrial uses. Town residents have expressed a desire to encourage light industry, and small-scale commercial development and efforts should continue to encourage use of these industrial areas. More than one use can be considered on the two-acre lot density if the infrastructure is adequate, especially water, wastewater and road access.

J. Route 7 Corridor

Route 7 does not have a continuous stretch of development along both sides throughout the whole length of town. There are still some open areas with farmland and forestland, such as from Dakin Road to the Round Barn development. Because townspeople have clearly expressed a desire to see a mix of open land and highway commercial and residential along Route 7 in Ferrisburgh, this land use plan recommends an overlay planning district with varying development densities based on the character of the surrounding land.

Protecting the Route 7 corridor is critical to maintaining the rural character and quality of life Ferrisburgh residents currently enjoy. People's sense of a place is often largely based on the 'view from the road' that they see while traveling on their daily commute or while touring on vacation. Preventing the highway corridor from becoming a fully developed commercial strip should be a principal purpose of the town's regulations.

There are three sections of the Route 7 corridor in Ferrisburgh that have

been zoned to support highway-oriented businesses and highway uses as conditional uses. One area lies in the northern edge of the town, one in the center around the crossroads at Middlebrook and Little Chicago roads, and the third lies in the southern end of the town, adjacent to Vergennes. The limits of these areas should be delineated and further commercial development outside these permitted areas should be strictly limited.

Lower density areas of land use separate these three higher density areas. These areas should be maintained as low-density residential or open space/agricultural land. This will ensure that the town's commercial zones remain distinct areas and that highway commercial development does not slowly spread out along the entire highway.

The size, scope and impact of commercial uses along the state highway should be subject to site plan review to protect neighboring residences, the visual character and transportation function of the highway and to further the goals in the town plan for economic development to serve the needs of the townspeople and those who travel through town on the busy highway corridor.

It is recommended that access to all highway commercial areas be limited in number, if necessary by use of multi-lot access roads, to promote safety and to ease traffic flow on public roads. The town's regulations should require that commercial property be of a size that allows ample room to set the development footprint back from the traveled road and put landscaping in place to reduce the impact of the higher density of development.

K. Rural Development Patterns

Maintaining Ferrisburgh's rural character, agricultural economy, its long and rich history, and small-scale commercial businesses, are the central themes of this plan. The use of innovative planning techniques can provide for development while preserving agricultural land, open space, and the scenic and cultural resources that define the town's rural character and enhance residents' quality of life and attract seasonal residents and visitors. These techniques can also be used to provide opportunities for the affordable homes needed to maintain a diverse population in Ferrisburgh, as well as vibrant small businesses that can provide jobs within town.

Traditional zoning and subdivision regulations mandate a consistent, regular pattern of development and result in a suburban landscape, which Ferrisburgh residents have expressly described as not desirable. Conventional zoning determines the number of residential units allowed on a parcel largely by setting minimum lot sizes and road frontages. In Ferrisburgh, much of the developable land has been zoned for two- or five-acre lots for many years, and until they were recently amended, state septic regulations had promoted development on lots larger than 10 acres.

There is an inherent conflict in zoning rural land because it is difficult to write regulations that would result in a development pattern typical of the desired rural landscapes. Traditional rural development patterns are diverse, not simple. There are essentially no straight lines in nature. The landscapes in Ferrisburgh include places of relatively clustered development separated by large areas of productive farmland, forests, wetlands, rivers and rugged hills. There are dense concentrations of settlement along the shores of Lake Champlain and along many of the rivers.

The traditional tools provide two basic options, require large or small lots. Large lots maintain low densities, but consume more farmland than necessary and promote sprawl. Small lots can result in development that is too dense resulting in loss of rural character and a suburban landscape.

There are, however, techniques that can allow for development while maintaining rural character. These tools are commonly called 'cluster development', 'conservation design', and 'planned unit development' (PUDs). The underlying principle of all these systems is to encourage the allowable development to be grouped together on smaller lots with a significant amount (usually at least 50%) of the original parcel set aside as open space or productive land. In cluster developments, homes are typically built on lots less than two acres in size, but the overall density of the development is usually greater than five acres per unit.

Conservation subdivisions are a more environmentally friendly form of clustering that protects resources the community has identified as important, such as prime agricultural soils, wetlands, wildlife habitat, scenic views or forestlands. The first step in conservation subdivision design is to identify the resources that are to be preserved and those portions of the site that are not constrained by these features become potential development areas.

Communities can also plan and regulate in a manner that allows for revitalization and growth in existing centers. This also preserves rural character by guiding development into designated higher-density areas. The lack of wastewater infrastructure continues to be a limiting factor on more dense development around the town's traditional centers. Innovative options should be explored that could support 'village-scale' development within and adjacent to the town's traditional centers.

Ferrisburgh should revise the planned unit development (PUD) provisions in its land use regulations to provide appropriate standards and incentives to achieve development patterns appropriate to their surroundings in conformance with the goals of this plan. The town needs standards that respond to the unique character and special concerns of the areas described in this land use plan. Using bonuses and other incentives should be considered to ensure that the town's PUD provisions are regularly used.

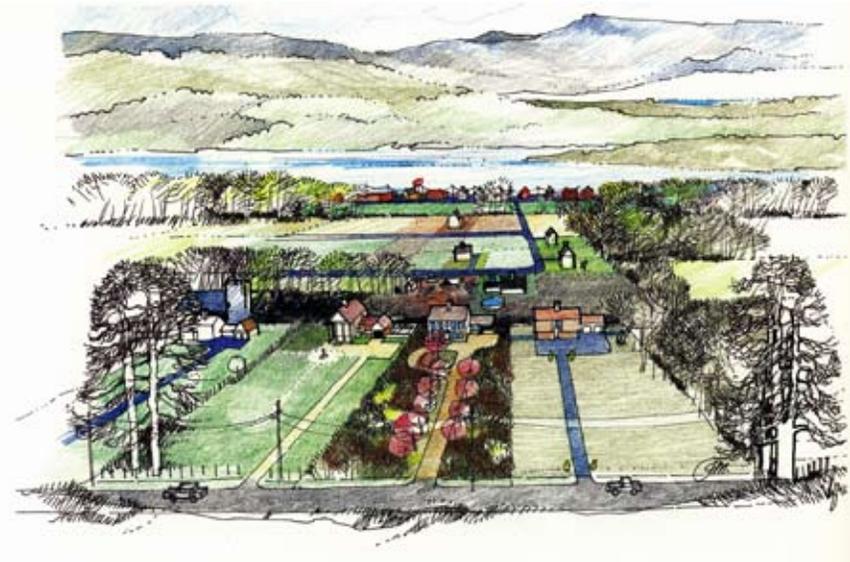
Design Considerations in Ferrisburgh's Rural Landscape

The character of Ferrisburgh's rural lands are captured in Illustration A and can be described as a broad valley with sweeping views to Lake Champlain and the distant Adirondack and Green Mountains visible from roads throughout town. Farm buildings are large and the open space around them is relatively flat and open.

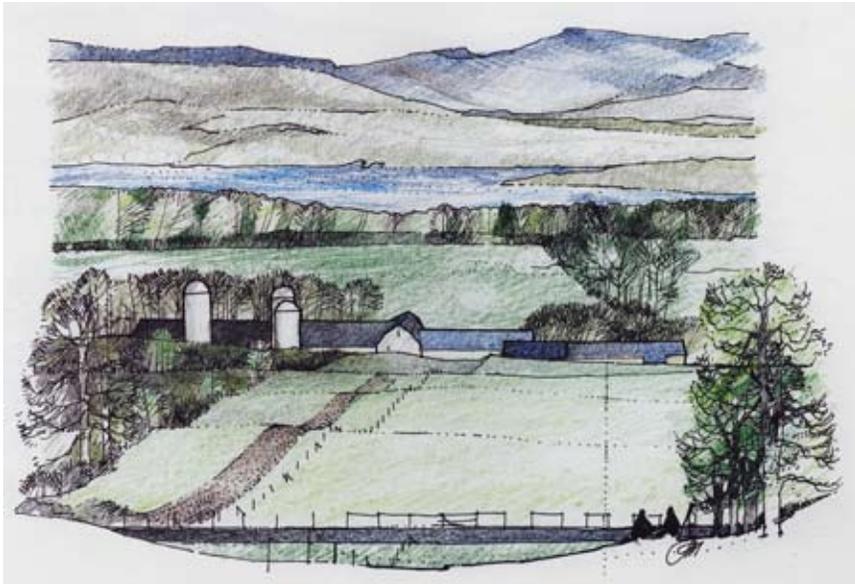
Illustration B shows how poorly guided growth has destroyed the historic farm complex and has allowed sprawling residential development to obscure the sweeping view and consume all the open land.

Illustration C shows a PUD that has been carefully located to maintain a maximum amount of open space, reuse the farmstead and reinforce the traditional agrarian settlement pattern.

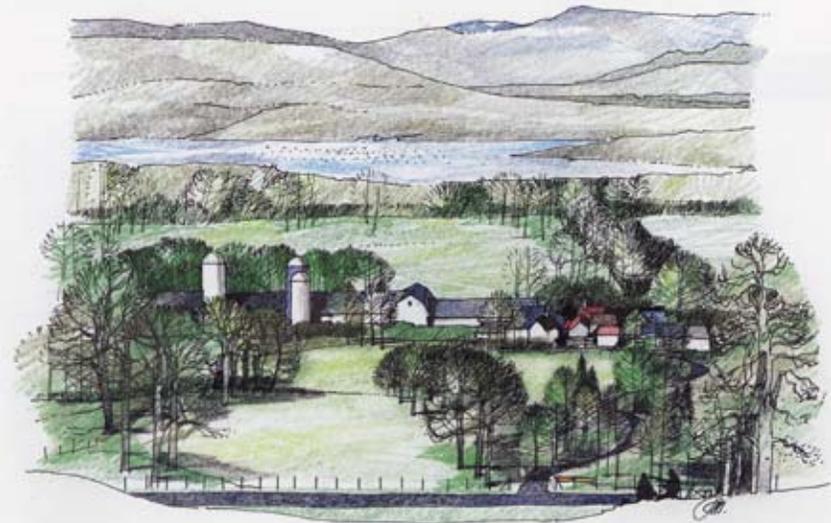
Source: *Vermont's Scenic Landscapes: A Guide for Growth and Protection*



B. Conventional Rural Subdivision



A. Existing Conditions

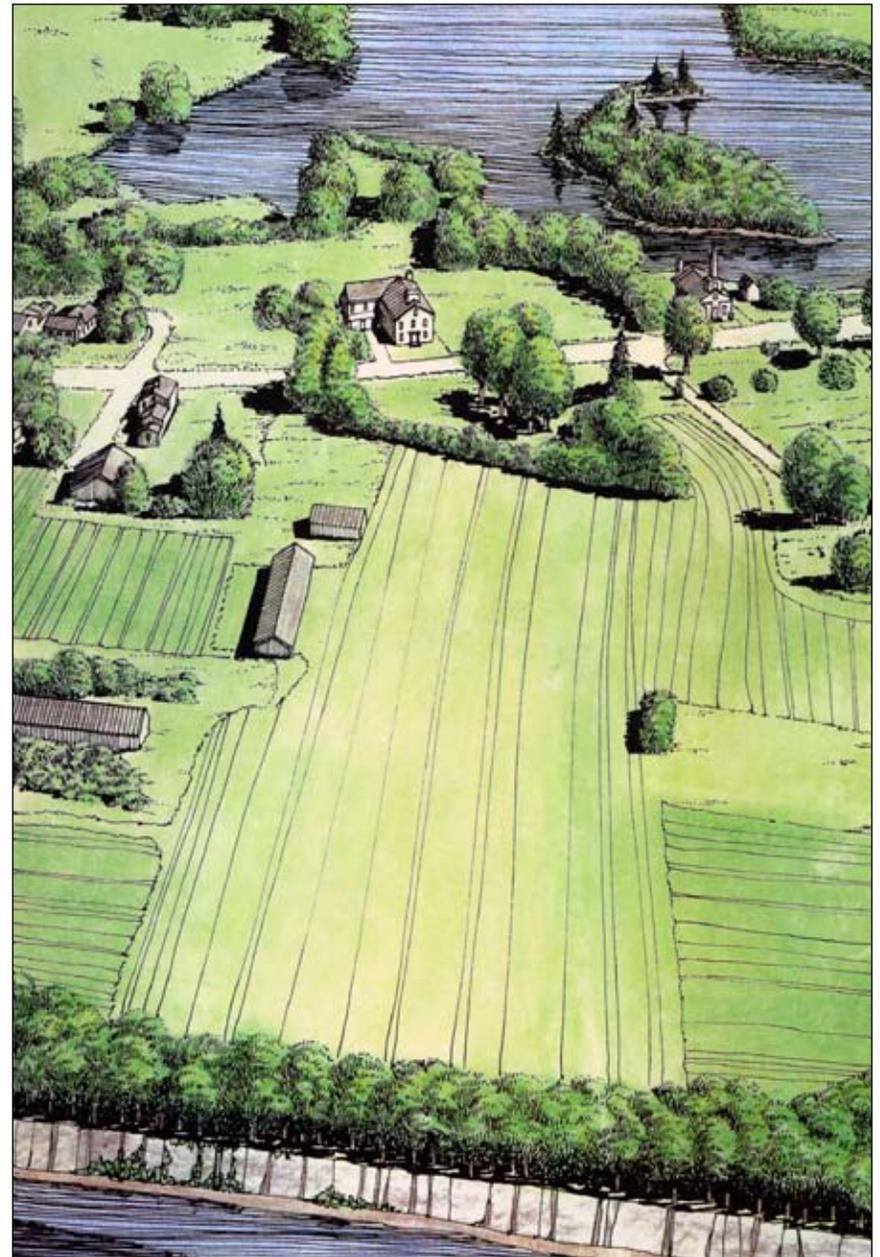


C. Sensitive Designed Planned Unit Development (PUD)

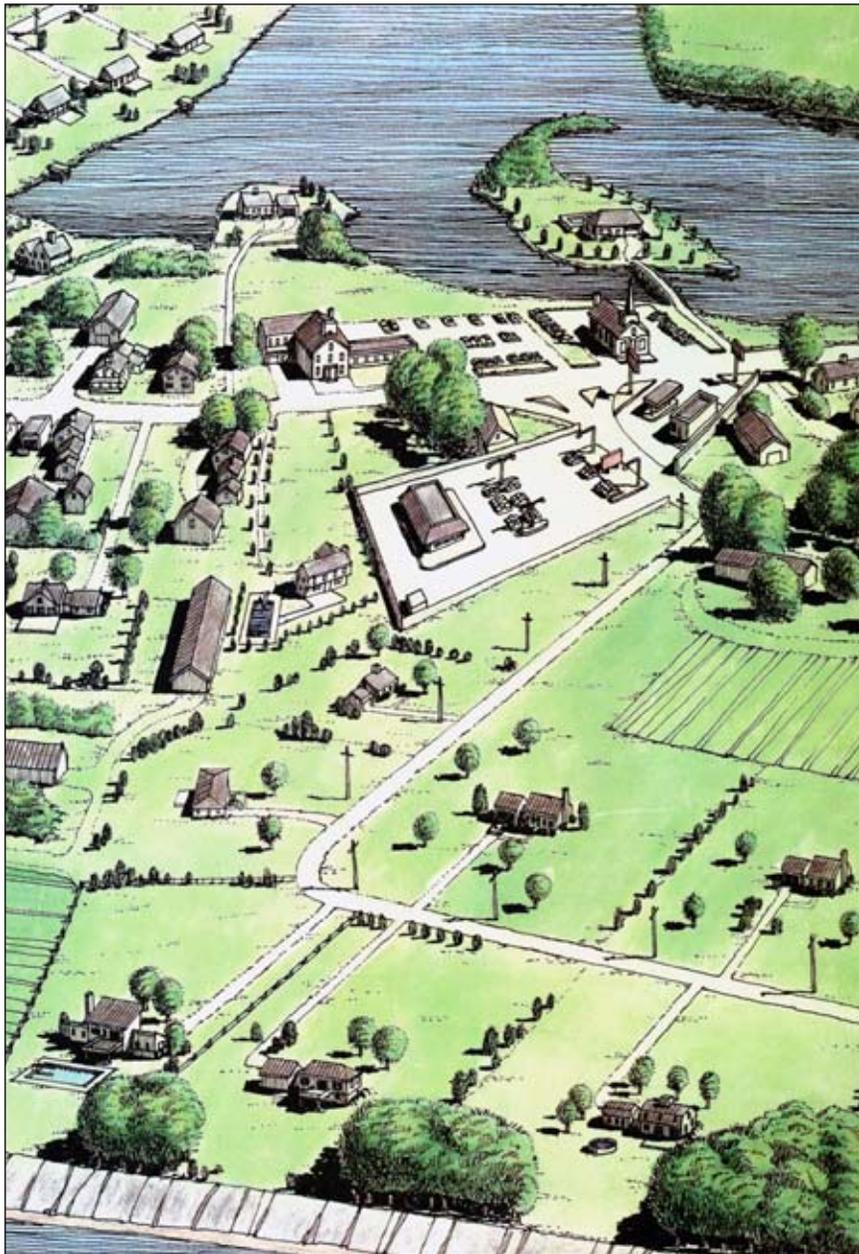
Design Considerations in Ferrisburgh's Rural Landscape (con't)

The open, agricultural character of Ferrisburgh's rural lands are also represented in Illustration D. Illustration E shows how a suburban pattern of development can be imposed on the rural landscape. Illustration F shows the result of a development pattern similar to a small, traditional New England village.

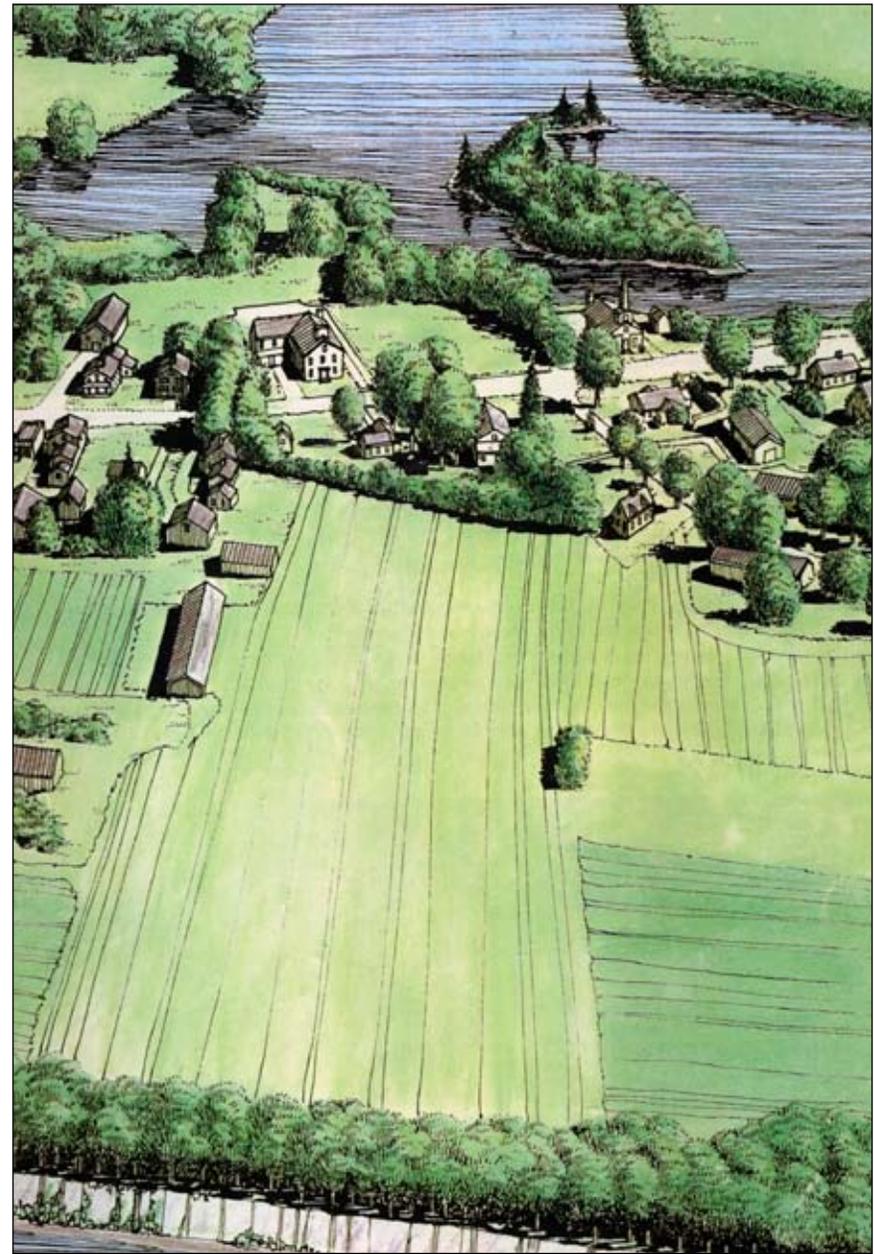
Source: Dealing with Change in the Connecticut River Valley. Yaro, Arendt, et al, 1993.



D. Existing Conditions



E. Suburban Pattern of Development



F. Small New England Village Pattern of Development



5. EPILOGUE

5.1. IMPLEMENTATION

This section of the plan identifies five specific actions that Ferrisburgh should take over the course of the next five years to implement the goals and objectives of this plan.

1. Revise zoning and subdivision regulations to be consistent with town plan policies.
2. Work with all relevant agencies and organizations to address the speed and safety of traffic along Route 7 and the main intersecting roads in town.
3. Establish a taskforce reporting to the Planning Commission, which will prepare a strategic plan to strengthen the role of small businesses in town.
4. Establish a taskforce reporting to the Planning Commission, which will prepare a recreation master plan for Ferrisburgh.
5. Prepare a Capital Budget and Plan.

5.2. COMPATIBILITY

A. Addison County Regional Plan

The Town of Ferrisburgh is located in the Addison Region. By state statute, town plans must be compatible with the Regional Plan and both must be in conformance with the state's planning goals. The Ferrisburgh Town Plan contains goals and objectives similar to the Addison County Regional Plan. The Regional Plan adopts the land use plans of its member municipalities as its own, so there can be no conflict between local and regional land use plans. Therefore, the Ferrisburgh Plan is compatible with the Addison County Regional Planning Commission's Regional Plan, which was last adopted in November 2005.

B. Panton

Panton's current Town Plan was adopted in 2005. Panton's planned land uses and zoning districts along the town line are compatible with those of Ferrisburgh. Both towns have recognized the areas around the Otter and Dead Creeks as environmentally sensitive areas requiring special protection. Most of the remaining lands along the border are part of low-density agricultural and rural residential areas.

C. Vergennes

Vergennes' current plan was adopted in 2004. The city's planned land uses and zoning districts along the border are compatible with those in Ferrisburgh. The Ferrisburgh plan includes an industrial area that wraps around the eastern and northern borders of the city along Route 7. This is an extension of the city's commercial and industrial corridor along Route 22A. The rest of the Ferrisburgh's land is part of agricultural and rural residential planning areas, which are compatible with Vergennes' agriculture and conservation district on its north and western borders.

D. Waltham

Waltham's current plan was adopted in 2001. Most of the land along the town line in Ferrisburgh is classified as rural residential, with a small area of

industrial between Route 7 and Vergennes. Waltham's land use plan puts the area adjacent to Ferrisburgh in its north-central planning area. The Waltham plan describes the land along the border as residential where the clusters of housing are kept distinct by large pockets of farm and forest land. This is compatible with the rural residential planning area along the town line in Ferrisburgh.

E. New Haven

New Haven's current Town Plan was adopted in 2005 with planned land uses and zoning districts along the town line that are compatible with those of Ferrisburgh. Along the border, most of the land in New Haven is classified as residential agricultural. New Haven's zoning system allows for higher density development in a narrow strip along town roads, with larger lot sizes for interior land. Most of the border land in Ferrisburgh is rural residential with a small area of conservation land along Mud Brook, which is similarly identified as conservation in New Haven.

F. Monkton

Monkton's Municipal Development Plan calls for land uses and development patterns along the town line that are compatible with those of Ferrisburgh. Along the border, most of the land in Monkton is classified for low-density agricultural use with some conservation areas along the hills. This is consistent with Ferrisburgh's upland conservation and rural residential planning areas.

G. Charlotte

Charlotte's plan was adopted in 2002. The two towns share a long border and the land use plans for most of this area are compatible. Ferrisburgh and Charlotte have both identified the shoreline and the Lewis Creek corridor as areas requiring special protection. Most of the land along the border is part of rural residential and agricultural areas.

The North Ferrisburgh neighborhood, however, has been an area of noticeable difference for many years. Charlotte's plan expresses concern over the highway commercial character of the Route 7 corridor in Ferrisburgh at the town line, which contrasts with their rural designation and Route 7 protection

strategies. It is, however, the intent of this Ferrisburgh plan to prevent strip commercial development along Route 7 and support well-defined centers with commercial and residential uses in North Ferrisburgh. The presence of the town line and the difference in the town's land use plans will help ensure that this center remains distinct from the surrounding rural lands on its northern edge.

5.3. GLOSSARY OF TERMS

(Other definitions that apply to this town plan can be found at 24 VSA 4303)

Agricultural Soils: Primary Agricultural Soils means soil map units with the best combination of physical and chemical characteristics that have the potential for growing food, feed, and forage crops, have sufficient moisture and drainage, plant nutrients or responsiveness to fertilizers, few limitations for cultivation or limitations which may be easily overcome, and an average slope that does not exceed 15 percent. Present uses may be cropland, pasture, regenerating forests, forestlands or other silvicultural or agricultural uses. However, soils must be of a size and location relative to adjoining land uses so that those soils will be capable, following any identifiable limitations, of supporting or contributing to an economic or commercial agricultural operation. Primary agricultural soils shall include important farmland soil map units with a rating of prime, statewide or local importance as defined by the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture (USDA).

Agricultural Soils, Local: In Addison County those soils which are classified as Adams Loamy Fine Sand, 5- 12% slope; and Colton Gravelly Sandy Loam, 5 - 12% slope; and Raynham Silt Loam, 6 -12% slope.

Affordable Housing: Either a) Housing that is owned by its inhabitants whose gross annual household income does not exceed 80% of the county median income and the total annual cost of the housing including principal, interest, taxes, insurance, and condominium association fees is not more than 30 % of the household's gross annual income; or b) Housing that is rented by its inhabitants whose gross annual income does not exceed 80% of the county median income, and the total annual cost of the housing including rent, utilities and condominium association fees is not more than 30% of the household's gross annual income.

Aquifer: A subgeologic formation capable of yielding water in useful quantities to wells and springs.

Capacity Study: An inventory of available natural and human-made resources, based on detailed data collection that identifies the capacities and limits of those resources to absorb land development (see also 24 VSA 4303).

Cluster Development: A development design technique that concentrates building in specific areas of a site to allow the remaining land to be used for recreation, common open space, or preservation of environmentally sensitive features.

Conserved Land: Land on which development rights have been restricted through public or private mechanisms.

Development: for the purpose of Town Planning development means any change in use land.

Flood Hazard Area: Land subject to flooding from the base flood, the flood having a one percent chance of being equaled or exceeded in any given year (100-year flood). See also floodproofing, floodway, hazard area, new construction and substantial improvement as defined in 24 VSA 4303.

Forest Soils: Soils which are not primary agricultural soils as defined above, but which have a reasonable potential for commercial forestry or maple syrup production and which have not been developed. In order to qualify as productive forest soils the land containing such soils shall be of a size and location relative to adjoining land uses, natural conditions and ownership patterns so that those soils will be capable of supporting or contributing to a commercial forestry or maple sugaring operation.

Groundwater: Water found underground in porous rock strata, as distinct from surface water.

Hazard Area: Land subject to soil erosion, landslide, water supply contamination, or other natural or human-made hazards.

Hydric Soils: Soils that are periodically saturated with water such that the physical, chemical and biological properties reflected in the soil profile clearly demonstrates long periods of saturation.

Level of Service: The operating conditions that a driver experiences while traveling on a particular street or highway, including frequency of stops, operating speed, travel time and traffic density.

Natural Area: An area of land or water with unusual or significant flora, fauna, geological or similar features of scientific, ecological or educational interest.

Nonconforming Lot, Structure, Use: See 24 VSA 4303.

Planned Unit Development (PUD): One or more lots, tracts or parcels of land to be developed as a single entity, the plan for which may propose any authorized combination of density or intensity transfers or increases as well as mixing of land uses. This plan, as authorized, may deviate from bylaw requirements that are otherwise applicable to the area in which it is located with respect to lot size, bulk, or type of dwelling or building, use, density, intensity, lot coverage, parking, required common space, or other standards.

Public Waterway: Any waterway that is accessible to the public and navigable when Lake Champlain is at the mean water level of 95.5 feet above sea level.

Renewable Energy Resources: Energy available for collection or conversion from direct sunlight, wind, running water, organically derived fuels, including wood and agricultural sources, waste heat and geothermal sources.

Rural Town: A town having, as at the date of the most recent United States census, a population of less than 2,500 persons, as evidenced by that census, or a town having 2,500 or more, but less than 5,000 persons that has voted by Australian ballot to be considered a rural town.

Substantial Improvement: Any repair, reconstruction or improvement of a structure the cost of which equals or exceeds 50% market value (see 24 VSA 4303).

Telecommunications Facility: A tower or other support structure, including antennae, that will extend 20 or more feet vertically, and related equipment, and base structures to be used primarily for communication or broadcast purposes to transmit or receive communication or broadcast signals.

Watershed Protection Area: A specific geographical area of land and surface water designated by a municipality or other authority to have minimal human impact in order to protect water supplies in surrounding areas.

Wellhead (Source) Protection Area: An area designated by the Vermont Department of Conservation to protect the quality of public water supplies.

Wetlands: Those areas of the state that are inundated with surface or groundwater with a frequency sufficient to support vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction. Such areas include marshes, swamps, sloughs, potholes, fens, river and lake overflows, mud flats, bogs and ponds, but excluding such areas as grow food or crops in connection with farming activities. Wetlands are further described by State Wetland Rules as Classes I, II and III with decreasing levels of required protection under state and federal laws.